



50

Years of Chemical Information
in the American Chemical Society

1943-1993

W. V. Metanomski



ACS Division of Chemical Information

**50 YEARS OF CHEMICAL INFORMATION IN
THE AMERICAN CHEMICAL SOCIETY**

1943-1993

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1943-1993

A History of the Chemical Literature Group (1943-1948),
the Division of Chemical Literature (1949-1975),
and the Division of Chemical Information (1975-1993)

W. V. Metanomski

Chemical Abstracts Service

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Division of Chemical Information

1993

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Preface

Information and Information Technology are becoming internationally recognized as resources critical to productive Research and Development and, ultimately, to national competitiveness. Today's network environment has fueled growth in global collaborative research with shared information being the essential ingredient and key success factor. Indeed, information, as a result of technological advances, has evolved into a valuable commodity and a buzzword of the nineties.

Yet chemistry, perhaps more than any other scientific discipline, recognized the value of information in the development of practical applications of theoretical concepts well before the advent of computer technology. Indeed several of today's chemistry journals and reference indices have their roots deeply embedded in the 17th and 18th centuries. To quote Harry Collier from the April 1993 edition of *Monitor*, "Traditionally, chemists (like stock and commodity traders) have been in the forefront of information matters".¹

This statement is true, but it owes its truth to the determination, dedication, and vision of individual chemists who, throughout the years, recognized the intrinsic value of information, actively strove to promote it, and worked tirelessly to leverage the technology of their era to improve information access, retrieval, utility, and dissemination.

Examples of such Chemists are the Founders of the Division of Chemical Literature who elevated the importance of information within the American Chemical Society; the author of the Division history who has well and selflessly served the Division and the field for many years and who has been a role model for me and for countless others; and all Division members and supporters who in their daily work continue to enhance and develop chemical information and related technology. This history of the Division is a testimony to their efforts; the continued success of chemistry is a tribute to their lives.

Bonnie Lawlor

Chairman
50th Anniversary Committee
Division of Chemical Information (CINF)

¹ Collier, H. "As Usual, Chemical Information Leads the Way", *Monitor* 1993 (April), (146), 9.

I. Introduction

A 50th anniversary is an unusual milestone for the ACS Division of Chemical Information. While there are countless new members who joined relatively recently, there are still among us those who founded the organization and guided it through its formative, most difficult, years. This history pays a tribute to those pioneers and visionaries who early foresaw the importance and significance of chemical information to all the chemists and chemical engineers as well as to the general public, and who knew how to forge ahead and to take advantage of the modern technologies from punched cards, KWIC indexes, and simple inventories of chemical structures in the 1940's and 1950's to laser disks, artificial intelligence, expert systems, and three-dimensional manipulation of structures in the 1980's and 1990's. Equally important was the early perception of the international nature of all the aspects of chemical-information generation, transfer, and utilization. International contacts and recognition, which the Division has pursued through the participation of speakers from many countries, the organization of international symposia and conferences, and the availability of its awards worldwide, attest to that.

Although the Division of Chemical Information (Division of Chemical Literature till 1975) was formally established in 1948, we have decided to relate our 50th anniversary celebration to the formation of its predecessor, the Chemical Literature Group of the ACS Division of Chemical Education in 1943. At that time the ACS recognized chemical literature (documentation, information) as being a separate branch of chemistry, worthy of special attention and research.

Writing and publishing the histories of the ACS and of its Divisions are not new activities. The ACS published its history at the 75th and 100th anniversary in 1952 [Ref. 5] and 1976 [Ref. 17], respectively. More recently, two Divisions published their histories, the Division of Inorganic Chemistry (by John C. Bailar, Jr.) in the *Journal of Chemical Education* in 1989 [Ref. 31] and the Division of Polymer Chemistry (by Jesse C. M. Hwa) in the *Polymer Preprints* in 1991 [Ref. 35].

A brief history of the Division of Chemical Information (by W. Val Metanomski) was published in the Spring 1990 issue of the *Chemical Information Bulletin* [Ref. 32].

This more comprehensive history of the Division of Chemical Information has been organized into groups of main activities such as goals and mission, organization and membership, symposia and sessions at various

meetings, educational activities, publications, awards and recognitions, social events, and financial aspects.

In this introduction, on the other hand, it might be of interest to list chronologically some major "first" accomplishments and milestones in the first fifty years:

- 1943: Formation of the Chemical Literature Group
First symposium of the Group (Pittsburgh)
- 1948: Formation of the Division of Chemical Literature
- 1949: First Divisional symposium (San Francisco)
First joint symposium with another Division (Atlantic City)
First issue of *Chemical Literature* (Divisional bulletin) (renamed *Chemical Information Bulletin* in 1975)
- 1951: First Advances in Chemistry Series book based on a Divisional symposium
- 1953: First technical demonstration at a National Meeting (Chicago)
- 1955: First Divisional Regional Meeting (Houston)
- 1961: First issue of the *Journal of Chemical Documentation* (renamed *Journal of Chemical Information and Computer Sciences* in 1975)
- 1966: Cosponsorship of *Documentation Abstracts* (renamed *Information Science Abstracts* in 1969)
- 1973: 25th Anniversary of the Division (Chicago)
- 1975: Name changed to the Division of Chemical Information
- 1976: First Herman Skolnik Award (New York)
First vendor's seminar/workshop (New York)
- 1978: First Tri-Society (ACS/ASIS/SLA) Symposium (Kansas City)
- 1980: Formation of the Subdivision of Chemistry and the Law
- 1982: First international winner of the Herman Skolnik Award
First Outstanding Intermediate Division Performance Award
- 1983: Formation of the Division of Chemistry and the Law
- 1984: Videotape on Chemical Information
- 1985: Formation of the Computer Secretariat (founding member)

1986: Formation of the Biotechnology Secretariat (founding member)
First teaching guide (module) for searching chemical information online
First Divisional Newsletter as additional communication medium with members

1987: First International Conference in The Netherlands
Formation of the Clearinghouse for Chemical Information
Instructional Materials (with SLA)
Formal Mission Statement
Second Outstanding Intermediate Division Performance Award

1989: First issue of the *CINF News*
First Student Scholarship Award

1992: First Meritorious Service Award

1993: 50th Anniversary of the Chemical Literature Group

While many facts and events have been listed, this history is primarily about professional chemists who in the early days worked on chemical problems in laboratories, plants, or offices, and while using literature for their own work became interested in the organization of that past knowledge and its utilization. From that group grew a new profession encompassing literature chemists, chemical librarians, and eventually chemical information specialists, and even information brokers and consultants. In today's environment, the history repeats itself, and the so-called end users are becoming the same practicing chemists and chemical engineers of the old days who did their own searching. Today, so many chemists rely on various computer programs at their workstations that the distinction between using information and doing own research becomes blurred in the application of artificial intelligence, expert systems, and molecular modeling.

Every history reflects the historian's biased grouping of subjects, preferential selection of highlights and milestones, perhaps undue emphasis of some events, and even a glaring omission of others. This history is no exception. On the other hand, since this has been a first attempt to compile a fairly exhaustive and comprehensive history with as many details recorded as possible, it might be regarded as experimental and even preliminary to some extent.

The author is very grateful to Robert E. Buntrock, Bonnie Lawlor, Jean G. Marcali, Peter F. Rusch, Peter F. Sorter, Ben H. Weil, Lucille M. Wert, and Barbara G. Wood for their careful reading of the manuscript, correcting the errors, and providing most useful suggestions to improve the history.

The readers are invited to send comments to the author. As is evident from the chronology of events, the "real" 50th anniversary of the formation of the Division will occur in 1998. We hope that for this second 50th anniversary celebration we will be able to provide an updated version of the Divisional history.

II. The Chemical Literature Group, 1943-1948

1. Pre-History

In the 1976 book "A Century of Chemistry" [Ref. 17], celebrating the 100th anniversary of the formation of the American Chemical Society, Herman Skolnik observed:

"From the time chemistry became a science, knowing the chemical literature has been an essential obligation of the professional chemist. Practitioners of no other science have been involved as chemists in working with their literature, establishing journals, setting up indexing and abstracting systems and services, systematizing nomenclature, and correlating data."

and added:

"Thus, like Moliere's *bourgeois gentilhomme*, who spoke prose without knowing it, chemists have been working as literature chemists without knowing it since chemistry has been a science."

The American Chemical Society was formed in 1876. The Society from the very beginning has been concerned with the encouragement of the advancement of chemistry in all its branches and the promotion of scientific interests and inquiry through meetings, reports, papers, discussions, and publications. On August 25, 1937, the Society obtained the National Charter, enacted by the 75th U.S. Congress and signed into law by President Franklin D. Roosevelt. The Charter reaffirmed as one of the Society's objectives the increase and diffusion of chemical knowledge, and emphasized meetings, professional contacts, reports, papers, discussions, and publications as proper means to accomplish this.

Citing a few dates related to the beginning of some of such activities and to some anniversaries would help to put them in a proper historical perspective:

- 1876: Formation of the Society and first paper on "The Determination of the Relative Effectiveness of Disinfectants" by Herman Endemann (later first Editor of the *Journal of the American Chemical Society*)
- 1877: *Proceedings of the American Chemical Society*
- 1879: *Journal of the American Chemical Society*
- 1884: ACS Committee on Nomenclature and Notation

- 1893: World's Congress of Chemists in Chicago
- 1895: *Review of American Chemical Research* (taken over by the ACS in 1897)
- 1901: 25th anniversary of the ACS
- 1907: *Chemical Abstracts*
- 1909: *Journal of Industrial and Engineering Chemistry*
- 1926: 50th anniversary of the ACS
- 1940: 100th ACS National Meeting in Detroit

At the Society's early National Meetings, papers were presented on various aspects of chemical literature. The first ACS symposium on "Bibliography" took place at the World's Congress of Chemists in Chicago on August 23, 1893. The Congress, partially organized by the ACS, was attended by 182 chemists, 83 of whom were members of the Society. The honorary chairman of the symposium was G. Thoms of Riga. The opening symposium address was given by H. Carrington Bolton of New York, a notable historian and bibliographer of chemistry.

The first literature-oriented symposium at an ACS National Meeting was on "Chemical Libraries and Their Problems" in Buffalo in April 1919. In later years, the topics covered and presented before the various ACS Divisions ranged from undergraduate courses in chemical literature to scientific journalism, patents, and nomenclature of specific fields.

Table I (page 6) lists a few typical papers from the late 1930's and early 1940's. One interesting comment in a 1939 paper on "Opportunities for Women as Research Bibliographers" reflects the opinion of the times:

"Temperamentally women are well equipped to undertake such work and should be superior to men carrying it out."

2. The Group

The last paper in **Table I** (page 6) deserves special attention, because it created such interest in problems connected with chemical literature and library research that it led to the organization of related symposia and the formation of the Chemical Literature Group. The paper on "Problems of the Scientific Literature Survey" was presented at the 105th ACS National Meeting in Detroit on April 12, 1943, by Gustav Egloff, Mary Alexander, and Prudence Van Arsdell. Gustav Egloff,

Table I
Pre-1943 Chemical Literature Papers at the ACS National Meetings

93rd, Spring 1937 - Chapel Hill, NC

Acquainting the Undergraduate with the Chemical Library (John R. Sampey)
 Use of References and Collateral Readings in Inorganic Chemistry (L. A. Goldblatt)
 Lantern-Slide Techniques (Hubert N. Alyea)
 Classification of Chelate Rings (Harvey Diehl)

94th, Fall 1937 - Rochester, NY

Symposium (3 papers) on Are Patents on Medicinal Discoveries and on Food in the Public Interest?
 (Edward R. Weidlein)

95th, Spring 1938 - Dallas, TX

A Plea for the Establishment of Courses in Scientific Journalism (Edgar Z. Friedenberg)

96th, Fall 1938 - Milwaukee, WI

Symposium (3 papers) on American Patent Practice and Procedure
 Symposium (6 papers) on Nomenclature of Sugars and Their Derivatives

97th, Spring 1939 - Baltimore, MD

The Nomenclature of Synthetic Rubbers (Harry L. Fisher)

98th, Fall 1939 - Boston, MA

Opportunities for Women as Research Bibliographers (F. W. Adams)
 The Chemical Bulletin Board (E. K. Bacon)
 The Vocabulary of Chemistry (G. W. Muhleman)
 A Streamlined Card Index for the Journal of Chemical Education (Sister Virginia Heines)
 A Boston Journal of Chemistry in the Early 1870's (Wilhelm Segerblom)

99th, Spring 1940 - Cincinnati, OH

The Use of Alpha, Beta, and Gamma in the Nomenclature of Carbohydrates (Ed. F. Degering and E. M. Burdick)

101st, Spring 1941 - St. Louis, MO

Symposium (6 papers) on Inorganic Chemical Nomenclature (John C. Bailar, Jr.)

102nd, Fall 1941 - Atlantic City, NJ

Nomenclature of Cyclic Hydrocarbons (Prudence M. Van Arsdell and Gustav Egloff)

103rd, Spring 1942 - Memphis, TN

Thirty Years of Petroleum Research (B. T. Brooks)

104th, Fall 1942 - Buffalo, NY

Frozen Assets. The Problems of Putting Chemical Knowledge to Work (Byron A. Soule)
 Report of Committee on Pectin Nomenclature (Z. I. Kertesz)

105th, Spring 1943 - Detroit, MI

Problems of the Scientific Literature Survey (Gustav Egloff, Mary Alexander, and Prudence Van Arsdell)

a noted petroleum scientist, research director at Universal Oil Products Co., was involved in many activities of the Society, patented over 300 inventions, and authored numerous papers. Mary Alexander was also to become very active, especially in the area of organic nomenclature.

A few excerpts from its abstract illustrate well the then existing problems:

"The problems of chemical literature survey have not received the deserved attention and chemists without proper background waste valuable time in the laboratory duplicating work already published."

"The difficulties encountered in complete surveys are appalling."

"The need of such procedure [governing library work] may be attributed to lack of fundamental training in the use of chemical literature as well as inability to foresee the outcome of carelessness."

Following that paper, Norman C. Hill discussed with Gustav Egloff the possibility of organizing a group to sponsor programs devoted to the study of library and literature problems. As a result, he organized a series of symposia, "Technical Library Techniques", held under the sponsorship of the ACS Division of Chemical Education.

The first such symposium was presented at the 106th ACS National Meeting in Pittsburgh on September 7, 1943. It included 18 papers, among them Part II of the "Problems of the Scientific Literature Survey" by Egloff, Alexander, and Van Arsdell, "The Importance of Technical Writing in Chemical Education" by Florence E. Wall, "Publications -Pitfalls and Problems" by Melvin G. Mellon, "Abstracting and Indexing" by E. J. Crane, and "Literature Service for Fuel Chemists" by Julian F. Smith. The luncheon, held at the Pittsburgher Hotel, cost \$1.40 only. The symposium was well attended and generated an enthusiasm that resulted in the formation of the Chemical Literature Group of the ACS Division of Chemical Education.

Papers on related topics continued to be presented before other Divisions. This is exemplified by a paper on "Information Services and War Effort" by Ben H. Weil before the Division of Industrial and Engineering Chemistry at the same National Meeting.

Appendix 4 (page 91) lists the symposia organized by the Group in the period 1943-1948. The breadth of topics was impressive. They covered many areas such as information sources, chemical patents, nomenclature,

abstracting, indexing, classifications, and punched cards. The last topic signaled the beginning of the application of mechanized tools to handling chemical information. The attendance was excellent. A "sardinelike" situation was reported for James W. Perry's paper on "Chemical Russian - Self-Taught" at the 107th ACS National Meeting in Cleveland on April 4, 1944. This was part of Part II of the symposium on "Technical Library Techniques".

It is worth noting that these were war and post-war years. Difficulties to travel, to meet, and to communicate were experienced. On August 10, 1944, the ACS President, Thomas Midgley, Jr., the inventor of tetraethyl antiknock additive, noted that the major aim of every American was to win the war in the shortest possible time and that the 108th ACS National Meeting in New York in September 1944 should be limited to discussing war production needs or research. He appealed to the members:

"This is not a time when anyone should travel solely for pleasure or sociality. If this meeting would be purely a social event for you, stay at home."

A couple of comments on the September 1944 meeting are worth citing as proof that some conditions and experiences never change:

"Inclement weather combined with a somewhat unfortunate location undoubtedly limited attendance at the symposium."

"Because the divisional luncheon meeting was unavoidably scheduled at a hotel many blocks beyond the divisional meeting room, only half the usual number attended."

In 1945, owing to immediate post-war conditions no ACS National Meetings were held, only meetings-in-miniature and meetings-in-print. A paper on "Punch Cards for a Chemical Bibliography" by Gerald J. Cox, C. F. Bailey, and Robert S. Casey, scheduled for the April 1945 meeting, had to be published in the *Chemical and Engineering News* on September 25, 1945.

The Chemical Literature Group became active again in earnest with the presentation of Part III of the symposium on "Technical Library Techniques" at the 109th ACS National Meeting in Atlantic City in April 1946. The attendance at its two sessions ranged from 250 to 300. The interest in punched-card techniques was so great that after hearing the papers by Casey, Bailey and Cox, and by C. D. Gull at the regularly scheduled symposium, a group of some 75 to 100 persons spent the following evening at an unscheduled meeting arranged to facilitate further discussion.

This was followed by Part IV at the 110th ACS National Meeting in Chicago in September 1946. That symposium and another on "Chemical Patents" attracted 350 to 400 attendees. Both symposia "carried over" into unscheduled dinner and evening meetings for more discussion.

At that meeting, a more formal organization of the Group took place. An Executive Committee was formed:

Norman C. Hill	chairman
Gerald J. Cox	vice-chairman
Robert C. Casey	secretary
Byron A. Soule	treasurer
James W. Perry	program chairman

Ex officio members:

the Editors of *Chemical Abstracts*, *Journal of the American Chemical Society*, and *Industrial and Engineering Chemistry*
the chairman and secretary of the Division of Chemical Education

At the 111th ACS National Meeting in Atlantic City in April 1947, the topic of punched-card indexing continued to draw attention. James W. Perry presented, for the first time, an informal report of the ACS Punched-Card Committee, of which he was the chairman.

At the 113th ACS National Meeting in Chicago in April 1948, J. G. Tolpin presented a paper on "The Highlights of Present Day Russian Chemical Research", which attracted much attention. At that meeting an informal discussion on chemical literature problems was formally scheduled for 8 to 11 pm.

In the 1946-1948 post-war period, 15 symposia consisting of 106 papers were presented before the Group. In the six-year period of the Group's existence (1943-1948), a total of 149 papers were presented. Of these, 62 were published in the *Journal of Chemical Education*, 14 in the *Chemical and Engineering News*, eight in the ACS Advances in Chemistry Series, four in the first edition of "Punched Cards", and three in two other journals for a total of 94 publications or 63% of those presented.

III. The Division of Chemical Literature, 1949-1975

1. Goals and Mission, 1949-1975

At the 114th ACS National Meeting in Washington, DC, in September 1948, the Committee on National Meetings and Divisional Activities, under the chairmanship of Gustav Egloff, recommended the establishment of the Division of Chemical Literature. A motion to this effect was made and passed by the ACS Council.

Walter J. Murphy, Editor of *Chemical and Engineering News*, stated in an editorial on February 14, 1949 [Ref. 1]:

“Once again the flexibility of the AMERICAN CHEMICAL SOCIETY and its ability to provide for the expanding interests and needs of the chemists and chemical engineers, within the framework of the Society, is demonstrated by the formation of a Division of Chemical Literature. With the adoption of bylaws and their approval by the Council, the new division will become the nineteenth division of the ACS.

For approximately five years those conducting research and development work and concerned with the importance of chemical literature and utilization of this literature have operated as the Chemical Literature Group of the Division of Chemical Education. Large and enthusiastic audiences composed of a large segment of Society members have demonstrated a sustained and rapidly growing interest at every symposium sponsored by the group.

The objects of the new division are tentatively defined as follows:

To hold meetings for the reading and discussion of papers and reports for the purposes of studying and advancing the art and science of the collection, recording, processing, exchange, and dissemination of chemical information, and to provide the other associations and activities for the same purpose.

The above interpretation of the objects of the new division purposely has been made very broad, but the new division certainly will be concerned with problems connected with secondary as well as primary publication, with indexes as well as abstracts and papers, with punched cards and electronic devices, with technical library techniques, statistical analysis of numerical data, correlations, nomenclature, and most certainly with ideas for facilitating the use of chemical literature.

Every chemist and chemical engineer is experiencing difficulty in keeping abreast of the volume of original publications. Mechanical aids, for example, punched cards, will not eliminate the necessity of reading the principal scientific and abstract journals, but punched card systems can be utilized to make easily available vast areas of chemical and physical data already published. Every plan should be explored that promises to increase the efficiency of the chemist or chemical engineer by reducing the time spent in literature searches. If we do not develop such means, the expanding bulk of accumulated information will decrease in practical value.”

and concluded:

“Probably no other division has such potential interest for all the members of the Society as does the Division of Chemical Literature. Therefore, we expect to see many become actively associated with the program of the division.”

In 1950, the first elected chairman, E. J. Crane, stated:

“Interest in chemical literature is very high, having been stimulated by the recent work. There is also a new appreciation of the individual who works in science at a desk instead of in the laboratory. This worker is growing in stature among chemists, the creation of our strongly active Division is an indication of that.”

The Divisional Bylaws stated succinctly:

Bylaw I Name and Object

Section 1. The name of this organization shall be “The Division of Chemical Literature of the AMERICAN CHEMICAL SOCIETY” hereinafter called the “Division” and the “SOCIETY”, respectively.

Section 2. The objects of this Division shall be those of the **SOCIETY** as they apply to chemical literature, which is regarded as including the study, preparation, collection, recording, processing, conserving, reproduction, organization, exchange, dissemination, and assembly for use of chemical information.

Ben H. Weil in a 1957 article [Ref. 7] added to it:

“In other words, the Division is concerned with the

primary, secondary, and tertiary publication of information - with original papers, books, and reports; with abstracts, indexes, and machine documentation; and with techniques and ideas for facilitating the use of chemical literature. It conceives as its task both the provision of assistance to the laboratory chemist in his own work with the literature and the interchange of knowledge and techniques among professional literature chemists."

2. Organization and Membership, 1949-1975

For 1949, the ACS appointed Norman C. Hill as acting Chairman and Robert S. Casey as acting Secretary. Both were part of the founding team who led the Chemical Literature Group in the previous five years.

At the 115th ACS National Meeting in San Francisco in March 1949, the Divisional Executive Committee adopted a proposed set of Bylaws, and elected Mary Alexander and Julian F. Smith as Members-at-Large to serve through 1949. Membership was reported to be about 300.

By the time of its first anniversary at the 116th ACS National Meeting in Atlantic City in September 1949, the number of Division members and associates reached 725. Annual dues were \$1 for an ACS member and \$2 for a Division Associate (non-ACS member).

For 1950, the first elected Divisional Officers were:

E. J. Crane	chairman
James W. Perry	chairman-elect
Robert A. Casey	secretary
Byron A. Soule	treasurer
Mary Alexander	member-at-large
Julian F. Smith	member-at-large

The Executive Committee consisted of the above six elected members and three *ex officio* members, who were Editors of the ACS journals:

Walter J. Murphy	<i>Industrial and Engineering Chemistry</i>
W. Albert Noyes, Jr.	<i>Journal of the American Chemical Society</i>
Norris W. Rakestraw	<i>Journal of Chemical Education</i>

In subsequent years, E. J. Crane, Editor of *Chemical Abstracts*, also continued to serve as an *ex officio* member.

All the Officers and Councilors of the Division for

the years 1949-1993 are listed in **Appendix 2** (page 89) and **Appendix 3** (page 90), respectively.

In 1950, the following Committees were operational:

Bulletin Committee (Ben H. Weil, chairman)
Program Committee (James W. Perry, chairman)
Membership Committee (Leona E. Straka, chairman)
Committee on Spanish and Portuguese Chemical Literature (Wallace R. Brode, chairman)

On September 5, 1950, the Executive Committee proposed a resolution, subsequently approved by the membership, to oppose the holding of Divided ACS National Meetings. It was pointed out that the majority of Division members had considerable interest in one or more industrial fields of chemistry and that the needs of the members would not be satisfied by a divided meeting. It was obvious that other Divisions would not participate fully in the divided meetings.

The 1951 roster of Committees included:

Nomination Committee (Mary Alexander, chairman)
Committee on Improvements of Papers (Tibor E. R. Singer, chairman)

In the June 1951 issue of *Industrial and Engineering Chemistry*, Julian F. Smith presented a brief history of the Chemical Literature Group and of the first two years of the Division in a paper on "Chemical Literature" [Ref. 2].

In the Fall 1951 issue of *Chemical Literature*, the first Directory of Members and Associates was published (606 names) with a supplement (125 names) in the following issue.

In a paper on "The Story of the Division of Chemical Literature of the American Chemical Society" [Ref. 4], presented as part of the symposium on "Operation Knowledge" at the national meeting of the American Association for the Advancement of Science (AAAS) in Philadelphia on December 30, 1951, the Divisional Chairman James W. Perry gave one of the best descriptions of the varied role of the literature chemist:

"During recent years, many a research and development teams has included, as one of its members, a fully qualified chemist who works, not in the laboratory, but in the library. Such a chemist - sometimes referred to as a literature chemist - contributes to the accomplishment of a research program in a variety of ways. He prepares reports which serve as a basis for planning research programs. He aids in guiding research and development by scanning the literature. He assists in attaining



Meeting of chemists engaged in the development of chemical structure techniques at the Massachusetts Institute of Technology (MIT) in 1951. Front row: Eugene W. Scott, Harriet A. Geer, Alice Perry, Madeline M. Berry (Henderson), unidentified. Second row: Ernest H. Huntress, Karl F. Heumann, William J. Wiswesser, Friedrich Richter, Charles L. Bernier, Howard S. Nutting. Third row: Pieter Verkade, G. Malcolm Dyson, James W. Perry, Austin M. Patterson, unidentified, Paul Arthur, Jr., Erich Pietsch, Franz Leiss.

sound patent protection for inventions. He suggests possible uses for new products. He assists the sales department in preparing advertising material. He locates market data needed for intelligent planning of installation or expansion of production facilities."

In 1952, Kathleen Bannister was appointed Assistant Secretary to maintain a unified membership list. Earlier, the McBee Company provided one thousand 5" x 8" Keysort Cards for the membership file.

In the same year, two additional Committees were formed:

Bylaws Revision Committee (Robert S. Casey, chairman)

Publications Committee (E. J. Crane, chairman)

and a third Committee under the chairmanship of Ben H. Weil studied grouping members by specific subject interests. The Executive Committee made many attempts to identify potential Division members and their specific interests. At the 119th ACS National Meeting in Boston in April 1951, a panel (Tibor E. R. Singer, moderator) attempted to define the boundaries between the "literature chemist" and the "chemical librarian".

A 1951 survey identified the following fields starting with the highest activity and interest:

- searching of literature

- presentation of data
- abstracting and reviewing literature and patents
- classifying, indexing, and coding
- chemical terminology
- mechanical aids in documentation
- information and literature services
- foreign languages
- reproduction of data

Julian F. Smith, the 1952 Divisional Chairman, identified librarians, literature searchers, abstractors, indexers, translators, classifiers, punch card experts, and documentalists as potential members.

In his message, Robert S. Casey, the 1953 Divisional Chairman, commented with respect to future programs:

"I hope we may emphasize the fact that the techniques of chemical literature are used not only by full-time workers in this field, but are needed also by the *practicing chemist*, who may be working in the laboratory, field, classroom, or executive office. He must, at least occasionally, do a little searching; he must collect, organize, store, and retrieve his data; and, eventually, he must communicate his results and conclusions. We should have at least several hundred more members of the above category."

The 1953 roster consisted of 854 members, 174 of whom were associates. That year also saw the revision of the Divisional Bylaws, subsequently approved by the

ACS Council, which simplified procedures, eliminated numerous complications, and clarified the distinction between members and associates.

In 1954, two new Committees emerged:

Finance Committee (Madeline M. Berry, chairman)
Public Relations Committee (Edward E. Thorp, chairman)

In April 1955, the Division mourned the passing of Gustav Egloff. An internationally renowned petroleum scientist, he was one of the founders of and active contributor to the Chemical Literature Group and the Division.

By a striking and unfortunate coincidence, his close collaborator of 16 years, Mary L. Alexander, passed away at the age of 38 just two months later in June 1955. She was also very active in the Division as a Member-at-Large of the Executive Committee in the period 1949-1954 and a contributor to the technical program.

Due to the demise of the ACS Committee on Scientific Aids to Literature, Allen Kent and Herman Skolnik prepared a report recommending formation of a new Divisional Committee. This was formally approved in April 1956 as

Committee on Aids to Chemical Documentation (Allen Kent, chairman).

The Committee had its first open meeting at the 130th ACS National Meeting in Atlantic City in September 1956 to give individual ACS members a chance to discuss their documentation needs. At that meeting, Hanna Friedenstein presented to the Executive Committee the first draft of a "Procedures Manual for Officers of the Division of Chemical Literature".

Also formed in 1956 were:

Committee on Translation Pool (Eric I. Hoegberg, chairman)
Committee on Preprint Photocopies (Ben H. Weil, chairman)

In 1957, the membership passed the 1000-mark. John H. Fletcher, the Divisional Chairman, said in his message:

"I think you will agree that the Division of Chemical Literature has indeed "come of age". We have made tremendous progress and growth. The field of chemical literature has gained well-deserved recognition as an integral and important part of the chemical profession."

The 1958 roster of Committees included several interim Committees:

Bibliographies of Bibliographies (Fred J. Bassett, chairman)
Journal Study (Herman Skolnik, chairman), which evolved in the same year into the Publications Committee (Herman Skolnik, chairman)
Papers Review (Gerald Jahoda, chairman)
Revision of "Titles of Papers" (Robert A. Chisholm and Richard A. Hazen)

In that year, further revision of the Bylaws took place resulting in the elimination of appointments of Councilors and Alternate Councilors by the Executive Committee. Henceforth, Councilors and Alternate Councilors were elected like all other Divisional Officers. The revision also eliminated Members-at-Large from the Executive Committee. It also provided continuity as well as vitality to other Committees by limiting appointments to a specified term and by allowing for regular turnover of members with appropriate rotation.

On January 16, 1959, Ben H. Weil coordinated a Division-sponsored visit to Chemical Abstracts Service (CAS) for editors of chemical-company abstracts bulletins. A tour was conducted of the CAS building on The Ohio State University campus. In September 1959, the ACS Board of Directors approved a new journal on chemical documentation. Patient negotiations and cooperation on the part of many people were guided by Herman Skolnik. The Division had long sought to find a medium for publication of worthwhile chemical documentation papers, particularly those presented at its own meetings.

In 1959 a new Committee was established:

Committee on Instruction in Chemical Literature (Melvin G. Mellon, chairman).

It was to serve for a few years as a joint Committee of the Division and the Division of Chemical Education.

The 1961 Divisional Chairman, Herman Skolnik, described chemical documentation as a discipline of chemistry still in the throes of growing toward maturity. In a scientific discipline, he characterized this by three conditions:

- a continuing tradition of responsible authorities
- a technical literature
- an educational curriculum

He further elaborated that the Division had become a forum for a continuing tradition. The *Journal of Chemical Documentation* became a reality

in 1961, fulfilling the second condition. The third condition remained to be met.

In 1961, the Executive Committee began recognizing Divisional past-chairmen by presenting them with an ACS lapel button "PAST CHAIRMAN". This tradition was made retroactive to 1950 and continues to this day.

In 1962 two new Committees were authorized:

Committee on Awards and Recognition (Robert J. Kyle, chairman)

Committee on Section Liaison (Fred A. Tate, chairman)

A Bylaw change was initiated to include the Editor of the *Journal of Chemical Documentation* as an *ex officio* member of the Executive Committee. While it was recognized that the journal was not a Divisional publication, the journal still would be the outlet for most papers presented before the Division.

The 1962 Divisional roster had 1,081 members.

Over the years, a number of Committees were established, some changed names, and others disappeared or became inactive. Therefore, it would be useful to have a snapshot of a total picture in one year, e.g., in 1963:

Committees and their chairmen:

Awards and Recognition	Robert J. Kyle
Bulletin	Virginia Valeri
Bylaws	Gerald Jahoda
Chemical Documentation	Helen F. Ginsberg
Instruction in Chemical Literature	Waldemar T. Ziegler
Members Activities and Interests	Robert J. Kyle
Membership	James G. Van Oot
Nominations	Howard T. Bonnett
Photocopy Service	Eugene Garfield
Procedures Manual	Ben H. Weil
Program	Carleton C. Conrad
Publications	Herman Skolnik
Section Liaison	Fred A. Tate
Titles of Papers	George F. Lewenz
Translations	Kurt Gingold

In 1963, several projects were explored, including:

- incorporation of Division (for which no action was ever taken)
- representation of Division in the American Association for the Advancement of Science (AAAS) Section on Information and Communication
- cooperation with Chemical Abstracts Service

(CAS) on CAS better serving Divisional interests and needs

In 1964, the AAAS officially approved the Division's application to become affiliated with AAAS, Section T - Information and Communication. This entitled the Division to one representative on the AAAS Council. Ben H. Weil was appointed as Divisional representative. He wrote an article on the Division which was published in the March 13, 1964, issue of *Science* [Ref. 8]. This association lasted till 1968, when it was concluded to be no longer beneficial.

In 1966, the Division was selected by the ACS Washington Office to serve in a pilot project. Its objective was to determine what automated services the Society could furnish its Divisions, e.g., printouts for a divisional directory, mailing labels for divisional bulletins, addressed envelopes for ballots, etc.

The Spring 1967 issue of *Chemical Literature* included an obituary for one of the most active members of the Division since 1950. Tibor E. R. Singer, passed away in December 1966. He served long and well on the Program Committee, presented many papers, and organized several symposia.

At the 155th ACS National Meeting in San Francisco in April 1968, a suggestion was recorded that the Division's name be changed to "Division of Chemical Information" or "Division of Chemical Documentation".

In 1968 a Liaison Representative (Robert E. Maizell) to the American Society for Information Science (ASIS) was appointed. Also, a new Committee was established:

Long Range Planning Committee (Peter F. Sorter, chairman).

This Committee as such lasted only about a year and in 1970 was converted into a permanent Program Committee which was authorized by a 1969 Bylaw change. That, in turn, freed the Divisional Chairman and Chairman-Elect from the primary responsibility of program planning.

In 1971, a Long Range Planning Committee under the chairmanship of James E. Rush was reestablished to plan for the future on an orderly basis. The Divisional Councilor, Carlos M. Bowman, was appointed to the ACS Committee on Divisional Activities (DCA). Also, two new Committees were formed:

Committee on Audio-Visual Matters (renamed Continuing Education Committee in the same year) (Margaret H. Graham, chairman)

Committee on Public and Professional Relations (Bernard S. Schlessinger, chairman)

The Division conducted a salary survey of its members, a "first" for the Division.

A 1972 report by the Long Range Planning Committee, chaired then by Judy E. Davis, included recommendations such as:

- Divisional meetings should be directed at management level people as well as those doing original work
- local meetings should receive more attention
- conference-type and joint meetings with other societies should be encouraged
- consideration should be given to "what the Division does for its members"

The Division reestablished liaison with both the ASIS and the Special Libraries Association (SLA). Steps had been initiated to have "chemical information specialists" recognized as a job category in the ACS Employment Clearinghouse.

In the Fall of 1972 the Division mailed a questionnaire to the members trying to find out what activities had been considered as most useful and to solicit suggestions for the future. The results were tabulated and published in the Spring 1975 issue of *Chemical Literature*.

When in 1973 Peter Lykos initiated action to form a new ACS division, Division of Computers in Chemistry, James E. Rush contacted him and proposed that the new group join the already established Division of Chemical Literature to form a single division of broader scope, larger membership, and greater strength.

The new group, however, applied for independent recognition. The ACS Council in April 1974 approved the Division of Computers in Chemistry on a probationary basis. Full Divisional status was granted two years later.

The Division of Chemical Literature recognized that the new Division would include a broad coverage of computer activities such as simulation, modeling, computer-assisted instruction, and management; yet it noted potential overlap in, for instance, information storage and retrieval, especially online. Our Division decided to monitor the new Division's papers and foresaw future joint meetings and cooperative programming.

Discussion ensued about a new name for the Division. The three final candidate names were:

Division of Chemical Information
Division of Chemical Information Science
Division of Information Science in Chemistry

Finally, "Division of Chemical Information" was chosen as the new name. It was approved by the ACS Council on April 9, 1975, at the 169th ACS National Meeting in Philadelphia. At that time, the Division had 918 members and 134 affiliates for a total membership of 1052.

3. Symposia and Sessions at the ACS National Meetings, 1949-1975

The Beginning and the Early Years

The Division's first technical sessions were held at the 115th ACS National Meeting in San Francisco in March 1949. Three symposia were presented:

- The University Library as an Aid to Scientific Work (4 papers, Norman C. Hill, presiding)
- Literature Sources of Information on Western Chemical and Process Industries (3 papers, John Callaham, presiding)
- Trends in Indexing, Classifying, and Utilizing Chemical Literature (8 papers, James W. Perry, presiding)

The third symposium almost exclusively dealt with the experiments on the use of punched cards. One sorting machine was described that could sort cards with then amazing speed of 20,000 cards per hour.

The first meal sponsored by the Division was a luncheon attended by 43 people on March 29, 1949. At this event, G. Malcolm Dyson of Loughborough, England, the inventor of the Dyson chemical notation and later Director of Research at Chemical Abstracts Service, was the guest of honor. He congratulated the Society on the formation of the Division of Chemical Literature, stating he knew of no other chemical organization in the world which had recognized the broad importance of documentation by forming such a division.

From bibliographies of Divisional papers published in 1954 for the period 1943-1953, and in 1967 for the period 1943-1964, data can be derived on a total number of papers presented in those early days, as well as on who of the members were most active. The following summaries provide that information.

In the period 1943-1953 (including meetings of the Chemical Literature Group), 470 papers were delivered and the most prominent and prolific authors were:

Perry, James W.	25 papers
Smith, Julian F.	11
Crane, E. J.	10
Hill, Norman C.	10
Alexander, Mary	8
Doss, Milburn P.	8
Dyson, G. Malcolm	8
Egloff, Gustav	7
Singer, Tibor E. R.	7
Weil, Ben H.	7

For the period 1943-1964 (again including meetings of the Chemical Literature Group), 1486 papers were presented, and the following were the most active authors:

Perry, James W.	44 papers
Smith, Julian F.	27
Weil, Ben H.	27
Singer, Tibor E. R.	21
Crane, E. J.	19
Kent, Allen	17
Skolnik, Herman	17
Dyson, G. Malcolm	16
Stephens, Irlene R.	14
Heumann, Karl F.	13
Bernier, Charles L.	10
Cortelyou, Ethaline H.	10
Friedenstein, Hanna	10
Frome, Julius	10
Garfield, Eugene	10
Hill, Norman C.	10
Hoseh, Mordecai	10
Welt, Isaac D.	10
Casey, Robert S.	9
Doss, Milburn P.	9
Mellon, Melvin G.	9
Oatfield, Harold	9
Spitzer, Ernest F.	9
Waldo, Willis H.	9
Alexander, Mary	8
Bonnett, Howard T.	8
Egloff, Gustav	8
Fletcher, John H.	8
Schaler, Charlotte	8
Stevens, Leo J.	8
Taube, Mortimer	8
Whaley, Fred R.	8

These were the pioneers in the real sense of the word. There were others who investigated and introduced new approaches to handling chemical information in their companies or information services: Madeline M. Berry, Carleton C. Conrad, John H. Fletcher, Dean F. Gamble, Harriet A. Geer, Margaret H. Graham, Howard S. Nutting, Austin M. Patterson, Byron A. Soule, and Fred A. Tate. Their names as well as those

of other pioneers appear on the rosters of Officers and Councilors in **Appendices 2 and 3** (pages 89 and 90) and in the listings of symposia organizers in **Appendices 4 and 5** (pages 91 and 92).

General Characteristics

A detailed list of symposia and general sessions at the ACS National Meetings for the 1949-1975 period is presented in **Appendix 5** (page 92). The information given includes the number of papers in each symposium or session, the name of the presiding chairman, and the name of the cosponsoring ACS Division or ACS Committee, if applicable.

The Division took part in all but three of the 55 numbered ACS National Meetings in that period, 115th through 169th. In two consecutive years, 1963 and 1964, there were three numbered ACS National Meetings each year, instead of the usual two. The Division did not participate in the 146th ACS National Meeting in Denver in January 1964 (which was one of the three in that year), in the 159th ACS National Meeting in Houston in February 1970 (since it participated in the ACS/CIC Joint Conference in Canada in May 1970), and in the 165th ACS National Meeting in Dallas in April 1973 (since it had its own meeting that month in Columbus, Ohio).

The total number of papers presented in the 1949-1975 period was 1,927. The two meetings with the record number of Divisional papers were:

128th, Fall 1955 - Minneapolis, 68 papers
130th, Fall 1956 - Atlantic City, 73 papers

Some topics presented in these years have never faded away and are being discussed to this day just as they were 50 years ago. Admittedly, the problems and solutions are different, because of the evolving laws and customs, increasing application of mechanized and electronic methods, and changing interactions between scientists at large, information professionals, and the governments worldwide.

These perennial topics are:

- patents
- copyright
- education
- nomenclature
- Chemical Abstracts (CA)

On the topic of education, discussion centered primarily on courses, formal and informal, at universities and colleges. A gradual shift of terms occurred from "chemical literature" to "chemical documentation" to "chemical information".

The subject of nomenclature as a method for unequivocal communication of chemical substance information was hotly discussed. The pros and cons of various needs and uses of trivial and systematic names were debated. The ACS has always had a Committee on Nomenclature for whom the Division provided formal and informal forums for their reports. Every pioneer in this field, starting with E. J. Crane and continuing with Austin M. Patterson, Howard S. Nutting, G. Malcolm Dyson, W. Conard Fernelius, and Kurt L. Loening, spoke before the Division at one time or another.

The last topic, Chemical Abstracts and Chemical Abstracts Service (CAS) as it was instituted in 1956, was in one form or another on the program of almost every meeting. Every aspect of CAS activities was reported at one time or another, including coverage of specific chemical fields, mechanization and computerization of production operations, description of publications and services, and planned expansion.

From the mid-1960's, CAS regularly conducted CAS Open Forums at the ACS National Meetings. They were not officially part of the Divisional program, but their timing was coordinated with Divisional activities. Many members participated and did not shy away from expressing their opinion and concerns.

It should be noted that almost every ACS National Meeting had one or more Divisional general sessions. These included papers on individual subjects which could not be grouped under a common theme. Yet, they were important as they often reported breaking new ground or announcing a significant advance. Frequently, such a single paper became a precursor of a large number of papers which appeared as the field developed. Then such papers were grouped and presented under a specific symposium topic.

It is of interest to review programming trends over the years and to list the most popular topics covered by symposia in each succeeding decade.

In the 1940's (including the activities of the Chemical Literature Group), the Division learned about and discussed:

- abstracting, indexing, classifying, and coding
- punched card applications
- sorting and scanning devices
- chemical notation systems
- record keeping
- technical writing
- literature of specific fields and countries

By far the largest number of papers was on punched cards. Punched cards, and other cards such

as optical cards, were quite fascinating to utilize in indexing literature and compiling data on chemicals and processes. Many of the papers on that topic were reports of the ACS Committee on Punched Cards.

The ability to mechanically manipulate punched cards prompted the investigation into notation systems or ciphers. These could replace polysyllabic Geneva-system names with unique linear expressions consisting of letters, numerals, and punctuation marks, and yet describe uniquely the full structure of a compound. By 1951, nine such notations were proposed. Dyson and Wiswesser notations are two examples. Digital computers potentially capable of revolutionizing methods of indexing and retrieval of chemical information were first discussed in 1949.

The topics of record keeping and technical writing were the outgrowth of increasing volumes of data and the resulting requirement for organization and accurate reporting. The communication, verbal as well as printed, became more confusing, as new fields of endeavor were investigated and new jargon was generated accordingly.

Papers on the literature of specific fields provided sources of information on specific materials and processes such as those related to plastics or textiles, rather than giving hints how to find specific information.

In the 1950's, the topics discussed were:

- communication of chemical information
- searching techniques and aids
- pharmaceutical and medicinal literature
- industrial information activities
- foreign chemical literature
- language and translation problems
- microdocumentation

Chemical information had become more of a household word. Papers were presented to national and international audiences on efficient methods of communicating research results in textual as well as graphic form.

As electronic digital computers became available, more and more studies were reported on their application to chemical literature searching. The ACS Committee on Punched Cards was renamed the Committee on Scientific Aids for Literature Searching. In 1956, the Division established its own Committee on Aids to Chemical Documentation which conducted open forums.

The increased medical research and development of drugs prompted many investigations into novel

ways of recording and retrieving chemical and biological data. Pharmaceutical companies reported success with centralization, coordination, and integration of their files. Concerns were expressed about toxicity data. Some government agencies, such as the Food and Drug Administration (FDA), reported on their methods for handling data.

In that period, industrial information activities received much attention. Organizations reported on improved communication of technical information within industrial research groups. Individual companies created technical information groups and services, and thus information specialists or information intermediaries came into being. Esso, in 1957, formed its Technical Information Division.

In the 1950's more was published in languages other than English than it is today. Consequently, foreign languages received attention, especially with respect to problems of translation, transliteration, foreign abbreviations, and language instruction. Early attempts to mechanically translate technical literature were described. The launching of Sputnik in 1957 created an unprecedented interest in the Russian language and in Russian technical literature.

The growth of printed publications, primary and secondary journals alike, research reports, and patents, and the scarcity of library shelves gave impetus to the development of all types of microforms such as microcards, microfiche, and microfilm. Experiences in producing, using, and maintaining them against the background of costs and benefits were reported.

In the 1960's the topics were:

- chemical structure searching
- vocabulary control and thesaurus
- machine-produced publications and indexes
- mission-oriented literature searches
- specialized information systems and centers
- selective dissemination of information (SDI)
- value and cost of information

First attempts to code chemical structures for the specific purpose of retrieving structures and substructures by computer were reported in the late 1950's, but many more were described in the 1960's. Innumerable techniques involving fragment coding, connection tables and connectivity matrixes, and line notations were investigated, tested, and proven successful within a given company's environment. The National Research Council (NRC) investigation of chemical notation systems was reported. The CAS Registry System, based on connection tables, and the ISI's Index Chemicus Registry System, based on Wiswesser Line Notation (WLN), became operational.

As the literature searching utilized more and more mechanized aids and as profiles to retrieve the relevant information had to become relatively precise, the need for fairly comprehensive standardization and vocabulary control was examined. Various dictionaries, lists of descriptors, and thesauri were described in detail.

The big innovation of the 1960's was the machine production of printed publications and indexes. KWIC, KWOC, and even double KWIC indexes were produced. These were first exemplified by CAS' *Chemical Titles*, and ISI's *Science Citation Index*. ISI's *Rotadex* was an example of rotated molecular formula index. Design and implementation of mechanized systems to produce such publications were described. The key to success was that from a single data entry multiple products could be derived. In other words, creation of a database could yield individually tailored publications and products.

Mission-oriented concerns first led to the need of searching interdisciplinary databases and then to the creation of mission-oriented bibliographic services. Specialized information systems such as those of the Department of Defense (DOD), National Library of Medicine (NLM), and National Aeronautics and Space Administration (NASA) are examples.

Computerized literature searches led to the creation of other information centers, often within the academic communities. Their purpose was to experiment with batch searches and to provide selective dissemination of information (SDI) services.

With the mounting expenses associated with the acquisition of electronic hardware, development of software, and creation of information centers and services, questions arose about the value of such services, with emphasis on the cost of missing the needed information. Cost effectiveness was also questioned.

Highlights at Selected Meetings

At the 119th ACS National Meeting in Boston in April 1951, the Division members toured the Library of the Massachusetts Institute of Technology (MIT).

At the 120th ACS National Meeting, which was the Diamond Jubilee Meeting, in New York in September 1951, the Division presented three symposia on "Mechanical Aids to Chemical Documentation", "Communication of Chemical Information", and "Chemical Nomenclature". The attendance averaged about 250, with a high of about 300. The luncheon speaker was Pieter E. Verkade of The Netherlands, a long-time

chairman of the IUPAC Commission on the Nomenclature of Organic Chemistry.

A 1988 review paper by Charles E. Meadow cited Mortimer Taube's paper on "The Coordinate Indexing of Scientific Fields", presented at the 1951 symposium on "Mechanical Aids to Chemical Documentation" (James W. Perry, chairman), as one of the "firsts" in the development of information science.

Within the symposium on "Communication of Chemical Information", D. H. Killeffer presented a paper entitled "We Talk to Ourselves - Too Much", commenting on the inability of scientists to explain what they were doing to laymen, and pointing out the need for a group of people who would be able to stand between and in contact with both scientists and the lay public.

For the symposium on "Chemical Nomenclature", Austin M. Patterson remarked in his introduction that the symposium was a unique event, since it constituted the first such symposium held anywhere, not counting prior conferences on chemical nomenclature. Six different countries and three IUPAC nomenclature commissions were represented among the speakers.

At that ACS Diamond Jubilee meeting, E. J. Crane, Editor of *Chemical Abstracts* since 1915 and the first elected chairman of the Division (1950), received the highest ACS honor, the Priestley Medal.

At the 124th ACS National Meeting in Chicago in September 1953, the Division included in its program an exposition with demonstrations of equipment for the preparation, reproduction, and utilization of technical information. Forty-six companies exhibited all varieties of equipment from dry-type photo copiers to microcopiers with such names as "Coxhead DSJ Machine", "Develop Combi", "EZ Sort System", "Thomas Tandem Collator", and "Stenefax".

At the 125th ACS National Meeting in Kansas City in April 1954, an interesting prediction was made that the number of known compounds in the organic chemistry field was expected to increase from about 600,000 to over 1,000,000 within the next 20 years. [The CAS Registry had close to 3,000,000 chemical substances by the end of 1974, the majority of which (over 96%) contained carbon, and only 6 years later by the end of 1980 the number rose to over 5,000,000.]

At the 126th ACS National Meeting in New York in September 1954, a symposium on "Aids to the Use of the Foreign Chemical Literature" was organized in participation with the Modern Language Association of America. The attendees were invited for an evening

demonstration of a Mechanical Translation Machine at the IBM office in New York.

At the same meeting, Tibor E. R. Singer presented a paper, coauthored with Hanna Friedenstein, Ronald M. Warren, and Albert T. Winstead, on "Preparing a Program of the Division of Chemical Literature". The paper was later published in the Spring 1955 issue of *Chemical Literature*.

At the 127th ACS National Meeting in Cincinnati in March 1955, a symposium on "New Tools for the Resurrection of Knowledge" was organized by James W. Perry and Allen Kent. A hot topic, it continued through several more meetings including the 133th ACS National Meeting in San Francisco in April 1958. Among the tools considered were notation systems, structural codes, encoders, electronic searching equipment, automatic language translation, unit concept coordinate indexing, and chemical structure display on the oscilloscope.

At the 129th ACS National Meeting in Dallas in April 1956, E. J. Crane paid tribute at the Divisional luncheon to Austin M. Patterson, former Editor and long-time consultant to Chemical Abstracts, and a pioneer in the development of chemical nomenclature.

At the 130th ACS National Meeting in Atlantic City in September 1956, Chemical Abstracts observed its 50th anniversary by presenting a symposium on CA policies, production, and use. At the same meeting, there was an open discussion on documentation needs of ACS members, organized by a newly appointed Divisional Committee chaired by Allen Kent.

At the 134th ACS National Meeting in Chicago in September 1958, papers in the symposium on "Organic Chemical Nomenclature" not only discussed specific fields (boron and phosphorus compounds, steroids, vitamins, carbohydrates, and polymers), but reported on the French, Japanese, German, and Russian chemical nomenclature and on the activities of national and international committees. At an informal evening session devoted to the comparison of the U.S.S.R. and U.S. scientific literature, two Russian visitors, Victor V. Kafarov of the All-Union Institute of Scientific and Technical Information (VINITI) of the U.S.S.R. Academy of Sciences, and Sergei J. Komov of the Committee of Invention and Discovery of the U.S.S.R. Council of Ministers (equivalent to the U.S. Patent Office) told the attendees that scientific literature abstracting services in the U.S.S.R. faced the same challenges as their U.S. counterparts. It was pointed out, however, that the Soviet Union's patent system differed by giving the inventor either a patent, i.e., exclusive right of invention, or an author's certificate

which assigned the invention to the state as its property. A third Russian visitor, K. Postnova, represented the Chamber of Commerce in Moscow.

At the 136th ACS National Meeting in Atlantic City in September 1959, Herman Skolnik chaired an open meeting of the Committee on Chemical Documentation to discuss chemical literature problems. This open meeting of the Committee eventually became a regular feature at almost every meeting for the next 10 years. The last one was at the 155th National Meeting in San Francisco in April 1968. The consecutive chairmen were Carleton C. Conrad, Helen F. Ginsberg, and Henry M. Kissman.

Another panel discussion, organized by J. G. Tolpin, Ben H. Weil, and Hanna Friedenstein took place on Soviet technical literature, ways and means of increasing its proper use. Two Soviet academicians, N. S. Nametkin and K. A. Andrianov, were invited to attend. Gennady M. Kosolapoff and Michael Becker served as hosts and translators for the visitors.

During another session of the same meeting, Hans Peter Luhn described the Keyword-In-Context (KWIC) index of titles, automatically processed with the aid of electronic data processing equipment.

At the 137th ACS National Meeting in Cleveland in April 1960, Division members toured the Center for Documentation and Communication Research at the Western Reserve University.

At the 141st ACS National Meeting in Washington, DC, in March 1962, during a symposium on "Education of Literature Chemists" a question was posed: "What makes a literature chemist?". Identified were training in chemistry and library science, technical writing, literature searching, foreign language, and "more", which meant on-the-job training. At that time, information retrieval and storage could only be learned on-the-job. These subjects were not taught at schools as yet, and were not considered quite respectable academically.

At the 144th ACS National Meeting in Los Angeles in April 1963, a whole day was devoted to visiting the Armed Services Technical Information Agency (ASTIA) and Douglas Aircraft Company to see "information systems in action".

At the 148th ACS National Meeting in Chicago in September 1964, an evening session was organized in conjunction with a symposium on "Mechanized Handling of Information on Drugs". This gave the opportunity to further interact with the speakers and to continue relevant discussion. At the same meeting the

report of the National Academy of Sciences/National Research Council (NAS/NRC) Committee on Modern Methods of Handling Chemical Information was discussed in detail.

At the 149th ACS National Meeting in Detroit in April 1965, the Division sponsored a trip to Chemical Abstracts Service in Columbus, Ohio.

At the 152nd ACS National Meeting in New York in September 1966, chemical nomenclature was revisited after a long absence. Reports were presented on the nomenclature of organic, inorganic, and biochemical compounds, polymers, carbohydrates, and highly fluorinated hydrocarbons. The need for users' feedback on chemical information sources was highlighted by a symposium on user evaluations.

At the 153rd ACS National Meeting in Miami Beach in April 1967, the subject of "selective dissemination of information", which became better known as "SDI", was discussed at length. This was the result of the advances in handling and extracting information from magnetic tapes.

The 154th ACS National Meeting in Chicago in September 1967 included a symposium on "Present and Future Communication within the Division of Chemical Literature". It was a reexamination of the ways the Division functioned in the past. Suggestions were offered on how to communicate better in the future. Of main concern were the development of information science as a field in its own right and the emergence of a multitude of documentation groups. It was concluded that the Division must relate to those other groups and to broader activities in the field of documentation.

At the 157th ACS National Meeting in Minneapolis in April 1969, Ralph E. O'Dette chaired an open meeting with a panel discussing "Literature and Creativity, Help or Hindrance". This form of an open discussion on broad topics was repeated at subsequent National Meetings with such themes as "How It Will Be in 10 Years?", "Information - Does It Cost What It Is Worth?", and "Information Issues and Problems". The last two were chaired by Charles E. Granito.

In May 1970, the Division participated in the ACS/CIC Joint Conference in Toronto, Canada, celebrating the 25th anniversary of the Chemical Institute of Canada (CIC). Since the CIC had no formal counterpart of the ACS Division of Chemical Literature, the Division organized and presented two symposia on communicating scientific and technical information. Among 24 speakers, there were eight Canadians reporting on their problems and solutions.

At the 160th ACS National Meeting in Chicago in September 1970, Karl F. Heumann in a paper on "How To Listen To a Paper Given Before the ACS Division of Chemical Literature" suggested that the listener should approach a spoken talk as an opening to a free-form discussion somewhat modeled after Gordon Research Conferences. He presented mechanical and organizational requirements for such a new approach.

At the 166th ACS National Meeting in Chicago in August 1973, the Division observed its 25th anniversary with an open forum and panel moderated by James E. Rush with a theme "Where to Now?". Other panelists were Florence E. Wall, Herman Skolnik, Peter B. Schipma, and Anthony E. Petrarca. The following questions were explored:

Where is the Division headed?
What should be its scope?
What should be its goal?

At that meeting, due to the concerns of many Division members about Chemical Abstracts Service (CAS) and its publications and services, a joint symposium was held with the ACS Board Committee on CAS on "Chemical Abstracts in Transition".

At the 168th ACS National Meeting in Atlantic City in September 1974, Herman Skolnik presented a paper on "The Division of Chemical Literature: A Historical Survey - 1943 to the Present" [Ref. 13].

Just how important the CAS publications and services were to the chemical information community was again illustrated by a symposium on "User Reactions to CAS Data and Bibliographic Services". Cynthia H. O'Donohue chaired this session at the 169th ACS National Meeting in Philadelphia in April 1975.

4. Special Meetings, Joint Meetings, and Regional Activities, 1949-1975

A detailed list of symposia and sessions at the special and joint meetings is presented in **Table II** (page 21), along with the number of papers and the names of organizers and chairmen.

Divisional Meetings

The first Divisional regional meeting, outside the framework of any ACS National Meeting, was held in Houston on February 25, 1955. Eight papers were presented on topics ranging from training and activities of the literature chemists to reviews on patent documentation, microdocumentation, and mechanical aids in

documentation. The papers were well received, but attendance was not large, possibly due to lack of publicity.

The next Divisional special meeting was held in Pittsburgh on January 19-21, 1958, with 157 attending. It also covered a wide range of topics from acquisition of material and copyright aspects to evaluation of information sources and information departments to available mechanized documentation equipment. An unusual feature of the meeting was a panel discussion on the future of the Division of Chemical Literature, moderated by the 1958 Chairman, Ben H. Weil. All living past-chairmen of the Division participated, E. J. Crane, James W. Perry, Julian F. Smith, Robert S. Casey, Byron A. Soule, Milburn P. Doss, Melvin G. Mellon, and John H. Fletcher, along with Hanna Friedenstein as chairman-elect.

The Winter Conference in Columbus on March 14-17, 1973, chaired by Judy E. Davis, was an experiment that grew out of the Long Range Planning Committee's recommendation. It covered the field of chemical information from a broader perspective and was organized in such a way that participants could engage in a dialog with the speakers and among themselves. Each panel in seven different technical areas, ranging from information handling in small and large industries to the operation of information suppliers and information centers to university research to copyright law revision, was skillfully moderated by a professional knowledgeable in a given area. One-hundred-and-forty seven (147) participants attended, and many also toured information services in the Columbus area: Chemical Abstracts Service, the Battelle Memorial Institute, the Ohio State University Library, and the Ohio College Library Center (OCLC).

Joint Meeting

The Division participated in the Nuclear and Engineering Science Congress in Cleveland on December 11-15, 1955. A 1-1/2 day symposium on "Literature Resources Applied in Peaceful Use of Atomic Energy" was sponsored.

Local Section Activities

The Division had realized early that only a certain number of members can regularly attend the ACS National Meetings. The Division, or rather dedicated individuals on the local scene, formed local Chemical Literature Groups as counterparts of the Division on the national level.

Table II.
Special and Joint Meetings, 1949-1975

Regional Meeting, February 25, 1955 - Houston, TX
The Activities of a Literature Chemist (Martin Padwe)
What Management Expects in a Literature Chemist (Louis Koenig)
Training the Literature Chemist (Otis C. Dermer)
Geological Literature in the Gulf Coast Area (H. B. Stenzell)
Patent Practices in Southwestern Research Institutions (Charles E. Zerwekh, Jr.)
The Present Status of Mechanical Aids in Documentation (James W. Perry)
Market Research from the Literature (Douglas Benton)
Microdocumentation (John Eben)
Regional Meeting, January 20-21, 1958 - Pittsburgh, PA
Punched Cards and Chemical Documentation (3) (Allen Kent)
Future of the Division of Chemical Literature (9) (Ben H. Weil)
General (11)
Acquisition of Material (6)
Winter Conference, March 14-17, 1973 - Columbus, OH
Information Center Outlook (3) (Gerald J. Lazorick)
Information Handling in Small Industries (3) (Hanna Friedenstein)
Outlook on Proposed Copyright Revision (2) (Ben H. Weil)
Information Supplier Outlook (3) (Russell J. Rowlett, Jr.)
New Directions in University Research (3) (Anthony E. Petrarca)
Information Handling in Large Industries (3) (Judy E. Davis)
Information Handling in Government (3) (Saul Herner)

The first such Group was the Delaware Valley ACS Chemical Literature Group, jointly sponsored by the ACS Delaware and Philadelphia Local Sections.

Herman Skolnik, the 1960 Divisional Chairman, and Herbert K. Livingston, the 1960 Delaware Section Chairman, were most responsible for the formation of the Group. The group was formally launched on May 10, 1961, with a talk by G. Malcolm Dyson on "Fundamentals of Mechanized Chemical Documentation".

The first elected officers of the Group were:

Carleton C. Conrad	chairman
Fred A. Tate	chairman-elect
Benn E. Clouser	treasurer

In 1962, a new Chemical Literature Group became active in the ACS Chicago Local Section. This Group evolved from the Midwest Science Information Club, organized two years earlier by Walter Southern, Howard T. Bonnett, and Frederick K. Broome.

The Division established the Section Liaison Committee in 1962 with the following goals:

- to provide potential speakers to Local Sections on various aspects of chemical literature
- to work with Local Sections in planning

programs on chemical literature
• to aid in formation of local chemical literature groups

The ACS Columbus Local Section organized a panel discussion on "Problems in Finding and Using the Chemical Literature", chaired by Kurt L. Loening, on May 18, 1962.

ACS Regional Meetings

While the regional meetings of the ACS Local Sections had a long history, most of the formalized ACS Regional Meetings started in the 1960's (Middle Atlantic in 1963, Great Lakes in 1964, Midwest in 1964, and Central in 1968). As with the Local Section meetings, the Division was interested in promoting programs on chemical literature, but had no organizational resources to do that formally. Therefore, the Division depended on individual members to become responsible for promoting, organizing, and chairing the chemical literature or documentation symposia.

A complete list of participation in the ACS Regional Meetings is not available, but representative examples for the period 1949-1975 are listed in Table III (page 23).

A most active group was that associated with the Middle Atlantic Regional Meeting (MARM), primarily due to the large concentration of active members of the profession in that geographical area.

5. Educational Activities, Workshops, and Seminars, 1949-1975

Long before the formal organization of the Division in 1948, concerns were expressed by chemistry educators and researchers on educating undergraduate and graduate students to utilize chemical literature. Two 1937 papers presented at the 93rd ACS National Meeting in Chapel Hill, "Acquainting the Undergraduate with the Chemical Library" and "Use of References and Collateral Readings in Inorganic Chemistry", were examples of such concern.

The seminal 1943 paper by Gustav Egloff, presented at the 105th ACS National Meeting in Detroit, provided impetus for the formation of the Chemical Literature Group. Clearly identified was the "lack of fundamental training in the use of chemical literature".

When the Division was formed in 1948, there was no clear reference in the Bylaws to initiate educational activities. Yet, the Division's role was interpreted as providing assistance to the laboratory chemists in their own work with the literature, and providing a forum for the exchange of knowledge and techniques facilitating the use of chemical literature.

Early papers presented before the Division often referred to the topic of instruction or instructional materials, for example, "Training the Student in the Use of Chemical Literature" and "Searching German Chemical Literature".

In 1953 during the week of April 13-18, the Division joined in the sponsorship of a "Workshop on the Production and Use of Technical Reports", held at the Catholic University of America in Washington, DC. More than 250 participants registered from the Government, and from industrial libraries and laboratories.

At the 124th ACS National Meeting in Chicago in September 1953, the Division had its own booth at a highly successful exhibition held in conjunction with the symposium on "Equipment for the Preparation, Reproduction, and Utilization of Technical Information".

At the 127th ACS National Meeting in Cincinnati in March 1955, the Division presented, jointly with the ACS Division of Chemical Education, a symposium on "Training of Literature Chemists" (Melvin G. Mellon,

chairman). Specific topics included training in colleges and universities, on-the-job training in industry, the role of library schools, and careers such as abstractors and indexers.

At the 128th ACS National Meeting in Minneapolis in September 1955, the Executive Committee discussed "possible activities to promote the choice of chemical literature as a career, particularly for women".

In 1956, the ACS Advances in Chemistry Series No. 17, "Training of Literature Chemists" (Melvin G. Mellon, editor) was published. It contained the seven papers presented before the Division in 1955.

In the Fall 1957 issue of *Chemical Literature*, Ben H. Weil reviewed the 2nd edition of "A Guide to the Literature of Chemistry" by E. J. Crane, Austin M. Patterson, and Eleanor B. Marr (John Wiley, New York), praising the book. He commented on what a tremendous growth had occurred in the 30 years since the first edition and on the new attempts to cope with it, among them the efforts of the Division itself.

At the 133rd ACS National Meeting in San Francisco in April 1958, the Executive Committee authorized approaching the Division of Chemical Education with a proposal to form a joint committee on chemical literature courses. This committee would study the existing courses, prepare a suggested course outline, set up minimum library holdings necessary for such courses, and work toward the preparation of course requirements needed for approval by the ACS.

In 1959, the Divisional Chairman, Hanna Friedenstein, included among the Divisional goals "instruction in chemical literature in all ACS accredited schools". She repeated that Division members felt strongly that all chemists should receive instruction in the effective use of the chemical literature as part of their college education. In that year, for the first time, a dedicated Committee was established:

Committee on Instruction in Chemical Literature (Melvin G. Mellon, chairman).

Later in the year it evolved into a joint Committee of the Division of Chemical Education as well. In February 1960, the Committee began a survey of training in the use of chemical literature in the U.S. by mailing a questionnaire to about 600 colleges.

At the 139th ACS National Meeting in St. Louis in March 1961, the Committee reported on the completion of this survey of 330 responding schools that taught chemistry and chemical engineering. More than 96% were teaching the use of the chemical literature, but only

Table III.
Symposia at the ACS Regional Meetings, 1949-1975

5th Middle Atlantic, April 1970 - Newark, DE
Chemical Documentation. General (10) (Herman Skolnik; Paul N. Craig)
Information System Design (8) (Melvin L. Huber; Paul N. Craig)
Polymer Nomenclature (5) (Herman Skolnik)
3rd Central, June 1971 - Cincinnati, OH
Chemical Documentation (7) (Anthony E. Petrarca)
3rd Northeast, October 1971 - Buffalo, NY
Wordage Problems: Amount, Languages, Access (8) (Charles L. Bernier; Russell J. Rowlett, Jr.; Peter F. Urbach)
General (5) (Charles L. Bernier)
7th Middle Atlantic, February 1972 - Philadelphia, PA
Chemical Documentation (19) (Herman Skolnik; Charles E. Granito; G. D. Little; Bruno M. Vasta)
4th Northeast, October 1972 - Hartford, CT
Information Retrieval (3) (Robert E. Maizell)
8th Middle Atlantic, January 1973 - Washington, DC
Chemical Documentation (16) (Herman Skolnik; Bruno M. Vasta)
Panel Discussion: Current Status of Information Programs Concerned with Environmental Quality (Henry M. Kissman)
5th Central, May 1973 - Cleveland, OH
Chemical Literature (8) (M. Parsons)
9th Middle Atlantic, April 1974 - Wilkes-Barre, PA
Informational Groups in Chemical Companies - Services, Special Systems, and Research and Development (10) (Herman Skolnik; Barbara A. Montague)

about 40% taught formal courses. Others taught by course projects, assigned reading, reports, term papers, and the like. While the proportion of schools giving some instruction was high, there was evidence that in many cases the quality of this instruction was not good.

As a follow-up of the survey, the Division jointly with the Division of Chemical Education organized at the 141st ACS National Meeting in Washington, DC, in March 1962, a symposium on the "Education of Literature Chemists" (Melvin G. Mellon; Willis H. Waldo, chairmen). One paper by Elbert G. Smith specifically suggested that new methods of chemical information retrieval should be part of a college chemistry curriculum.

In 1962, Waldemar T. Ziegler succeeded Melvin G. Mellon as chairman of the Committee on Instruction in Chemical Literature. Its task was reaffirmed as being concerned with collecting information on and helping

to improve college and university instruction of chemists and chemical engineers in the use of chemical literature. This included the desirability of developing a curriculum and perhaps setting standards as well.

At the 155th ACS National Meeting in San Francisco in April 1968, a tutorial session (conducted by Elbert G. Smith) on the Wiswesser Line Notation (WLN) took place. Earlier a considerable discussion was held at the Executive Committee's level on whether the Division should sponsor such a tutorial in the first place. At that time the matter of using the WLN was still controversial and some members wished to avoid any possible perception that the Division was actually approving this notation.

At the 156th ACS National Meeting in Atlantic City in September 1968, yet another joint symposium with the Division of Chemical Education was presented on "Training Chemists in the Use of the Chemical Litera-

ture" (Gerald Jahoda, chairman). One paper summarized the results of an earlier survey on the status of chemical literature teaching practices in the U.S. chemistry departments with graduate programs. A decline in the number of chemical literature courses was ascribed to a faculty preference for integration of chemical literature in other courses and to a belief that chemical literature was less important than other courses.

A tutorial on available computer programs for information retrieval (chemical structures, physical data, analytical data, document processing system) was conducted by Freeman H. Dyke, Jr., at the 158th ACS National Meeting in New York in September 1969.

In 1971, the Division reinstated the Committee as Committee on Continuing Education (Margaret H. Graham, chairman).

The Committee took note of comments and suggestions offered by the members in conjunction with the 1971 salary survey. Mentioned were:

- continuing education programs
- courses at affordable prices
- education programs oriented toward modern information services, including their management techniques
- courses on utilization of information resources for bench chemists and information scientists

In spite of apparently high interest in continuing education programs, when two workshops on "Introduction to Computers" and "Fundamentals of Indexing" were conducted at the 168th ACS National Meeting in Atlantic City in September 1974, the attendance was disappointingly small. Similar workshops planned for the 169th ACS National Meeting in Philadelphia in April 1975 had to be cancelled.

6. Publications, 1949-1975

Chemical Literature Bulletin

At the 116th ACS National Meeting in Atlantic City in September 1949, James W. Perry and Ben H. Weil were authorized to collect items of interest to the Division, and to issue a news bulletin to Division members about four times a year. Ben H. Weil was appointed the Editor of the bulletin, named *Chemical Literature* (with a byline "News Bulletin of the ACS Division of Chemical Literature"), which made its debut in November 1949. It was five-pages long and contained an inaugural editorial, articles on program plans for the next two Divisional meetings, a "1950

Dues Now Due" notice, news notes, and a two-page "Annotated Bibliography on Chemical Documentation", contributed by Mary Alexander, Milburn P. Doss, Frances Jenkins, Arthur B. Johnson, and Julian F. Smith.

With Issue No. 2 of Volume 2 (Spring 1950), the "Annotated Bibliography on Chemical Documentation" was divided for the convenience of the readers into several sections:

- chemical terminology
- presentation of data
- reproduction of data
- classifying, indexing, coding
- sorting
- searching, abstracting
- library operations
- miscellaneous

In 1950, the Executive Committee approved the carrying of advertisements in the bulletin. Three advertisements from a book publisher, a serials bookseller, and a translation service appeared in the Winter 1950 issue. The Spring 1951 issue included an article by E. J. Crane entitled "Are Abstracts Expensive?". The Fall 1951 issue had an article by Ben H. Weil on "Preparation of Scientific and Technical Papers".

A complete set of Divisional abstracts for a forthcoming ACS National Meeting was first included in the Fall 1951 issue and so was the "1951 Directory of Members and Associates". Ben H. Weil contributed an ode:

"The chemical literature worker
Delves deep into journals and books,
But unless he is wise
His work testifies
To the references he overlooks.

Oh chemical literature worker,
Adrift on a deep sea of lore,
Take heed while you may
And go not astray,
For whatever you find, there is more."

The Winter 1951 issue introduced a new feature "Know Your Officers", a list of biographies of Divisional Officers. The Summer 1952 issue reported on the Executive Committee's lengthy discussion on the Divisional publication policy, especially with respect to the publication of papers presented before the Division, on the future of the bulletin, and on the role of preprints and photocopies. This eventually led to a full-fledged article by Ben H. Weil on "Division Publications" in the Spring 1953 issue. He concluded that *Chemical*

Literature would remain a "news bulletin", and that one could expect the publication pattern of Divisional papers to evolve into their regular inclusion in the ACS Advances in Chemistry Series or in a new self-sustaining ACS journal.

In the Winter 1954 issue, Ben H. Weil reviewed the performance of *Chemical Literature* and indicated some financial strains on the Divisional resources since the bulletin has never been a self-supporting publication. It also depended on the generosity of several industrial companies, especially the employers of the Editor.

The Winter 1957 issue was the last one edited by Ben H. Weil. He concluded his editorship with a note of appreciation "Vale!". Ethaline H. Cortelyou became a new Editor for one year only (1958), but took the reins again for the period 1965-Spring 1969.

Table IV (page 26) lists all the Editors of *Chemical Literature* (renamed *Chemical Information Bulletin* in 1975) for the period 1949-1993. The Editors' employers are listed for a good reason. The Division could not have afforded to publish the bulletin without their assistance. In addition to providing editorial staff time, these organizations provided the typing, cold-type composition or keyboarding, and the required layout. Especially unique has been the support provided by the Institute for Scientific Information (ISI). Since 1973 to this day, that is, for a period of over 20 years ISI has aided the Divisional bulletin.

In the Spring 1964 issue, Ben H. Weil added a "reprise" to his 1951 ode:

"But now the strident computer
Does this searching so very much cuter -
With a click and a hiss,
Scarcely ever a miss -
And it hardly needs man as a tutor."

That, in turn, brought a "reprise" to reprise by Elizabeth G. Rose in the Summer 1964 issue:

"Oh dear Mr. Weil, you exaggerate.
No computers have lore that is innate.
Your same human searcher
Must put in all its nurture:
The machine only speeds up the rate."

The "Annotated Bibliography on Chemical Documentation" was published in the Fall 1964 issue for the final time. It was felt at that time that the bibliography might be an unnecessary duplication. The majority of members had access to developments in the informa-

tion field through the membership in other professional associations such as the American Documentation Institute (ADI) or the Special Libraries Association (SLA). Eventually, in 1966 the Division, along with other information-related professional societies, founded a new abstracting journal, *Documentation Abstracts*, which responded to the need of locating information about new documentation and information work.

Once the issue of where to publish papers presented before the Division was resolved by the establishment of a new ACS journal, *Journal of Chemical Documentation*, the Divisional bulletin, *Chemical Literature*, continued to serve the members by publishing:

- meeting papers information, such as detailed programs and abstracts of the forthcoming Divisional papers
- detailed information about Divisional Officers, Committee Chairmen, and other Functionaries
- useful information about the Division's business, such as minutes of the Executive Committee meetings and of the Divisional Business Meetings
- proposed and approved versions of the Divisional Bylaws
- a Membership Directory

During the years 1950-1964, the bulletin was published four times a year, and in the period 1965-1977, twice a year.

The last issue of *Chemical Literature* under that name was Issue No. 1 of Volume 27, edited by Gabrielle S. Revesz and published in Spring 1975. It contained minutes from the September 1974 Executive Committee meeting and the Divisional Business Meeting; a message from Bruno M. Vasta, the 1975 Chairman-Elect; a summary of the 1974 Committees' activities; the Treasurer's report; a schedule of future meetings (1975-1980); abstracts of papers to be presented at the 169th ACS National Meeting in Philadelphia in April 1975; a list of Divisional functionaries; and six advertisements.

Bibliographies of Divisional Papers

In 1951, a bibliography was prepared by Milburn P. Doss of all the papers that had been presented before the Division of Chemical Literature and its predecessor, Chemical Literature Group [Ref. 3]. The 23-page booklet included author, company, institution, and subject indexes. It was prepared as an extra service for Division members and associates.

Table IV
Editors of *Chemical Literature/Chemical Information Bulletin*, 1949-1993

1949-1957	Ben H. Weil	Georgia Tech Engineering Experiment Station Ethyl Corporation Research Laboratories Exxon Research and Engineering Company
1958	Ethaline H. Cortelyou	Armour Research Foundation
1959-1961	Iver Igelsrud	Battelle Memorial Institute
1962-1964	Virginia Valeri	Arthur D. Little, Inc.
1965-Spring 1969	Ethaline H. Cortelyou	National Aeronautics and Space Administration National Institute of Arthritis and Metabolic Diseases
Fall 1969	Lorraine Dupuis	Wm. S. Merrell Company
1970-1972	James E. Rush	The Ohio State University
1973-Spring 1977	Gabrielle S. Revesz	Institute for Scientific Information
Fall 1977-1982	Bonnie Lawlor	Institute for Scientific Information
1983-1993	Margaret A. Matthews	Institute for Scientific Information

In 1954, Milburn P. Doss extended this bibliography to cover the period 1943-1953 and published a 46-page booklet listing 470 papers [Ref. 6]. The same indexes were provided. Full citations were given for those papers which were subsequently published in technical journals or as book chapters.

In 1967, another bibliography, this time in the form of a Keyword-in-Context (KWIC) Index to Papers, was published by George F. Lewenz and Judith A. Feltham [Ref. 9]. It was modeled after *Chemical Titles* and was, in fact, processed by Chemical Abstracts Service. The period covered the years 1943-1964 and 1486 papers were listed. In addition to a KWIC Index of titles, an author index, a journal (or book of abstracts) reference index, and full citations were provided.

Books Containing Papers from Divisional Meetings

The first Divisional contribution to the ACS Advances in Chemistry Series resulted in the publication of "Searching the Chemical Literature", ACS Advances in Chemistry Series No. 4, in 1951. Included were a collection of papers presented at the symposium on "Chemical Literature Searching Techniques" at the 117th ACS National Meeting in Detroit in April 1950, and revised papers from the symposium on the "Preparation of Literature and Patent Surveys" at the 111th ACS National Meeting in Atlantic City in April 1947. The book was so popular that it was reprinted four times. Its price was \$2 (for members \$1).

A second collection of papers, originally presented at the symposium on "Chemical Nomenclature" at the 120th ACS National Meeting in New York in September 1951, led to the publication of "Chemical Nomenclature", ACS Advances in Chemistry Series No. 8, in 1953. It brought up to date the work on inorganic, organic, and biological nomenclature, and discussed among other topics the development of chemical symbols, and the role of terminology in indexing, classifying, and coding.

In an editorial, Walter J. Murphy, Editor of *Chemical & Engineering News*, stated on August 20, 1956, while commenting on the progress in publication of the ACS Advances in Chemistry Series:

"Great credit is due the Division of Chemical Literature for pioneering, not only in the field of chemical literature, but in the broader fields of documentation. Today there is widespread interest in documentation and scientific communication, not only among literature chemists, libraries and documentalists, but in management circles as well, where "productivity of research" is a meaningful term."

In addition to publishing Divisional papers in the ACS' own Advances in Chemistry Series, enterprising members of the Division found other outlets by submitting collections of papers, some presented before the Division and some derived from other meetings, to

commercial publishers. Examples are:

"Punched Cards: Their Applications in Science and Industry" by Robert S. Casey and James W. Perry (Reinhold, 1951; 2nd ed., 1958)

"Information Processing Equipment" by Milburn P. Doss (Reinhold, 1955)

"Progress Report in Chemical Literature Retrieval" by Gilbert L. Peakes, Allen Kent, and James W. Perry (Interscience, 1957)

"Technical Editing" by Ben H. Weil (Reinhold, 1958)

In 1961, a revised and enlarged edition of the *Advances of Chemistry Series* No. 4 from 1951 was published as No. 30. To the original papers from the ACS National Meetings in April 1947 and April 1950, a symposium from the 130th ACS National Meeting in Atlantic City in September 1956 was added and all of the 31 chapters were updated.

A complete list of books related to Divisional symposia is presented in **Table V** (page 28).

Preprints and Photocopies

Associated with the inability to publish the many papers presented before the Division were various projects to make them available to members as preprints or photocopies. In 1951 and 1952, discussions centered on the fact that the Division could not sell preprints outside its own membership to help defray the cost of printing them. Furthermore, the Society journals would not be interested in publishing papers already widely distributed. Consequently, the Division decided not to engage in a paper-preprinting program. But in 1955 the question surfaced again, this time as a proposal to produce photocopies of manuscripts. The Division could establish a central service where a manuscript of each paper would be deposited after the presentation for preparation of copies on demand.

A survey of members, reported in the Spring 1956 issue of *Chemical Literature*, indicated their willingness to pay a nominal fee for copies of requested manuscripts. Subsequently, a Meeting-Paper Photocopy Service, operated by Ben H. Weil, was established on a trial basis for 1957. It proved to be a successful operation. Listings of available papers (with prices of photocopies) were occasionally published in *Chemical Literature*. For the period 1958-1964, the service was operated by Eugene Garfield.

With the appearance of the *Journal of Chemical*

Documentation as a formal medium to publish Divisional papers, the demand for photocopies slowly diminished. In 1967, the Executive Committee decided to discontinue the service, except for the papers already on deposit and listed in the "Index to Papers Delivered before the Division of Chemical Literature 1943-1964" [Ref. 9]. Papers available from the Divisional Photocopy Service were identified there, with the number of pages, so that proper payment (\$0.25 per page) could be made.

Journal of Chemical Documentation

When the Division was formed in 1948, it did not take long for it to become a forum for exchange of news and views on all aspects of chemical documentation through technical meetings and papers. However, relatively few of these technical papers could find a medium for publication. A few were published in the *Journal of Chemical Education*, *Chemical & Engineering News*, *Industrial and Engineering Chemistry*, and *American Documentation*. Some were published as chapters in books or in proceedings such as the *ACS Advances in Chemistry Series*. The bulk of the papers remained unpublished.

As early as the 121st ACS National Meeting in Buffalo in March 1952, the Executive Committee discussed at length its publication policy. The possibility of the ACS publishing a new self-supporting journal was mentioned. At the 128th ACS National Meeting in Minneapolis in September 1955, Tibor E. R. Singer discussed again the establishment of a journal to provide for publication of the papers presented before the Division.

Eventually, in 1957 the Division appointed a Journal Study Committee (Herman Skolnik, chairman), which carefully evaluated papers presented before the Division and judged most of them as meriting publication. Consequently, the Committee recommended that a new journal be established. From that Committee, the Publications Committee (Herman Skolnik, chairman) evolved. It consulted with the ACS staff and officers and finally presented its case before the ACS Board of Directors. The Board approved the publication of the *Journal of Chemical Documentation* in 1961 and appointed Herman Skolnik as its Editor [Ref. 15].

Upon taking the editorship, Herman Skolnik summarized for Division members three obligations towards the Journal:

- to conduct mature studies and research in chemical documentation
- to prepare well written and well thought out articles for the Journal
- to support the Journal through personal subscription

Table V
Books Containing Papers From Divisional Meetings, 1949-1975

“Searching the Chemical Literature”, Advances in Chemistry Series No. 4, American Chemical Society, Washington, DC, 1951, 184 pp.

“Punched Cards: Their Applications to Science and Industry”, Casey, R. S.; Perry, J. W. (eds.), Reinhold Publishing Corp., New York, 1951, 516 pp.

“Chemical Nomenclature”, Advances in Chemistry Series No. 8, American Chemical Society, Washington, DC, 1953, 112 pp.

“Literature Resources for Chemical Process Industries”, Advances in Chemistry Series No. 10, American Chemical Society, Washington, DC, 1954, 582 pp.

“The Technical Report, Its Preparation, Processing, and Use in Industry and Government”, Weil, B. H. (ed.), Reinhold Publishing Corp., New York, 1954, 485 pp.

“Information Processing Equipment”, Doss, M. P. (ed.), Reinhold Publishing Corp., New York, 1955, 276 pp.

“A Key to Pharmaceutical and Medicinal Chemistry Literature”, Advances in Chemistry Series No. 16, American Chemical Society, Washington, DC, 1956, 254 pp.

“Training of Literature Chemists”, Advances in Chemistry Series No. 17, American Chemical Society, Washington, DC, 1956, 44 pp.

“Advances in Documentation and Library Science. Vol. I. Progress Report in Chemical Literature Retrieval”, Peakes, G. L.; Kent, A.; Perry, J. W. (eds.), Interscience Publishers, New York, 1957, 217 pp.

“Punched Cards: Their Applications to Science and Industry”, 2nd ed., Casey, R. S.; Perry, J. W.; Kent, A.; Berry, M. M. (eds.), Reinhold Publishing Corp., New York, 1958, 697 pp.

“Information and Communication Practice in Industry”, Singer, T. E. R. (ed.), Reinhold Publishing Corp., New York, 1958, 310 pp.

“Technical Editing”, Weil, B. H. (ed.), Reinhold Publishing Corp., New York, 1958, 288 pp.

“Literature of the Combustion of Petroleum”, Advances in Chemistry Series No. 20, American Chemical Society, Washington, DC, 1958, 295 pp.

“Searching the Chemical Literature”, Advances in Chemistry Series No. 30, American Chemical Society, Washington, DC, 1961, 326 pp.

“Patents for Chemical Inventions”, Advances in Chemistry Series No. 46, American Chemical Society, Washington, DC, 1964, 117 pp.

“Literature of Chemical Technology”, Advances in Chemistry Series No. 78, American Chemical Society, Washington, DC, 1968, 732 pp.

In his first editorial to Issue No. 1 of Volume 1, he remarked jokingly that he had been writing it for 12 years, that is, since the Division was formed in 1949 and the obvious need for a publication medium arose.

The breadth of topics contained in the 24 papers published in the first issue is impressive:

- nomenclature
- data interchange
- patents
- editing of abstracts
- chemical literature in the Soviet Union
- photocomposition
- chemical indexing
- codes
- mechanized searching

The very first paper published in that issue was on “French Organic Nomenclature” by Noel Lozac’h.

Initially, two issues per year were planned. The flow of excellent papers was such that an immediate expansion to three issues was warranted in 1961 and to four issues per year in subsequent years. By the time the second issue was published, the number of subscriptions exceeded 1,500. Incidentally, the subscription was \$7 a year for an ACS member and \$10 for a non-member.

Starting with Volume 2 in 1962, the Journal was produced by photocomposition using a Photon machine. This was an experiment in which the ACS had been involved for some time.

A total of 59 papers were published in 1961, of which 40 had been presented before the Division. In the second volume, 71 of the 81 papers published had been on the Divisional program. The early volumes were very much dominated by chemical information papers, for the most part from the industrial sector. In the early 1970's, papers from the academic world took over the first place and by 1980 became the dominant source, the majority being concerned with computer science related to chemistry.

Although impetus for the introduction of the Journal came from the Division and until 1971 a relatively high percentage of papers came from the Divisional programs, in the 1970's the number of such papers progressively decreased, and those written for publication only progressively increased, becoming the dominant source of papers published in the Journal. Papers from outside the U.S., especially from Japan, the United Kingdom, and West Germany were growing towards the 50% participation, making the Journal internationally important.

Nevertheless, the Division has always regarded the Journal as its own, although administratively the Journal and its Editor were independent and worked with the ACS Books and Journals Division staff. A cooperative relationship was maintained by having the Journal's Editor serve as an *ex officio* member of the Executive Committee, and having the Divisional Officers and the Program Committee Chairman on the Journal's Advisory Board.

In his editorials over the years Herman Skolnik frequently referred to Divisional activities [Refs. 10-12, 16]. He made a special point in 1970, at the time the Journal was 10 years old, that as the Editor he tried to help both the Journal and the Division attain their objectives [Ref. 11].

Documentation Abstracts (Information Science Abstracts)

When in 1965 the Divisional Executive Committee decided to eliminate the "Annotated Bibliography of Chemical Documentation" section from the Divisional bulletin, *Chemical Literature*, it assigned to the Publications Committee (Herman Skolnik, chairman) a task of finding a suitable replacement. Subsequently, Herman Skolnik met with Arthur W. Elias, the Editor of *American Documentation*, published by the American Documentation Institute (ADI), and Bill M. Woods, the Executive Director of the Special Libraries Association (SLA), to discuss the possibility of the ADI's *Literature Notes* becoming a joint venture of the three organizations.

This became a reality in March 1966 when the first issue of *Documentation Abstracts*, a new quarterly abstracting journal, aimed to provide comprehensive coverage of the rapidly expanding literature of documentation and related fields, was published [Ref. 14]. The first issue, produced under the editorship of Burton E. Lamkin and published jointly by the Division and the American Documentation Institute, contained 479 citations and abstracts of articles appearing in 102 journals worldwide. Items were arranged alphabetically by author's name in 20 subject-oriented sections. The editorial was coauthored by Harold Borko, President of the ADI, and Howard T. Bonnett, the 1966 Divisional Chairman. The very first abstract was that of a paper by R. Astall on "Identifying and Locating Standards".

In May 1966 the Special Libraries Association joined the other two organizations in cosponsoring *Documentation Abstracts*. A new Editor, Isaac D. Welt, was appointed, yet he soon asked to be relieved because of his other commitments. A combined 2nd and 3rd issue was produced under the direction of Mary B. O'Hara. With the 4th issue of Volume 1, Ben-Ami Lipetz became the Editor, a post he held till 1980.

In mid-1966, a governing body, Documentation Abstracts, Inc., a non-profit corporation, was organized mainly through the dedicated efforts of Carleton C. Conrad, Joseph H. Kuney, Richard L. Snyder, and Judith A. Werdel, who were among the earliest directors.

The role of each sponsoring organization was to nominate two directors for a limited term on the corporation's Board of Directors. For the years 1966-1975, the following were the Divisional representatives:

1966	Herman Skolnik, President
1967	Carleton C. Conrad
1968-1969	Carleton C. Conrad, President
1970-1972	Ben H. Weil
1973	Carleton C. Conrad, President
1974	Lee N. Starker
1975	Carleton C. Conrad, President
	Peter F. Sorter
	Carleton C. Conrad, President
	Charles H. Davis
	Carleton C. Conrad, President
	Frederic R. Benson
	Peter F. Sorter, President
	Frederic R. Benson

In 1968, the American Documentation Institute (ADI) was renamed the American Society for Information Science (ASIS). This, in turn, led to a new name for the abstracting journal, *Information Science Abstracts*, in March 1969.

The frequency of publication was changed from four to six issues per year in 1970. In the first year 1,205 abstracts were published, in the second 1,327, and by 1975 Volume 10 had 4,210 abstracts or about 700 abstracts per issue.

7. Awards and Recognitions, 1949-1975

At the 129th ACS National Meeting in Dallas on April 11, 1956, the Division presented at a luncheon scrolls of appreciation to **Ben H. Weil** for his contributions in setting up and editing the Divisional bulletin, *Chemical Literature*, and to **Tibor E. R. Singer** for his work as Program Chairman. Ben H. Weil related an amusing incident at that luncheon. His ACS badge read simply "B. H. Weil". Another person showed up with her badge reading "Mrs. B. H. Weil". Naturally, the Divisional Chairman, Melvin G. Mellon, jumped to the conclusion that she was Ben's wife and was ready to invite her to the head table. It turned out that she, as Barbara H. Weil, was a Division member in her own right and unrelated to Ben.

At the 134th ACS National Meeting in Chicago on September 10, 1958, the Division presented a scroll of appreciation to **Evan J. Crane** for his outstanding contribution to chemical literature, namely, for his long-time editorship of Chemical Abstracts, for his many contributions to chemical nomenclature, and pioneering contributions during the formation of the Division, culminating in his service as the Division's first elected Chairman.

In 1962, a Divisional Committee on Awards and Recognition was established under the chairmanship of Robert J. Kyle to investigate possible ways of providing recognition to individual literature chemists. There is no record, however, of any awards established or recognition given until the Herman Skolnik Award was established in 1976.

Shortly after Tibor E. R. Singer's death in December 1966, a suggestion was made that a T. E. R. Singer Award be established for the best paper presented before the Division. At the 155th ACS National Meeting in San Francisco in April 1968, several papers were rated as an experiment to explore the feasibility of establishing such an award.

In May 1970, the idea was still alive, but extended into an investigation whether the award should be for the best presented paper, best published paper, or life work; whether sponsorship by a commercial organization was possible, etc. Consequently, an Award Committee (Carlos M. Bowman, chairman) was reestablished in September 1970. In March 1971, the Committee reported that, in view of the existence of the ACS Dayton Local Section's Patterson Award and the planned ACS National Crane Award, the Division should not sponsor yet another award for work in chemical literature, but should help in administering the Crane Award. In 1972, the two awards, one existing and one proposed, were reviewed by an ACS ad hoc Patterson-Crane Award Subcommittee.

Eventually, no ACS National Award in Chemical Documentation was ever created, and the ACS Dayton and Columbus Local Sections established a joint Patterson-Crane Award in 1975. In the same year, a proposal for a Divisional Award, to become the Herman Skolnik Award in 1976, was revived.

8. Social Events, 1949-1975

At almost every ACS National Meeting, the Division members enjoyed having a Divisional luncheon, usually on a Tuesday. On a few occasions only, a dinner or a social hour was held.

The luncheon speakers are listed in **Table VI** (page 31). The tradition was started with the Chemical Literature Group in 1943, long before the Division was formed in 1948. The speakers represented a broad spectrum of well informed individuals with great credentials, mostly from within the ACS membership. One can easily identify among them:

- past and future ACS presidents (Edward P. Weidlein, Joel H. Hildebrand, W. Albert Noyes, Jr., Harry L. Fisher, Wallace R. Brode, Maurice H. Arveson, Robert W. Cairns, Byron Riegel)
- editors of the ACS journals (Walter J. Murphy, Sidney D. Kirkpatrick, Richard L. Kenyon, George H. Coleman, Frederick D. Greene, Benjamin J. Luberoff)
- future Patterson Award winners (G. Malcolm Dyson, Pieter E. Verkade, E. J. Crane, W. Conard Fernelius, Melvin G. Mellon, Herman Skolnik, Eugene Garfield)
- educators (Hubert N. Alyea, Sidney Siggia)
- government administrators (Walter M. Carlson, Andrew A. Aines)
- a famous science-fiction writer (Isaac Asimov)

Table VI.
Luncheon Speakers at the ACS National Meetings, 1943-1975

106th	7 September 1943	Pittsburgh	Edward R. Weidlein
107th	4 April 1944	Cleveland	M. J. Rentschler
109th	9 April 1946	Atlantic City	Hubert N. Alyea
110th	10 September 1946	Chicago	Joel H. Hildebrand
111th	15 April 1947	Atlantic City	W. Albert Noyes, Jr.
112th	16 September 1947	New York	Colin G. Fink
113th	20 April 1948	Chicago	Franklin B. Snyder
115th	29 March 1949	San Francisco	G. Malcolm Dyson
117th	18 April 1950	Detroit	Walter J. Murphy
119th	5 April 1951	Boston	Vernon D. Tate
120th	6 September 1951	New York	Pieter E. Verkade
121st	26 March 1952	Buffalo	Sidney D. Kirkpatrick
122nd	17 September 1952	Atlantic City	William E. Hanford
123rd	18 March 1953	Los Angeles	Richard L. Kenyon
124th	9 September 1953	Chicago	George H. Coleman
125th	29 March 1954	Kansas City	Harry L. Fisher
126th	15 September 1954	New York	Donald I. Rogers
127th	31 March 1955	Cincinnati	B. D. Thomas
128th	15 September 1955	Minneapolis	Louis C. McCabe (dinner)
129th	11 April 1956	Dallas	E. J. Crane
130th	19 September 1956	Atlantic City	Wallace R. Brode
131st	8 April 1957	Miami Beach	Sidney D. Kirkpatrick
132nd	10 September 1957	New York	Gerald L. Wendt
135th	7 April 1959	Boston	Isaac Asimov
137th	7 April 1960	Cleveland	David Dietz
140th	6 September 1961	Chicago	Maurice H. Arveson
141st	22 March 1962	Washington, DC	Richard H. Belknap
142nd	11 September 1962	Atlantic City	W. Conard Fernelius
143rd	3 January 1963	Cincinnati	Perley F. Ayer
145th	11 September 1963	New York	Melvin G. Mellon
147th	8 April 1964	Philadelphia	Robert W. Cairns
148th	2 September 1964	Chicago	Walter M. Carlson
150th	15 September 1965	Atlantic City	Edward J. Brenner
155th	2 April 1968	San Francisco	Gaylord P. Whitlock (dinner)
156th	10 September 1968	Atlantic City	Byron Riegel
160th	16 September 1970	Chicago	N. B. Haney
161st	30 March 1971	Los Angeles	Sidney Siggia
162nd	14 September 1971	Washington, DC	Andrew A. Aines
163rd	11 April 1972	Boston	Frederick D. Greene
164th	19 August 1972	New York	Benjamin J. Luberoff
168th	10 September 1974	Atlantic City	Herman Skolnik
169th	8 April 1975	Philadelphia	Eugene Garfield

In 1959, at the 136th ACS National Meeting in Atlantic City on September 14, the Division celebrated its 10th anniversary with a birthday party. A cake was served during a social hour held at a location with ocean view.

In 1973, at the 166th ACS National Meeting in Chicago on August 28, the Division celebrated its 25th anniversary with a special dinner.

9. Financial Aspects, 1949-1975

In the early 1950's the only sources of Divisional revenues were the dues and the fees for advertisements in *Chemical Literature*. The annual dues were \$1 for an ACS member and \$2 for a Division Associate (non-ACS member). The first three small advertisements appeared in the Winter 1950 issue of *Chemical Literature*, after its Editor, Ben H. Weil, had found that there were no ACS regulations

prohibiting the solicitation of advertisements to help defraying the publishing expenses. John C. Lane at that time was named the Advertising Manager.

The expenses in those days were the cost of publishing *Chemical Literature*, printing ballot forms, stationery, postage, and providing members with separates of abstracts of papers to be presented at the Divisional meetings, prior to the inclusion of such abstracts in the bulletin starting with the Fall 1951 issue.

By the end of 1950, the Divisional treasury had a balance of only about \$175. With increasing membership to about 900 in 1954, the Divisional assets reached then \$1,000.

In 1953, Ben H. Weil pointed out that publishing *Chemical Literature* might cost \$300-400 per year because of a falling off in the revenue from advertisements. The only action taken then was the formation of the Finance Committee in 1954 (Madeline M. Berry, chairman).

In the Winter 1954 issue of *Chemical Literature*, Ben H. Weil further analyzed the financial performance of the bulletin and concluded that in the absence of a support from industrial companies the bulletin would be in serious financial trouble. He discussed such alternatives as increasing the membership dues and discontinuing some of the bulletin's features. Since the financial situation of the Division remained relatively stable, nothing was changed.

In 1958, the Division had a surplus of \$300 from its own Divisional meeting in Pittsburgh in January. In the late 1950's and early 1960's significant profits were realized from the photocopy service.

In 1956, the Executive Committee approved a transfer of \$1,000 to a saving account, but the first Divisional saving account was not established till 1961 when the Executive Committee came to the agreement that only working funds need be in a checking account. Helen F. Ginsberg, the 1961 Divisional Treasurer, transferred \$2,500 to a saving account which was closed in 1964. Subsequently, Barbara A. Montague, the 1965 Divisional Treasurer, opened a new saving account for \$3,000 and somewhat later invested in a small saving certificate. These investments provided the Division with additional revenues.

For 1967, the dues were raised to \$2 and \$3 for an ACS member and a non-ACS member, respectively. A new method of collecting Divisional dues stemmed

from the efforts of Carleton C. Conrad, and later of Keatha K. Krueger and Barbara A. Montague, by working with the ACS Operational Services Division to have central collection of Divisional dues done by the ACS headquarters in conjunction with the ongoing mechanization of producing membership lists and labels. In 1966, the Division participated in an ACS pilot study to centrally collect Divisional dues and produce membership lists and labels. Since 1969, the ACS has provided those services.

Between 1965 and 1972, the Divisional assets rose steadily and reached over \$6,000 in 1972. At the 161st ACS National Meeting in Los Angeles in March 1971, the Executive Committee discussed a more effective way to use the financial resources, e.g.,

- to support some of the audiovisual aids for teaching chemical literature
- to defray the costs of future experimental meetings of the Division

Among one-time revenues was a surplus of \$780 from the 1969 workshop on "Available Computer Programs for Information Retrieval" in New York and a surplus of \$966 from the 1973 Winter Conference in Columbus.

Special expenses included the support of the start-up of *Documentation Abstracts* in 1966-1968 to the tune of \$2,500 and the production of the third edition of the bibliography of Divisional papers in the form of an index to papers in 1967.

In 1975, the ACS started the Program Development Fund as financial support to enhance divisional programming at the ACS National Meetings as well as other divisional programs. The Division received \$250 for programming at each of the two 1974 ACS National Meetings and \$515 based on session attendance at those meetings, a total of over \$1,000.

IV. Division of Chemical Information, 1975-1993

1. Goals and Mission, 1975-1993

Just after the approval to change the Division name, a membership brochure revised in May 1975 restated the following interests and scope of the Division:

- organization of chemical information, indexing, abstracting, classification, and nomenclature
- mechanized information storage and retrieval techniques
- research on and evaluation of indexing and searching methods
- foreign languages and their relation to chemical documentation
- training in chemical literature
- reproduction techniques, including production and use of microforms
- presentation of data, including notebooks, technical writing, reports, patent preparation, correlation and statistical methods
- library operation and bibliographic techniques
- searching the literature
- commercial aspects of chemical literature, such as cost estimation, market analysis, advertising, and new product literature
- current awareness methods
- input-output interaction of the chemist with the computer

For April 6, 1976, the Division was invited, along with other ACS units, to submit a write-up on recent advances and future trends to be sealed in a time capsule in the wall of the New York University building. The date of this event was exactly one century to the day after the founding of the ACS.

Herman Skolnik, the author of this document, wrote in an editorial that one can wait till April 6, 2076, to find out what he wrote or read it now. The following is the full text of the sealed message [Ref. 18]:

"Chemistry became a science in the 19th century because chemists constructed a language, a system of symbols and nomenclature, on which a cumulative literature could be based. By the beginning of the 20th century, chemistry had a viable literature comprising journals, books, compendia, handbooks, and abstract services. This literature, barely large enough to fill a dozen library shelves, did not foretell a 1975 *Chemical Abstracts* containing about 300,000 abstracts of papers published in some 12,000 journals during the year.

Beginning with the expanding industrial needs of World Wars I and II and further augmented by the atomic energy and space programs, science and technology assumed a dominant role in the evolving 20th century. This role required an increasing number of scientists and engineers as reflected by an ACS membership that went from 1,800 in 1900; to 16,000 in 1920; 25,000 in 1940; 92,000 in 1960; and 110,000 in 1975. The chemical literature expanded at a somewhat faster rate, at about 8% per year or doubling every 12 years.

During this period of rapid growth, chemistry underwent an accelerating segmentation and specialization into a variety of disciplines and subdisciplines. One of these, chemical information science, took root in 1948 with the formation of the ACS Division of Chemical Literature, the 19th ACS division to be formed (there are now 28).

What chemical information science was about and the advances made in this discipline of chemistry may be gleaned since 1948 from the programs of the Division of Chemical Information (new name as of 1/1/75) and since 1960 from the pages of the *Journal of Chemical Information and Computer Sciences*. The size, growth, and complexity of the chemical literature over this period motivated the chemical information scientist's involvement in the various aspects of communicating, categorizing, correlating, indexing, abstracting, storing, and retrieving chemical information.

Significant advances made since 1948 include: design of information systems using edge-notched and optical coincidence cards and using tab cards with accounting machines; uniterm and multiterm indexing systems; notation and topological systems; chemical nomenclature systems; new molecular formula and fragmentation indexes; citation indexes; keyword indexes based on contents (KWIC) of articles, such as title, abstract and even the whole text; and the design of online computerized information systems.

Much of the activity in notation and topological systems and molecular formula and fragmentation indexes has been prompted by the failure of chemical nomenclature systems to be in harmony with the advancing frontiers of chemistry. Possibly we shall never achieve a truly systematic nomen-

clature system that can anticipate the requirements of new families of chemicals and that can be completely satisfactory for the indexing of chemicals. Yet the objective will remain worthy of our attention far into the future.

Chemical information scientists have paid considerable attention over the past several years to two problems over which they can do little other than express their opinions: the copyright controversy and the journal problem. The copyright controversy between publishers and those who photocopy rather than subscribe apparently will be solved by law someday, yet it is already becoming complicated by computer use with CRT terminals and massive printouts. The journal problem is a matter of pollution control. If the journal is an endangered species, as some scientists predict, then how do we account for its phenomenal growth to today's 40,000 scientific and trade journals, of which about one-third is pertinent to chemistry or to chemical technology? But if we cannot control the dilution of the very good scientific journals with those of relatively low quality, we at least need to seek methods for controlling the input of only meaningful and original contributions into our information and databases.

We have acquired two important tools: computers and telecommunications. In recent years, chemical information science has been linked closely to these two tools, and will continue to be so for many years to come. But so far, they have been used with relatively little creativity and minimum concern for economy and effectiveness. We have tended to be enamored with the great storage capacity and phenomenal processing and printing speeds of third generation computers and their peripherals. Thus the majority of large information systems have been designed with keyword indexes, i.e., the words in the titles and less frequently the abstracts of authors. A consequence of the marriage of computers and telecommunications has been the expanding growth of the information industry: the database producers, such as Chemical Abstracts Service, and the database broker. It is the broker, for the most part, that markets most of the databases to potential users, individuals and libraries, for online interaction.

Although approximately one million online searches were made in 1975, with a strong upward trend, we are a long way from achieving a universal information network. Our weak links are: keyword indexes, the increasing separation of database producers from users, isolation of scientists from sought for information by a maze of

terminal operating systems, and emphasis on the reference rather than the data or information in the reference.

Before we reach our utopia, a universal information network, we need to explore the fundamental nature of information. We need to create new systems that relate the unknown with the known and to design information systems that produce direct answers and data, as well as references, reliably, productively, and economically. We need to direct our research to the underlying principles that govern the properties, reactions, and uses of chemicals. Knowing goals, however, is a start in the right direction towards achieving a universal information network by or before April 6, 2076."

In September 1977, the Long Range Planning Committee, chaired by Carlos M. Bowman, published a report, which identified five major subject areas and made appropriate recommendations:

- meetings: to establish stricter quality control, sponsor a separate meeting once every 2-3 years, provide for longer tenure and continuity in the position of the Program Committee Chairman, and survey members to determine their interests and needs
- publications: to increase the frequency of publication of the *Chemical Information Bulletin* and to increase its editorial content
- education: to provide educational courses or seminars coordinating subject matter with meeting content
- professional relations: to carry out a membership survey, disseminate information about job opportunities, institute a public relations efforts informing about the information profession, encourage personal professional development, and have a representative on the *CHEMTECH* editorial advisory panel
- relations with other Divisions and Societies: to establish intersociety and interdivisional liaisons and to sponsor some form of intersociety or interdivisional activity at least annually

Many of these recommendations were adopted, especially those on the continuity of the Program Committee chairmanship, professional relations, and intersociety and interdivisional liaisons, including having a representative on the *CHEMTECH* editorial advisory panel.

A membership brochure revised in 1979 updated or added the following subject areas to those listed in 1975:

- communications
- chemical literature sources
- evaluation of methods, systems, and tools
- linguistics
- new computerized online databases
- management of chemical information operations
- correlation of information and data
- historical, evolutionary, legal, and commercial aspects of chemical literature

The Long Range Planning Committee continued to exist, but no major reports were issued. On the other hand, the Divisional Executive Committee in 1987 instituted a regular series of special planning meetings which continue on an annual basis to this day. Carlos M. Bowman chaired the first of these meetings. A mission statement was adopted:

The Division of Chemical Information of the American Chemical Society is committed to providing a forum for the exchange of information and expertise among the generators, developers, providers, and users of chemical information worldwide through innovative, quality programs and publications, and through opportunities for career development and recognition of excellence.

The goals and objectives supporting the Mission were formalized to address such vital issues as:

- promoting and assisting the formation of Chemical Information Topical Groups in the ACS Local Sections
- participating in the technical programs of the ACS Regional Meetings
- promoting contact at the ACS National Meetings among members and between members and Divisional functionaries
- cosponsoring interdivisional, intersociety, and international symposia and meetings
- communicating with members through additional publications
- promoting research and development in chemical information science and technology
- monitoring legal and legislative issues, and taking appropriate stands
- promoting career development
- establishing a reporting mechanism for all such tasks by the identification of milestones and measurement of success

The most recent Divisional Bylaws, amended as of December 31, 1990, and reproduced in Appendix 1 (page 79), reflect the objects of the Division as follows:

Bylaw I Name and Object

Section 1. The name of this organization shall be "The Division of Chemical Information of the AMERICAN CHEMICAL SOCIETY" hereinafter called the "Division" and the "SOCIETY", respectively.

Section 2. The objects of this Division shall be those of the SOCIETY as they apply to chemical information and computer sciences which deal, first, with the fundamental concepts, relationships, theory, and methods pertaining to the collection, processing, communication, and utilization of chemical information and, secondly, with the theory, design, and operation of systems which process chemical information. Chemical information processing is regarded as including the collection, manipulation, correlation, organization, storage, transmission, retrieval, display, reproduction, dissemination, analysis, and evaluation of chemical information. Information processing systems include computer systems, communication systems, reprographic systems, and other associated devices.

In the 1993 "Information Industry Directory" (13th ed., Gale Research, Detroit), the Division is listed as a separate entity, described as providing a forum to inform chemists, chemical engineers, and others about the latest developments in producing and using chemical information.

2. Organization and Membership, 1975-1993

The Division met under its new name for the first time at the 170th ACS National Meeting in Chicago in August 1975. At that time, the following were the members of the Executive Committee and the Divisional functionaries:

Chairman	Barbara A. Montague
Chairman-Elect	Bruno M. Vasta
Past-Chairman	Charles E. Granito
Secretary	Mary H. Reslock
Assistant Secretary	Emma-June H. Tillmanns
Treasurer	Judy D. Hale
Councilors	Carlos M. Bowman; Carleton C. Conrad
Alternator Councilors	Margaret S. Hicks; James E. Rush
Editor, <i>J. Chem. Inf. Comput. Sci.</i>	Herman Skolnik

Committee Chairmen:

Audit
Computer Program
Compilations and
Technological
Forecasting
Long Range Planning
Membership
Nominating
Procedures Manual
Professional and
Public Relations
Program

Patricia M. McDonnell

Robert E. Maizell
Arthur C. Diesing
Emma-June H. Tillmanns
Melvin L. Huber
David M. Krentz

Bernard S. Schlessinger
Cynthia H. O'Donohue

Other Functionaries:

Editor, *Chem. Inf. Bull.*
Documentation Abstracts,
Inc., Board

ASIS Liaison
SLA Liaison

Gabrielle S. Revesz

Frederic R. Benson;
Peter F. Sorter
Rita G. Lerner
Marian E. Wickline

At the 171st ACS National Meeting, the Society's Centennial Meeting in New York in April 1976, the Executive Committee noted with sadness the unexpected death of Richard L. Kenyon. An ACS executive, he joined the Society's editorial staff in 1946 and was involved for many years in all aspects of information and communication, including editorship of the *Chemical & Engineering News* and directorship of the ACS Office of Planning for Information Systems.

At that meeting, Arthur C. Diesing reported, on behalf of the Long Range Planning Committee, the existence of three projects under study:

- joint technical meeting with ASIS and SLA
- poster sessions
- vendor symposia

A possibility of joining the American Federation of Information Processing Societies (AFIPS) was explored. Some potential advantages were cited, such as participation in the National Computer Conference and working directly with other societies affiliated with the AFIPS. Eventually, however, such a move did not occur.

The *CHEMTECH* Editorial Advisory Panel unanimously accepted the Division's application for having a representative on the panel. Cynthia H. O'Donohue was appointed to that post for 1978.

At the 174th ACS National Meeting in Chicago in August 1977, the Council voted to increase Divisions' representation on the ACS Council from 13 to

20%, effective January 1, 1978. The approved redistribution, based on the size of Division membership, called for a third Divisional Councilor and a third Divisional Alternate Councilor. For 1978, the Division appointed Peter F. Sorter as the third Councilor, and Charles E. Granito and Bruno M. Vasta as the second and third Alternate Councilor.

In the summer 1978 issue of the *Chemical Information Bulletin*, Bonnie Lawlor, its Editor, inserted an announcement:

**WANTED
DIVISION LOGO**

\$25 Reward

"Attention Bounty Hunters:

The Division of Chemical Information has initiated a widespread search for a logo. Few identifying characteristics are available. It has been described as original, related to divisional activities, and appropriate for use in awards, publications, etc. A reward of twenty-five dollars will be given to whoever provides the logo selected. Put your creativity to the test and join the search.

Sketches of logos fitting the above description should be submitted by November 1, 1978."

In the Spring of 1979, Gabrielle S. Revesz, the Divisional Chairman, announced:

"To All Bounty Hunters:

I would like to thank all of you who answered our call and submitted designs for a divisional logo. We had a hard time choosing from so many excellent ideas and ended up combining several to come up with what, we hope, will be acceptable to all. While no one won the prize, we nevertheless would like to acknowledge your contributions and hope that you will be willing to participate again in future competitions."

and provided the logo:



On May 29-30, 1979, the Divisional Chairman (Gabrielle S. Revesz) and Chairman-Elect (Cynthia H. O'Donohue) attended a pre-White House Conference meeting in Washington, DC. The invited heads of information-related professional societies and associations were charged with the mandate to plan the involvement of these organizations in the White House Conference on Library and Information Services. A follow-up pre-White House Conference meeting took place on August 1, 1979, also attended by Cynthia H. O'Donohue.

Seldon W. Terrant represented the Division as an observer at the White House Conference on November 15-19, 1979. Five basic themes were considered:

- meeting personal needs
- enhancing life-long learning
- improving organizations and the profession
- effectively governing our society
- increasing international understanding and cooperation

Cynthia H. O'Donohue, as the Divisional representative, attended in turn a post-Conference follow-up, the Third Information Community Organizations Heads meeting in Washington, DC, on February 29, 1980.

When the Division's name was changed to the Division of Chemical Information, the ACS assigned to it the acronym CHIF for use as a heading in the programs of the ACS National Meetings and as a running head in the ACS Book of Abstracts. The alphabetization in either one proceeded, however, according to the full names of the Divisions. Thus, the order was:

CHED	Chemical Education
CHSA	Chemical Health and Safety
CHIF	Chemical Information
CMEC	Chemical Marketing and Economics

which placed "CHIF" after "CHSA". To remedy the situation, by the Fall of 1979 the Divisional acronym was changed to CINF which allowed for a correct parallel alphabetization of both acronyms and full Divisional names.

At the 179th ACS National Meeting in Houston in March 1980, the Executive Committee voted to formally establish a Subdivision of Chemistry and the Law (Howard M. Peters, chairman). Subsequently, the Division Bylaws were amended:

- to add a new Bylaw titled "Subdivisions"
- to specify the conditions for the existence of a Subdivision
- to provide for the appointment in the first year of a Chairman, a Secretary, and a Membership Secretary for the Subdivision

- to provide for the regular annual election cycle for officers of the Subdivision to start in the year following the formation of a Subdivision
- to include the chairman of each Subdivision in the Divisional Executive Committee

Although the Subdivision three years later became an independent ACS Division, the Bylaws were not changed again in case another Subdivision might be formed in the future.

In November 1980, the Division mourned the loss of Fred A. Tate, the 1978 Herman Skolnik Award winner, who was responsible for moving the Chemical Abstracts Service (CAS) into the computer age, including the development of the CAS Registry System. He was the ACS voice and international advocate of a worldwide chemical information system, especially through the cooperation of scientific organizations in the U.S., the United Kingdom, West Germany, France, and Japan.

At the 181st ACS National Meeting in Atlanta in March 1981, the Executive Committee discussed with the officers of the Subdivision of Chemistry and the Law the advantages and disadvantages of becoming an independent ACS Division. Several Divisional officers expressed opinion that there would be definite benefits to have a bigger Division and that fragmentation would not be useful, yet the officers of the Subdivision argued otherwise. The meeting lasted till 9:25 pm.

Because of the periodic recalculation of the Councilor divisor by the ACS Council Policy Committee, in 1982 the Division lost its third Councilor and third Alternate Councilor. The 1982 Divisional roster had a total of 1,076 (950 full members, 120 affiliates, and 6 national affiliates).

At the 184th ACS National Meeting in Kansas City in September 1982, the Subdivision of Chemistry and the Law was granted probationary ACS Division status as of January 1, 1983.

In 1983, a new Committee was established:

Education Committee (Arleen N. Somerville, chairman).

In that year, the Division learned that both the German Chemical Society (Gesellschaft Deutscher Chemiker) and the Chemical Society of Japan had created chemical information divisions.

The German Chemical Society established its Fachgruppe Chemie-Information in September 1982

with Dr. Robert Fugmann as its first chairman. Its first meeting was scheduled for October 27-28, 1983, in Frankfurt. From the very beginning, the Group published its bulletin, *Mitteilungsblatt* (No. 1 in September 1982), with Dr. Robert Fugmann and Dr. Ekkehard Fluck as coeditors. Both were well known to the Division and spoke at several Divisional sessions. The second issue of the bulletin of February 1983 announced our Divisional program for the Spring 1983 Seattle meeting. The Division sent a gavel to the Group with greetings and wishes for successful activities.

The Chemical Society of Japan established a Division of Chemical Information and Computer Science in January 1983 with Professor Shin'ichi Sasaki as its first chairman. Its first scheduled meeting was on April 1, 1983, in Kyoto. The 1983 Divisional Chairman, Barbara G. Prewitt, sent a congratulatory message prior to that meeting.

The results of a questionnaire conducted in 1983 by the Long Range Planning Committee (Merle I. Eiss, chairman) were published in the Spring 1984 issue of the *Chemical Information Bulletin*. There were 234 responses. Questions were asked relating to type of employment, membership in other professional societies, most useful means of keeping up in the field, attendance at the ACS national, regional, and local meetings, suggestions for improving the Bulletin, and types of programming preferred.

In June 1984, the Division mourned the passing of Emma-June Tillmanns-Skolnik. She was a very active member of the ACS. In the Delaware Local Section she served as Councilor and was the first woman chairman for that Section in 1982. Within the Division, she served as Assistant Secretary and Membership Committee Chairman (1974-1977) and later was responsible for updating and maintaining the Divisional Procedures Manual.

At the 188th ACS National Meeting in Philadelphia in August 1984, a Bylaw change was suggested making the Program Committee Chairman a voting member of the Executive Committee. The Program Chairman was to be appointed by the Divisional chairman with the consent of the Executive Committee.

As of December 31, 1984, the Division had a total of 1,264 members (1,129 full members, 123 affiliates, and 12 national affiliates).

Cordial relations, mutual exchange of experience and ideas, and increased contacts continued between the Division and the German Fachgruppe Chemie-Information. On the occasion of their meeting in Aachen in March 1985, the Divisional Chairman,

Peter F. Rusch, sent greetings personally delivered by David W. Weisgerber, CAS Editor, who was a speaker at that meeting.

The Division was a founding member of the ACS Computer Secretariat and participated in its inaugural meeting at the 189th ACS National Meeting in Miami Beach in April/May 1985. Similarly, the Division took part in the organization of the ACS Biotechnology Secretariat and contributed a symposium to its first meeting at the 192th ACS National Meeting in Anaheim in September 1986.

The year 1987 saw another "first" for the Division. It cosponsored and participated in the International Conference on "Chemical Structures: International Language of Chemistry" in The Netherlands in June 1987.

The year 1988 was noted for a major focus on the membership-related activities. A Sunday reception (in addition to the usual Tuesday evening social hour) took place at the 195th ACS National Meeting (3rd Chemical Congress of North America) in Toronto in June 1988. Its purpose was meeting old friends and welcoming new members, and providing the information on the meeting program as well as on the city attractions.

New committees to address the members' concerns were established:

Legislative Issues Committee (Murray D. Rosenberg, chairman)

Public Relations Committee (Carol A. Duane, chairman)

Publication Committee (Ann P. Moffett, chairman)
Careers in Chemical Information Subcommittee

(David S. Saari, chairman)

Task Force for Chemical Information Posters
(Carol A. Carr, chairman)

Also, a reporting mechanism for Committees was strengthened to improve the planning and implementation of various Divisional programs and to ensure continuity of commitments and actions.

In 1988, the German Fachgruppe Chemie-Information asked the Division for its brief history to which W. Val Metanomski responded by providing a manuscript on "Division of Chemical Information of the American Chemical Society - A Brief History". It was subsequently published by the Fachgruppe in their *Mitteilungsblatt* (No. 16 of November 1989) [Ref. 32].

It is interesting to note that the Fachgruppe first established a working subgroup, Computer in der Chemie (Computer in Chemistry), and then, as of November 20, 1989, it changed its overall name to Fachgruppe Chemie-Information-Computer. Thus, the German Society, unlike the ACS, went into the direction of having one division encompassing both chemical information and computers in chemistry.

The 1989 Divisional Chairman, Bonnie Lawlor, stressed the commitment to the strategic goals from the previous year:

- to improve the image of the chemical information profession
- to increase member benefits
- to focus on career development
- to identify current issues affecting chemical information
- to promote inter- and intra-Society cooperation

To fulfill these goals, several organizational changes were implemented, and some, eventually, were incorporated into revised Bylaws:

- the appointed position of Membership Committee Chairman was raised to the level (as voting member) of the Executive Committee
- the position of Assistant Secretary was eliminated
- the Careers in Chemical Information Subcommittee was raised to a full Committee (Patricia E. O'Neill, chairman) status

The Division mourned the passing of William J. Wiswesser, the 1975 Patterson Award winner and the 1980 Herman Skolnik Award winner, on December 16, 1989. The obituary in the *Chemical Information Bulletin* described him as "a legend among us" and "a guru of concise storage and retrieval of chemical structures". He was best known for the WLN (Wiswesser Line Notation), a practical application of his pioneering research into mathematical, physical, and chemical methods of punch cards, and computer storage representation of interatomic relationships.

In 1990, the Public Relations Committee reported on the results of a questionnaire. It was to determine how Division members perceived the Division and the information profession, and whether its name matched these perceptions. Seventy percent of the respondents had a positive reaction to the name "Division of Chemical Information" well reflecting the profession.

On April 5, 1990, Gabrielle S. Revesz passed away. She was a role model for many younger people, teaching them what a true information

professional really was. She was Divisional Chairman in 1979 and served as Editor of the *Chemical Information Bulletin* (1973-1977).

On September 3, 1990, George Vladutz, the 1989 Patterson-Crane Award winner, passed away. He was an active researcher, an innovator, a frequent contributor to the Divisional programs, and a friend to many in the chemical information field. On a more personal note, an obituary described him as "the intellectual, the generous host, the involved conversationalist, and the visionary".

The 1991 roster of members had a total of 1,426 (1,264 full members, 121 affiliates, 27 national affiliates, and 14 student affiliates). In 1992, the number dropped slightly to a total of 1,409.

In the June/July 1991 issue of the *Bulletin of the American Society for Information Science*, Judith E. Watson, the Divisional liaison representative to ASIS, published an article on "Inter-Society Cooperation Yields Mutual Benefits" [Ref. 37]. It described the Division's background and highlighted joint ventures such as the sponsorship of *Information Science Abstracts* and the organization of Tri-Society Symposia.

In this and other sections of this History, many individuals are recorded who served in the Division, but it is not possible to acknowledge all. Even keeping track of all the Committees over the years, their changing names, scope, and chairmen has been a difficult task.

What is useful, however, is to take a "snapshot" of those who served the Division in a single year, 1993:

Chairman	Gary D. Wiggins
Chairman-Elect	Gerald G. Vander Stouw
Past-Chairman	Joseph E. Clark
Secretary	Victoria K. Veach
Treasurer	Patricia L. Dederet
Program Chairman	Richard A. Love
Councilors	Bonnie Lawlor;
Alternate Councilors	Arleen N. Somerville Robert E. Buntrock; Peter F. Rusch

Committees:	
Consultant	Herman Skolnik
Archivist/Historian	W. Val Metanomski
Audit	Patricia M. Lorenz (chairman), Paul R. Finkernagel
Awards	Edlyn S. Simmons (chairman), Robert E. Buntrock, Leo P. Clougherty, Charles

Careers	E. Gragg, David R. Lide, Jr., Charles Sullivan Bruce Slutsky (chairman), Patricia E. O'Neill, Janice E. Mears, Mary Moulton
Constitution & Bylaws	Robert E. Stobaugh
Education	Carol A. Carr (chairman), Grace Baysinger, Robert E. Buntrock, James J. Heinis, Charles F. Huber, Maggie D. Johnson, Adrienne W. Kozlowski, Mary Ann Palma, Alan Smith, Arleen N. Somerville, Samuel H. Wilen
Fundraising	Louis P. Torre (chairman), Diane Hoffman
Legislative Issues	Maureen W. Matkovich
Long Range Planning	Gary D. Wiggins (chairman), Michael P. O'Hara, Jon C. Palmer, Gerald G. Vander Stouw, Joanne L. Witiak, Barbara G. Wood
Membership	Ruthann Bates (chairman), Barbara A. Hurwitz, Michael J. Knee, Mark R. Rycheck, Sherry White
Nominating Program	Joseph E. Clark (chairman), Richard A. Love (chairman), Mark A. Frentrup, Guenter Grethe, Mohammed Z. Hassan, Barbara A. Hurwitz, Edmund T. King, John Kloss, David S. Saari, William G. Town, Thomas E. Wolff
Procedures Manual Publications	George R. Famini Bonnie Lawlor (chairman), Richard A. Lowe, Margaret A. Matthews, Patricia E. O'Neill, Patricia L. Rosso, Betty L. Unruh, Joanne L. Witiak
Tellers	A. Rahman Khan (chairman)
Liaison Representatives:	
ACS Committee on Nomenclature	W. Val Metanomski
ASIS	Judith E. Watson
SLA	Katherine R. Porter
CHEMTECH Documentation Abstracts, Inc.	Lucille M. Wert
1994 Tri-Society Symposium	Paul E. Swartzentruber, Judith E. Watson (alternate)
	Judith E. Watson

Chemical Information Bulletin:

Editor	Margaret A. Matthews
Assistant Editor	Patricia C. Rosso
Business Manager	Joanne L. Witiak

CINF News:

Production Editor	Richard A. Lowe
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Members of the Division have always participated in the activities of other ACS Divisions and ACS Local Sections and served as their Officers and Councilors. On the national scene, many served on the ACS Committees, an essential part of the overall ACS governance, and on the editorial boards of the ACS journals.

A rather incomplete list of such Division members serving other ACS areas than the Division, compiled in 1985, had 66 names.

Several members, as Divisional or Local Section Councilors, chaired the ACS Committees and a more informal Divisional Officers Group (DOG):

- Carlos M. Bowman, Committee on Divisional Activities (1975, 1982-1983); Divisional Officers Group, "Top Dog" (1988)
- Carleton C. Conrad, Divisional Officers Group, "Top Dog" (1967)
- Merle I. Eiss, Committee on Copyrights (1984-1986)
- Madeline M. Henderson, Committee on Copyrights (1978-1980)
- Bonnie Lawlor, Committee on Copyrights (1993)
- Kurt L. Loening, Committee on Nomenclature (1964-1989)
- Ann P. Moffett, Committee on Divisional Activities (1990-1991); Divisional Officers Group, "Top Dog" (1990)
- Barbara A. Montague, Committee on Divisional Activities (1979-1981); Divisional Officers Group, "Top Dog" (1977)
- Frederick H. Owens, Committee on Copyrights (1981-1983)
- Ben H. Weil, Committee on Copyrights (1970-1977)
- Barbara G. Wood, Committee on Publications (1985-1987)

In 1986-1989, Herman Skolnik, the Divisional Archivist/Historian (1982-1989), conducted interviews with those Division members who made meaningful contributions to chemical information science (Dale B. Baker, Frederic R. Benson, Carlos M. Bowman, Kurt L. Loening, W. Val Metanomski, Ralph E. O'Dette, Gerard O. Platau, Bruno M. Vasta, and Ronald L. Wigington). Tape transcriptions of the

interviews were deposited in the Center for the History of Chemistry in Philadelphia.

A joint session (open meeting) with the ACS Society Committee on Chemical Abstracts Service at the 205th ACS National Meeting in Denver in March 1993 was the last one for the Committee as it was then constituted. The ACS Council at its March 31, 1993, meeting dissolved the Committee and established in its place a Joint Board-Council Committee on Chemical Abstracts Service. Since the governance function with respect to CAS was taken over by the CAS Governing Board established in 1991, the new Committee is to act in an advisory and information exchange role between CAS, the Governing Board, and the ACS membership. Lura J. Powell, the Committee Chairman, established a subgroup (Jean G. Marcali, chairman) specifically charged with improving interactions between the Division of Chemical Information, the Division of Computers in Chemistry, and other Divisions, and the Committee.

As this history was going to press, the Division learned that Karl F. Heumann passed away on April 8, 1993. He was the 1960 Divisional Chairman and served the Division in numerous other assignments. He was also the first R&D Director at Chemical Abstracts Service (1955-1959) and the 1959 President of the American Documentation Institute (ADI).

3. Symposia and Sessions at the ACS National Meetings, 1975-1993

General Characteristics

A detailed list of symposia and general sessions at the ACS National Meetings for the 1975-1993 period is presented in **Appendix 6** (page 97). The information given includes the number of papers in each symposium or session, the name of the presiding chairman, and the name of the cosponsoring ACS Division or ACS Committee, if applicable.

The Division took part in all of the 36 numbered ACS National Meetings in that period, 170th through 205th, including the ACS/CSJ (Chemical Society of Japan) Chemical Congress in Honolulu in April 1979.

The total number of papers presented in the 1975-1993 period was 1,739. As in the previous years, certain perennial topics were presented and debated frequently:

- education
- nomenclature
- Chemical Abstracts (CA)
- patents
- copyright

Training was no longer confined to courses or instruction in literature searching, but now was extended to searching online. Various groups were involved such as database producers, online vendors, search intermediaries, and end users.

With the advent of the ability to search and retrieve information through structure and substructure searching, different nomenclature needs were discussed. On the one hand, the presence of systematic name fragments facilitated searches for substances containing these fragments. On the other hand, common and trivial names led directly to the retrieval of information through chemical dictionaries online.

The operation of Chemical Abstracts Service (CAS) and its publications and services continued to be the subject of both formal and informal papers, and of occasionally heated discussions ranging in scope from technical content to online searching to pricing.

Patent- and copyright-related problems continued to be of vital interest to the Division members. Patents and published patent applications continued to proliferate, patent offices became automated and incorporated many database building and searching techniques. Copyright Law interpretation became a primary concern to librarians, organizations, and individuals alike.

A group of chemists specializing in legal practice and of those involved with legal aspects of the intellectual property protection was formed as the Subdivision of Chemistry and the Law. Between 1980 and 1982, it was responsible for a large part of the Divisional program. With the formation of the ACS Division of Chemistry and the Law in 1983, the more legal aspects of patents, trademarks, and copyright, as well as discussions on laws in the workplace, environmental laws, and other government laws and regulations of concern to chemists, and on para-legal careers became their domain. Because of the many topics of interest to both Divisions, numerous symposia were joint or cosponsored.

It is again of interest to review trends in programming by listing the most popular topics in each succeeding decade.

In the 1970's the topics discussed were:

- computer-assisted organic syntheses
- pattern recognition
- quantitative structure-activity relationships
- chemical reaction searching
- online databases, systems, and searching
- numerical databases
- environmental laws and information systems
- international activities and transborder data flow
- document access

The ability to search for and retrieve information online had the greatest impact on all aspects of information handling and that was reflected in many papers. Early systems were fairly complicated so that trained information intermediaries normally operated them. Gradually, the systems became more friendly, and more and more papers described their use and acceptance by the end users.

The 1970's saw the emergence of online vendors, Lockheed's DIALOG, System Development Corporation's (SDC) ORBIT, BRS, and National Library of Medicine (NLM). These organizations as well as the users of their systems contributed many papers. The government systems such as MEDLINE, TOXLINE, and NIH/EPA Chemical Information System were described in detail.

Environmental laws, notably the Toxic Substances Control Act (TSCA), had a tremendous impact on reporting, compiling, and retrieving information on toxic and potentially toxic substances. A comprehensive computer-based information system, established to support the decision-making responsibilities of the EPA, was the subject of papers and discussions.

As the databases proliferated, cooperation, networking, and resource sharing, national and international, became necessary and essential. The Division became a forum for reports from such organizations as UNISIST, INIS (International Nuclear Information System), IUPAC (International Union of Pure and Applied Chemistry), ICSU (International Council of Scientific Unions), and their Committees such as AB (Abstracting Board) and CODATA (Committee on Data for Science and Technology).

Access to full documents, or rather regulations governing their distribution, copying, and lending, were discussed. In spite of the proliferation of information services and their sophistication, these services provided pointers only to the specific data needed. Very few numerical databases were then in existence. The chemists still needed to consult the original documents, and often wanted to keep copies

in personal files.

In the context of all these developments, it should be mentioned that in 1974 a new ACS Division of Computers in Chemistry was created to recognize the large and growing importance of computer science to chemistry in analysis, education, marketing, organic syntheses, and theoretical calculations from an atomic and molecular perspective.

In the 1980's, information on a plethora of newly developed fields, techniques, experiences, and uses was shared in papers, posters, and demonstrations. They were concerned with:

- artificial intelligence research and applications
- natural language processing
- full text capture and searching
- graphic manipulation of structures
- biotechnology information
- personal computers and minicomputers
- optical disks
- office automation and workstations
- electronic publishing and delivery
- new technology for information centers
- end user searching
- information careers for chemists

The availability of personal computers had the greatest effect on information retrieval. A common part of the laboratory and office, they shortened immeasurably the cycle of the generation, storage, transfer, and use of chemical information. Computers are now an integral part of laboratory instruments and data collected are being transferred to personal computers for further processing as well as for combining with graphics and text. Resultant manuscripts may be sent electronically to other researchers or to journals for publication. Telecommunications link the personal computer with remote databases, to search them and to retrieve the information for research.

The meetings that we have had in the 1990's so far featured further refinement in topics discussed in the 1980's such as:

- hypermedia in chemical information
- Markush structure databases and searching
- 3-D chemical databases and 3-D substructure searching
- similarity searching
- intellectual property protection

Highlights at Selected Meetings

At the 170th ACS National Meeting in Chicago in August 1975, the first meeting at which the Divisional program appeared under its new name, papers were presented on a wide variety of topics ranging from the application of Wiswesser Line Notation (WLN) in substructure searching to chemical information networking to the impact of environmental laws on information requirements. The latter heralded the beginning of symposia related to environmental concerns for years to come. Most of these described the activities of the Environmental Protection Agency (EPA).

At the 171st ACS National Meeting, the Society's Centennial Meeting, in New York in April 1976, the first Herman Skolnik Award Symposium was presented. Included were papers that reviewed milestones in chemical information and progress reached thus far [Ref. 20]. Some also speculated on the potential future trends for chemical primary journals, chemical nomenclature, indexing and classification systems, notation and topological systems, and information industry. Herman Skolnik was not only the first recipient of the Divisional Award named in his honor, but he was also a member of the ACS Centennial Coordinating Committee and the chairman of the Committee on ACS Centennial History.

At that meeting, the Division started sponsoring a long series of vendor's workshops and seminars with two workshops on "Using CA Volumes Indexes" and "Using CA Condensates." This series continued for ten years till the 192nd ACS National Meeting in Anaheim in September 1986.

The 172nd ACS National Meeting in San Francisco in August/September 1976, the Society's West Coast Centennial Meeting, was made memorable by two general addresses: a) "From Then to Now" by the 1976 ACS President and 1951 Nobel Prize laureate, Glenn T. Seaborg, and b) "Chemistry - Key to Our Progress" by 94-year old former ACS President, Joel H. Hildebrand. At the Divisional luncheon Carlos M. Bowman expressed an opinion that there was too much talking to one another at the Divisional meetings and not enough contact and communication with bench chemists who needed facts and data [Ref. 21]. He also felt that too many papers had dealt with the methodology "how to do things", rather than with the guidance on how new developments could be useful to others.

At both 1977 ACS National Meetings, the 173rd in New Orleans in March and the 174th in Chicago in August, patent literature was discussed at great length, especially how it had changed and how it should be handled.

The 175th ACS National Meeting in Anaheim in March 1978 was almost exclusively devoted to the handling of medicinal information including that mandated by the Toxic Substances Control Act (TSCA) and that managed by the Food and Drug Administration (FDA).

The 177th ACS National Meeting in Honolulu in April 1979, which was the ACS/CJS Chemical Congress with the participation of the Royal Australian Chemical Institute, the Chemical Institute of Canada, and the New Zealand Institute of Chemistry, provided a new and unusual experience of mounting joint symposia with the Japanese chemical information scientists.



Speakers at the "History of Abstracting" symposium at the ACS/CJS Chemical Congress in Honolulu, HI, on April 4, 1979: Reiner Luckenbach, Eugene Garfield, W. Val Metanomski, Walter Lippert, Dale B. Baker.

Gabrielle S. Revesz was the Divisional Program Committee Chairman who collaborated with Shizuo Fujiwara on the chemical information program. The emphasis of the Divisional program was on international aspects of technical information retrieval and on large databases, numeric and bibliographic. Each symposium and session had two cochairmen, an American and a Japanese. Out of a total of 64 papers presented, 19 papers were by the Japanese researchers. The Divisional social event was a moonlight cruise along the Waikiki Beach, with a buffet dinner on board. For some participants, the rolling of the boat was too strong for comfort.

The meeting was memorable for some participants because of the difficulties of getting to and leaving the island, caused by the United Airlines' strike. Those who did not fly in the preceding week had to find alternative routes, even through Seattle or Vancouver. Some never reached Hawaii and that included several speakers whose papers had to be either cancelled or read by someone else. When it came to leaving Honolulu, many had to wait even several days to find alternative airline carriers, including Australia's Quantas.

At the 180th ACS National Meeting (2nd Chemical Congress of North America) in Las Vegas in August 1980, the Subdivision of Chemistry and the Law, led by Howard M. Peters and Hubert E. Dubb, made its official debut with the symposia on protection of intellectual and industrial property, on patent systems, and on specific environmental and workplace laws. There was also a symposium on the uses and applications of the Wiswesser Line Notation (WLN). This was the last symposium on the topic, since the use of the linear notations was decreasing as topological codes and connection tables became more and more applicable to chemical structure encoding, and to structure and substructure searching.

The meeting in Las Vegas was notable for an unusual circumstance. It was first planned for San Francisco and then moved at a short notice of a few weeks to Las Vegas. In spite of its being a joint meeting, only one Canadian presented a paper before the Division. Since the change in location was so sudden, some speakers could not adjust their travel plans and did not come. Their papers had to be read by others.

At the 181st ACS National Meeting in Atlanta in March/April 1981, some symposia addressed specifically professional issues such as careers in information science and in law-related activities.

At the 183rd ACS National Meeting in Las Vegas in March/April 1982, the Herman Skolnik Award was presented to Robert Fugmann from West Germany. He was the first winner of the Award from outside the U.S. Thus, the Award has become international in scope.

At the 184th ACS National Meeting in Kansas City in September 1982, Chemical Abstracts Service (CAS) observed its 75th anniversary with a commemorative symposium. It featured Dale B. Baker, Toni Carbo Bearman, Bryce Crawford, Jr., Paul Rhyner, and Edward E. David, Jr., who discussed not the past, but future information activities in the computer age.

At the same meeting, the Division hosted a five-member delegation from the Chemical Industry and Engineering Society of China, headed by their Deputy Secretary General.

The Divisional Chairman, Jean G. Marcali, officially represented the Division and spoke at the farewell dinner for the retiring CAS Editor, Russell J. Rowlett, Jr., in Kansas City on September 12, 1982.

At the 185th ACS National Meeting in Seattle in March 1983, within the framework of the symposium on "History of Chemical Information Science", chaired by Herman Skolnik, various historical aspects of the Division were presented: a) historical overview (Herman Skolnik), b) its members (Peter F. Rusch), c) communications (Ben H. Weil), d) finances (Jean G. Marcali), e) organization (Carlos M. Bowman), f) meeting programs (W. Val Metanomski), g) papers published (Herman Skolnik), and h) future plans (Ralph E. O'Dette) [Ref. 24]. At the Divisional luncheon, Thomas L. Isenhour, Editor of the *Journal of Chemical Information and Computer Sciences*, spoke about future plans for the Journal.

At that meeting the newly formed ACS Division of Chemistry and the Law, headed by Hubert E. Dubb (Chairman) and J. Susanne Siebert (Secretary), made its debut with three symposia. The Division evolved from the Subdivision of Chemistry and the Law (1980-1982).

International interest and concerns were expressed at the 186th ACS National Meeting in Washington in August/September 1983. Symposia were mounted on "International and Transborder Flow of Information" and the "European Inventory of Existing Commercial Chemical Substances (EINECS)".

At that meeting, the Division contributed a paper on "Searching Fiber/Textile Literature: Sources and Methodology" by B. Z-P. Bass to an ACS Macromolecular Secretariat's symposium on "Polymers for Fibers".

At the 188th ACS National Meeting in Philadelphia in August 1984, a major novelty was a joint session of the Division with the ACS Society Committee on Chemical Abstracts Service (SCCAS). The purpose was to introduce the Committee to the Division, to explain the ACS governance, and to provide a forum for exchanging views on topics of mutual interest. This practise of holding joint sessions has continued into the 1990's, first once a year and since 1988 at every ACS National Meeting.

The ACS Computer Secretariat, of which the Division was a founding member, under the leadership of Rudolph J. Marcus, made its debut at the 189th ACS National Meeting in Miami Beach in April/May 1985 with a symposium on "The Use of Computers in Chemistry". The attendance was excellent, 185 in the morning and 150 in the afternoon. The Division contributed two papers on "Path of Computerized Chemical Information" (Aldona K. Valicenti and Robert E. Bunrock) and "Computer Hardware and Software in Chemical Information Processing" (James E. Rush).

The Division hosted the 3rd ACS/ASIS/SLA Tri-Society Symposium on "New Technologies and Chemical Information - 1986" (chaired by Ruthann Bates and Joanne L. Witiak) at the 191st ACS National Meeting in New York in April 1986. At the Herman Skolnik Award Symposium "Challenges in Moving Toward a New International Chemical Information Order", honoring Dale B. Baker, papers were presented by prominent speakers from Switzerland, France, Japan, and Germany. At the Divisional luncheon, Pamela S. Richards spoke on an unusual subject, "World War II Technical Information Activities of the Allied and Axis Powers".

The ACS Biotechnology Secretariat, of which the Division was a founding member, made its debut at the 192nd ACS National Meeting in Anaheim in September 1986. Presented was a full week of symposia on the impact of chemistry on biotechnology, technology of biopolymers, biotechnology of agrochemicals, and biotechnology in agriculture, food, and waste treatment. The Division contributed a symposium on "Biotechnology Information", organized by Ronald A. Rader.

At the same meeting, the ACS Division of Computers in Chemistry observed its 10th anniversary with a symposium on "The History of Computing in Chemistry". W. Val Metanomski contributed a paper on "Impact of Computers on Chemical Literature". The paper reflected the activities of the ACS Division of Chemical Information in the field expanding from "chemical literature" to "chemical documentation" to "chemical information", and of its members who under-

went a transition from "literature chemists" and "chemical librarians" to "chemical information specialists".

At the 195th ACS National Meeting (3rd Chemical Congress of North America) in Toronto in June 1988, several symposia with emphasis on numerical data and numerical databases reflected the international participation. One symposium specifically described the activities of CODATA (Committee on Data for Science and Technology of the International Council of Scientific Unions). Out of a total of 58 papers presented before the Division, 10 were by Canadian, two by Mexican, one by German, and one by French speakers.

That meeting saw the last symposium of the ACS Computer Secretariat on "How the Computer Has Affected the Practice of Chemistry". One session was contributed by the Division, organized by Bonnie Lawlor and chaired by Eugene Garfield.

At the 196th ACS National Meeting in Los Angeles in September 1988, Rudolph J. Marcus was honored at the Divisional luncheon for his contribution to the Society's activities by single-handedly organizing, guiding, and nurturing the ACS Computer Secretariat. The Secretariat was needed as an umbrella organization to bring together various aspects of computer applications before the latter became part of everybody's professional life.

The 202nd ACS National Meeting was the 4th Chemical Congress of North America in New York in August 1991. The Division presented symposia focused on synthesis planning, chemical reaction searching, and three-dimensional structure handling. The international aspect was highlighted by the symposium on "International Flow of Information: North America and Europe", organized by Edmund T. King.

A good illustration of the variety of topics and the versatility of Divisional activities was the program at the 204th ACS National Meeting in Washington, DC, in August 1992. Symposia were given on genome information, hypermedia in chemical information and education, topological information in molecular modeling, and biotechnology patent information.

The variety of topics was also evident at the 205th ACS National Meeting in Denver in March 1993, where symposia dealt with stereochemical information, competitive intelligence, and environmental information management systems.

For the 206th ACS National Meeting in Chicago in August 1993, symposia are planned to cover new technologies for the delivery of chemical information, chemical information careers in transition, spectroscopic databases, computational approaches for matching chemical structures, chemical information instruction, and electronic notebooks.

Unusual Experiences

For all the ACS National Meetings, the assignment of hotel rooms for Divisional meetings and social functions has always been done by the ACS Department of Meetings and Divisional Activities. Special requirements have been honored for most meetings, such as having cosponsored and related symposia organized by other Divisions, as well as Divisional governance functions, in the same hotel or convention center where the Divisional own symposia and sessions were held.

Occasionally, however, the Division was unlucky in having its meeting room or social function in hotels ill equipped for the purpose or far away from the center of the ACS National Meeting activities. Here are a few instances of such experiences to be reminisced by the participants in years to come:

- Hotel Konover in Miami Beach in September 1978, farthest north on Collins Avenue, 4.1 miles from the Convention Center, site of the ACS Exposition
- Hotel Warwick in New York in August 1981, where corridors and rooms were refurbished with accompanying noise, just outside the meeting room while the sessions were being held
- Hotel DiLido in Miami Beach in April 1985, where
 - hotel staff did not know or pretended not to understand much English, which was convenient for handling, or rather ignoring, complaints
 - for the Executive Committee meeting, the seating was arranged in tables of four, ideal for a bridge tournament
 - at the luncheon when someone asked for a slice of bread, a whole loaf was delivered still wrapped in plastic foil
- Hotel Milford Plaza in New York in April 1986, definitely a third-class, not noted for cleanliness
- Hotel Pennsylvania in New York in August 1991, farthest south on 7th Avenue, 22 city blocks

from New York Hilton Hotel, site of the ACS Exposition

4. Special Meetings, Joint Meetings, and Regional Activities, 1975-1993

A detailed list of symposia and sessions at the special and joint meetings is presented in **Table VII** (page 47-48), along with the number of papers and the names of organizers and chairmen.

ACS/ASIS/SLA Tri-Society Symposia

The 1st Tri-Society Symposium (originally referred to as "Seminar") was held in conjunction with the 69th Special Libraries Association (SLA) Annual Conference in Kansas City on June 11, 1978. The host was the SLA Chemistry Division and the topics included indexing, retrieval of structures, accessing online files, and toxicological information. The program attracted more than 100 attendees.

The precedent for a cooperative effort of the three groups was established. An organizational meeting on the next Symposium planned for 1981 took place as early as November 15, 1978, with Gabrielle S. Revesz representing the Division, yet the plan was abandoned on June 10, 1980. Even a last minute detailed proposal by Harry M. Allcock did not produce the desired result. The reasons cited for cancelling the project were "organizing complexity, meeting conflicts, and loss of spirit". The organizers agreed "to shake hands and quit", because "the financial and organizational risks were looming larger, and the potential for benefit smaller".

It took a determined effort on part of James M. Cretos, on behalf of the American Society for Information Science (ASIS) - Special Interest Group on Biological and Chemical Information Systems (SIG/BC), to put the project back on the front burner in March 1981. Once all three societies became convinced that such a meeting would be very beneficial to the professional needs of the three groups, planning proceeded smoothly.

The 2nd Tri-Society Symposium was on "Technology and Its Impact on the Future of Chemical Information Processing" and was held in conjunction with the 45th ASIS Annual Meeting in Columbus on October 17, 1982. The emphasis was on new techniques and systems, and interfaces with end users. Over 90 participants attended. The final report by James M. Cretos, the symposium organizer, stressed the cooperative spirit of the three cosponsoring groups and

Table VII.
Special and Joint Meetings, 1975-1993

1st Tri-Society Symposium, June 11, 1978 - Kansas City, MO
What Is and What Is Not Indexed in Chemical Information (Toni Carbo Bearman)
Structural Retrieval Methods in Chemical Information (James E. Rush)
Structural Activity (Paul N. Craig)
Future of Chemical Information (Otis C. Dermer)
Current Awareness in Toxicological Information (Richard A. Parent)
Accessing Online Data Files
Impact of Computer Searching on Chemical Information
2nd Tri-Society Symposium, October 17, 1982 - Columbus, OH
New Techniques and Systems (5) (W. Jeffrey Howe)
Interface With End Users (3) (Ronald G. Dunn)
Panel Discussion on Evolving Roles of End Users and Information Specialists in Chemical Information Transfer (Ronald R. Dueltgen)
1984 International Chemical Congress of Pacific Basin Societies, December 18-19, 1984 - Honolulu, HI
Communicating Chemical Information (6) (Leslie W. Shemilt)
International Solutions to Problems of Nomenclature (11) (Kurt L. Loening)
Computer Manipulation of Chemical Information (6) (Shin'ichi Sasaki)
3rd Tri-Society Symposium, April 14, 1986 - New York, NY
Chemical Information Technology, Optical Storage Technology, Human Factors (5) (Ruthann Bates)
Artificial Intelligence Expert Systems, Telecommunications, Information Access, Online Retrieval (5) (Joanne L. Witiak)
1st International Conference, May 31-June 4, 1987 - Noordwijkerhout, The Netherlands
R&D in Chemical Information Science, Retrospect and Prospect (Michael F. Lynch) (Keynote Address)
Future Trends in Integrated Information Management: Is There a Strategic Advantage? (Myra N. Williams) (Plenary Lecture)
Integrated In-House Chemical Databases (7) (David K. Johnson)
Substructure Searching Methodology (11) (Peter W. Nichols; Reiner Luckenbach)
New Technologies (7) (Bonnie Lawlor)
Chemical Reactions (6) (Gerald G. Vander Stouw)
Poster Papers (11) (David K. Johnson)
1989 American Institute of Chemical Engineers (AIChE) National Meeting, August 1989 - Philadelphia, PA
What's New in Databases for Chemical Engineers
1989 International Chemical Congress of Pacific Basin Societies, December 20, 1989 - Honolulu, HI
The Terminology of Biotechnology: A Multidisciplinary Problem (23) (Kurt L. Loening; J. Rokach; A. Tsugita)
2nd International Conference, June 3-7, 1990 - Noordwijkerhout, The Netherlands
Chemistry in Three Dimensions (Ernest L. Eliel) (Keynote Address)
Chemical Structures (33) (Wendy A. Warr; David K. Johnson; Gerald G. Vander Stouw; Peter W. Nichols; William G. Town; Reiner Luckenbach; Joanne L. Witiak) on representation of and search for stereochemical information, 3-D databases, 3-D substructure searching, similarity searching, generic searching, reaction searching, computer-assisted synthesis, nomenclature, information systems, and the Standard Molecular Data (SMD) Format.
Poster Papers (10) (David K. Johnson)

Table VII. (continued)

4th Tri-Society Symposium, June 10-11, 1990 - Pittsburgh, PA

Carnegie Mellon University Library (Field Trip)

Putting Technology to Work in the World of Chemical Information (8) (Gary D. Wiggins)

Clearinghouse for Chemical Information Instructional Materials (Poster Session) (Carol A. Carr)

3rd International Conference, June 6-10, 1993 - Noordwijkerhout, The Netherlands

The Use of Mathematically and Formally Logical Computer Programs in Chemistry and Their Applications to Reactions (Ivar Ugi) (Keynote Address)

Chemical Structure Representation and Search (7) (Gerald G. Vander Stouw)

Chemical Reaction Handling (7) (Reiner Luckenbach)

Processing of Chemical Structure Information (7) (John M. Barnard)

3-D Chemical Structure Handling (6) (Wendy A. Warr)

Poster Papers (29)

recommended repeating such a symposium every three years, in conjunction with the national meeting of the host organization.

The 3rd Tri-Society Symposium on "New Technologies and Chemical Information: 1986" was held in conjunction with the 191st ACS National Meeting in New York on April 14, 1986. A logo was designed to reflect a common bond of the three groups - chemistry (C) - with acronyms of the three parent organizations (ACS, ASIS, and SLA):



The speakers from various segments of the information community (database producers and vendors, government agencies, industrial users, and information consultants) reviewed optical storage technology, artificial intelligence and expert systems, telecommunications, and integrated information network architecture. The impact of new technologies on chemical information processing, and the human factors involved therein, were also covered. In his report, W. Val Metanomski, the symposium organizer, noted excellent attendance (150-160) and the satisfaction of the participants at having been apprised of the new technologies, which were changing the ways chemical information was handled and paving the way for modern tools in the future.

Now that the cycle of each participating society hosting the Tri-Society Symposium had been completed, it was the turn of the Special Library Association (SLA) (Chemistry Division) to host the 4th Tri-Society Symposium. It was organized by Gary D. Wiggins and held in conjunction with the 81st Special

Libraries Association Annual Conference in Pittsburgh on June 10-11, 1990. "Putting Technology to Work in the World of Chemical Information" was its theme. The Symposium was well attended. The organizers indicated continuing support for such a cooperation among the chemical information groups of the three societies.

The 5th Tri-Society Symposium is being planned in conjunction with the 57th ASIS Annual Meeting in Alexandria, VA, in October 1994.

International Conferences

The 1st International Chemical Information Conference on "Chemical Structures: The International Language of Chemistry" was held in Noordwijkerhout, The Netherlands, on May 31-June 4, 1987 [Ref. 28]. It was cosponsored by the Chemical Structure Association (UK), the Chemical Information Group of the Royal Chemical Society, die Fachgruppe Chemie-Information in der Gesellschaft Deutscher Chemiker, and the Division. Wendy A. Warr chaired the Conference and Charles L. Citroen was the Dutch host. The keynote address on research and development in chemical information science was given by Michael F. Lynch and the plenary lecture on future trends in integrated information management by Myra N. Williams. Attending the Conference were 187 participants from 13 countries. There were 33 papers, grouped under four major topics, 11 poster papers, and an exhibition of various publications and software. The purpose of the Conference was admirably fulfilled. It brought together experts and an international, professional audience to discuss the latest developments in the handling of chemical structures. It also promoted cooperation among major chemical information groups in Europe and North America.

The 2nd International Conference on the same topic was held again in Noordwijkerhout in June 3-7, 1990 [Ref. 34]. The Royal Netherlands Chemical Society was an additional sponsor. Wendy A. Warr chaired the Conference and Charles L. Citroen was again the Dutch host. The keynote address, "Chemistry in Three Dimensions", by Ernest L. Eliel provided an excellent introduction to the key subject of the Conference. Unlike in 1987, aspects of chemical nomenclature such as automatic generation, integration into the structure-based systems, and use in industry, were on the program. About 180 participants from 13 countries attended. In addition to 33 papers presented, 10 poster papers were displayed, and demonstrations of software for the access to various databases were given by 12 exhibitors. As in 1987, the Conference fulfilled the expectations of the organizers and participants as an excellent forum to learn about the advances in the handling of chemical structures which are the core of any chemical information system.

The 3rd International Conference, cosponsored by the same five organizations, scheduled for June 6-10, 1993, again at Noordwijkerhout, will be chaired by Gerald G. Vander Stouw. By now the Conference has established its place as a forum to exchange experience and ideas in further development in the field among the organizations and individual researchers involved with chemical structures and chemical information. Chemical structure representation and search, 3-D chemical structure handling, and chemical reaction handling will again be the main themes of the Conference. There is much to report and discuss on what has transpired in the field since the 1990 Conference. Twenty-eight papers, 29 poster papers, and an exhibition featuring commercial software and services, and software from research projects, are planned.

Other Joint Meetings

The 1984 International Chemical Congress of Pacific Basin Societies (PAC CHEM '84), which took place in Honolulu on December 16-21, 1984, had technical program organized not along the Divisional lines, but on 10 subject areas. One was "Information Transfer/Computation" which covered chemical information and related areas. Herman Skolnik and Kurt L. Loening, on behalf of the ACS, were the organizers of the symposium on "Chemical Information Science", covering the aspects of communicating chemical information, international solutions to problems of nomenclature, and computer manipulation of chemical information. Out of a total of 23 papers, six were presented by Japanese, five by Canadian, and two by Australian participants.

The 1989 International Chemical Congress of Pacific Basin Societies (PACIFICHEM '89) in Honolulu on December 17-22, 1989, was organized along similar lines. This time, nine major subject areas were identified, among them "Information Transfer" which covered computation, economics, education, and management as well. The Division again supported and indirectly participated in the event. Joanne L. Witiak was the area coordinator on behalf of the ACS. The symposium most related to Divisional activities was on "The Terminology of Biotechnology", organized by Kurt L. Loening and presented within the "Bioscience and Technology" subject area. Out of a total of 19 papers and four poster papers, five were by Japanese, two by Canadian, one by Australian, and one by Dutch speakers.

The Division participated in the 1989 National Meeting of the American Institute of Chemical Engineers (AIChE) in Philadelphia in August 1989 through a symposium on "What's New in Databases for Chemical Engineers".

ACS Regional Meetings

The Division did not participate officially in ACS Regional Meetings. It depended mostly on the interest and resourcefulness of individual Division members in respective geographical areas to organize and chair symposia on the subjects related to the field of chemical information.

In 1980, the Division decided to play a more positive and visible role in the ACS Regional Meetings by offering advice and help to the Regional Meeting organizers. The Middle Atlantic Regional Meeting (MARM) had already established a tradition of having chemical information symposia on its program, primarily because of the existence of Chemical Information Topical Groups in the Delaware and Philadelphia Local Sections. The Central, Great Lakes, and Northeast Regional Meetings became target for the inclusion of chemical information symposia on their programs.

Almost every year the Divisional Chairman-Elect and the Program Committee Chairman attended the ACS Divisional Officers Conference (DOC) and the Program Coordination Conference (PCC). It was at the latter conference that attempts were being made to establish contact with the Regional Meeting chairmen and program chairmen. At times, these contacts were successful in promoting chemical information as a field to be covered at the ACS Regional Meetings.

In the late 1980s, the Divisional Program Committee

had one member whose specific assignment was to coordinate Regional Meeting activities. The effort was very successful as evident by the presence of chemical information topics at three ACS Regional Meetings in 1986, four in 1987, and three in 1988. On a number of occasions, the symposia presented at the ACS National Meetings were repeated at a Regional Meeting.

A complete list of participation in the ACS Regional Meetings is not available, yet most of them for the period 1975-1993 are listed in **Table VIII** (page 51-52).

Local Section Tour Speakers

Over the years, active, knowledgeable, and willing Division members volunteered to be tour speakers lecturing on broad or specialized subjects related to chemical information at the ACS Local Section meetings. Usually, two or more geographically close Sections were visited at a time, mainly to reduce expenses associated with travel. The most recent "ACS Speakers List, 1992-1993", published by the ACS Local Speaker Service, includes two related subject areas with several names within each:

- Chemical literature
 - Ralph O. Allen
 - Maureen W. Matkovich
 - O. Bertrand Ramsay
 - Herman Skolnik
- Information retrieval
 - Rudolph J. Marcus
 - John D. Peterson
 - Herman Skolnik

In the 1970's and 1980's, Ralph E. O'Dette also participated in the tour speaker program and delivered a number of presentations before the ACS Local Sections.

5. Educational Activities, Workshops, and Seminars, 1975-1993

In 1976, at the 171st ACS National Meetings in New York in April, the Division sponsored the first of a long series of vendor's workshops/seminars which were to continue on a regular basis for 15 years. The Division members expressed interest in being informed about the publications and services of the various providers of chemical information in a more technical environment as opposed to strictly commercial advertising at the Exposition. The workshop/seminar organizers were asked to present technical-like papers prepared by their staff as well as by users of the specific services, who were willing to share their experience.

Often hands-on tutorials were included. The organizations that participated were:

- database producers (Chemical Abstracts Service, Institute for Scientific Information, BioSciences Information Service, Derwent Publications, National Library of Medicine, IFI/Plenum, Predicasts)
- online vendors (DIALOG, ORBIT, Questel)
- publishers of handbooks and dictionaries (Beilstein, Gmelin, Heilbron's Dictionary of Organic Compounds, Merck)
- chemical marketing service (SRI International)
- graphic software provider (Molecular Design Limited)

At times, these workshops/seminars coincided with the introduction of new editions or innovations, e.g., the 5th edition of Heilbron's Dictionary of Organic Compounds and the 11th edition (100th anniversary) of the Merck Index.

A detailed list of workshops, seminars, and demonstrations presented at the ACS National Meetings is given in **Appendix 7** (page 104).

In 1977, the Division, together with the Divisions of Chemical Education and Computers in Chemistry, sponsored the ACS Workshop on Computers III in Upper Montclair, NJ, on June 26-29 (Mark L. Lyndrup, Coordinator). The Division contributed the workshop on "Computer-Based Information Storage and Retrieval" (Peter F. Sorter; Melvin L. Spann).

The ACS Department of Educational Activities published in April 1977 a booklet "Careers Nontraditional" (Pamela Ayre and Patricia M. Lemaire, editors) [Ref. 22]. Two chapters were devoted to careers in information science. The opportunities in information science were presented in the form of interviews with Trisha M. Johns (G. D. Searle & Company's Chemical Data and Literature Section) and Rona Sun (Smithsonian Science Information Exchange). Ronald R. Duetgen was also identified in one of the chapters.

The 1977 Long Range Planning Committee (Carlos M. Bowman, chairman) identified education as one of the five areas of activity the Division needed to be involved in. It recommended restructuring the Education Committee to better assess member needs, to institute the development of systematic evaluative compilations of existing courses, and to provide specific courses and seminars at the meetings, coordinated with the meeting content.

Implementation of these recommendations continued to be discussed by the Executive Committee. In

Table VIII.
Symposia at the ACS Regional Meetings, 1975-1993

10th Middle Atlantic, February 1976 - Philadelphia, PA
 Chemical Documentation (13) (Herman Skolnik; Peter F. Sorter)

11th Middle Atlantic, April 1977 - Newark, DE
 Searching the Patent Literature (9) (Carleton C. Conrad)
 Online Databases: Users' Experiences and Evaluations (8) (Stuart M. Kaback)
 General (8) (Ralph E. Miegel)
 Workshop: Nomenclature (CAS staff)

12th Middle Atlantic, April 1978 - Hunt Valley, MD
 Chemical Documentation (13) (Melvin L. Huber)

13th Middle Atlantic, March 1979 - West Long Branch, NJ
 Systems for Structures and Data: Access to Nonbibliographic Chemical Information (10) (Melvin L. Huber; D. Lewis)

11th Central, May 1979 - Columbus, OH
 Science Information in Today's Society (3) (Ralph E. O'Dette)

14th Middle Atlantic, April 1980 - King of Prussia, PA
 Development and Use of Reliable Data Bases for Quantitative Structure Activity Relationships (QSAR) (11) (Sidney Siegel; Amy Rispin)

15th Middle Atlantic, January 1981 - Washington, DC
 Aids to Use Multiple Online Files (5) (Paul N. Craig)
 Statistical Correlations of Biological Activity with Chemical Properties (5) (Paul N. Craig)

13th Central/15th Great Lakes, May 1981 - Dayton, OH
 Using the Computer To Do Research - the Emerging Computer Chemistry (5) (Gerald G. Vander Stouw)

16th Middle Atlantic, April 1982 - Newark, DE
 Online Today: Where Are We Now, Where Are We Heading? (4) (Charles H. Nelson)
 General (4) (Charles H. Nelson)

14th Central, June 1982 - Midland, MI
 Chemical Information (12) (Carlos M. Bowman)

17th Middle Atlantic, April 1983 - White Haven, PA
 Cost-Effectiveness of Online Searching of Chemical Information (6) (Robert E. Buntrock)
 General (7) (Jean G. Marcali)
 Numeric Databases (7) (B. Feuer)
 Copyright - Bane, Boon or Both? (5) (Frederick H. Owens)

16th Central/18th Great Lakes (3rd Joint), May 1984 - Kalamazoo, MI
 Current Topics in Chemical Information (10) (Patricia F. Roush)
 Direct End-User Access to Chemical Information (5) (Ronald R. Dueltgen)
 Poster: Careers in Chemical Information

16th Northeast, June 1986 - Binghamton, NY
 Tutorial on Chemical Information (Arleen N. Somerville)
 Cost-Effective Information Access for Chemists in Small Companies (5) (Arleen N. Somerville)

Table VIII. (continued)

20th Middle Atlantic, September 1986 - Baltimore, MD Literature Searching for Chemical Reactions (5) (Barton K. Bower)
42nd Southwest, November 1986 - Houston, TX Exploring the Fringes of Chemical Information Retrieval (7) (L. Levine)
19th Central, June 1987 - Columbus, OH Finding Information in Patent Databases (5) (Edlyn S. Simmons) Communicating of Chemical Knowledge in the Nineties (4) (Gerard O. Platau) General (4) (Marian S. Bursten) Poster: Careers in Chemical Information
21st Great Lakes, June 1987 - Chicago, IL End-User Views of End-User Searching (5) (Ronald R. Duetgen; Robert E. Buntrock)
17th Northeast, November 1987 - Rochester, NY Computer-Searching of Chemical Databases (7) (Arleen N. Somerville)
43rd Southwest, December 1987 - Little Rock, AR Searching the Chemical Database (4) (J. L. York; C. G. Winter)
9th Rocky Mountain, March 1988 - Las Vegas, NV Recent Developments at Chemical Abstracts Service (4) (Harry F. Boyle)
22nd Middle Atlantic, May 1988 - Millersville, PA Technology Update: Sources and Access to Chemical Information (5) (Andrea Holladay)
20th Central, June 1988 - Morgantown, WV Cost-Effective Chemical Information Retrieval (5) (Carol A. Duane)
1988 Pacific Conference on Chemistry and Spectroscopy, October 1988 - San Francisco, CA (originally announced as 24th Western Regional Meeting) Computer Information (8) (P. Cohan)
23rd Middle Atlantic, May 1989 - Cherry Hill, NJ Workshop: Searching the Chemical Literature on Your Personal Computer (Andrea Rosanoff)
22nd Central, June 1990 - Saginaw, MI (Susanne V. McKinley; Carlos M. Bowman) Materials and Chemical Information (6) (J. R. Downey; R. K. Shastri) Patent Information (6) (Michael S. Feider) Software for Chemists (6) (Ingrid L. Knox; E. W. Otterbach)
25th Middle Atlantic, May 1991 - Newark, DE General (5) (L. Kronk) Second Careers in Chemical Information (6) (Bruce Slutsky)
27th Middle Atlantic, June 1993 - Hempstead, NY Me and My Mac (4) (Norman R. Schmuff)

1980, the Committee voted not to establish an Education Committee, as it felt that opportunities for continuing education had been expanded within the meeting programs. At the 181st ACS National Meeting in Atlanta in March/April 1981, information on careers in library and information science, and on legal and paralegal careers in chemistry, was provided through two symposia.

In 1982, David K. Johnson represented the Division at the meetings of the ACS Committee on Professional Training (CPT). He was asked to communicate the Divisional views on the Committee's criteria for instruction in chemical information. In 1983, the Division was instrumental in securing a proper content of the chapters on "Chemical Literature and Information Retrieval" and "Library" in the CPT's "Undergraduate Professional Education in Chemistry: Guidelines and Evaluation Procedures". These guidelines have noted that "students preparing for professional work in chemistry must learn how to retrieve specific information from the enormous and rapidly expanding chemical literature".

At the 184th ACS National Meeting in Kansas City in September 1982, a symposium on "Chemical Literature and Information Retrieval in the Chemistry Curriculum" (George Gorin; Herman Skolnik, chairmen) was presented. In the December 1982 issue of the *Journal of Chemical Education*, several papers were published from an earlier symposium, "Instruction in Chemical Literature", including those by George Gorin and Gary D. Wiggins.

In 1983, the Education Committee was reestablished (Arleen N. Somerville, chairman) with specific goals such as:

- to aid college and university professors and/or librarians in teaching the use of chemical information
- to interact with other ACS bodies, such as the Committee on Professional Training (CPT)
- to assist industrial information centers in educating their scientists in the use of chemical information

Two Divisional officers attended the workshop on the "Potential of the Science of Chemistry", organized by the ACS Committee on Science in Washington, DC, on September 2-3, 1983, and reported that the workshop had no relevance to the Division's areas of interest.

In 1984, the Committee conducted a survey of the chemical information programs of 331 chemistry departments to identify difficulties faced by the departments in implementing information instructions. Many departments answered that their curricu-

lum was too crowded to accommodate a separate chemical information instruction course and that even in other courses information instruction could not be included. Arleen N. Somerville described the survey, analyzed the results, and suggested remedies in a paper on "Perspectives and Criteria for Chemical Information Instruction" published in the May 1990 issue of the *Journal of Chemical Information and Computer Sciences* [Ref. 33].

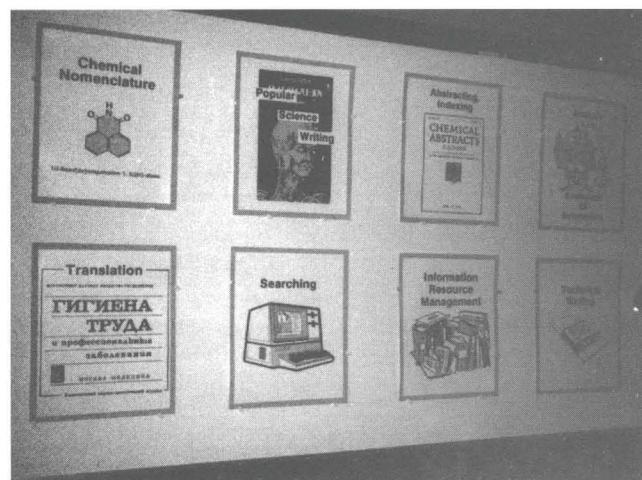
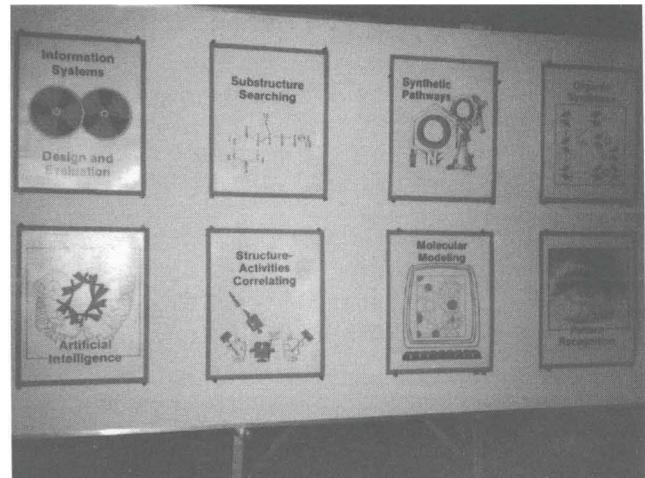
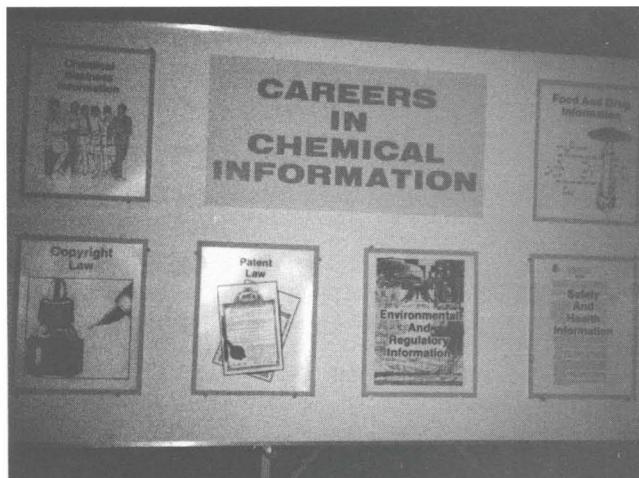
Promoting careers in chemical information has always been one of the Division's challenges. To this end, a poster "Careers in Chemical Information" on three boards was created, a project guided by Patricia F. Roush with the support of Dow Chemical U.S.A., with the intention of displaying it at a number of meetings, especially at the ACS Regional Meetings. This was done in the period 1984-1987. The individual 22 panels promoted by words and pictures such fields as:

- abstracting, indexing, technical writing
- chemical nomenclature
- substructure searching
- analysis and evaluation of information
- structure-activity correlations
- molecular modeling
- chemical business information
- environmental and regulatory information
- information resource management
- copyright and patent laws

Also in 1984, the Division produced a videotape (23 minutes) entitled "Chemists and Questions". It demonstrated how chemists, engineers, managers, and others can improve their understanding of chemistry by working with chemical information professionals. It provided answers to such questions as:

- how do chemists get their answers?
- what are the careers in the chemical information profession?
- how can chemical information professionals contribute to achievements in research and development, and in market development?
- what do you need to know to justify information costs?

The videotape project was the initiative of Jean G. Marcali, the 1982 Divisional Chairman, who also guided the project from its inception, arranged for a professional producer (Dorothy Arthur), reviewed the scripts, organized the taping sessions, and promoted the product. Six Division members (Carlos M. Bowman, Jean G. Marcali, Ann P. Moffett, Ralph E. O'Dette, Barbara G. Prewitt, and Bruno M. Vasta)



“Careers in Chemical Information” posters.

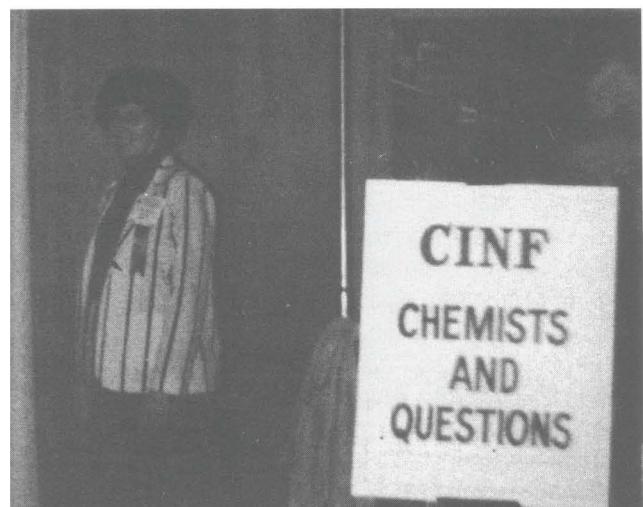
volunteered as spokesmen and actors. The Division was grateful for support provided by the E. I. DuPont Company for hosting all the participants and allowing the use of facilities for photography.

The tape was subsequently shown at the 187th ACS National Meeting in St. Louis in April 1984, at the 188th ACS National Meeting in Philadelphia in August 1984, at the 16th Central/18th Great Lakes ACS Regional Meeting in Kalamazoo, MI, in May 1984, at the ACS Delaware and Philadelphia Local Section meetings, at an ASIS meeting in Philadelphia, and before the Industrial Technical Information Managers Group (ITIMG) in Naperville, IL.

The tape was listed in the 1985 Catalog of ACS Videocourses and promoted by at least five other means. The production cost a total of \$17,269. Purchase price of the tape was \$275, rental \$80 per week. By the end of 1984, nine copies were sold. More copies were sold and rented in subsequent years which brought back \$6,300 to the Divisional Treasury. Originally, the recovery of expenditures was not expected.

Informing students and chemists about chemical information as a career option in chemistry has not been an easy task. Prior to creating the Careers Committee, the Division attempted to work with the ACS publications. For the Winter 1984/1985 issue of the *pHilter* (ACS Student Affiliates Newsletter), Ben H. Weil wrote an article on “Chemical Information Work - Satisfying Colleagues and Curiosity”, featuring interviews with Rosemarie Parker, William M. Anthony, Joanne L. Witiak, Karen Friever, and David K. Johnson [Ref. 27].

In 1985, the Education Committee mailed a 23-page bibliography of available published guides and aids to chemical literature, compiled by Linda K. Heideman, Ann Razgunas, and Gary D. Wiggins [Ref. 25], to all chemistry departments that responded to the Committee’s 1984 questionnaire on instruction information. In 1986,



Division displays its videotape “Chemists and Questions” at a 1984 ACS National Meeting, George R. Famini, Lois E. Fritts.

the Committee completed a computer searching training module for CAS files on STN, as the first of an intended series. This was quickly followed by the DIALOG version. By September 1988, 276 STN modules and 226 DIALOG modules were distributed.

At the 191st ACS National Meeting in New York in April 1986, the ACS Committee on Professional Training (CPT) celebrated its 50th anniversary with a symposium "CPT 1936-1986, What Next?". Arleen N. Somerville contributed a paper on "Perspectives and Criteria for Chemical Information Instruction in the Undergraduate Curriculum". In 1989, the CPT published a commemorative 23-page booklet on that symposium.

At the same meeting, the Division cosponsored a symposium on "Using the Chemical Literature with Students Today" (Gary D. Wiggins; Carol A. Carr, organizers). Arleen N. Somerville reported on the activities of the Divisional Education Committee at that session.

For the ACS Division of Chemical Education, Barbara G. Wood organized a symposium on "Scientific Information: A Multi-Faceted Career" to which eight chemical information professionals (Barbara J. Peterson, Victoria K. Veach, Robert E. Buntrock, Peter F. Rusch, Carlos M. Bowman, Marianne C. Brogan, Sandra E. Erb, and Bonnie Lawlor) contributed. It was an early try to convince professors that chemical information offered viable, respectable careers.

In 1987, the Education Committee in conjunction with the Special Libraries Association (SLA) opened a Clearinghouse for Chemical Information Instructional Materials (CCIM). It also incorporated the ACS Tomorrow's report recommendations on chemical information into its own agenda to promote education.

In 1988, the Careers in Chemical Information Subcommittee (David S. Saari, chairman) was formed to collect existing materials on careers, and to disseminate appropriate information to students or recent graduates. A Task Force (Carol A. Carr, chairman), working with the editorial staff of the *Journal of Chemical Education*, created two posters on chemical information, primarily dealing with online searching. The first 2' x 3' poster, "Chemical Information in the Computer Age. From Bits to Bytes: The Chemical Information Cycle", was published in Winter 1988 as part of the Journal's "Chemistry Currents" series. The second poster, "Chemical Information in the Computer Age. Online Chemical Databases - Many Paths to Information", was published in Summer 1989.

The ACS Education Division published in 1988 yet another booklet on "Careers in Chemistry: Questions & Answers", in which one section was devoted to "Non-traditional Careers in Chemistry", among them chemical information specialists [Ref. 29].

On November 1, 1989, as part of the National Chemistry Week, the Division sponsored a "Careers in Chemical Information" workshop in New York (Bruce Slutsky, organizer).

At the 201st ACS National Meeting in Atlanta in April 1991, Patricia E. O'Neill contributed a paper on "Chemical Information Industry: Opportunity Knocks" to a symposium on "Nontraditional Careers in Chemistry", organized by the ACS Younger Chemists Committee.

At the 202nd ACS National Meeting in New York in August 1991, the Executive Committee considered the request from William G. Town, chairman of the Board of Trustees of the Chemical Structure Association Trust for a contribution to an endowment to be used for assisting in the education of future information scientists and information specialists. The Division donated \$1,000.

Since 1991 Arleen N. Somerville continued to be successful in promoting chemical information instruction through the *Journal of Chemical Education*. She served as editor of "The Chemical Information Instructor" column, which debuted (with a specially designed cover) in the July 1991 issue, and as the author of "Information Sources for Organic Chemistry" published in the July 1991, October 1991, and May 1992 issues of the Journal. The latest article for the column was on "Subject Searching of Chemical Abstracts Online: Searching in the Basic Index", also by Arleen N. Somerville, published in the March 1993 issue of the Journal.

In 1992, the Careers Committee published "Salary Survey: Scientific Information Professionals with a Focus on Chemistry", compiled by Patricia E. O'Neill and Joanne L. Witiak. The compilation was based upon 589 responses to a 1991 salary survey and presented data correlating salary with such factors as time with employer, area, type of organization, group function, job function, and educational degree.

The compilation was favorably reviewed by Edward R. Silverman in the March 22, 1993, issue of *The Scientist*, with quotes from interviews with Patricia E. O'Neill, Arleen N. Somerville, Edlyn S. Simmons, Joseph E. Clark, and Victoria K. Veach [Ref. 39].

In 1992, the responsibility for the Clearinghouse for Chemical Information Instructional Materials (CCIIM) was assumed by Gary D. Wiggins of the Indiana University Chemistry Library. Under Carol A. Carr's leadership since the inception of the project in 1985, the collection of the CCIIM has grown to nearly 200 items dealing with publications such as Beilstein and Chemical Abstracts, and topics such as physical properties, nomenclature, and online searching.

In 1993, the Education Committee, recognizing that chemistry departments were facing new challenges with increased reliance on electronic access to information, decided to update the 1984 survey on "Chemical Information Instruction in United States Colleges and Universities":

- to reflect the current status of information instruction
- to recognize trends
- to identify how the Committee could best assist

The questionnaire was sent to all 595 chemistry departments that granted chemistry degrees in May 1992. Report on the survey is expected to be presented at the ACS National Meeting in Chicago in August 1993.

6. Publications, 1975-1993

Chemical Information Bulletin

Consistent with the change in the Division's name, the Divisional bulletin acquired a new name, *Chemical Information Bulletin*, with Issue No. 2 of Volume 27, published in Fall 1975.

Under the editorship of Gabrielle S. Revesz (till Spring 1977), Bonnie Lawlor (Fall 1977-1982), and Margaret A. Matthews (1983-1993), the Bulletin has continued to be the prime vehicle of communication among the Division members, especially between the Divisional Executive Committee and members at large. A relatively small fraction of members regularly attends the Divisional meetings which have been almost exclusively conducted at the ACS National Meetings. But all members need to be informed about the technical programs, educational activities, membership benefits, and news about the profession.

The Bulletin has continued to include the abstracts of papers to be presented at the Divisional symposia and sessions, and frequently of those presented at the cosponsored symposia as well. This has allowed all the members to be familiar with the technical content of papers often reporting the most recent advances in and application of new technologies.

Incidentally, because of misunderstanding rather than by design, the *Information Science Abstracts (ISA)* in its two issues (Volume 22, No. 1 and 2/3, of January and February/March 1987, respectively) published 414 abstracts based on abstracts published in the *Chemical Information Bulletin* in the period 1983-1987. While the Division might have been flattered by the coverage of the Bulletin in the *ISA*, it became immediately obvious that this was a mistake since the *ISA* had not normally covered abstracts of presentations such as those published in the Bulletin.

Till 1977, the Bulletin was published twice a year. Between 1978 and 1990, it appeared three times a year: in spring prior to the Spring ACS National Meeting, in summer prior to the Fall ACS National Meeting, and in fall/winter. The third issue, usually mailed in December, contained as a rule the Membership Directory. Often enough, the cover of that issue had a different color, blue, green, or peachy, to distinguish it from the other two regular issues.

In 1991, two issues were published, because the third projected issue was moved to the following year. Starting with 1992, the first issue became an "administrative" issue with information for the members published at the beginning of the calendar year rather than at the end. It contained:

- Chairman's Message
- 1992 Milestone Calendar
- Call for Nominations
- 1992 Publication Schedules
- 1992 CINF Symposia
- Constitution and Bylaws
- Membership Directory
- 1992 CINF Committees
- 1992 CINF Functionaries

Advertisements have continued to be a big factor in reducing publication expenses. Especially successful were two Bulletin's Business Managers, Ruthann Bates (1986-1987) and Ronald R. Duetgen (1989-1991). Since 1987 the revenue for advertisements exceeded the expenses. The average number of full-page advertisements was 21 per issue and there were a number of half- and quarter-page advertisements as well.

The Division has been grateful for the support provided by the Institute for Scientific Information (ISI) which since 1973 absorbed the cost of typing, artwork, and foreign postage.

CINF News

From time to time, the Executive Committee discussed the publication of an interim newsletter to inform the Division members of pertinent matters

between the two consecutive issues of the *Chemical Information Bulletin*. First such *Newsletter* was published by Ann P. Moffett in February 1986. It specifically focused on the events to take place at the forthcoming ACS National Meeting in New York in April 1986, providing details on the 3rd Tri-Society Symposium, the Herman Skolnik Award Symposium, and the Divisional luncheon and Business Meeting.

When the mission statement was adopted in 1987, one of the objectives supporting the mission has been "communicating with members through additional publications". In response to that, another issue of the *Newsletter* was published by Ann P. Moffett in March 1988, reporting on the 1987 planning sessions and on the events at the forthcoming meeting in Toronto in June 1988.

In November 1989, Bonnie Lawlor launched a new version of the newsletter, named *CINF News*. Its first issue contained highlights from the 198th ACS National Meeting in Miami Beach in September 1989, and information on future ACS meeting programs and on the 1990 2nd International Conference on Chemical Structures in The Netherlands.

Two issues of *CINF News* were published in 1990 and two in 1991. In the July 1991 issue, a new column "The Pen Writes On ..." by Betty L. Unruh was introduced to cover news and "hot" topics in the information industry, primarily outside the ACS.

A new format and a greatly enriched content were introduced in the Fall 1991 issue, which contained among others highlights from the August 1991 Executive Committee meeting, Councilors' report from the August 1991 ACS Council meeting, and a report on the ACS standards on evaluating and certifying undergraduate degrees with respect to libraries and chemical information retrieval skills.

Three issues were published in 1992 with additional features such as "Letter from Europe", "CINF Member Demographics", "A Brief History of the CINF", "Copyright News", and numerous other Committees' reports and announcements.

For 1989-1992, Richard A. Love (ACS Advanced Technology Group) was the *CINF News* Production Editor. For 1993, Richard A. Lowe (Institute for Scientific Information) took over that responsibility.

Books Containing Papers from Divisional and Division-Sponsored Meetings

A number of problems became associated with the publication of papers presented at the Divisional

symposia at the ACS National Meetings and other Division-sponsored meetings. While many an author were most willing to participate in a given symposium to present a report on their activities, a state-of-the-art review, or a description of a specific application of software to a chemical information problem, a few authors only were willing to invest additional time in preparing a publication-quality manuscript and, often needed, a camera-ready copy.

Unlike other professional organizations or even other ACS Divisions which regularly publish preprints and request the speakers to submit a full manuscript or an extensive summary before the meeting, this Division has never had such requirements. Consequently, it often fell upon the symposium organizer to literally twist the arms of the participants to make them submit after the meeting, and without much delay, publication-quality manuscripts.

An additional problem has been created by a kind of tug of war between editors of journals such as the *Journal of Chemical Information and Computer Sciences* and book publishers such as the ACS Books Department which publishes the ACS Symposium Series. Both solicit symposia papers, but each has a different criteria for acceptance. The journal editor sends each paper for peer review and some papers are rejected because they do not fit the criteria of original, previously unpublished, research. The symposia often include historical or survey papers that have no new science to report. The book publisher, on the other hand, does not object to publishing a whole symposium including such introductory or review material, but is carefully looking at a potential market first.

Both ways of publishing the symposia have been advantageous to the Division. The Division has always been vitally interested in channeling papers to the *Journal of Chemical Information and Computer Sciences*, which has become internationally recognized as a forum for exchange of ideas and applications in chemical information science and which the Division still regards as its "unofficial organ". On the other hand, publishing a symposium as a proceedings has allowed the symposium organizer a greater control of the book's content, has directed the message to a more focused group, and has provided the Division with royalties as additional income.

As is seen from Table IX (page 58), seven symposia from the ACS National Meetings were published in the ACS Symposium Series, while symposia from the three international meetings, cosponsored by the Division, were published as proceedings by a commercial publisher.

Table IX.
Books Containing Papers from Divisional and Division-Sponsored Meetings, 1975-1993

“Computer-Assisted Structure Elucidation”, Smith, D. E. (ed.), ACS Symposium Series, Vol. 54, American Chemical Society, Washington, DC, 1977, 151 pp.

“Computer-Assisted Organic Synthesis”, Wipke, W. T.; Howe, W. J. (eds.), ACS Symposium Series, Vol. 61, American Chemical Society, Washington, DC, 1977, 239 pp.

“Retrieval of Medicinal Information”, Howe, W. J.; Milne, M.; Pennell, A. F. (eds.), ACS Symposium Series, Vol. 84, American Chemical Society, Washington, DC, 1978, 231 pp.

“TSCA’s Impact on Society and Chemical Industry”, Ingle, G. W. (ed.), ACS Symposium Series, Vol. 213, American Chemical Society, Washington, DC, 1983, 240 pp.

“Graphics for Chemical Structures: Integration with Text and Data”, Warr, W. A. (ed.), ACS Symposium Series, Vol. 341, American Chemical Society, Washington, DC, 1987, 160 pp.

“Chemical Structures: The International Language of Chemistry”, Proceedings of the Conference, Leeuwenhorst Congress Center, Noordwijkerhout, The Netherlands, May 31-June 4, 1987, Warr, W. A. (ed.), Springer-Verlag, Berlin, 1988, 472 pp.

“Chemical Structure Information Systems: Interfaces, Communication, and Standards”, Warr, W. A. (ed.), ACS Symposium Series, Vol. 400, American Chemical Society, Washington, DC, 1989, 132 pp.

“Expert Systems for Environmental Applications”, Hushon, J. M. (ed.), ACS Symposium Series, Vol. 431, American Chemical Society, Washington, DC, 1990, 232 pp.

“The Terminology of Biotechnology: A Multidisciplinary Problem”, Proceedings of 1989 International Chemical Congress of Pacific Basin Societies, PACIFICHEM ’89, Loening, K. L. (ed.), Springer-Verlag, Berlin, 1990, 216 pp.

“Chemical Structures 2: The International Language of Chemistry”, Proceedings of The Second International Conference, Leeuwenhorst Congress Center, Noordwijkerhout, The Netherlands, 3rd June to 7th June 1990, Warr, W. A. (ed.), Springer-Verlag, Berlin, 1993, 496 pp.

Journal of Chemical Information and Computer Sciences

When the Division changed its name in 1975 from the Division of Chemical Literature to the Division of Chemical Information, the *Journal of Chemical Documentation* also changed its name to the *Journal of Chemical Information and Computer Sciences*, effective with Volume 15, Issue No. 1 (February 1975).

Not only this name change reflected the increasing involvement of the Division and of other ACS members in computerized operations such as data acquisition and analysis, data manipulation and display, pattern recognition, and automation, but it also identified a forum for publication of papers presented before a newly formed (1974) ACS Division of Computers in Chemistry. In fact, two of its founding members, Peter G. Lykos and W. Todd Wipke, were invited to join the Journal’s Advisory Board.

Although the Journal has never been formally pronounced as the official organ of the Division and the Division has never attempted to influence the Editor’s publication policies, very close ties have continued to exist between the Journal and the Division. Prominent

and active members of the Division have continued to serve on the Journal’s Advisory Board. The Division directly has contributed by encouraging speakers at the Divisional symposia and sessions to submit their papers for publication in the Journal.

Examples of such published symposia are:

- User Reactions to CAS Data and Bibliographic Services (Vol. 15, No. 3, August 1975)
- Impact of Copyright Developments on Chemical Information Transmission and Use (Vol. 16, No. 2, May 1976)
- Information Handling and Processing by the Food and Drug Administration (Vol. 17, No. 2, May 1977)
- Retrieval of Polymer Information (Vol. 19, No. 2, May 1979)
- Techniques and Problems in Retrieval of Numerical Data (Vol. 20, No. 3, August 1980)
- Uses and Applications of the Wiswesser Line Notation Today (Vol. 22, No. 2, May 1982)

- Scientific Communication Pathways (Vol. 26, No. 2, May 1986)
- Searching for Markush Structures (Vol. 31, No. 1, February 1991)
- Computer Retrieval of Polymer Information (Vol. 31, No. 4, November 1991)
- Numeric/Factual Materials and Chemical Databases (Vol. 33, No. 1, January/February 1993)

While the symbiotic relationship with the Division has continued to exist, the Journal has increasingly attracted papers with no association with a previous scientific meeting, and papers from outside the U.S. Clearly, the Journal has gained an international status of a prime journal in chemical information science.

As an example, from a total of 62 papers published in 1979, 30 were from the area of chemical information and 32 from the computer science field. Out of a total of 62, 29 were presented before the Division and 29 were written for publication only and never presented anywhere. One-third of all the papers (21) came from outside the U.S.

In mid-1981, Herman Skolnik expressed his intention to relinquish the position of the Editor. He commented in his last editorial on "Changing of the Editor" on his experience as the Editor for 21.5 years and on the international importance of the Journal [Ref. 23].

Thomas L. Isenhour was named a new Editor, effective as of July 1, 1982. He noted in his first editorial in August 1982 the exponential development in computers and envisioned the opening of new areas of computerized chemical investigations for which he hoped the Journal would become a forum. Carlos M. Bowman was appointed an Associate Editor with special responsibility for the chemical information-related manuscripts. In 1982, Peter C. Jurs was appointed the Book Review Editor, and in 1984, Stephen R. Heller became the Software Review Editor.

To celebrate the 25th anniversary of the Journal, the Silver Anniversary Issue (Volume 25, No. 3, August 1985) with a glossy silvery cover was published. It was presented as a review of the past 25 years and a predictor of the future [Ref. 26]. W. Val Metanomski and Charles L. Wilkins acted as special Associate Editors who solicited papers from the best experts in the field. The issue contained 37 papers covering every conceivable topic of chemical information and computer sciences from publishing, storing, and retrieving primary and secondary information to storing, naming, searching,

and retrieving chemical structures to generating and organizing specialized databases to providing chemical information instruction to applying automation and robotics in the laboratory. Among them were contributions from Belgium, France, Germany, Japan, Poland, Rumania, Switzerland, and the United Kingdom. It is worth noting that six of the authors (Charles L. Bernier, Eugene Garfield, Joseph H. Kuney, Noel Lozac'h, Herman Skolnik, and Robert E. Stobaugh) 25 years earlier contributed papers to the very first issue of the Journal in 1961.

In mid-1988, Thomas L. Isenhour tendered his resignation. George W. A. (Bill) Milne was named a new Editor as of July 1, 1989. Shortly thereafter, three Associate Editors, Pierre Buffet from France, Reiner Luckenbach from Germany, and Wendy A. Warr from the United Kingdom were appointed to reflect the international nature of the Journal. Gary D. Wiggins became the new Book Review Editor and Stephen R. Heller has continued as the Software Review Editor.

The November 1990 issue (Volume 30, No. 4) was dedicated to the memory of George Vladutz, the 1989 Patterson-Crane Award winner, who passed away on September 3, 1990.

The May 1991 issue (Volume 31, No. 2) was dedicated to Michael F. Lynch, the 1989 Herman Skolnik Award winner, on the occasion of his 25th anniversary of joining the Faculty at the University of Sheffield, England, from where a steady stream of significant research papers has been reaching the Journal, from him, his colleagues, and his students.

Interesting statistics showing for the period 1982-1991 the upward slope in the percentage of papers from outside the U.S. published in the Journal were presented by the Editor in the November 1991 issue of *CHEMTECH* [Ref. 38]. The average for the last three years (1989-1991) was 55%.

Since the Journal in the past few years enjoyed a steady growth, the frequency of publication was increased in 1992 from four to six issues per year.

Starting with the March/April 1993 issue (Volume 33, No. 2), the Journal's papers have been divided into three sections, "Chemical Information", "Chemical Computation", and "Molecular Modeling". This merely formalized what the Journal had been publishing already. A subtitle, "Includes Chemical Computation and Molecular Modeling", has also been added. Anton J. Hopfinger and Kenny Lipkowitz were named as additional Associate Editors to deal with papers on chemical computation and molecular modeling.

Information Science Abstracts

As one of the founders of this abstracting journal, the Division has continued to participate actively on its governing body, Documentation Abstracts, Inc., through the following representatives on the Board of Directors:

1976-1977	Peter F. Sorter, President Frederic R. Benson
1978-1982	Peter F. Sorter, President Ralph E. O'Dette
1983	John T. Dickman Ralph E. O'Dette
1984-1987	Murray D. Rosenberg, President (1986-1987) John T. Dickman
1988-1993	Paul E. Swartzentruber, Secretary (since 1990)

When in 1988 the Divisional representation was reduced to one member on the Board, the Division has started appointing an alternate representative whose role was to act for the representative whenever the latter could not attend the Board's meeting:

1988-1991	David F. Zaye
1992-1993	Judith E. Watson

The number of sponsoring organizations grew from the original three to eight:

- ACS Division of Chemical Information (ACS/DCI)
- American Society for Information Science (ASIS)
- Special Libraries Association (SLA)
- American Society of Indexers (ASI) (since 1978)
- American Library Association (ALA) (since 1985)
- Association of Information and Dissemination Centers (ASIDIC) (since 1985)
- Association of Library and Information Science Education (ALISE) (since 1985)
- Medical Library Association (MLA) (since 1985)

Accordingly, the Board of Directors was enlarged from the original six members to 18 in 1986, but it was trimmed down to eight when the new Bylaws went into effect in 1988. Currently, there are ten members, including two representatives from the Plenum Publishing Corporation.

In an effort to improve the currency and the efficiency of publication, the Board awarded a contract in 1981 to Plenum Publishing Corporation which continues to publish *Information Science Abstracts* to date.

When this change occurred, Frank Columbus of Plenum took over the editorship for four years (1981-1984). In 1985, Harry M. Allcock from Plenum became the Editor, the post he held till 1992. In 1993, Anne Meagher became the Managing Editor. Harry M. Allcock, as Technical Advisor, continues to serve on the Board of Directors.

In the years 1976 through 1980, the journal published on the average 4,500 abstracts per year. In the years 1981, 1982, and 1983, it published 5,892, 5,995, and 7,202 abstracts, respectively. When in 1984 the frequency of publication was increased from six issues to 12 issues per year, 12,000 abstracts were published. In later years (1987-1989), the number dropped to 8,400, then increased to 9,200 (1990-1991), and dropped again to 8,800 in 1992.

At the 191st ACS National Meeting in New York in April 1986, Dorothy Thomas presented an informative paper on "Information Science Abstracts: An Overview of History, Purpose, and Goals" [Ref. 30].

The journal observed its 25th anniversary in 1990 with a glossy ivory and silver cover [Ref. 36]. A special historical editorial, provided for the occasion by Ben-Ami Lipetz, former Editor (1966-1980), was published in the March 1990 issue (Volume 25, No. 3).

Since September 1983, the journal can be accessed online as the DIALOG File 202, and since September 1992 is available on a single CD-ROM. The latter is enhanced with information science records from the ERIC database.

CHEMTECH

In January 1971, a new ACS monthly magazine, *CHEMTECH*, made its debut under the editorship of Benjamin J. Luberoff. Subtitled "The Innovator's Magazine", it was intended to cover interdisciplinary areas of chemistry and chemical engineering. From the very beginning, its Advisory Panel has consisted of official representatives of selected ACS Divisions. Among the 11 Divisions on the first such panel, the Division of Chemical Literature, as it was known then, was not included.

In 1977, the Divisional Long Range Planning Committee recommended that the Division should seek representation on the *CHEMTECH* Advisory Panel. The Division's application was unanimously accepted

by the Panel and Cynthia H. O'Donohue was appointed a Divisional representative for 1978.

Since then the Division has had a continuous representation on the Panel, renamed Advisory Board in 1985, as follows:

- 1978-1982 Cynthia H. O'Donohue (chairman, 1981)
- 1983-1984 Gabrielle S. Revesz
- 1985-1987 Stuart M. Kaback
- 1988-1993 Lucille M. Wert (chairman, 1992)

Their active participation was beneficial to both the magazine and to the Division, since they directly or indirectly contributed to the articles addressing chemical information issues such as:

- Rowlett, R. J., Jr. "Gleaning Patents with CHEMICAL ABSTRACTS" (Vol. 9, No. 6, June 1979)
- Kaback, S. M. "Patents: Keys to Knowledge" (Vol. 10, No. 3, March 1980)
- Revesz, G. S.; Cassidy, P. A. "Modern Literature Searching: The Case of C₄" (Vol. 14, No. 1, January 1984)
- Kaback, S. M. "Access All the Information in Patents" (Vol. 15, No. 3, March 1985)
- Rickter, D. "Wandering through Darkest Abstracts" (Vol. 15, No. 8, August 1985)
- Nelson, G. L. "Whither Chemical Information" (Vol. 15, No. 12, December 1985)

At the 202nd ACS National Meeting in New York in August 1991, *CHEMTECH* celebrated its 20th anniversary.

In the end of 1991, Benjamin J. Luberoff, the founding Editor, retired having served for 21 years (1971-1991). He spoke twice before the Division as a luncheon guest speaker on August 19, 1972, in New York and on August 25, 1992, in Washington, DC, almost to the day 20 years apart!

A new Editor, Abraham P. Geilbein took over the reins in January 1992. A new format for *CHEMTECH* was introduced in January 1993.

7. Awards and Recognitions, 1975-1993

American Chemical Society (ACS) Outstanding Division Award

For its performance in 1982, the Division received the ACS Outstanding Intermediate Division Award, established by the ACS Committee on Divisional Activities. The Division was cited for excellence of administration, dissemination of information to members, sponsorship of journals, production of an educational videotape, and outstanding programming at the ACS National Meetings. Specifically identified for 1982 were the Tri-Society Symposium (with the American Society for Information Science and the Special Libraries Association) and the international character of the Herman Skolnik Award, given in 1982 to Robert Fugmann of West Germany. On hand to receive the Award plaques at the 187th ACS National Meeting in St. Louis in April 1984 were the 1982 Divisional Officers (Jean G. Marcali, chairman; Barbara G. Prewitt, chairman-elect; and Ann P. Moffett, treasurer).



Divisional Officers, Ann P. Moffett (treasurer), Jean G. Marcali (chairman), and Barbara G. Prewitt (Wood) (chairman-elect) receive the 1982 ACS Outstanding Intermediate Division Award at the 187th ACS National Meeting in St. Louis, MO, in April 1984.

At the semiannual Divisional Officers Group (DOG) dinner at the 196th ACS National Meeting in Los Angeles on September 24, 1988, the Division received, for the second time, the ACS Outstanding Intermediate Division Award for its 1987 performance. The Division was cited for carrying out its mission to provide a forum for the exchange of information, for cosponsoring and participating in the First International Conference on Chemical Information in The Netherlands, for

programming and demonstrations at the two ACS National Meetings, for providing assistance to four ACS Regional Meetings, and for encouraging a direct interaction between the bench chemists and information resources through programs, publications, awards, and member-assistance. The 1987 Divisional Officers (W. Val Metanomski, chairman; Arleen N. Somerville, chairman-elect; Bonnie Lawlor, secretary; and M. Karen Landsberg, assistant secretary) were on hand to receive the Award plaques.

The five factors that contributed most to both Awards were:

- long-range planning
- continuity of management
- monitoring of technological advances
- response to changing needs of members
- quality and comprehensiveness of annual reports

In response to a request by Karl S. Vorres, Chairman of the Divisional Officers Caucus, W. Val Metanomski made a brief presentation on "ACS Division of Chemical Information - An Award-Winning Division" at the Caucus meeting in Miami Beach on September 9, 1989, highlighting those very factors which contributed most to the 1987 Award.

Herman Skolnik Award

In 1976, in honor of the first recipient, the Division established the Herman Skolnik Award to recognize outstanding contributions to and achievements in the theory and practice of chemical information science. It was not a coincidence that the first Award was given at the ACS Centennial Meeting in New York. It was fitting at the time of celebrating the 100th anniversary of founding the ACS to recognize chemical information as one of the integral functions of the whole Society.

Bruno M. Vasta, the 1976 Divisional Chairman is to be credited with initiating and implementing the Award. A year earlier, at the 169th ACS National Meeting in Philadelphia in April 1975, he had suggested the Division establishes an award to be granted for an outstanding paper, research endeavor, or other significant contribution in the field of chemical information. He further proposed the award to be named the Herman Skolnik Award in honor of the first Editor of the *Journal of Chemical Information and Computer Sciences*.

Upon the receipt of the Award, Herman Skolnik described the Award in an editorial [Ref. 19] as a proof that

"chemical information science has achieved the final mark of maturity: a continuing tradition of responsible authorities. When we honor a member of our discipline, we honor the discipline."



Herman Skolnik receives the first Divisional Award from Bruno M. Vasta (chairman) at the 171st ACS National Meeting in New York on April 6, 1976.

The original Award consisted of a \$350 honorarium and a walnut plaque. In recent years, the honorarium has been increased in 1989 to \$500, in 1991 to \$1,000, and in 1993 to \$2,000.

The "Call for Nominations" announcement and brochure refer to the Award as recognizing the continuing advancement of chemical information in areas such as:

- design of new and unique computerized information systems
- preparation and dissemination of chemical information
- editorial innovations
- design of new indexing, classification, and notation systems
- chemical nomenclature
- structure-activity correlations
- numerical data correlation and evaluation

Each Award winner gives an address at the time of the presentation of the Award at the ACS National Meeting. In 1976, and regularly since 1982, an Award Symposium has been organized by the recipient on the topic close to that of the address.

The Herman Skolnik Award Winners are listed in **Table X** (page 63). There were no Awards in 1979 and 1985. Two Awards were given in 1989. Detailed citations are given below.

Table X.
Herman Skolnik Award Winners

1976	Herman Skolnik
1977	Eugene Garfield
1978	Fred A. Tate
1980	William J. Wiswesser
1981	Ben H. Weil
1982	Robert Fugmann
1983	Russell J. Rowlett, Jr.
1984	Montagu Hyams
1986	Dale B. Baker
1987	William Theilheimer
1988	David R. Lide, Jr.
1989	Michael F. Lynch
	Stuart A. Marson
1990	Ernst Meyer
1991	W. Todd Wipke
1992	Jacques-Emile Dubois
1993	Peter Willett

1976 - Herman Skolnik - for outstanding and sustained service in the field, as one of the founders of the Division, founder of the ACS Delaware Valley Chemical Literature Group, science historian, founder and Editor of the *Journal of Chemical Documentation (Journal of Chemical Information and Computer Sciences* since 1975), inventor of a notation system, innovator in indexing, and organizer of symposia and panel discussions at the ACS local, regional, and national level.

1977 - Eugene Garfield - for contributions to information science that have had considerable impact on both the academic world and the information industry, especially the successful application of scholarly work to the business of information, such as founding of the Institute for Scientific Information (ISI), publication of innovative secondary journals and indexes (*Current Contents*, *Index Chemicus*, and *Science Citation Index*), and enjoying acceptance of his innovations through effective educational marketing programs.

1978 - Fred A. Tate - for conceiving, developing, and implementing computer-based information-handling systems and procedures across the full-range of Chemical Abstracts Service's (CAS) operations, which had provided prototypes for other secondary services, for his leadership in the development of the CAS Chemical Registry System, and for close international cooperation between the United Kingdom, West German, French, Japanese, and United States groups in the development and use of chemical information systems and services.

1980 - William J. Wiswesser - for pioneering mathematical, physical, and chemical methods of punched-card and computer-stored representation of molecular structures, leading to the creation of the Wiswesser Line Notation (WLN) for concise storage and retrieval of chemical structures, which was adopted by the largest chemical and pharmaceutical companies worldwide to manage their respective chemical structure files, and by a number of secondary indexes, atlases of data, and catalogs of chemical compounds.

1981 - Ben H. Weil - for distinguished and dedicated services to the chemical profession, particularly in definition and documentation of chemical literature, pioneering and continuing work in chemical information systems and copyright, including one of the first punched card indexing systems placed in actual use, founding and editing of the Divisional bulletin, *Chemical Literature*, standardiza-

tion of abstracts, and contribution to the creation of the Copyright Clearance Center, Inc. (CCC).

1982 - Robert Fugmann - for development of the GREMAS system (Genealogical RETrieval of MAgnetic tape Storage), the first truly sophisticated computerized retrieval system, based on a faceted hierarchical fragment code for each part of a chemical molecule, and for development of the TOSAR system (TOpological representation of Synthetic and Analytical system Relations) for the retrieval of reactions and other concepts, including establishment of indexing concepts for nonstructural information and creation of theoretical basis of information systems.

1983 - Russell J. Rowlett, Jr. - for guiding *Chemical Abstracts'* transition from a manually produced abstracting and indexing publication to a computer-generated family of products, and for his leadership in the improvement of patent coverage, the CAS Registry System, timeliness of CA Volume and Collective Indexes, and quality control through a shift from volunteer abstractors to full-time professional document analysts and through the unified document analysis utilizing to the fullest extent man-machine interactions.

1984 - Montagu Hyams - for contribution to handling of patents by founding in 1951 a one-man business from his house, Derwent, which through his vision, leadership, and business acumen has become, as Derwent Publications Limited, the world leader in patent-based information services producing a diversified range of patent- and journal-based information services available both in printed form and as online computer-searchable databases.

1986 - Dale B. Baker - for leadership of Chemical Abstracts Service (CAS) in its move from the conventional abstracting and indexing service of the 1950's to the world's premier automated information storage and retrieval system through courageous embarkation on new paths and approaches including promotion of international sharing of scientific and technical information, which provided direction for the entire information industry.

1987 - William Theilheimer - for pioneering a chemical reaction documentation system, embodied in 40 yearbooks of "Theilheimer's Synthetic Methods of Organic Chemistry" and paving the way to modern chemical reaction databases through codification of chemical reactions and categorization of reactions in terms of reaction type and

essential bond breaking and formation.

1988 - David R. Lide, Jr. - for the creation of the National Standard Reference Database Series of computer-searchable numeric databases, administration of the Standard Reference Data Program of the National Bureau of Standards, founding and editing the *Journal of Physical and Chemical Reference Data*, and participation in national and international data activities of the International Union of Pure and Applied Chemistry (IUPAC) and the Committee on Data for Science and Technology (CODATA).

1989 - Michael F. Lynch - for pioneering research of more than two decades on the development of methods for the storage, manipulation, and retrieval of chemical structures and reactions as well as related bibliographic information, including generic structure storage and retrieval, automatic subject indexing, articulated subject index production, document retrieval system, and database management.

- Stuart A. Marson - for development of innovative, user friendly software which has allowed the bench chemist to more productively utilize chemical information as daily resource such as the first complete commercial system for graphic input, storage, searching, and retrieval of chemical structures (MACCS) and the chemical reaction information system (REACCS).

1990 - Ernst Meyer - for playing a major role in revolutionizing chemical information technology through the use of computer methodology since the late 1950's for input and searching techniques for topological and fragment representation of chemical substances, including generic or Markush structures and considering structure-activity correlations.

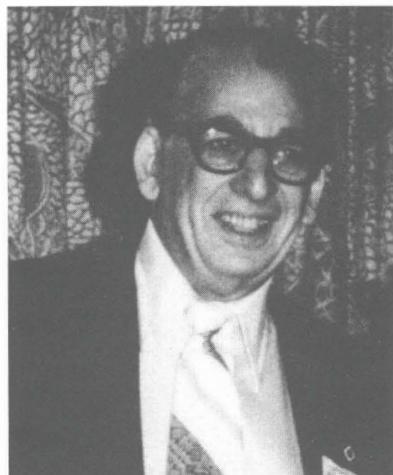
1991 - W. Todd Wipke - for pioneering work in the development of methods for representing and manipulating chemical information such as computer-assisted design of organic syntheses, simple interfaces and smart systems, methods for molecular modeling and conformational analysis, and editorial innovations in starting an electronic journal *Tetrahedron Computer Methodology*.

1992 - Jacques-Emile Dubois - for the development of the DARC Topological System which led to various applications in search and retrieval of chemical substructures and structures and in artificial intelligence such as in applying sequences of substructure, structure, and

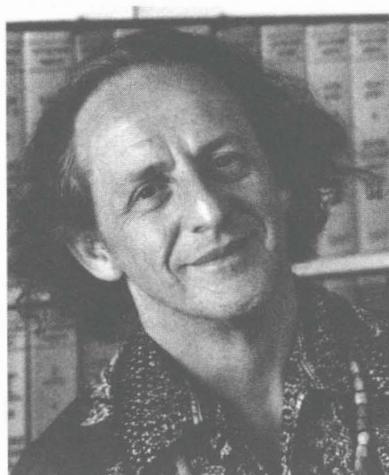
hyperstructure in locating chemical entities in their structural context and in evaluation of their local or global properties according to topological or topographical information.

1993 - Peter Willett - for contributions to the development of chemical information science which includes the identification of reaction sites and the development of maximal common subgraph algorithms in reaction retrieval systems, the introduction of similarity measures through classification and clustering in chemical substructure searching, 3-D searching of chemical molecules and biological macromolecules, and text searching.

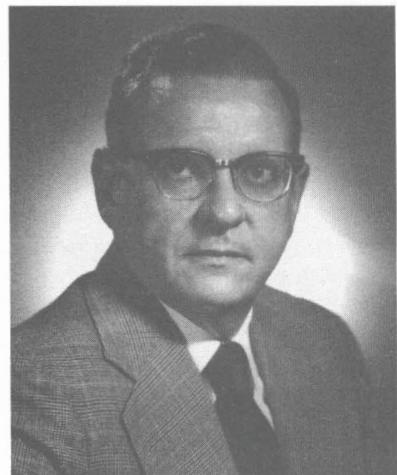
Herman Skolnik Award Winners



1976 - Herman Skolnik



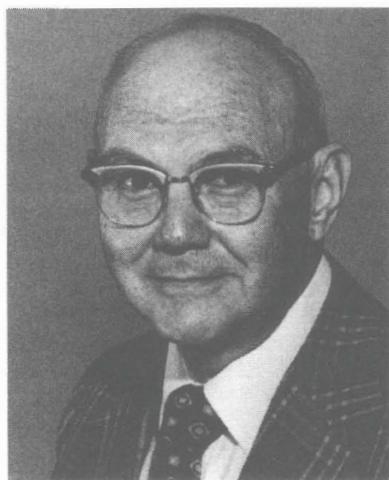
1977 - Eugene Garfield



1978 - Fred A. Tate



1980 - William J. Wiswesser

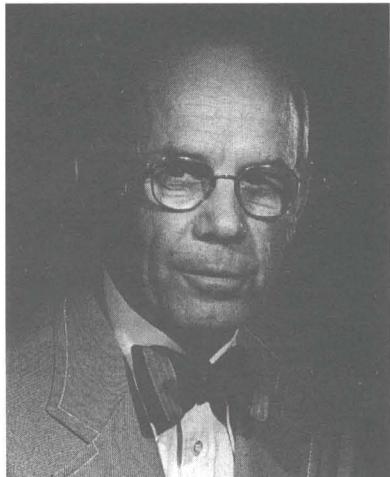


1981 - Ben H. Weil

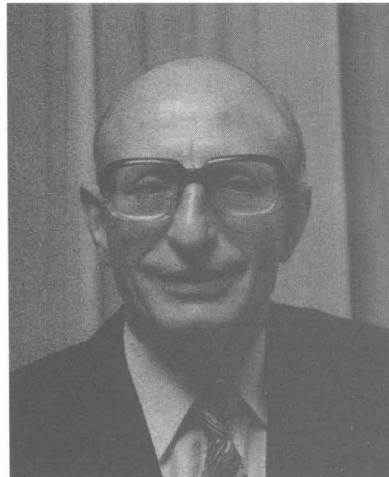


1982 - Robert Fugmann

Herman Skolnik Award Winners



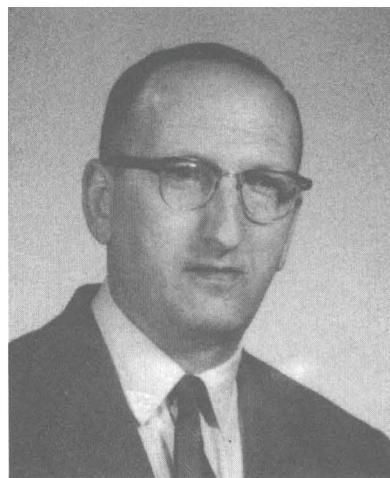
1983 - Russell J. Rowlett, Jr.



1984 - Montagu Hyams



1986 - Dale B. Baker



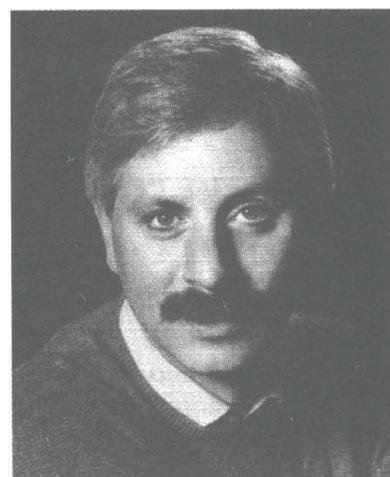
1987 - William Theilheimer



1988 - David R. Lide, Jr.



1989 - Michael F. Lynch



1989 - Stuart A. Marson



1990 - Ernst Meyer



1991 - W. Todd Wipke

Herman Skolnik Award Winners



1992 - Jacques-Emile Dubois



1993 - Peter Willett

Awards Committee

In 1986, the Awards Committee was reestablished under the chairmanship of Merle I. Eiss (1986-1988) with the goals to better define and formalize requirements for the Herman Skolnik Award, to investigate the possibility of the Award being made an ACS National Award, including the incorporation of the Patterson-Crane Award into the ACS National Award, and to institute a Student Scholarship Award. The Committee also considered the establishment of an award for the best paper submitted to the *Journal of Chemical Information and Computer Sciences*.

These matters continued to be considered during the next few years under the chairmanship of W. Val Metanomski (1989), Ruthann Bates (1990), and Edlyn S. Simmons (1991-1993). In 1989, the Executive Committee accepted the recommendation for the Herman Skolnik Award Selection Jury to consist of the Divisional Chairman, Divisional Chairman-Elect, and the Divisional Awards Committee Chairman. Prior to that, the Divisional Past-Chairman was a member of the Selection Jury. The suggested award for the best paper did not get the support from the new Editor of the Journal, George W. A. Milne, and his Editorial Advisory Board, and the idea was abandoned accordingly.

In 1991, the Committee made several recommendations, which were subsequently approved by the Executive Committee:

- to discontinue any considerations and efforts towards making the Herman Skolnik Award an ACS National Award, and rather to build an appropriate Divisional endowment and work

toward making this internationally recognized annual Award even more prestigious by increasing the honorarium

- to establish the Divisional Meritorious Service Award for outstanding contribution to the Division
- to award Certificates of Appreciation to outgoing Divisional Officers, Committees' Chairmen, and other Members, who deserved thanks for service and valued contributions

Meritorious Service Award

This Award was established in 1992 to recognize a member's outstanding contribution to the Division. The criteria for the Award are, for instance, preparation of a major report or study, continuing leadership in a particular area, or sustained active contribution to major tasks over many years.

W. Val Metanomski was the first recipient of the Award given at the Divisional luncheon at the 204th ACS National Meeting in Washington, DC, on August 25, 1992. He was cited for his contributions to the Program Committee (1976-1983), his leadership as Divisional Chairman (1987), and the fulfillment of numerous other tasks including the latest commitment to prepare a history of the Division for the 1993 celebration of the 50th anniversary of chemical information within the ACS. The Division was awarded the ACS Outstanding Intermediate Division Award in 1982 and 1987, when he was its Program Chairman and Divisional Chairman, respectively.

Student Scholarship Award

In 1989, the Division established the annual Student Scholarship Award to recognize chemists pursuing graduate studies in information, library, or computer science, leading to a career in chemical information. The Award consists of a certificate and a \$1,000 stipend. It is usually presented at an ACS Local Section meeting in the vicinity of the recipient's residence or school.

The recipients of this Award were:

1989 - **Joan M. Evans** (College of Information Studies, Drexel University, Philadelphia, PA)

1990 - **Eric A. Johnson** (School of Information Studies, Syracuse University, Syracuse, NY)

1991 - **Leann Hankom** (School of Library and Information Science, University of Iowa, Iowa City, IA)

- **Craig Jenkins** (Department of Library and Information Studies, University of North Carolina, Greensboro, NC)

1992 - **James J. Heinis** (School of Information and Library Science, University of North Carolina, Chapel Hill, NC)

- **Robyn Stewart** (School of Library, Archival, and Information Studies, University of British Columbia, Vancouver, BC, Canada)

1993 - **Linda Halliburton** (School of Information and Library Studies, State University of New York at Buffalo, NY)

Special Recognitions and Grants

Herman Skolnik was honored at the Divisional luncheon at the 184th ACS National Meeting in Kansas City on September 14, 1982, with a plaque for over 20 years of service as Editor of the *Journal of Chemical Information and Computer Sciences*.

Harry M. Allcock was presented at the Divisional luncheon at the 192nd ACS National Meeting in Anaheim on September 9, 1986, with an Award recognizing his numerous and various contributions to the Division. His hospitality at the "Harry's Party" on Monday evening at every ACS National Meeting as long as one cares to remember has become a Divisional tradition and a best place to renew professional acquaintances and to meet new members of the profession.

Matthew Hahn and John Leneve, graduate students at the University of California at Santa Cruz, were awarded a grant of \$250 each to attend the 1st

International Conference on Chemical Structures in The Netherlands in 1987.

Carlos M. Bowman and Gerald G. Vander Stouw were presented at the 204th ACS National Meeting in Washington, DC, in August 1992 with Certificates of Appreciation for service and valued contributions to the Division.

Patterson-Crane Award

The Austin M. Patterson Award was originally established in 1949 by the ACS Dayton Local Section to acknowledge meritorious contributions in the field of chemical literature, especially in the documentation of chemistry. Austin M. Patterson was the first recipient of the Award in recognition of his work as Editor of *Chemical Abstracts* (1909-1914) and his leadership in organic chemical nomenclature.

In 1975, the Award was expanded to honor E. J. Crane, who was Editor of *Chemical Abstracts* (1915-1958) and the first Director of Chemical Abstracts Service (1956-1958), and renamed the Austin M. Patterson-E. J. Crane Award. From that time, the Award has been sponsored and administered jointly by the ACS Dayton and Columbus Local Sections. According to the agreement between the two ACS Local Sections, the seven-member selection jury consists of three members of the Dayton Section, three members of the Columbus Section, and the Chairman of the ACS Division of Chemical Information (or a designated personal representative).

The Award is presented every two years and consists of a personalized commendation and a \$2,000 honorarium.

Since the Division started to participate in the selection of the Award winner, the following distinguished members of the chemical information community received the Award:

1977 Benjamin H. Weil
1979 Dale B. Baker
1981 W. Conard Fernelius
1983 Eugene Garfield
1985 Bruno J. Zwolinski
1987 Kurt L. Loening
1989 George E. Vladutz
1991 David R. Lide, Jr.
1993 Hideaki Chihara

Each Award winner presented an Award address at a banquet held either in Dayton or Columbus. Each made a major contribution to the documentation of chemistry or to chemical information theory or practice. Each has been an active member of the Division, as an officer, a Committee member, or a speaker on numerous occasions at the ACS National Meetings.

8. Social Events, 1975-1993

Luncheons

The most enduring tradition, Divisional luncheons at the ACS National Meetings, continued throughout that period, almost always capped with a talk by a knowledgeable, interesting, and often witty speaker. Some luncheons were joint with other ACS Divisions such as Computers in Chemistry, and Chemistry and the Law. The subjects covered up-to-date information on general societal concerns, on some of the ACS activities, on new technological developments in information storage, retrieval, and distribution, and on other "hot" topics.

The luncheon speakers are listed in Table XI (page 70). They included:

- a Nobel Prize laureate (Melvin Calvin)
- a future chairman of the ACS Board of Directors (Paul V. Smith, Jr.)
- an ACS senior executive (D. H. Michael Bowen)
- the ACS Computer Secretariat founder (Rudolph J. Marcus)
- editors of the ACS journals (Thomas L. Isenhour, Benjamin J. Luberoff)
- pioneers in information processing (Carlos M. Bowman, Robert L. Chartrand, Everett H. Brenner, Peter B. Schipma, Harry M. Allcock)
- researchers and educators (William E. Hanford, Robert Fugmann, Charles H. Davis, Jack H. Stocker, Stephen Hanessian)
- government administrators (Adlene Harrison, Paul de Falco)
- a noted science historian (Pamela S. Richards)

Receptions and Social Hours

At almost every ACS National Meeting, the Division held a reception or a social hour, usually on Tuesday afternoon. The receptions were often associated with the Herman Skolnik Award Ceremony. Those receptions were sponsored by the companies associated with the Award winner as employers, publishers, or service organizations. Other receptions were sponsored by database producers, publishers, and vendors who presented workshops and seminars at those meetings.

The sponsoring organizations were:

- BASF
- Beilstein Institute
- Chemical Abstracts Service
- Derwent Publications
- Dialog Information Services
- Hampden Data Services
- IFI/Plenum Data Corporation
- Institute for Scientific Information
- S. Karger AG
- Maxwell Online
- Merck Index
- Molecular Design Limited
- ORBIT Search Service
- Questel
- Springer-Verlag

Special celebrations to which the Division was invited were receptions commemorating:

- 75th anniversary of Chemical Abstracts Service in Kansas City on September 14, 1982
- 100th anniversary of the Merck Index in Miami Beach on September 12, 1989
- 25th anniversary of the CAS Registry System in Boston on April 24, 1990

Starting with the 195th ACS National Meeting (3rd Chemical Congress of North America) in Toronto in June 1988, the Division also held a Sunday evening reception to welcome new members, to meet old acquaintances and make new friends, to supply meeting programs and badge holders, and to provide information on the city's tourist attractions and restaurants. This has been continued through 1993.

Planned for the 206th ACS National Meeting in Chicago in August 1993 is the 50th anniversary gala celebrating the formation in 1943 of the Division's predecessor, the Chemical Literature Group. Especially honored going to be the Herman Skolnik Award winners and past Divisional chairmen.

Table XI.
Luncheon Speakers at the ACS National Meetings, 1975-1993

170th	26 August 1975	Chicago	Paul V. Smith, Jr.
171st	6 April 1976	New York	C. Levinthal
172nd	31 August 1976	San Francisco	Carlos M. Bowman
173rd	22 March 1977	New Orleans	William E. Hanford
174th	30 August 1977	Chicago	Philip A. Greth
175th	14 March 1978	Anaheim	Melvin Calvin
176th	12 September 1978	Miami Beach	Robert Fugmann (panel moderator)
178th	13 September 1979	Washington	Robert L. Chartrand
179th	25 March 1980	Houston	Adlene Harrison
180th	25 August 1980	Las Vegas	Howard M. Peters (Subdivision)
	28 August 1980	Las Vegas	Paul de Falco, Jr.
181st	31 March 1981	Atlanta	D. H. Michael Bowen
182nd	24 August 1981	New York	Walter E. Buting (Subdivision)
	25 August 1981	New York	Everett H. Brenner
183rd	30 March 1982	Las Vegas	Einar Stefferud
184th	13 September 1982	Kansas City	J. Franke (Subdivision)
	14 September 1982	Kansas City	Peter B. Schipma
185th	22 March 1983	Seattle	Thomas L. Isenhour
186th	30 August 1983	Washington, DC	Jon A. Baumgarten
187th	10 April 1984	St. Louis	Charles H. Davis
188th	28 August 1984	Philadelphia	(Roundtable topical discussions)
189th	30 April 1985	Miami Beach	Rudolph J. Marcus
190th	10 September 1985	Chicago	Joseph P. Bremner
191st	15 April 1986	New York	Pamela S. Richards
192nd	9 September 1986	Anaheim	Harry M. Allcock
193rd	7 April 1987	Denver	Orville L. Chapman
194th	1 September 1987	New Orleans	Jack H. Stocker
195th	7 June 1988	Toronto, Canada	Stephen Hanessian
196th	27 September 1988	Los Angeles	Rudolph J. Marcus
197th	11 April 1989	Dallas	(Awards Luncheon)
199th	24 April 1990	Boston	Ching-Chih Chen
200th	28 August 1990	Washington, DC	Charles W. Harper
201st	16 April 1991	Atlanta	Howard W. Ory
202nd	27 August 1991	New York	Davida Sharf
203rd	6 April 1992	San Francisco	Giuliana Lavendel
204th	25 August 1992	Washington, DC	Benjamin J. Luberoff
205th	30 March 1993	Denver	Martha Whittaker

Tours and Excursions

Special events which the Division organized or was invited to were tours and excursions, most with buffet dinners or receptions, at the ACS National Meetings such as:

- Moonlight cruise on a catamaran boat along Waikiki Beach in Honolulu on April 3, 1979
- Engineering Societies Libraries tour in New York on August 26, 1981

- Chateau St. Michel Winery tour near Seattle on March 22, 1983
- Library of Congress reception in Washington, DC, on August 30, 1983
- Anheuser-Busch Brewery tour in St. Louis on April 10, 1984
- Boat cruise on Delaware river in Philadelphia on August 27, 1984 (courtesy of the Institute for Scientific Information)

- Walking tour of the Philadelphia Historical Area on August 28, 1984 (courtesy of the Chemical Information Topical Groups of the ACS Philadelphia and Delaware Local Sections)
- Getty Conservation Institute tour in Marina del Rey, CA, on September 8, 1986 (courtesy of the Institute)
- Boat cruise with music and dance on Mississippi river in New Orleans on August 31, 1987 (courtesy of the Institute for Scientific Information)
- Exploratorium Science Museum tour in San Francisco on April 7, 1992 (courtesy of Dialog Information Services)

Executive Committee Dinners

The Executive Committee has usually been meeting twice a year at the ACS National Meeting on a Sunday preceding the week of technical sessions.

For many years, the Committee members, together with other Committees' chairmen, enjoyed a leisure dinner on Sunday nights in local restaurants. Some of them are still remembered for their decorum (The Forge in Miami Beach in 1985) or elegance (Brennan's in New Orleans in 1987). On the other hand, the dinner at Bookbinders in Philadelphia in 1984 is better to be forgotten by some participants.

Often enough a discussion continued at the table on a topic not quite wrapped up at an earlier formal session. Primarily, however, this social event helped the members to get to know each other better and to cement the working relationships which helped considerably in cooperating on Divisional matters for years to come.

Since 1975, these dinners were subsidized by the Division. Some Executive Committee members questioned, however, whether the expense was justified since only a relatively few members directly benefited. In 1986 the subsidy became partial and in 1987 the arrangement for dinner payment went "Dutch". The last well-attended dinner took place at the June 1988 meeting in Toronto and is remembered by the participants for the restaurant making an error in addition and presenting a bill with at least twice the amount owed.

The demise of these dinners was primarily caused by the lack of time. In 1988 the Division introduced another regular social event, a Sunday night reception which has become a welcome feature and a good place to meet old and make new friends. The ACS on Monday nights has now another combined technical/

social function, SCI-MIX, where posters are presented and in which the Division regularly participates. And, at most ACS National Meetings, the Divisional Tuesday night reception is also held, which is specially popular when it follows the Herman Skolnik Award Symposium.

Harry's Party

Harry's Party has been hosted by Harry M. Allcock (IFI/Plenum Data Corporation) at every ACS National Meeting since the early 1960's. While "unofficial", it has become a Divisional tradition to which every attendee looks forward on Monday evening.

Every party is well attended and is always considered as the best place to renew old acquaintances, to make new friends, and to exchange most-up-to-date information, especially on newest trends in information processing as well as who manages whom and what. The best remembered party was the one in the Caesars Palace in Las Vegas on August 25, 1980, when Harry and his associates served drinks standing in a huge decorative bathtub.

9. Financial Aspects, 1975-1993

The main sources of Divisional revenues continued to be:

- Divisional dues
- allotment from the ACS, based on membership and attendance at the ACS National Meetings
- fees for advertisements in the *Chemical Information Bulletin*
- interest and dividends on investments
- royalties from the ACS-published symposia proceedings

In 1979, the dues were increased to \$3 for a full member and \$4 for an affiliate. The income from dues in the early 1980's averaged \$3,000 per year.

In later years, the dues were as follows:

1983-1984	\$3 and \$4 for a member and an affiliate, respectively
1985	\$3 and \$5
1986-1993	\$4 and \$7

With the membership approaching and exceeding 1,400 in the late 1980's and early 1990's, the income from dues averaged \$5,300 per year.

From the ACS Program Development Fund, started in 1975, a steady regular income developed in the following years. Since 1978, the ACS apportioned the fund on the basis of Divisional membership, attendance at the Divisional sessions at the ACS National Meetings, and the stated preference for Divisional programs as noted on the meeting registration form. This ACS allotment brought the Division an average \$3,800 per year in the early 1980's and increased to \$4,500-\$5,000 in more recent years.

A couple of detailed examples show how the allotment was calculated:

	<u>for 1980</u>	<u>for 1985</u>
Membership at \$1 per member	865.00	1,141.00
Base fee	500.00	500.00
For Spring Meeting	802.86	1,816.96
For Fall Meeting	<u>1,002.40</u>	<u>1,744.97</u>
total	<u>3,170.26</u>	<u>5,202.93</u>

In 1991, the ACS Council approved a change in the formula for the allocation of ACS funds to the Divisions, as recommended by the Committee on Divisional Activities. The new formula is based on a different percentage ratio of allocation for orally presented papers *versus* displayed poster papers, and for attendance at regular sessions *versus* attendance at the Exposition. It follows from all the sample calculations that this Division, unlike some other ACS Divisions, will not experience much change in this source of income.

In 1977, the revenue from advertisements in the *Chemical Information Bulletin* increased significantly. In the early 1980's, it amounted, along with institutional subscriptions to the Bulletin, to some \$1,800 per year. Under the management of Ruthann Bates (1986-1987) and Ronald R. Dueltgen (1989-1991) it rose to an average of \$6,800 per year in the late 1980's and early 1990's.

The last significant and steady source of revenue was interest on investment. As the Divisional assets grew in the late 1970's, \$5,000 were invested in a saving certificate and another \$2,500 in a saving account. In 1979, \$13,000 was reinvested in money market certificates. Renewed and increased investments brought \$2,500 per year in interest in the early 1980's. In 1981, a money market certificate earned as much as 16.4% annual interest.

How to invest the Divisional assets has been the subject of many discussions. Counsel of experts was sought on occasions. With increasing Divisional assets and decreasing rates of interest for regular saving certificates and saving accounts, the Executive Committee in the early 1990's started to look into ways of improving return on investment. At the 204th ACS National Meeting in Washington, DC, in August 1992, the Committee heard a presentation by Ross M. Wilson from the ACS Office of the Treasurer on how the ACS invested its assets. In December 1992, the Division invested a portion of its assets in the ACS Investment Pool.

Typical expenses over the years were:

- publication of the *Chemical Information Bulletin* (and also, more recently, of *CINF News*)
- support of special meetings and symposia such as PAC CHEM Congress and Tri-Society Symposia
- support of technical sessions and demonstrations at the ACS National Meetings (this started in earnest in the mid-1980's)
- membership promotion such as printing and distributing Divisional brochures
- subsidy of social events
- administrative costs such as printing and mailing ballot forms
- educational activities, especially the production of a videotape in 1981-1983 (while a total cost was \$17,269, some \$6,300 was recovered through sales and rentals)
- support of special activities such as those of the Subdivision of Chemistry and the Law, the ACS Secretariats, and the ACS Divisional Officers Group (DOG)
- Divisional awards (honoraria and costs associated with award administration)
- special recognitions (luncheon speaker's gift, past-chairman's pin)

In 1986, the Division opened the Herman Skolnik Award Fund with a transfer of \$2,500 from the Divisional treasury. A donation for the Award Fund was received in the form of stock which on sale realized a profit of \$7,916. Over the years, annually \$2,500 or \$5,000 were transferred to the Fund. With the accrued interest the Fund had a total of \$29,027 by the end of 1992.

Originally, the Award Fund was specifically destined to be the source of regular annual interest to support the Herman Skolnik Award when it becomes the ACS National Award. When the Division decided not to go in that direction, but to keep the Herman Skolnik Award under its wing and jurisdiction, the Fund became an overall Award Fund for all Divisional awards, including the Student Scholarship Award and any future monetary awards the Division might establish.

In the 1980's the Divisional total assets grew at a much higher rate than during the preceding decades. By the end of 1982, Jean G. Marcali, the 1982 Divisional Chairman (who was the Treasurer for 1976-1980) reported total assets at \$29,180. By the end of 1991, the total assets were at a record high of \$70,162, even after the Division made unbudgeted contributions such as:

- \$2,000 for the continuing development of the Standard Molecular Data (SMD) Format, then under review by a subcommittee of the ASTM Committee E-49 on Computerization of Material and Chemical Property Data
- \$1,000 to the Chemical Structure Association Trust established to promote internationally the education of information scientists and information specialists
- \$300 to the ACS Campaign for Chemistry

The 1992 expenses and the 1993 projected expenses exceeded the income and the total assets were accordingly reduced. The Executive Committee, however, felt that the Division should support technical sessions and educational activities to the fullest extent possible.

To look into new ways of adding to the Divisional treasury and to be able to financially support some additional activities, the Executive Committee established for 1993 the Fundraising Committee (Louis P. Torre, chairman).

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Appendices

Appendix 1.
Bylaws, December 31, 1990

APPROVED
AS AMENDED
EFFECTIVE

DEC 31 1990

by the Committee on Constitution and Bylaws, acting for the Council of the American Chemical Society under the authority of Bylaws III, VI, and VIII.

John W. Clark
Secretary of the Council

JAN 15 1991
Date

BYLAWS OF THE
DIVISION OF CHEMICAL INFORMATION
of the
AMERICAN CHEMICAL SOCIETY

BYLAW I
NAME AND OBJECT

Section 1. The name of this organization shall be "The Division of Chemical Information of the AMERICAN CHEMICAL SOCIETY" hereinafter called the "Division" and the "SOCIETY," respectively.

Section 2. The objects of this Division shall be those of the SOCIETY as they apply to chemical information and computer sciences which deal, first, with the fundamental concepts, relationships, theory, and methods pertaining to the collection, processing, communication, and utilization of chemical information and, secondly, with the theory, design and operation of systems which process chemical information. Chemical information processing is regarded as including the collection, manipulation, correlation, organization, storage, transmission, retrieval, display, reproduction, dissemination, analysis, and evaluation of chemical information. Information processing systems include computer systems, communication systems, reprographic systems, and other associated devices.

BYLAW II
MEMBERS AND AFFILIATES

Section 1. Membership in this Division shall be open to all members of the SOCIETY who indicate their wish to join the Division by paying annual dues. Such SOCIETY members shall be called "members" hereinafter. Application for membership shall be sent to the Membership Chairman.

Section 2. A National Affiliate may apply to the Membership Chairman to become a National Affiliate of the Division provided that dues established for National Affiliates are paid.

Section 3. A person who is neither a member nor a National Affiliate of the SOCIETY but who wishes to participate in the activities of the Division, may do so as a Division Affiliate by applying to the Membership Chairman, and paying dues established for Division Affiliates.

Section 4. Privileges.

(a) Members of the SOCIETY may hold an elective position in the Division, vote on articles of incorporation and bylaws for the Division, vote for all elective positions of the Division, and serve as members of its

Executive Committee. ASSOCIATE MEMBERS of the SOCIETY may not hold the office of Councilor or Alternate Councilor, or be designated as a Temporary Substitute Councilor.

(b) Division Affiliates may not hold an elective position or vote on articles of incorporation and bylaws for the Division, or vote for Councilor(s) and Alternate Councilor(s) from the Division, but they may vote for the Chairman-Elect, Secretary, and Treasurer and may serve as members and chairmen of committees except the Nominating Committee and the Executive Committee.

(c) National Affiliates of the Division may not vote on articles of incorporation and bylaws for the Division, or vote for or hold an elective position of the Division, but may serve as members and chairmen of committees except the Nominating Committee and the Executive Committee.

(d) Notices of proposed activities of the Division and such abstracts, preprints, and other literature services as the Division may provide shall be directed to the last known address of each member, Division Affiliate, and National Affiliate of the Division.

Section 5. Both National Affiliates of the Division and Division Affiliates are hereinafter called "affiliates." A member or affiliate may resign from the Division by submitting a written resignation to the Membership Chairman.

BYLAW III OFFICERS

Section 1. The officers of the Division shall consist of:

Chairman
Chairman-Elect
Secretary
Treasurer

Division Councilors (whatever number is permitted to the Division by the SOCIETY)

Division Alternate Councilors (whatever number is permitted to the Division by the SOCIETY)

Section 2. Duties of Officers.

(a) The duties of the Chairman shall be to preside at Business Meetings of the Division and of the Executive Committee; to carry into effect the decisions of that Committee and of the Division; to appoint committees; and to assume the other responsibilities usually associated with that office.

(b) The duties of the Chairman-Elect shall be to perform the duties of the Chairman in the latter's absence; to assemble and present to the Executive Committee at its fall meeting a budget for the Division for the ensuing year.

(c) In the absence of both the Chairman and the Chairman-Elect, the Secretary shall act as Chairman.

(d) The Secretary shall handle Division correspondence, keep a record of the proceedings of the Division and of the Executive Committee, send or cause to be sent to members and affiliates such notices and other literature as the

business of the Division may require, and carry out all the other duties usually associated with that office and outlined in the Constitution and Bylaws of the SOCIETY (SOCIETY Bylaw VIII, Sec. 7). If the Secretary is newly elected, the outgoing Secretary shall prepare the annual report.

(e) The Treasurer shall have charge of the funds of the Division, collect dues and assessments, and, subject to the approval of the Executive Committee, make all disbursements. Officers and committee chairmen may authorize disbursements within their respective approved annual budgets. The Treasurer shall carry out all the other duties usually associated with that office and outlined in the Constitution and Bylaws of the SOCIETY (SOCIETY Bylaw VIII, Sec. 6 and 7). If the Treasurer is newly elected, the outgoing Treasurer shall prepare the annual report.

(f) It shall be the duty of the Division Councilors (Alternate Councilors in the absence of the Councilors) to represent the Division on the Council of the SOCIETY.

(g) Additional information on the duties of Officers is found in the Divisional Procedures Manual.

Section 3. Term of Office.

(a) Officers shall assume the duties of their respective offices on the first day of January following their election, and shall continue for the slated term of the office, or until their respective successors are selected, whichever period is longer.

(b) The Chairman and Chairman-Elect of the Division shall serve for a term of one year. The Chairman-Elect shall succeed to the office of Chairman on the first day of the second January following election or upon a vacancy in the office of Chairman.

(c) The term of office of the Secretary shall be two years, beginning January 1 of even-numbered years.

(d) The term of office of the Treasurer shall be two years, beginning January 1 of odd-numbered years.

(e) The term of office of each of the Councilors and Alternate Councilors shall be three years, and the terms of Councilors and Alternate Councilors, respectively, shall partially overlap. One Councilor and one Alternate Councilor shall be elected to start their terms in 1954, and one each shall be elected each year thereafter until the Division's full quota of Councilors and Alternate Councilors is filled. If more than three Councilors are permitted, then more than one Councilor and more than one Alternate Councilor may be elected in any year to fill the quota.

BYLAW IV ELECTIONS

Section 1. Nominations.

(a) Each year, not later than March 1, the Secretary shall solicit nominations for the Officers who are to be elected that year. Any ten members may by petition nominate to any office any eligible member who agrees to serve

if elected. Nomination ballots and petitions shall be returned not later than April 1.

(b) The Chairman shall select a Nominating Committee which shall review the nomination ballots when returned. It shall solicit from each potential candidate agreement to serve if elected. It shall prepare an election slate consisting of candidates for each position to be filled and including the name of each member nominated by petition. There shall be at least one more candidate per position than required to fill that position, and Councilor and Alternate Councilor shall be a single slate as specified in Section 3. The Nominating Committee shall forward promptly the election slate to the Secretary. The Chairman shall select a Teller Committee, no member of which shall have served on the Nominating Committee. No candidate for elected office may be a member of either the Nominating Committee or the Teller Committee.

Section 2. Voting.

(a) Not later than June 1, the Secretary shall cause to be sent to each member and to each Division Affiliate an election ballot bearing the names of the candidates for each office for which they may vote, arranged in alphabetical order under each office. On each ballot there shall be a blank line under each office for "write-in" votes. There shall be a ballot envelope provided in which the voters shall seal their ballots. When the voters return their ballots, they shall place their names on the outer envelope or on a piece of paper enclosed in the outer envelope in which the ballot envelope is mailed; otherwise their ballots shall be void. Ballots must be received by the first Monday of August. Promptly thereafter the tellers shall count the ballots according to the procedure in the Divisional Procedures Manual and inform the Secretary of the results.

(b) Elections shall be held by a preferential ballot according to the Hare system or such other method of counting preferential ballots as the Executive Committee may adopt.

(c) In case of a tie, a majority vote provided in writing by the members of the Executive Committee, based on a quorum as defined in bylaw V and provided in writing, shall decide the winner. Prompt notification of election results shall be made to the candidates by the Secretary.

Section 3. Councilors and Alternate Councilors. Councilors and Alternate Councilors shall be elected from a single slate of nominees, with the person(s) receiving the highest number(s) of votes filling the Councilor seat(s), and the person(s) receiving the next highest votes filling the Alternate Councilor seat(s). The election of Councilor(s) and Alternate Councilor(s) shall be contingent upon the number of Councilor(s) and Alternate Councilor(s) authorized for the Division for the ensuing year by the official determination of representation set by the SOCIETY. In the case of a decrease in the number of Councilor(s) and Alternate Councilor(s), the election shall be null and void; or in the event two or more Councilors and Alternate Councilors are elected, the persons receiving the lowest number of votes shall be eliminated. In the case of an increase in the number of Councilor(s) and Alternate Councilor(s), the Alternate Councilor(s) receiving the highest number of votes shall fill the newest Councilor seat(s), and the person(s) receiving the next highest votes shall fill the newest Alternate Councilor seat(s).

Section 4. Vacancies.

Any vacancies occurring shall be filled by a vote by the members of the Executive Committee unless the method of succession is otherwise provided for, except that the office of Chairman-Elect may remain vacant until the next election of Officers. Vacancies in the office of Councilor or Alternate Councilor are to be filled by the Executive Committee until the next annual election. A majority of the members of the Executive Committee shall constitute a quorum for this purpose. At that election, a MEMBER shall be elected to serve the remainder of the original three-year term. If this remainder is less than one year, then a MEMBER may be elected for the remainder of the original term, plus a new three-year term.

BYLAW V COMMITTEES

Section 1. Executive Committee.

(a) Voting members of the Executive Committee shall be composed of the officers of the Division, the Immediate Past-Chairman, the Program Committee Chairman, the Membership Committee Chairman, and the Chairman of each Subdivision. Additional persons, such as chairmen of other committees, the Editor of the "Journal of Chemical Information and Computer Sciences," and the editors of other SOCIETY and divisional journals, may attend Executive Committee meetings in an advisory capacity, when invited by the Chairman.

(b) The Executive Committee shall conduct the business of the Division and shall control expenditures of Division funds.

(c) This Committee shall meet whenever the Division meets at a national meeting of the SOCIETY, and may meet at other times and by mail as called by the Chairman.

(d) A simple majority of the voting members of this Committee shall constitute a quorum for the transaction of business, whether present at a regularly called meeting of the Committee or replying to a mail ballot. In the latter case, the ballot shall be considered closed two weeks after its mailing if response has been received from a quorum, or as soon thereafter as a quorum has responded.

Section 2. Other Committees.

(a) Inter alia, there shall be a Nominating Committee, a Teller Committee, a Program Committee, a Membership Committee, and an Award Committee. The Chairman shall appoint all Committees and Committee Chairmen, except that the Program Committee Chairman shall be appointed with the consent of the Executive Committee.

(b) The Nominating Committee shall be appointed by February 1.

(c) Members of all committees shall serve no more than three successive one-year terms. Committee chairmen may serve three additional one-year terms after having been a committee member for as many as three consecutive terms.

(d) Appointments to committees shall be made on the basis that at least one-third of the members of each committee shall be new each year.

Section 3. Archives.

(a) The Chairman shall appoint an Archivist for an initial term of three years. The Archivist may thereafter be appointed to an unlimited number of one-year terms.

(b) The Archivist shall maintain the archives of the Division in a place and in a manner approved by the Executive Committee.

(c) Each Officer and Committee Chairman shall maintain and retain the records necessary to the conduct of office.

BYLAW VI
MEETINGS

Section 1. The Division shall meet at each National Meeting of the SOCIETY unless the Executive Committee votes otherwise, provided that the requirement for a minimum number of meetings as specified in the SOCIETY's Bylaws shall be met.

Section 2. Special meetings of the Division may be called by the Executive Committee, if notice is given to the membership in a special bulletin or by publication in the Division's newsletter or in the official organ of the SOCIETY at least two months in advance. Those members of the Division who are present at a regularly scheduled meeting of the Division shall constitute a quorum for the transaction of business. The fee for registration at any special meeting shall be decided by the Executive Committee, in accordance with the Bylaws of the SOCIETY.

BYLAW VII
PRESENTATION OF PAPERS

Section 1. The Chairman-Elect shall be responsible for the selection of papers to be presented at meetings of the Division. The Chairman-Elect may delegate this authority to the Program Committee.

Section 2. The rules for papers presented before meetings of the SOCIETY as outlined in the Bylaws and Regulations of the SOCIETY shall govern this Division.

BYLAW VIII
DUES

Section 1. Payment. Dues shall be payable annually in an amount to be decided by the Executive Committee. Members, Division Affiliates, and National Affiliates shall remain in that status so long as their dues are paid. A person whose SOCIETY membership is terminated through nonpayment of dues shall simultaneously cease to be a member of the Division.

Section 2. Members. Dues for members shall be at least \$3.00 per year.

Section 3. Affiliates. Dues for Division Affiliates and National Affiliates shall exceed dues for members by at least \$1.00 per year and shall be at least \$4.00 per year, except that a regularly matriculated student specializing in a chemical science who has not taken a baccalaureate degree in a chemical science may be accepted as a Division Affiliate with Student Status on payment of annual dues of \$2.00.

Section 4. Members in Emeritus and Retired Status.

(a) A member of the Division in good standing shall be eligible to become a member in Emeritus or Retired Status in the Division, respectively, upon certification to the Chairman of the Membership Committee of emeritus status in the SOCIETY or of permanent retirement from active professional employment.

(b) Dues for members in Emeritus or Retired status shall be remitted or reduced in the same proportion as SOCIETY dues for such Members.

(c) A member in Emeritus or Retired status shall have all the privileges of membership.

Section 5. Unemployed members. Upon request by members or affiliates who declare themselves unemployed, payment of dues may be deferred according to regulations adopted by the Executive Committee.

**BYLAW IX
AMENDMENTS**

Section 1. A proposal to amend these bylaws may be initiated by the Executive Committee and also by a petition to the Executive Committee signed by at least ten members. In either case, the Executive Committee shall submit promptly, and in writing, the proposed amendments, with its recommendations to the members for a vote, and shall specify a deadline for return of votes which shall be between four and six weeks after the date of submission. If the majority of the votes cast is affirmative, the amendments shall be automatically adopted when approved by the Council of the SOCIETY.

**BYLAW X
PARLIAMENTARY AUTHORITY**

Section 1. These bylaws are subordinate to the Constitution and Bylaws of the SOCIETY. The rules contained in "Robert's Rules of Order," latest revised edition, shall govern the Division in all cases to which they are applicable and in which they are not inconsistent with the Constitution and Bylaws of the SOCIETY or the bylaws of the Division.

**BYLAW XI
SUBDIVISIONS**

Section 1. Composition. The Division may sponsor Subdivisions devoted to specialized fields within the areas of Divisional interest. Membership or affiliation in this Division shall be a requirement for participation in a Subdivision as members and affiliates, respectively.

Section 2. Formation. Formation or discontinuance of a Subdivision shall be at the discretion of the Executive Committee. Steps to initiate a Subdivision may be made by petition of a group of 50 Division members to the Executive Committee or by the action of the Executive Committee.

(a) The scope of the activities of a Subdivision shall be defined by the Executive Committee.

(b) The Executive Committee shall appoint an advisor(s) to the Subdivision to insure that the Subdivision shall operate in conformity with the bylaws of, and shall be responsible to, the Division.

Section 3. Officers.

(a) Upon approval of the formation of a Subdivision, the Executive Committee shall appoint for a period not to exceed one year a Chairman, a Secretary and a Membership Secretary for the Subdivision. Only members may be officers of the Subdivisions.

(b) The Chairman of a Subdivision shall submit an annual report for the preceding calendar year to the Chairman and to the Secretary of the Division not later than January 31.

Section 4. Elections.

(a) The regular annual election cycle for officers of the Subdivision shall start in the year following the formation of a Subdivision.

(b) The Membership Secretary of the Subdivision, together with a Nominating Committee appointed by the Chairman of the Subdivision, shall solicit nominations, prepare ballots, and carry out all other actions necessary to conduct annual elections. The elections for Subdivision officers shall follow the applicable procedures in bylaw IV, except that Subdivision officers shall carry out all functions required of Division officers in bylaw IV.

(c) Only members and Division Affiliates of the Subdivision may vote for Officers of the Subdivision.

(d) The officers of a Subdivision shall serve for a term of one year beginning January 1.

Section 5. Funds. Not later than August 1, the Chairman of a Subdivision shall submit to the Chairman-Elect of the Division a budget for the ensuing year for review and approval by the Executive Committee.

Section 6. Representation. The officers of a Subdivision shall constitute a steering committee for the Subdivision, and shall report through the Subdivision Chairman to the Executive Committee.

Section 7. Dissolution. Upon dissolution of a Subdivision and discharge of its debts and the settlement of its affairs, any property of the Subdivision remaining thereafter shall be conveyed to the Division for the general purpose of the Division.

BYLAW XII
DISSOLUTION

Upon the dissolution of the Division and the discharge of its debts and the settlement of its affairs, any funds and property of the Division remaining thereafter shall be conveyed to such organization then existent as is dedicated to objects similar to those of the Division and the SOCIETY, or to the SOCIETY, so long as whichever organization is selected by the governing body of the Division at the time of the dissolution shall be exempt under Section 501(c)(3) of the Internal Revenue Code of 1954 as amended or under such successor provision of the Code as may be in effect at the time of the Division's dissolution.

Appendix 2.
Officers of the Division of Chemical Literature (Chemical Information), 1949-1993

<u>Year</u>	<u>Chairman</u>	<u>Chairman-Elect</u>	<u>Secretary</u>	<u>Assistant Secretary</u>	<u>Treasurer</u>
1949	Norman C. Hill	Gerald J. Cox (vice-ch.)	Robert S. Casey		Byron A. Soule
1950	Evan J. Crane	James W. Perry	Robert S. Casey		Byron A. Soule
1951	James W. Perry	Julian F. Smith	Robert S. Casey		Byron A. Soule
1952	Julian F. Smith	Robert S. Casey	Charlotte Schaler	Kathleen Bannister	Tibor E. R. Singer
1953	Robert S. Casey	Byron A. Soule	Lorna F. Lederman		Madeline M. Berry
1954	Byron A. Soule	Milburn P. Doss	Hanna Friedenstein		Madeline M. Berry
1955	Milburn P. Doss	Melvin G. Mellon	Hanna Friedenstein		Madeline M. Berry
1956	Melvin G. Mellon	John H. Fletcher	M. Lucille Jackson		Madeline M. Berry
1957	John H. Fletcher	Ben H. Weil	Lucille J. Strauss		Virginia Valeri
1958	Ben H. Weil	Hanna Friedenstein	Harriet A. Geer		Virginia Valeri
1959	Hanna Friedenstein	Karl F. Heumann	Harriet A. Geer		Fred J. Bassett
1960	Karl F. Heumann	Herman Skolnik	Dean F. Gamble		Fred J. Bassett
1961	Herman Skolnik	Fred R. Whaley	Dean F. Gamble		Helen F. Ginsberg
1962	Fred R. Whaley	Dean F. Gamble	Barbara M. Davis		Helen F. Ginsberg
1963	Dean F. Gamble	Carleton C. Conrad	Barbara M. Davis		Eugene Garfield
1964	Carleton C. Conrad	Harriet A. Geer	Barbara M. Davis		Eugene Garfield
1965	Harriet A. Geer	Howard T. Bonnett	Barbara M. Davis		Barbara A. Montague
1966	Howard T. Bonnett	Helen F. Ginsberg	Lee N. Starker		Barbara A. Montague
1967	Helen F. Ginsberg	Joe H. Clark	Lee N. Starker		Barbara A. Montague
1968	Joe H. Clark	Carlos M. Bowman	Margaret S. Hicks		Barbara A. Montague
1969	Carlos M. Bowman	Frederick K. Broome	Margaret S. Hicks		Patricia M. McDonnell
1970	Frederick K. Broome	Robert E. Maizell	Margaret S. Hicks		Patricia M. McDonnell
1971	Robert E. Maizell	Stephen J. Tauber	Charles E. Granito		Stuart M. Kaback
1972	Stephen J. Tauber	James E. Rush	Barbara A. Montague		Stuart M. Kaback
1973	James E. Rush	Charles E. Granito	Mary H. Reslock		Judy E. Davis
1974	Charles E. Granito	Barbara A. Montague	Mary H. Reslock		Judy D. Hale
1975	Barbara A. Montague	Bruno M. Vasta	Mary H. Reslock		Judy D. Hale
1976	Bruno M. Vasta	Peter F. Sorter	Cynthia H. O'Donohue		Jean G. Marcali
1977	Peter F. Sorter	Mary H. Reslock	Barbara G. Prewitt		Jean G. Marcali
1978	Mary H. Reslock	Gabrielle S. Revesz	Barbara G. Prewitt		Jean G. Marcali
1979	Gabrielle S. Revesz	Cynthia H. O'Donohue	Barbara G. Prewitt		Jean G. Marcali
1980	Cynthia H. O'Donohue	Robert E. Buntrock	Barbara G. Prewitt		Jean G. Marcali
1981	Robert E. Buntrock	Jean G. Marcali	Barbara G. Prewitt		Ann P. Moffett
1982	Jean G. Marcali	Barbara G. Prewitt	Paula B. Moses		Ann P. Moffett
1983	Barbara G. Prewitt	Ralph E. O'Dette	Paula B. Moses		Ann P. Moffett
1984	Ralph E. O'Dette	Peter F. Rusch	Bonnie Lawlor		Ann P. Moffett
1985	Peter F. Rusch	Ann P. Moffett	Bonnie Lawlor		Bettijoyce B. Molino
1986	Ann P. Moffett	W. Val Metanomski	Bonnie Lawlor		Bettijoyce B. Molino
1987	W. Val Metanomski	Arleen N. Somerville	Bonnie Lawlor		Bettijoyce B. Molino
1988	Arleen N. Somerville	Bonnie Lawlor	Ruthann Bates		Bettijoyce B. Molino
1989	Bonnie Lawlor	Joanne L. Witiak	Ruthann Bates		Bettijoyce B. Molino
1990	Joanne L. Witiak	Bettijoyce B. Lide	Victoria K. Veach		Bettijoyce B. Molino
1991	Bettijoyce B. Lide	Joseph E. Clark	Victoria K. Veach		Bettijoyce B. Molino
1992	Joseph E. Clark	Gary D. Wiggins	Victoria K. Veach		Bettijoyce B. Molino
1993	Gary D. Wiggins	Gerald G. Vander Stouw	Victoria K. Veach		Bettijoyce B. Molino

Appendix 3.
Councilors of the Division of Chemical Literature (Chemical Information), 1949-1993

<u>Year</u>	<u>Member-at-Large</u>	<u>Member-at-Large</u>	<u>Councilor</u>	<u>Councilor</u>	<u>Alternate Councilor</u>	<u>Alternate Councilor</u>
1949	Mary Alexander	Julian F. Smith				
1950	Mary Alexander	Julian F. Smith				
1951	Mary Alexander	F. Lowell Taylor	Julian F. Smith		F. Lowell Taylor	
1952	Melvin G. Mellon	F. Lowell Taylor	Robert S. Casey	Julian F. Smith	Madeline M. Berry	Lorna F. Lederman
1953	Mary Alexander	Melvin G. Mellon	Robert S. Casey	Julian F. Smith	Madeline M. Berry	Hanna Friedenstein
1954	Mary Alexander	Arthur B. Johnson	Robert S. Casey	Byron A. Soule	Madeline M. Berry	Hanna Friedenstein
1955	Arthur B. Johnson	James W. Perry	Robert S. Casey	Byron A. Soule	Madeline M. Berry	Hanna Friedenstein
1956	James W. Perry	Ernest F. Spitzer	Robert S. Casey	Byron A. Soule	Madeline M. Berry	Hanna Friedenstein
1957	Howard S. Nutting	Ernest F. Spitzer	Robert S. Casey	Hanna Friedenstein	Madeline M. Berry	Herman Skolnik
1958	Benjamin E. Lanham	Howard S. Nutting	Ernest F. Spitzer		Madeline M. Berry	Ernest Levens
1959	Charles L. Bernier	Benjamin E. Lanham	Ernest F. Spitzer			
1960	Howard S. Nutting	Ben H. Weil	Ben H. Weil		Charles E. Zerwekh, Jr.	
<hr/>						
	<u>Councilor</u>	<u>Councilor</u>	<u>Councilor</u>	<u>Alternate Councilor</u>	<u>Alternate Councilor</u>	<u>Alternate Councilor</u>
1961	Fred J. Bassett	Ben H. Weil		Julian F. Smith	Charles E. Zerwekh, Jr.	
1962	Fred J. Bassett	Ben H. Weil		Julian F. Smith	Charles E. Zerwekh, Jr.	
1963	Fred J. Bassett	Harriet A. Geer		Julian F. Smith	Ben H. Weil	
1964	Dean F. Gamble	Harriet A. Geer		Ben H. Weil	Fred R. Whaley	
1965	Dean F. Gamble	Harriet A. Geer		Ben H. Weil	Fred R. Whaley	
1966	Barbara M. Davis	Dean F. Gamble		Ethaline H. Cortelyou	Fred R. Whaley	
1967	Howard T. Bonnett	Barbara M. Davis		Ethaline H. Cortelyou	Dean F. Gamble	
1968	Howard T. Bonnett	Barbara M. Davis		Ethaline H. Cortelyou	Dean F. Gamble	
1969	Howard T. Bonnett	Helen F. Ginsberg		Dean F. Gamble	Lee N. Starker	
1970	Carlos M. Bowman	Helen F. Ginsberg		Eugene Garfield	Lee N. Starker	
1971	Carlos M. Bowman	Helen F. Ginsberg		Eugene Garfield	Lee N. Starker	
1972	Carlos M. Bowman	Helen F. Ginsberg		Eugene Garfield	Ben H. Weil	
1973	Carlos M. Bowman	Helen F. Ginsberg		Margaret S. Hicks	Ben H. Weil	
1974	Carlos M. Bowman	Helen F. Ginsberg		Margaret S. Hicks	Ben H. Weil	
1975	Carlos M. Bowman	Carleton C. Conrad		Margaret S. Hicks	James E. Rush	
1976	Carleton C. Conrad	Barbara A. Montague		Robert E. Maizell	James E. Rush	
1977	Carleton C. Conrad	Barbara A. Montague		Robert E. Maizell	James E. Rush	
1978	Carlos M. Bowman	Barbara A. Montague	Peter F. Sorter	Charles E. Granito	Robert E. Maizell	Bruno M. Vasta
1979	Carlos M. Bowman	Barbara A. Montague	Peter F. Sorter	Charles E. Granito	Robert E. Maizell	Bruno M. Vasta
1980	Carlos M. Bowman	Barbara A. Montague	Peter F. Sorter	Charles E. Granito	Robert E. Maizell	Bruno M. Vasta
1981	Carlos M. Bowman	Barbara A. Montague	Peter F. Sorter	Ronald R. Dueltgen	Robert E. Maizell	Bruno M. Vasta
1982	Carlos M. Bowman	Barbara A. Montague	Peter F. Sorter	Peter F. Sorter	Bruno M. Vasta	
1983	Carlos M. Bowman	Jean G. Marcali		Peter F. Sorter	Bruno M. Vasta	
1984	Jean G. Marcali	Barbara G. Prewitt		Robert E. Buntrock	Bruno M. Vasta	
1985	Jean G. Marcali	Barbara G. Wood		Robert E. Buntrock	Bruno M. Vasta	
1986	Carlos M. Bowman	Jean G. Marcali	Barbara G. Wood	Robert E. Buntrock	Ronald R. Dueltgen	Bruno M. Vasta
1987	Carlos M. Bowman	Jean G. Marcali		Ronald R. Dueltgen	Bruno M. Vasta	
1988	Carlos M. Bowman	Jean G. Marcali		Ronald R. Dueltgen	Bruno M. Vasta	
1989	Jean G. Marcali	Peter F. Rusch		Carlos M. Bowman	Robert E. Buntrock	
1990	Jean G. Marcali	Peter F. Rusch		Carlos M. Bowman	Robert E. Buntrock	
1991	Peter F. Rusch	Arlene N. Somerville		Carlos M. Bowman	Robert E. Buntrock	
1992	Bonnie Lawlor	Arleen N. Somerville		Robert E. Buntrock	Peter F. Rusch	
1993	Bonnie Lawlor	Arleen N. Somerville		Robert E. Buntrock	Peter F. Rusch	

Appendix 4. Symposia at the ACS National Meetings, Chemical Literature Group, 1943-1948

(number in parentheses gives the number of papers presented in a given symposium;
name in parentheses is the name of the presiding symposium chairman, or the author
of a single paper if so indicated)

106th, Fall 1943 - Pittsburgh, PA

Technical Library Techniques (18) (Norman C. Hill)

107th, Spring 1944 - Cleveland, OH

Technical Library Techniques. II. (19) (Norman C. Hill)

and 2 papers: Chemical Editing (Sidney D. Kirkpatrick) and Patent Work as a Field for Chemists (C. B. Hollabaugh)

108th, Fall 1944 - New York, NY

Paper: Scholastic Training for a Career in Chemical Literature Research (Mary Alexander, Nancy Corbin, and Gustav Egloff)

- 1945 (Meeting-in-Print)

Paper: The Nomenclature of Coordination Compounds (W. Conard Fernelius et al.)

109th, Spring 1946 - Atlantic City, NJ

Technical Library Techniques. III. (10) (Norman C. Hill)

and 2 papers: Patentability of Organic Compounds (I. J. Fellner) and A New System for the Classification of Compounds (Emmett L. Buhle et al.)

110th, Fall 1946 - Chicago, IL

Chemical Patents (6) (I. J. Fellner)

Technical Library Techniques. IV. (10) (James W. Perry)

and 2 papers: Reports Constitute Capital Investments (Florence E. Wall) and The Special Toxicity Data Files for the CWS Technical Command (Emma L. Wardell)

111th, Spring 1947 - Atlantic City, NJ

Preparation of Literature and Patent Surveys (5) (Gustaf Egloff) (joint with Petroleum Chemistry)

Petroleum Information Service (3) (Gustav Egloff) (joint with Petroleum Chemistry)

Chemical Literature (10) (James W. Perry)

112th, Fall 1947 - New York, NY

Methods of Handling Research Records (7) (Gerald J. Cox)
Utilization of Punched Cards in the Chemical Literature Field (8) (James W. Perry)

Modern Chemical Nomenclature (4) (James W. Perry)
General (4) (Norman C. Hill)

113th, Spring 1948 - Chicago, IL

Trends in Indexing, Classifying, and Coding Chemical Information (8) (James W. Perry)

General Chemical Literature Program (4) (Byron A. Soule)
Technical Journalism (12) (Thomas H. Chilton)

(commemorating the 40th anniversary of the Industrial and Engineering Chemistry) (joint with Industrial and Engineering Chemistry)

114th, Fall 1948 - Washington, DC, and Portland, OR

General (4) (E. L. Haenish)

Chemical Literature Group (7) (James W. Perry)

Appendix 5.

Symposia at the ACS National Meetings, Division of Chemical Literature, 1949-1975

(number in parentheses gives the number of papers presented in a given symposium;
name in parentheses is the name of the presiding symposium chairman, or the author
of a single paper if so indicated)

115th, Spring 1949 - San Francisco, CA

The University Library as an Aid to Scientific Work (4)
(Norman C. Hill)
Literature Sources of Information on Western Chemical
and Process Industries (3) (John Callahan)
Trends in Indexing, Classifying, and Utilizing Chemical
Literature (8) (James W. Perry)

116th, Fall 1949 - Atlantic City, NJ

Foreign Chemical Literature. I. Language Instruction
for Chemists (6) (James W. Perry) (joint with Chemical
Education)
Microdocumentation (5) (Milburn P. Doss)
Electronic Equipment for Chemical Information Work (8)
(James W. Perry)
General (6) (Norman C. Hill)
Nomenclature of Hydrocarbons (8) (Stewart S. Kurtz) (joint
with Chemical Education, Organic Chemistry, and
Petroleum Chemistry)

117th, Spring 1950 - Houston, TX, and Detroit, MI

General (6) (Milburn P. Doss)
Chemical Literature Searching Techniques (22) (Tibor E. R.
Singer)

118th, Fall 1950 - Chicago, IL

General (9) (James W. Perry)
Communication of Chemical Information (10) (Robert S.
Casey)
History of Chemical Literature and Libraries (9)
(Julian F. Smith) (joint with History of Chemistry)
and 2 papers: The History of Chemical Notation (William
J. Wiswesser) and
Russian Chemical Literature Since 1917 (Paul W.
Howerton)

119th, Spring 1951 - Boston, MA

General (6) (Milburn P. Doss)
Literature Chemists and Chemical Librarians (5) (Tibor
E. R. Singer)
Evolution of a Patent (10) (Gertrude A. Munafò;
Earl P. Stevenson) (joint with Committee on Patents)
Abstracting and Indexing Services (11) (Eugene W. Scott)

120th, Fall 1951 - New York, NY (Diamond Jubilee Meeting)

Mechanical Aids to Chemical Documentation (9) (James W.
Perry)
Communication of Chemical Information (10) (Robert S.
Casey)
Chemical Nomenclature (14) (Austin M. Patterson)

121st, Spring 1952 - Buffalo, NY

Chemical-Biological Clearing Houses (8) (William H.
Longenecker) (joint with Biological Chemistry)
General (10) (Milburn P. Doss)
Company Abstract Bulletin (6) (Milburn P. Doss)
Literature Sources for Chemical Market Research
(15) (John R. Skeen)

122nd, Fall 1952 - Atlantic City, NJ

Literature of Synthetic Resins and Plastics (7) (Gordon
M. Kline) (joint with Paint, Varnish, and Lacquer
Chemistry; and Polymer Chemistry)
Abstracting (8) (Robert P. Ware)
General (15) (Tibor E. R. Singer)
Literature of Textile Chemistry (6) (Julian F. Smith)
(joint with Cellulose Chemistry)
Literature Resources of the Food Industries (9) (Earl
D. Stewart) (joint with Agricultural and Food Chemistry)

123rd, Spring 1953 - Los Angeles, CA

Literature of Chemicals Derived from Petroleum (10)
(Charlotte Schaler) (joint with Petroleum Chemistry)
General (5) (Arthur Furst)
What the Technical Publisher Expects and Why (8)
(Mary Alexander)

124th, Fall 1953 - Chicago, IL

General (13) (Ernest F. Spitzer; Tibor E. R. Singer)
Research Report, Its Functions, Preparation, Distribution,
and Use (12) (Ben H. Weil)
Equipment for the Preparation, Reproduction, and
Utilization of Technical Information (12) (Milburn P.
Doss; L. C. Stork)
Pharmaceutical and Medicinal Chemistry (15) (Howard T.
Bonnett; S. B. Binkley) (joint with Medicinal Chemistry)

125th, Spring 1954 - Kansas City, MO

Literature in the Fields of Cellulose and Its Related
Materials (9) (Harry F. Lewis) (joint with Cellulose
Chemistry)
General (20) (Tibor E. R. Singer)

126th, Fall 1954 - New York, NY

General (23) (Charles E. Zerwekh, Jr.; Tibor E. R. Singer;
Ernest F. Spitzer; Hanna Friedenstein)
Aids to the Use of the Foreign Chemical Literature (15)
(Teresa G. Labov; Tibor E. R. Singer) (with the Modern
Language Association of America)
Technical Information in Action (15) (Gustav Egloff; L. H.
Flett) (joint with Chemical Marketing and Economics; and
Industrial and Engineering Chemistry)
Pharmaceutical and Medicinal Literature (13) (Howard T.
Bonnett; S. B. Binkley) (joint with Medicinal Chemistry)

127th, Spring 1955 - Cincinnati, OH

General (9) (Ernest F. Spitzer; Charlotte Schaller)
Literature of Agricultural Chemicals (7) (Richard L. Kenyon) (joint with Agricultural and Food Chemistry)
Technical Writing (9) (Ben H. Weil)
Patents (6) (Earl P. Stevenson)
Literature of Soaps and Detergents (7) (John W. McCutcheon)
New Tools for the Resurrection of Knowledge (5)
(James W. Perry and Allen Kent)
Training of Literature Chemists (7) (Melvin G. Mellon)
(joint with Chemical Education)

128th, Fall 1955 - Minneapolis, MN

Results of the Practical Application of Punched Cards to Indexing (13) (Gilbert L. Peakes)
General (25) (Erna L. Gramse; Ben H. Weil; Charles E. Zerwekh, Jr.; Margaret H. Graham)
Training of Chemists and Chemical Engineers in Technical Writing (6) (Ben H. Weil) (joint with Chemical Education)
Communication of Technical Information in an Industrial Research Organization (11) (Herman Skolnik)
Patents (10) (Leonard J. Robbins)
Centralized and Decentralized Information Activity in Industry (3) (Carleton C. Conrad)

129th, Spring 1956 - Dallas, TX

Literature of Combustion of Petroleum (26) (Guenther von Elbe; Cecil E. Board; D. P. Barnard) (joint with Petroleum Chemistry)
New Tools for the Resurrection of Knowledge (8) (Allen Kent; James W. Perry)
General (12) (Ben H. Weil; Ernest F. Spitzer; Margaret H. Graham)
Patents (9) (Charles E. Zerwekh, Jr.)

130th, Fall 1956 - Atlantic City, NJ

Patents (5) (Byfleet G. Ravenscroft)
General (12) (Dean F. Gamble; John H. Fletcher)
Literature of Rubber (15) (Hanna Friedenstein) (joint with Rubber Chemistry)
Documentation Needs of ACS Members (1) (Allen Kent)
Chemical Abstracts; Its Policies, Production, and Use: A Fiftieth Anniversary Report (8) (E. J. Crane)
Searching the Chemical Literature (19) (Ernest F. Spitzer; Tibor E. R. Singer)
Preparation of Technical Material for Development, Promotion, and Advertising (13) (Ethaline H. Cortelyou; James J. McMahon) (joint with Chemical Marketing and Economics)

131st, Spring 1957 - Miami Beach, FL

New Tools for the Resurrection of Knowledge (10) (Allen Kent and James W. Perry)
General (12) (Irlene Roemer Stephens; Madeline M. Berry)
Literature of Naval Stores (7) (Herman Skolnik) (joint with Paint, Plastics, and Printing Ink Chemistry)
Literature of Marine Chemistry (7) (Dean F. Gamble)

132nd, Fall 1957 - New York, NY

Technical Editing (17) (Ben H. Weil)
Mechanized Data Handling (21) (Irlene Roemer Stephens)
Chemical Indexing (8) (John H. Fletcher)
General (13) (Charles E. Zerwekh, Jr.; Harriet A. Geer)
Patents (13) (A. J. Nydick; C. F. Chisholm)

133rd, Spring 1958 - San Francisco, CA

General (9) (Ben H. Weil)
Literature of Automation as Applied to Analytical Chemistry (5) (Melvin G. Mellon) (joint with Analytical Chemistry)
New Tools for the Resurrection of Knowledge (6)
(James W. Perry)
Patents (10) (Ernest Levens)

134th, Fall 1958 - Chicago, IL

Organic Chemical Nomenclature (16) (Leslie B. Poland) (joint with Organic Chemistry)
Administration of Technical-Information Groups (9) (William T. Knox)
Copyright Problem (panel) (T. O. Jones)
General (12) (Ben H. Weil; Harriet A. Geer)
Patent (5) (Howard T. Bonnett)
Technical Writing in Specialized Fields (7) (Irlene Roemer Stephens)

135th, Spring 1959 - Boston, MA

Machine Translation (7) (Norman P. Neureiter)
Language Problem in Chemical Literature (4) (Norman P. Neureiter)
General (14) (Hanna Friedenstein; Charles E. Zerwekh, Jr.)

136th, Fall 1959 - Atlantic City, NJ

General (12) (Karl F. Heumann; Charles E. Zerwekh, Jr.)
Technical Information Services for Industry - Case Histories and Informal Discussion (7) (Hanna Friedenstein)
Technical Writing for Specialized Purposes (10) (Irlene Roemer Stephens)
Inorganic Nomenclature (7) (Janet D. Scott) (joint with Inorganic Chemistry)

137th, Spring 1960 - Cleveland, OH

General (16) (Dean F. Gamble; Karl F. Heumann)
 Forensic Chemistry (16) (Harold Oatfield)
 Literature and Technology of Rocket Propellants (10)
 (Ronald A. Graham)
 Center for Documentation and Communication Research (5)
 (Harriet A. Geer)

138th, Fall 1960 - New York, NY

How Can the Chemist Help the Patent Lawyer? (6) (Thornton F. Holder)
 Literature Abstracting Practice: Petroleum-Industry Experience (11) (Irving Zaremba)
 General (12) (Herman Skolnik)
 Primary Scientific and Technical Publications; Training of Literature and Information Specialists; Utilization of Scientific and Technical Information (panel)
 (Mordecai Hoshen)
 Information Retrieval and Analysis (5) (Dean F. Gamble)
 (joint with Medicinal Chemistry)

139th, Spring 1961 - St. Louis, MO

New Machine Methods in Chemical Documentation (11) (Fred A. Tate)
 General (14) (Herman Skolnik)
 What New Information Services Are Needed (4) (Charles L. Bernier)
 Chemical Documentation (2) (Carleton C. Conrad)
 Battelle Solves Its Information Problem (6) (Iver Igelsrud)

140th, Fall 1961 - Chicago, IL

Distribution of Documents in an Industrial Organization (4) (Fred J. Bassett)
 Literature as a Basis of Creativity in Chemistry (7) (Frederic R. Benson)
 Current Research Programs in Library Science Graduate Schools (4) (Jesse H. Shera)
 General (13) (Fred R. Whaley)
 How Much Information Service? (8) (William T. Knox)
 Challenges and Opportunities for Chemists in Patent Work (6) (Harry M. Norton)

141st, Spring 1962 - Washington, DC

Education of Literature Chemists (8) (Melvin G. Mellon and Willis H. Waldo) (joint with Chemical Education)
 International Scientific Communication (7) (Erick I. Hoegberg and Karl F. Heumann)
 General (20) (Fred R. Whaley)
 Developing a Deep Index (10) (John C. Costello, Jr.)

142nd, Fall 1962 - Atlantic City, NJ

Introduction to Information Retrieval (6) (Julius Frome)
 ACS Divisional Preprints - Purpose, Production and Costs, and Place in the Chemical Literature (9) (Herman Skolnik)
 General (8) (Dean F. Gamble)
 Multiple Access Information Retrieval Systems (5) (John C. Costello, Jr.)
 Government Services for Technical Information (4) (Harold Wooster)

143rd, January 1963 - Cincinnati, OH

Introduction to Information Retrieval (5) (Julius Frome)
 General (6) (Dean F. Gamble)
 Literature Resources of the Chemical Process Industries (13) (Julian F. Smith)

144th, Spring 1963 - Los Angeles, CA

Introduction to Information Systems (1) (Julius Frome)
 Chemical Literature of Space Technology (7) (Margaret S. Hicks)
 Facing Literature Problems in Borderline Fields (4) (Erick Heftmann)
 General (4) (Dean F. Gamble)
 State of the Art of Information Retrieval (4) (George N. Arnowick)

145th, Fall 1963 - New York, NY

Introduction to Communication Aspects of Chemical Literature (6) (Ben H. Weil)
 Searching the Literature of a Number of Specialized Fields (8) (Julian F. Smith)
 Information System Planning and Design Considerations (8) (John C. Costello, Jr.)
 General (8) (Carleton C. Conrad)
 Role of Science Information in Attacking the World Food Problem (5) (Eugene Garfield) (joint with Agricultural and Food Chemistry)
 Patentability of Chemical Inventions (5) (Elmer J. Lawson)

146th, January 1964 - Denver, CO

The Division did not participate

147th, Spring 1964 - Philadelphia, PA

Advances in Chemical Structure Storage and Searching Systems (9) (Howard T. Bonnett)
 Information Problems in Chemical Marketing (9) (Gerald J. Bayern; Erick I. Hoegberg) (joint with Chemical Marketing and Economics)
 General (6) (Carleton C. Conrad)
 Problems of the Pesticide Literature and Some Solutions (11) (Herman Skolnik; Richard J. Magee) (joint with Agricultural and Food Chemistry)

148th, Fall 1964 - Chicago, IL

Methods of Alerting Chemists to New Developments (15)
(Ben H. Weil; Tibor E. R. Singer)
Mechanized Handling of Information on Drugs (12) (Oliver H. Buchanan; F. Ellis Kelsey) (joint with Medicinal Chemistry)
General (13) (Harriet A. Geer)
Evaluation on Information Retrieval Systems (4) (Fred R. Whaley and Julius Frome)
Chemical Notation Systems - The NRC Report and Subsequent Developments (5) (Robert A. Harte)

149th, Spring 1965 - Detroit, MI

Current Applications of Mechanized Procedures for Handling Chemical Information (9) (Kenneth H. Zabriskie, Jr.)
General (12) (Alan Gelberg)
Work and Time Studies in Technical Information (6) (Stephen J. Tauber)

150th, Fall 1965 - Atlantic City, NJ

General (14) (Howard T. Bonnett)
Equipment for Processing Information (6) (Tibor E. R. Singer; Julian F. Smith)
Current Viewpoints on Patents (6) (Charles A. Miller) (joint with Chemical Marketing and Economics)
Collection, Processing, and Utilization of Pharmaceutical Product Information from Biomedical Literature (5) (Henry M. Kissman)

151th, Spring 1966 - Pittsburgh, PA

Error Control in the Chemical Literature (6) (Karl F. Heumann)
Resources for Information Systems (6) (Julius Frome)
General (11) (Carlos M. Bowman)
Problems of Small Information Groups (10) (Madeline M. Henderson)

152nd, Fall 1966 - New York, NY

Compilations of Data on Chemical and Physical Properties of Substances (13) (Guy Waddington)
Administration of Technical Information Groups (3) (Erick I. Hoegberg)
General (12) (Helen F. Ginsberg)
User Evaluation of Secondary Sources of Information (9) (Joe H. Clark)
Chemical Nomenclature (6) (Kurt L. Loening)

153rd, Spring 1967 - Miami Beach, FL

Scientific Information Resources for the Water Researcher (5) (G. F. Morgan) (joint with Water, Air, and Waste Chemistry)
Selective Dissemination of Information (6) (Julius Frome)
Progress Report on Modern Methods (6) (David H. Gould)
General (8) (Panos Kokopoulos)

154th, Fall 1967 - Chicago, IL

Microforms in Information Storage and Retrieval (4) (Henry M. Kissman)
General (7) (Joe H. Clark)
Scientific Meetings: Considerations about Present and Future Communication within the Division of Chemical Literature (3) (Claire K. Schultz)
Advances in Handling and Searching Chemical Structure and Properties (5) (David H. Gould)

155th, Spring 1968 - San Francisco, CA

Critical Reviews: What, Why, When, and How (4) (Madeline M. Henderson)
Technical Information Facilities (4) (Robert E. Maizell)
Literature of Agricultural and Food Sciences - Problems and Some Solutions (11) (Michael M. Piskur; Herman Skolnik) (joint with Agricultural and Food Chemistry)
Effects of Proposed Patent Reform Act (6) (Julius Frome)
General (6) (Joe H. Clark)
Notation Systems (14) (Charles E. Granito; Alan Gelberg)

156th, Fall 1968 - Atlantic City, NJ

Training Chemists in the Use of the Chemical Literature (5) (Gerald Jahoda) (joint with Chemical Education)
Toxicological Centers (7) (Frederic R. Benson)
Whole Term Searching (5) (Kenneth H. Zabriskie, Jr.)
Redesign of the Technical Literature (12) (Charles L. Bernier)
Preparation of Technical Material for Development, Promotion, and Advertising (12) (Erick I. Hoegberg) (joint with Chemical Marketing and Economics)
General (7) (Carlos M. Bowman)

157th, Spring 1969 - Minneapolis, MN

Primary Journals (7) (H. L. Reynolds)
General (23) (Carlos M. Bowman; Frederick K. Broome)
Literature and Creativity, Help or Hindrance (panel) (Ralph E. O'Dette)

158th, Fall 1969 - New York, NY

Who Reads the Chemical Literature and for What Purposes (5) (Howard J. White)
Journal and Patent Literature Explosion (5) (Edmund M. Immergut)
General (7)
How It Will be in 10 Years - An Exercise in Practical Speculation About Information Output (panel) (Ralph E. O'Dette)
Methods and Resources for the Translator of Chemical Documents (5) (R. S. Schutz)
Microfilm Forum: Experiences, Problems, and Plans of Users and Publishers (9) (Ben H. Weil and Lee N. Starker)

159th, Spring 1970 - Houston, TX

The Division did not participate

ACS/CIC Joint Conference, May 1970 - Toronto, Canada

Communications in Chemistry and Chemical Technology (14)

(Herman Skolnik; Harold I. Schiff; Leo Yaffee)

Communicating Technical Information Within Industrial,
Academic, and Association Groups (10) (Frederick K. Broome)

160th, Fall 1970 - Chicago, IL

University and Chemical Information (7) (O. Bertrand Ramsay)
(joint with Chemical Education)

Communication of Technical Information (5) (Karl F. Heumann)
General (13) (Stephen J. Tauber; Charles E. Granito)

Functions and Contributions of Industrial Information
Centers (4) (Bernard S. Schlessinger) (joint with Industrial
and Engineering Chemistry)

Information - Does It Cost What It Is Worth? (open forum)
(Charles E. Granito)

Laboratory Automation and Direct Recording of Information
for Future Retrieval (4) (H. S. Conway) (joint with
Analytical Chemistry)

161st, Spring 1971 - Los Angeles, CA

Frontiers in Information Handling - New Techniques and
Technologies (3) (Robert E. Maizell)

Critique on Chemical Information Services (panel) (Bruno M.
Vasta)

General (6) (Charles E. Granito)

Information Issues and Problems (1) (open forum) (Charles E.
Granito)

Role of Information in Drug Design (4) (Paul N. Craig)
(joint with Medicinal Chemistry)

Input-Output Interactions (9) (Stephen J. Tauber)

162nd, Fall 1971 - Washington, DC

General (12) (Charles E. Granito; Alan Gelberg)

Appraising Information and Technology Systems (3) (Floyd D.
Hamilton)

Directing Appraisal (panel) (H. Bieber)

Copyrights (open forum) (Charles E. Granito)

Chemical Data Analysis (8) (Alfred P. Feldman; J. A. Schafer)

Engineer's Viewpoint of Patent Licensing (5) (J. R. Ehrenfeld)
(joint with Industrial and Engineering Chemistry)

163rd, Spring 1972 - Boston, MA

Computerized Manipulation, Storage, and Retrieval of Chemical
Structural Information (5) (Anthony E. Petrarca)

Evaluation of Existing Chemical Information Services (5)
(Bruno M. Vasta)

Information Research in Colleges and Universities (5) (Bernard
S. Schlessinger)

Problems of Reviewing R&D Grant and Contract Proposals (open
forum) (Anthony E. Petrarca)

Design, Implementation, Improvement of Chemical Information
Services (5) (Stephen J. Tauber)

General (3) (Charles E. Granito)

164th, Fall 1972 - New York, NY

Analysis and Handling of Structurally Related Data (6) (Anthony
E. Petrarca)

General (7) (James E. Rush)

Chemical Information Activities Abroad (5) (Stephen J. Tauber)

Problems Concerning Author, Editor, Reviewer, and Reader of
Scientific Journal Articles (open forum) (Anthony E. Petrarca)

Presenting Chemistry to the Public (9) (R. C. Brasted) (joint
with Chemical Education, and Committees on Chemical Education,
Local Section Activities, Professional Relations, and Public
Relations)

Cooperative Efforts in Information Distribution (9) (Bernard S.
Schlessinger)

165th, Spring 1973 - Dallas TX

The Division did not participate

166th, Fall 1973 - Chicago, IL

Impact of Current Trends in Science on Chemical Literature
(panel) (John K. Crum)

Evaluative and Comparative Studies of Information Sources and
Tools (6) (Bruno M. Vasta)

Understanding Chemistry and Chemists (5) (Raymond P. Mariella)
(joint with Chemical Education, and Committees on Chemical
Education, Professional Relations, and Public Relations)

Chemical Abstracts in Transition (2) (Herman Bloch) (joint
with Chemical Education, and Committees on Chemical Abstracts
Service and Publications)

Importance of Nomenclature of "Commercial" Chemicals in Chemical
Safety, Chemical Disasters, and Chemical Literature (4) (Howard
H. Fawcett) (joint with Committees on Chemical Disasters and
Chemical Safety)

The Division of Chemical Literature's First Twenty-Five Years:
Where to Now? (open forum) (James E. Rush)

167th, Spring 1974 - Los Angeles, CA

Recent Developments in Structure-Activity Correlations (11) (Paul
N. Craig) (joint with Medicinal Chemistry)

General (7) (Bruno M. Vasta)

Pattern Recognition in Chemistry (11) (James E. Rush)

168th, Fall 1974 - Atlantic City, NJ

General (10) (Alan Gelberg; Barbara A. Montague; Charles A.
Granito; Bruno M. Vasta)

Effectiveness of Chemical Information Systems Currently in Use (6)
(Peter A. Baker)

On-Line Systems (5) (Bruno M. Vasta)

169th, Spring 1975 - Philadelphia, PA

User Reactions to CAS Data and Bibliographic Services (10)
(Cynthia H. O'Donohue)

National Cancer Institute's Drug Research and Development Chemical
Information System (5) (Sidney Richman)

General (6) (Melvin L. Huber)

Impact of On-Line Information Systems (11) (Bruno M. Vasta; Robert
E. Bunrock)

General (5) (Charles E. Granito)

Appendix 6. Symposia at the ACS National Meetings, Division of Chemical Information, 1975-1993

(number in parentheses gives the number of papers presented in a given symposium;
name in parentheses is the name of the presiding symposium chairman)

170th, Fall 1975 - Chicago, IL

General (15) (Barbara A. Montague; Cynthia H. O'Donohue; Helen F. Ginsberg)
Chemical Information Networking/Resource Sharing (9) (Martha E. Williams; Bruno M. Vasta)
Information Requirements Resulting from Environmental Impact Laws (7) (Stephen R. Heller)

171st, Spring 1976 - New York, NY (Centennial Meeting)

Impacts of Copyright Developments on Chemical Information Transmission and Use (7) (Ben H. Weil) (joint with Committee on Copyrights)
National Library of Medicine's On-Line Information Services in Focus (6) (Bruno M. Vasta)
Contributions of the Division of Chemical Literature (Information) to the Chemical Society (6) (Herman Skolnik) (Herman Skolnik Award Symposium)
Computer-Assisted Organic Synthesis (14) (W. Todd Wipke; W. Jeffrey Howe) (joint with Computers in Chemistry)
Workshops: Using CA Volume Indexes, and Using CA Condensates (CAS editorial staff)

172nd, Fall 1976 - San Francisco, CA (Centennial Meeting)

Application of Nonnumerical Mathematics in Chemistry (10) (W. Todd Wipke)
Information Handling and Processing by the Food and Drug Administration (5) (Sander W. Bellman)
On-Line Retrieval (6) (Bruno M. Vasta)
General (5) (Peter F. Sorter)
Citation Searching (4) (Cynthia H. O'Donohue)
Workshop: Citation Indexing and Index Chemicus System (Henry G. Small)

173rd, Spring 1977 - New Orleans, LA

Meeting the Challenges of the Changing Patent Literature (10) (Carleton C. Conrad)
Information Systems - Industrial/Computerized (5) (Cynthia H. O'Donohue)
General (6) (Peter F. Sorter), including Herman Skolnik Award Address (Eugene Garfield)
Computer-Assisted Structure Elucidation (9) (Dennis H. Smith)
Workshop: BIOSIS

174th, Fall 1977 - Chicago, IL

Trends in Handling Patent Information (12) (Carleton C. Conrad)
Environmental Information Systems (5) (Alan Gelberg)
General (6) (Peter F. Sorter)
Fossil Fuels Information Systems (6) (Randall R. Graham)
Workshop: IFI/Plenum Data Co. Patent Services (Harry M. Allcock)

175th, Spring 1978 - Anaheim, CA

Retrieval of Medicinal Chemical Information (10) (Merrie Milne, W. Jeffrey Howe, and Ann P. Pennell) (joint with Computers in Chemistry, and Medicinal Chemistry)
Information Handling and the Toxic Substances Control Act (TSCA) (6) (Patrick J. McNulty)
Herman Skolnik Award Address (Fred A. Tate)
Chemical Information Utilization of FDA Bureau of Drugs Chemists (5) (Charles Kumkumian)
General (6) (Gabrielle S. Revesz)
Micrographic Information Systems in Chemistry (9) (Caroline M. Grills) (joint with Computers in Chemistry)

176th, Fall 1978 - Miami Beach, FL

Information Handling and the Toxic Substances Control Act (10) (Patrick J. McNulty; Joanne M. Egan)
Retrieval, Analysis, and Indexing of Chemical Reactions (6) (George Vladutz)
Chemical Information Resources for Safety and Health (6) (Paul Garwig) (joint with Chemical Health and Safety)
Retrieval of Polymer Information (6) (W. Val Metanomski) (joint with Polymer Chemistry, and Organic Coatings and Plastics Chemistry)
General (6) (Gabrielle S. Revesz)
Vendor's Seminar: PREDICASTS TERMINAL SYSTEM (PTS) (Samuel A. Wolpert)

177th, Spring 1979 - Honolulu, HI (joint with Chemical Society of Japan)

International Aspects of Technical Information Retrieval (11) (Robert H. Blaker and Hideaki Chihara)
Basic Characterization of Chemical Structures (12) (Haruo Hosoya and W. Todd Wipke; Haruo Hosoya and Dennis H. Smith)
History of Abstracting and General (9) (Shizuo Fujiwara and W. Val Metanomski)
Compilation and Use of Large Numeric Data Bases (7) (Stephen R. Heller and Takehiko Shimanouchi)
Development and Use of Large On-Line Data Bases (11) (Margaret Graham and Takeo Yamamoto; Nick A. Farmer and Shin'ichi Sasaki)
Industrial Information Systems (6) (Thomas M. Dyott)
General (8) (Shizuo Fujiwara and Merrie Milne)

178th, Fall 1979 - Washington, DC

Teaching and Use of Chemical Information in Academia (8) (Bonnie Lawlor) (joint with Chemical Education)
General (6) (Merrie Wise)
Status of TSCA Information Systems and Modules (5) (Bruno M. Vasta)

Searching Large Files of Chemical Structures (5)
 (Patrick J. McNulty)
 Techniques and Problems in Retrieval of Numerical
 Data (6) (W. Val Metanomski)
 Crystallographic Data Base for Chemists (7) (Camden
 R. Hubbard and Alan D. Mighell)
 Protection of Intellectual and Industrial Property (7)
 (Howard M. Peters and Hubert E. Dubb)
 Workshop: Introduction to Beilstein Handbook of
 Organic Chemistry (Reiner Luckenbach)

179th, Spring 1980 - Houston, TX
 Development and Use of Reliable Data Bases for
 Quantitative Structure Activity Relationships (10)
 (Amy Rispin)
 Record Keeping and Duties to Report Under the U.S.
 Environmental Laws (8) (Howard M. Peters; Cynthia
 H. O'Donohue)
 Handling of Patent Information in Image Technology
 (9) (G. Szonyi)
 Herman Skolnik Award Address (William J. Wiswesser)
 Workshop: Engineering Index (N. Hardy) (cancelled)

180th, Fall 1980 - Las Vegas, NV (2nd Chemical
 Congress of the North America)
 Protection of Intellectual and Industrial Property
 (7) (Howard M. Peters; Hubert E. Dubb) (Chemistry
 and the Law Subdivision, joint with Small Chemical
 Businesses)
 Chemical Literature Searching in the Undergraduate
 Curriculum (8) (Lucile E. Decker; J. A. Beel)
 (joint with Chemical Education and Committee on
 Chemical Education)
 Meeting the Information Needs of the Petroleum
 Industry (5) (Margaret H. Graham) (joint with
 Petroleum Chemistry)
 Innovation and the Patent System (7) (John L. Lucier;
 Willard Marcy) (joint with Small Chemical Businesses
 and Committee on Patent Matters and Related
 Legislation)
 General (5) (Ralph E. O'Dette)
 Past Present, and Future of Chemical Information
 Centers (4) (Cynthia H. O'Donohue)
 Uses and Applications of the Wiswesser Line Notation
 (WLN) Today (9) (Murray D. Rosenberg)
 Update on Specific Environmental and Workplace Laws
 (10) (Howard M. Peters; Kenneth W. Greenlee)
 (Chemistry and the Law Subdivision, joint with
 Industrial and Engineering Chemistry, and Small
 Chemical Businesses)

181st, Spring 1981 - Atlanta, GA
 Documents and Databases: Use or Misuse? (2) (Madeline
 M. Henderson) (joint with Committee on Copyrights)
 Thermodynamics Data Bases - Formulation, Reliability,
 and Availability (13) (John L. Morrey; Joseph
 Hilsenrath; Charles B. Alcock) (joint with Computers
 in Chemistry)

Hazardous Chemicals Control: Toxic Substances Control
 Act and Resource Conservation and Recovery Act (5)
 (Howard M. Peters) (Chemistry and the Law Subdivision,
 joint with Chemical Health and Safety; and Small
 Chemical Businesses)
 Information Careers for Chemists (5) (Charles H. Davis)
 Professional Liability Problems Faced by Independent
 Testing, Analytical, and R & D Laboratories (5)
 (Charles A. Garber) (Chemistry and the Law Subdivision,
 joint with Small Chemical Businesses)
 Legal and Para-Legal Career Options in Chemistry (8)
 (Howard M. Peters) (Chemistry and the Law Subdivision,
 joint with Professional Relations; Women Chemists
 Committee; and Younger Chemists Committee)
 Data and Information Systems with the Potential to
 Bridge Organizations in the Private Sector and in
 Government: Technical, Scientific, Legal,
 Administrative, and Political Issues (8) (Sidney Siegel)
 NSF-Supported Current R&D in Information Science
 Applicable to Chemistry (6) (Sarah N. Rhodes)

182nd, Fall 1981 - New York, NY
 Inventorship of Chemical Patents (3) (Howard M. Peters)
 (Chemistry and the Law Subdivision, joint with Committee
 on Patents and Related Matters)
 Spectroscopic Data Bases and Their Application to
 Chemical Problems (7) (George W. A. Milne) (cosponsored
 with Computers in Chemistry)
 Literature of Laboratory Safety and Health (7) (Michal E.
 Green) (joint with Chemical Health and Safety)
 Chemical Patent Practice in View of Reexamination and
 Expanded Protests (3) (C. Kenneth Bjork) (Chemistry and
 the Law Subdivision, joint with Committee on Patents and
 Related Matters)
 Molecular Substructure Searching: Advanced Systems (5)
 (W. Jeffrey Howe)
 Resource Conservation and Recovery in Small Businesses
 (6) (Jay A. King) (Chemistry and the Law Subdivision,
 joint with Small Chemical Businesses)
 New Technology for Information Centers (4) (David K.
 Johnson)
 Computer-Assisted Organic Synthesis (11) (Thomas M. Dyott)
 (joint with Computers in Chemistry)
 General (6) (W. Val Metanomski)
 Chemical Health and Safety, Especially in the Academic
 Laboratory (10) (Jay A. Young) (joint with Chemical
 Education; Chemical Health and Safety; and Small
 Chemical Businesses)
 Chemical Business Information Sources (7) (Jacqueline D.
 Montgomery) (joint with Chemical Marketing and Economics)
 Copyright Law. I. Bane or Boon (7) (Frederick H. Owens)
 (Chemistry and the Law Subdivision, joint with Chemical
 Education; and Committee on Copyrights)
 Copyright Law. II. A Practical Approach to Copyright for
 Chemists (6) (B. B. Thrasher) (Chemistry and the Law
 Subdivision, joint with Chemical Education; and
 Committee on Copyrights)

Seminar: Gmelin Handbook of Inorganic Chemistry (3)
(Dimitri R. Stein) (joint with Inorganic Chemistry)

183rd, Spring 1982 - Las Vegas, NV

Personal Computers and Microcomputers in Handling Information (6) (Antonio Zamora) (joint with Chemical Education; and Computers in Chemistry)

Chemist and Food Safety Regulation. I. Chemical Foundations of Today's Food Safety Regulations. II. Currently Pending Food Safety Legislation and its Compatibility with Today's Chemistry (10) (Michael J. Gilroy) (Chemistry and the Law Subdivision)

Role of Centralized Computer Facilities in Support of Research (15) (Richard W. Counts) (joint with Computers in Chemistry)

Problems with Foreign Literature (6) (Ann J. Jeater) Research and Development for Full-Text Searching (5) (Sarah N. Rhodes)

Intellectual Property and Recent Chemical Patent Decisions (4) (Hubert E. Dubb) (Chemistry and the Law Subdivision, joint with Committee on Patents and Related Matters)

Herman Skolnik Award Symposium (4) (Jean G. Marcali) Information Services and the Medicinal Chemist (5) (Barbara C. Zahm) (joint with Medicinal Chemistry)

Evaluation of Information (5) (Homer J. Hall)

TSCA Impacts on Society and Chemical Industry. I. Some General Effects (4) (George W. Ingle). II. Specific Effects on Domestic Industry (4) (Howard M. Peters). III. Domestic and International Effects (4) (Kenneth W. Greenlee). IV. Selected Societal Effects (4) (L. Keller) (Chemistry and the Law Subdivision, joint with Industrial and Engineering Chemistry; Organic Coatings and Plastics Chemistry; Small Chemical Businesses; and Committee on Corporation Associates)

Managing Information Services and Systems (5) (James M. Lommel)

Seminar: SRI International's Chemical Marketing Research Services - Who, What, Where, When, and How (4) (Sara L. Soder)

184th, Fall 1982 - Kansas City, MO

Artificial Intelligence Research and Application to Chemical Information (11) (Antonio Zamora) (joint with Chemical Education; and Computers in Chemistry)

Intellectual Property: The Tension Between Patents and Trade Secrets (8) (Walter E. Buting; John J. Lucier) (Chemistry and the Law Subdivision, joint with Committee on Patents and Related Matters)

General (8) (W. Val Metanomski)

Predicting Properties and Toxicity for Chemicals (6) (Kenneth E. Jackson) (joint with Chemical Health and Safety; and Small Chemical Businesses)

Communication and the Future of Science - Celebrating the 75th Anniversary of Chemical Abstracts Service (5) (Dale B. Baker)

Numerical Data Sources (7) (Edward P. Bartkus)

Recent Developments in the EPA Regulation of Chemicals (3) (Howard M. Peters) (Chemistry and the Law Subdivision, joint with Small Chemical Businesses)

Chemical Literature and Information Retrieval in the Chemistry Curriculum (12) (George Gorin; Herman Skolnik) (cosponsored with Chemical Education; joint with Computers in Chemistry)

Assessing Health Risks from Chemicals (16) (Elizabeth L. Anderson; Norton Nelson; Robert G. Tardiff; Joseph V. Rodrick) (joint with Chemical Health and Safety)

New Facilities and Technologies in Industrial Information Centers (4) (Robert E. Maizell)

TSCA Impacts on Society and the Chemical Industry (5) (George W. Ingle) (Chemistry and the Law Subdivision, joint with Small Chemical Businesses)

Seminar: Heilbron's Dictionary of Organic Chemistry (5) (Richard G. L. Stileman) (joint with Chemical Education; and Organic Chemistry)

185th, Spring 1983 - Seattle, WA

National Language Processing: Automatic Indexing of Natural Language Text and Natural Language Access to Online Databases (6) (George Vladutz) (joint with Computers in Chemistry)

Cost Effectiveness of Online Searching of Chemical Information (5) (Robert E. Buntrock)

History of Chemical Information Science. I. The Division of Chemical Information (8) (Herman Skolnik) (joint with History of Chemistry)

Copyright and Ownership of Database Information (5) (Merle I. Eiss) (joint with Chemistry and the Law; and Committee on Copyrights)

General (6) (David K. Johnson)

Chemical Information Flow - Present and Future (6) (William S. Lyon) (cosponsored with Analytical Chemistry)

Cost of Providing Information from an Industrial Information Center (8) (Murray D. Rosenberg)

Users Feedback and Services Evaluation (5) (Edward P. Bartkus)

Periodic Table in Chemical Education (6) (Thomas D. Coyle) (joint with Chemical Education; Inorganic Chemistry; and Committee on Nomenclature)

Seminar: Derwent Publications (7) (Michael D. Dixon) (joint with Industrial and Engineering Chemistry; and Polymer Chemistry)

186th, Fall 1983 - Washington, DC

Molecular Substructure Searching: New Applications (5) (W. Jeffrey Howe)

International and Transborder Flow of Chemical Information (6) (Jane Bortnick)

General (3) (David K. Johnson)

Value-Added in Information Processing (5) (M. Lynne Neufeld)

Indexing Chemical Information (Herman Skolnik Award Symposium) (4) (Jean G. Marcali)

Numerical Data Dissemination (5) (Bettijoce B. Molino)

Numerical Data Quality (5) (Lewis H. Gevantman)
 European Inventory of Existing Commercial Chemical
 Substances (EINECS). I. Technical Aspects (6)
 (William G. Town). II. General Aspects (4)
 (William G. Town for Goffredo del Bino)
 Seminar: The Merck Index (5) (Martha Windholtz)

187th, Spring 1984 - St. Louis, MO

History of Chemical Information Science. II.
 Historical Developments in the Communication
 of Chemical Information (6) (Herman Skolnik)
 General (2) (David K. Johnson)
 Electronic Information Delivery (6) (Gary D.
 Wiggins)
 Chemists and Their Personal Computers: Individual
 Access to Chemical Information. I. How Chemists
 Use Personal Computers (6) (Ruthann Bates).
 II. Downloading (5) (M. Lynne Neufeld). III.
 Training Chemists To Do Their Own Searching
 (7) (Aldona Valicenti). IV. Demonstrations and
 Posters (9) (David K. Johnston) (cosponsored
 with Computers in Chemistry)
 Seminar: Molecular Design Limited - Graphic Software
 for Chemical Information Management (5) (Stuart A.
 Marson)

188th, Fall 1984 - Philadelphia, PA

Individual Computer Searching by Academic Chemists (5)
 (Arleen N. Somerville) (cosponsored with Chemical
 Education)
 Open Meeting of the Society Committee on Chemical Abstracts
 Service (2) (David K. Johnson)
 General (11) (David K. Johnston)
 Chemical Patent Information (Herman Skolnik Award Symposium)
 (5) (Ralph E. O'Dette)
 Maintaining the Security of Proprietary Information: Legal
 Aspects and Practical Applications (6) (George A. Klumb)
 Chemical Reactions Databases (5) (George Vladutz)
 History of Chemical Information Science. III. Historical
 Development of Chemical Information Systems (5) (Herman
 Skolnik)
 Training Session: Use of the National Library of
 Medicine's Toxicological and Chemical Online Databases
 (Miriam Perkins)
 Seminar: Institute for Scientific Information (ISI) (5)
 (Bonnie Lawlor)

189th, Spring 1985 - Miami Beach, FL

Scientific Communication Pathways (7) (W. Val Metanomski)
 General (6) (David K. Johnson)
 Impact of Online Databases on Patent Searching (5)
 (Stuart M. Kaback)
 Use of Computers in Chemistry: Computer Secretariat
 Inaugural (9) (Rudolph J. Marcus) (cosponsored with
 Computer Secretariat)
 Electronic Publishing (6) (Eric W. Johnson)
 Full-Text Files and Their Use (7) (Barbara G. Wood)
 Training Session: National Library of Medicine's Chemical
 and Toxicological Databases (Miriam Perkins)
 Seminar: Questel, Inc. (5) (Norman R. Schmuff)

190th, Fall 1985 - Chicago, IL

Toxicological and Occupational and Environmental Health
 Information (6) (Rosemarie Parker)
 Open Meetings of the Society Committees on Publications
 and on Chemical Abstracts Service (2) (David K. Johnson)
 Pitfalls for the Novice in the Patent Jungle (9) (M. U.
 Cahn) (cosponsored with Chemistry and the Law; and
 Committee on Patents and Related Matters)
 Design, Construction, Maintenance, Operation, and Use of
 In-House Databases (7) (M. Karen Landsberg)
 Interactions - Scientific Information and Office Automation
 (5) (Merle I. Eiss)
 Preservation and Maintenance of Valuable Assets: Selected
 Topics in Trademark Law, Copyright Law, Trade Secret Law,
 Licensing, and Litigation (5) (Rod S. Berman) (cosponsored
 with Chemistry and the Law; Committee on Copyrights; and
 Committee on Patents and Related Matters)
 How to Access Databases Using Your Micro: Online Searching
 Packages for PCs (8) (James E. Rush)
 Computer-Based Calculation and Estimation of Chemical and
 Physical Properties (7) (S. H. Jacobsen)
 Training Session: National Library of Medicine's Chemical
 and Toxicological Online Databases (Miriam Perkins)
 Seminar: Dialog Information Services, Inc. (5) (Peter F.
 Rusch)

191st, Spring 1986 - New York, NY

New Technologies and Chemical Information - 1986 (12)
 (Ruthann Bates; Joanne L. Witiak) (3rd ACS/ASIS/SLA
 Tri-Society Symposium)
 Applications of Artificial Intelligence in Chemical
 Information (5) (A. K. Stewart)
 New Directions in Science Libraries and Information
 Centers (5) (John Pinzelik)
 Citation Analysis and Research Mapping - Principles and
 and Practices (1) (Henry G. Small)
 Using the Chemical Literature with Students Today (16)
 (Gary D. Wiggins and Carol A. Carr) (cosponsored with
 Chemical Education)
 General (7) (David K. Johnson)
 Challenges in Moving Toward a New International Chemical
 Information Order (5) (Ann P. Moffett) (Herman Skolnik
 Award Symposium)
 Chemical Business Information (7) (Phae H. Dorman)
 Training Session: National Library of Medicine's
 Chemical and Toxicological Online Databases (Miriam
 Perkins)
 Seminar: IFI/Plenum Data Company (7) (Harry M. Allcock)

192nd, Fall 1986 - Anaheim, CA

Impact of Chemistry on Biotechnology (4) (Marshall
 Philips and Sharon P. Shoemaker) (cosponsored with
 Biotechnology Secretariat)
 General (7) (David K. Johnson)
 Open Meetings of the Society Committees on Publications
 and on Chemical Abstracts Service (2) (Barbara G.
 Wood; Clayton F. Callis)
 Special Topics in Chemical Searching: Inorganics,
 Topology, Stereochemistry, Macromolecules, and
 Three-Dimensional Representations (5) (Michael
 P. O'Hara)

Generic Structure Searching (6) (John M. Barnard)
Biotechnology Information (5) (Ronald A. Rader)
(cosponsored with Biotechnology Secretariat)
Reaction Databases and Synthesis Planning (7)
(Gerald G. Vander Stouw)
Graphics in Chemical Information (6) (Wendy A. Warr)
Chemists' Workstations: Applications of Personal
Computers in Chemical Research (8) (Michael Savage)
(cosponsored with Computer Secretariat)
Seminar: System Development Corporation (SDC) (6)
(M. J. Camplin)

193rd, Spring 1987 - Denver, CO
End Users' Reflections on End User Searching (6)
(Ronald R. Duetgen)
Data/Information Resource Management (DRM/IRM) (6)
(M. Karen Landsberg)
General (4) (Joanne L. Witiak)
Small Computer Systems - Software for Chemists (12)
(Lorin R. Garson)

194th, Fall 1987 - New Orleans, LA
Human Factors in Computer-Based Systems (5)
(Lorraine F. Normore)
Open Meetings of the Society Committees on Chemical
Abstracts Service and on Publications (Clayton F.
Callis; Barbara G. Wood)
Chemical Emergency Responses (6) (Bruno M. Vasta)
Chemical Reaction Documentation (4) (Michael D.
Dixon) (Herman Skolnik Award Symposium)
Electronic Submission of Manuscripts for Publication:
a Publisher's Perspective (6) (Marianne Brogan)
(cosponsored with Computers in Chemistry)
Softcopy: Author-Generated Journal-Quality Manuscripts
(10) (Peter Lykos; Kenneth L. Ratzlaff) (cosponsored
with Computers in Chemistry)
Laboratory Information Management Systems (16) (Glenn
I. Ouchi) (cosponsored with Computers in Chemistry)
Chemical Information: Database Issues (11) (George R.
Famini; Joanne L. Witiak)
Technology Transfer: a Significant Tool for Chemists
and Industry (6) (Robert E. Maizell)

195th, Spring 1988 - Toronto, Canada (3rd Chemical
Congress of North America)
Peer Review of Technical Papers and Grant Proposals
(6) (D. H. Michael Bowen)
General (12) (Joanne L. Witiak)
Open Meeting of the Society Committee on Chemical
Abstracts Service (Newman M. Bortnick)
CODATA: Reliable Numerical Data for Science and
Technology (6) (Gordon H. Wood)
Scientific Numerical Databases - Present and
Future (6) (David R. Lide, Jr.) (6) (Herman
Skolnik Award Symposium)
Computerized Dissemination of Numerical Data for
Chemists (18) (Bettijoyce B. Molino)
Information Related Research Activities: Some
Exciting Opportunities (5) (Joseph C. Schehr)

How the Computer Has Affected the Practice of
Chemistry. How the Computer Has Affected the
Practice of Chemical Information (5) (Bonnie
Lawlor and Eugene Garfield) (cosponsored with
Computer Secretariat)

196th, Fall 1988 - Los Angeles, CA
Optimize Your PC Use: Software for Chemists (6)
(Linda M. Klug)
Open Meeting of the Society Committee on Chemical
Abstracts Service (Newman M. Bortnick)
Chemical Structure Information, Interfaces,
Communication, and Standards (11) (Wendy A.
Warr)
Competitive Intelligence in the Chemical
Marketplace: Sources of Information (4)
(T. Duetgen) (cosponsored with Chemical
Marketing and Economics)
Application of Competitive Analysis for
Evaluation of Current and Future Business
Positions (3) (Bruce W. Deckman)
Information Access: The Problems and Promises of
Gateways (9) (Bonnie Lawlor; Ronald G. Dunn)

197th, Spring 1989 - Dallas, TX
Biotechnology Information: Sources, Impacts,
and Future Developments (7) (Carole A. Duane)
Open Meetings of the Society Committees on
Nomenclature and on Chemical Abstracts Service
(Kurt L. Loening; Newman M. Bortnick)
Global Information - The Contribution From
Research and Perspectives for the Next
Millennium (9) (Michael F. Lynch; Stuart
A. Marson) (Herman Skolnik Award Symposium)
Natural Language Processing: New Developments
(5) (Robert E. Stobaugh)
Information Resources for AIDS and Antiviral
Drug Development (5) (Ronald A. Rader)
Transfer of Chemical and Biological Information
Among Academic, Industrial, and Governmental
Organizations: Efficiency and Computer
Readable Format (6) (Robert E. Harmon)
General (4) (George R. Famini)

198th, Fall 1989 - Miami Beach, FL
Patent Office Automation: Progress Report (4)
(Michael P. O'Hara)
General (10) (George R. Famini; Joanne L. Witiak)
Open Meeting of the Society Committee on Chemical
Abstracts Service (Joseph A. Dixon)
Environmental Expert Systems (17) (Judith M.
Hushon)
The Merck Index: Centennial Edition (4) (Sandra
S. McKelvey and Susan Budavari)
Chemical Information Entrepreneurs (4) (Daniel E.
Meyer)
Electronic Methods of Document Preparation and
Information Exchange (14) (Lorin R. Garson,
Richard A. Love, and David P. Martinsen)

199th, Spring 1990 - Boston, MA

Application of Hypermedia in Technical Information (9) (Richard A. Love)
 Open Meeting of the Society Committee on Chemical Abstracts Service (Lawrence F. Thompson)
 SCI-MIX Posters (5) (Joanne L. Witiak)
 Full Text Information Storage and Retrieval Systems: The Databases, Software, and System Development (13) (Murray D. Rosenberg)
 Tips/Problems Associated with Chemical Information Retrieval (11) (Joanne L. Witiak)
 General (3) (Gerald G. Vander Stouw)

200th, Fall 1990 - Washington, DC

Software for Frugal Chemists: What, Where, How, and How Not To (7) (Richard S. Hong and Robert E. Buntrock)
 General (6) (Charles E. Gragg)
 Open Meeting of the Society Committee on Chemical Abstracts Service (Lawrence F. Thompson)
 SCI-MIX Posters (1) (Gerald G. Vander Stouw)
 Intellectual Property: Yesterday, Today, and Tomorrow (6) (Frederick H. Owens) (cosponsored with Chemistry and the Law; and Committee on Copyrights)
 Topological Storage of Structures in Chemistry and Related Fields (6) (Robert E. Stobaugh) (Herman Skolnik Award Symposium)
 Markush Structure Files and Searching (8) (Michael S. Feider)
 Very Broad Markush Claims - Solution or Problem (2) (George W. A. Milne and Michael D. Dixon) (cosponsored with Chemistry and the Law)
 Risk Assessment - Past, Present, and Future Challenges (8) (Sidney Siegel) (cosponsored with Chemical Health and Safety)

201st, Spring 1991 - Atlanta, GA

Enhanced Access to Chemical Information: Foundations and Applications Including Expert Systems and Electronic Delivery (6) (A. K. Stewart)
 Numeric Data on Polymers, Plastics, and Elastomers (4) (R. K. Shastri)
 Open Meeting of the Society Committee on Chemical Abstracts Service (Lawrence F. Thompson)
 SCI-MIX Posters (3) (Joanne L. Witiak)
 Polymer Information: Storage for Retrieval, or Hide and Seek? (9) (Stuart M. Kaback)
 Information Resources for Health, Environment, and Toxicology (10) (R. O. Beauchamp)
 Environmental Information Systems (8) (John J. Brennan)
 General (2) (Gerald G. Vander Stouw)

202nd, Fall 1991 - New York, NY (4th Chemical Congress of North America)

Synthesis Planning and Reaction Databases (10) (Guenther Grethe)
 Open Meeting of the Society Committee on Chemical Abstracts Service (Lawrence F. Thompson)

International Flow of Information: North America and Europe (5) (Edmund T. King)
 New Dimensions in Chemical Information (4)

(W. Todd Wipke) (Herman Skolnik Award Symposium)
 Three-Dimensional Chemical Structure Handling (17) (Peter Willett, Yvonne C. Martin, and Robert P. Sheridan)
 3D Databases (15) (Peter Willett, Yvonne C. Martin, and W. Todd Wipke) (cosponsored with Computers in Chemistry; and Medicinal Chemistry)
 SCI-MIX Posters (6) (Joanne L. Witiak)
 Impact of New Technologies on Information Ownership and Copyright: Are Your Policies Inviolate or in Violation? (5) (Bonnie Lawlor) (cosponsored with Committee on Copyrights)

203rd, Spring 1992 - San Francisco, CA

Numeric/Factual Chemical and Materials Property Data (11) (J. Gil Kaufman and Gordon H. Wood) (cosponsored with CODATA of ICSU)
 International Flow of Information: Pacific Rim (6) (Edmund T. King) (cosponsored with Chemical Marketing and Economics)
 SCI-MIX Posters (7) (Nancy Lambert)
 Software and Data Integration in Chemical Information Systems: Standards, Software Toolkits, and Distributed Systems (7) (William G. Town)
 Scientific Publishing in the Year 2000 and Beyond (6) (Paul L. Garwig) (cosponsored with Committee on Publications)
 Information Tools for the Individual Scientists (8) (S. P. Schmidt)
 Biotechnology/Biopolymers Information and Databases (4) (E. Carey) (cosponsored with Biotechnology Secretariat)

204th, Fall 1992 - Washington, DC

Genome Informatics: U.S. Government Activities and International Activities (7) (Stephen R. Heller) (cosponsored with Computers in Chemistry)
 Open Meeting of the Society Committee on Chemical Abstracts Service (Lawrence F. Thompson)
 SCI-MIX Posters (2) (John Kloss)
 Use of Hypermedia in Chemical Information and Education (7) (Ken M. Chapman and Richard A. Love) (cosponsored with Chemical Education)
 Topological Information in Molecular Modeling (5) (Jacques-Emile Dubois) (Herman Skolnik Award Symposium)
 General (3) (Gerald G. Vander Stouw)
 Biotechnology Patent Information (6) (Richard A. Kurt)
 Information for the Bottom Line (5) (William J. Mayer)
 Structure Searching (6) (George W. A. Milne) (cosponsored with Computers in Chemistry)

205th, Spring 1993 - Denver, CO

Stereochemical Information (8) (Guenter Grethe)
Open Meeting of the Society Committee on Chemical
Abstracts Service (Lura J. Powell)
SCI-MIX Posters (10) (Thomas E. Wolff)
Competitive Intelligence and Technology Transfer
(6) (Edmund T. King) (cosponsored with Chemical
Marketing and Economics)
General (5) (David P. Martinsen)
Environmental Information Management Systems (12)
(John J. Brennan)

Appendix 7.
Workshops, Seminars, and Demonstrations at the ACS National Meetings, 1953-1989

<u>Meeting</u>	<u>Date</u>	<u>Location</u>	<u>Topic or Company (Organizer)</u>
124th	Fall 1953	Chicago	Equipment for the Preparation, Reproduction, and Utilization of Technical Information
144th	Spring 1963	Los Angeles	Scientific and Technical Information Systems
155th	Spring 1968	San Francisco	Wiswesser Line Notation (Elbert G. Smith)
158th	Fall 1969	New York	Available Computer Programs for Information Retrieval (Freeman H. Dyke, Jr.)
168th	Fall 1974	Atlantic City	Introduction to Computers (Bernard B. Schlessinger and Donna M. Mendelhall) Fundamentals of Indexing (James E. Rush)
171st	Spring 1976	New York	Using CA Volume Indexes and Using CA Condensates
172nd	Fall 1976	San Francisco	Citation Indexing and Index Chemicus System (Henry G. Small)
173rd	Spring 1977	New Orleans	Publications and Services of BioScience Information Service (BIOSIS)
174th	Fall 1977	Chicago	IFI/Plenum Data Corp. Patent Services (Harry M. Allcock)
175th	Spring 1978	Anaheim	Micrographic Information Systems (Caroline M. Grills)
176th	Fall 1978	Miami Beach	Predicasts Terminal System (Samuel A. Wolpert)
178th	Fall 1979	Washington, DC	Introduction to Beilstein Handbook of Organic Chemistry (Reiner Luckenbach)
179th	Spring 1980	Houston	Publications and Services of Engineering Index (Ei) (CANCELLED)
182nd	Fall 1981	New York	Gmelin Handbook of Inorganic Chemistry (Dimitri R. Stein)
183rd	Spring 1982	Las Vegas	SRI International's Chemical Marketing Research Services (Sara L. Soder)
184th	Fall 1982	Kansas City	Heilbron's Dictionary of Organic Chemistry (Richard G. L. Stileman)
185th	Spring 1983	Seattle	Darwent Publications (Michael D. Dixon)
186th	Fall 1983	Washington, DC	Merck Index (Martha Windholz)
187th	Spring 1984	St. Louis	Molecular Design Limited (Stuart A. Marson)
188th	Fall 1984	Philadelphia	Institute for Scientific Information (ISI) (Bonnie Lawlor) Three Optical Disc Systems Use of the National Library of Medicine's Toxicological and Chemical Online Databases (Miriam Perkins)
189th	Spring 1985	Miami Beach	Questel, Inc. (Norman R. Schmuff) The National Library of Medicine's Chemical and Toxicological Online Databases (Miriam Perkins)

190th	Fall 1985	Chicago	Dialog Information Services (Peter F. Rusch) Online Searching Packages for PC (James E. Rush) Electronic Document Delivery Demonstration (OCLC) The National Library of Medicine's Chemical and Toxicological Online Databases (Miriam Perkins)
191st	Spring 1986	New York	IFI/Plenum Data Corp. (Harry M. Allcock) An Overview of the National Library of Medicine's Chemical and Toxicological Online Databases (Miriam Perkins)
192nd	Fall 1986	Anaheim	ORBIT Search Service (SDC) (M. J. Camplin)
193rd	Spring 1987	Denver	Software: Microcomputer Information Handling (Janet L. Chapman)
194th	Fall 1987	New Orleans	Microcomputer Software (Daniel E. Meyer)
195th	Spring 1988	Toronto	Numerical Data for Chemists (Bettijoyce B. Molino)
196th	Fall 1988	Los Angeles	Standards for Exchange of Computerized Chemical Structures and Ancillary Data (John M. Barnard) Microcomputer Software (Daniel E. Meyer)
198th	Fall 1989	Miami Beach	The Merck Index (Sandra S. McKelvey and Susan Budavari)

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