

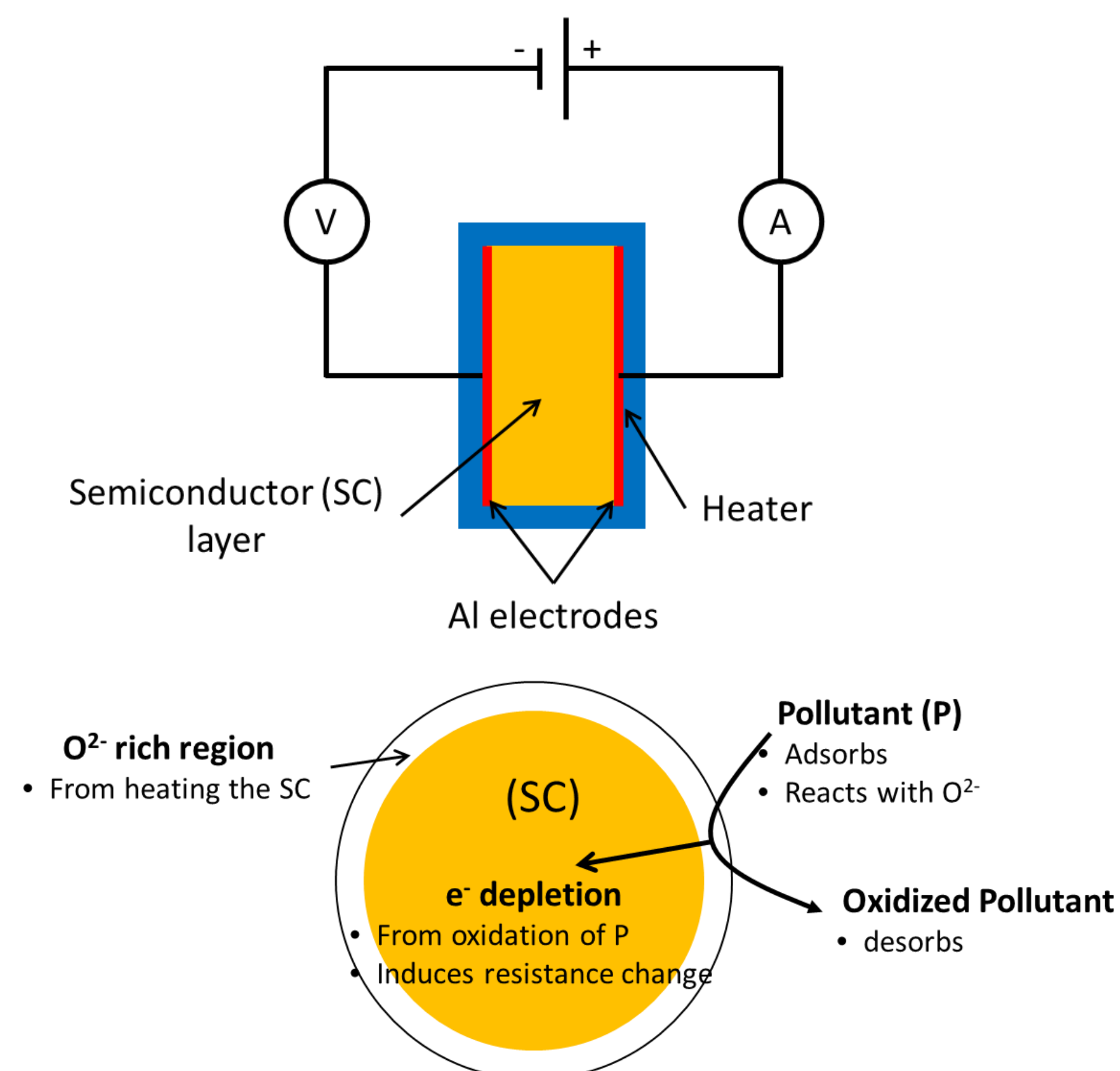


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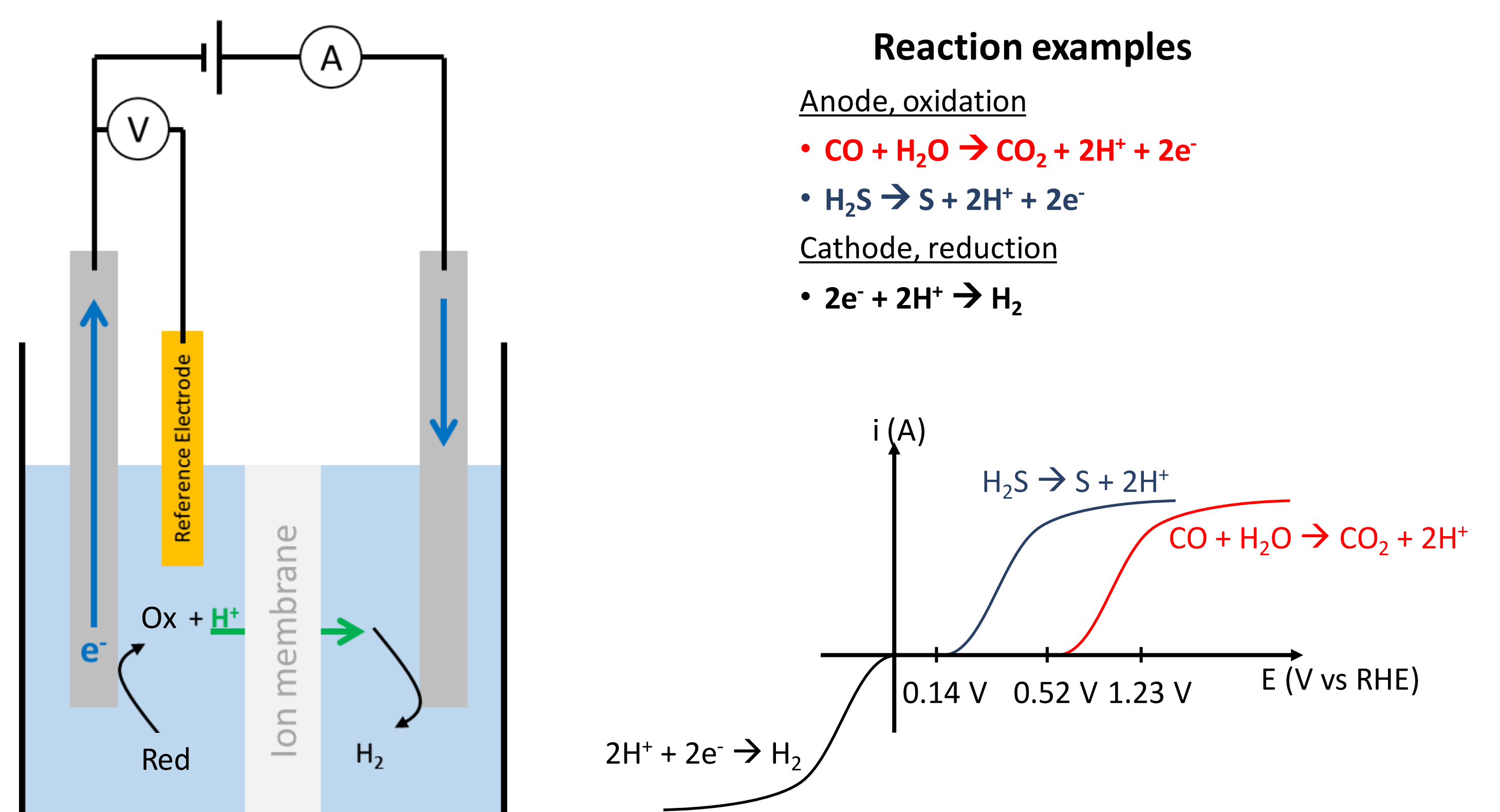
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A SMALL, SIMPLE AND SELECTIVE GAS SENSOR

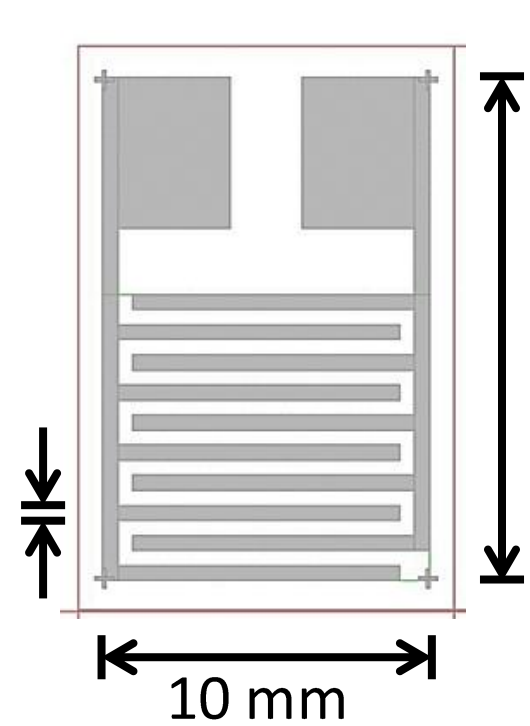
Current State of the Art gas sensor



Novel approach – Electrochemical detection

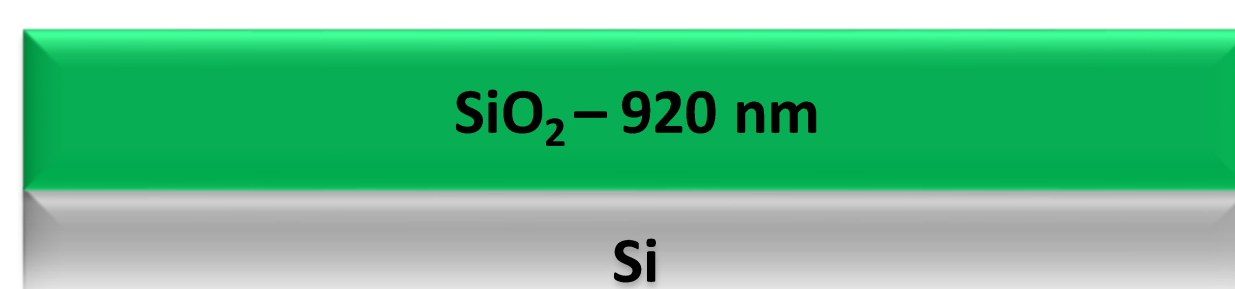


Geometry

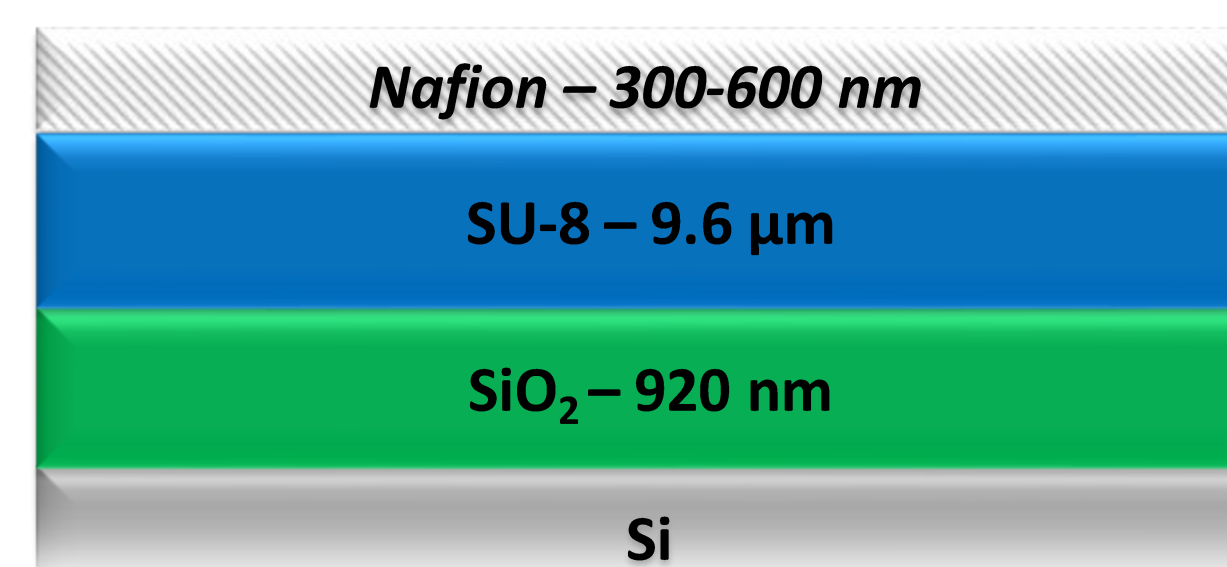


Single mask

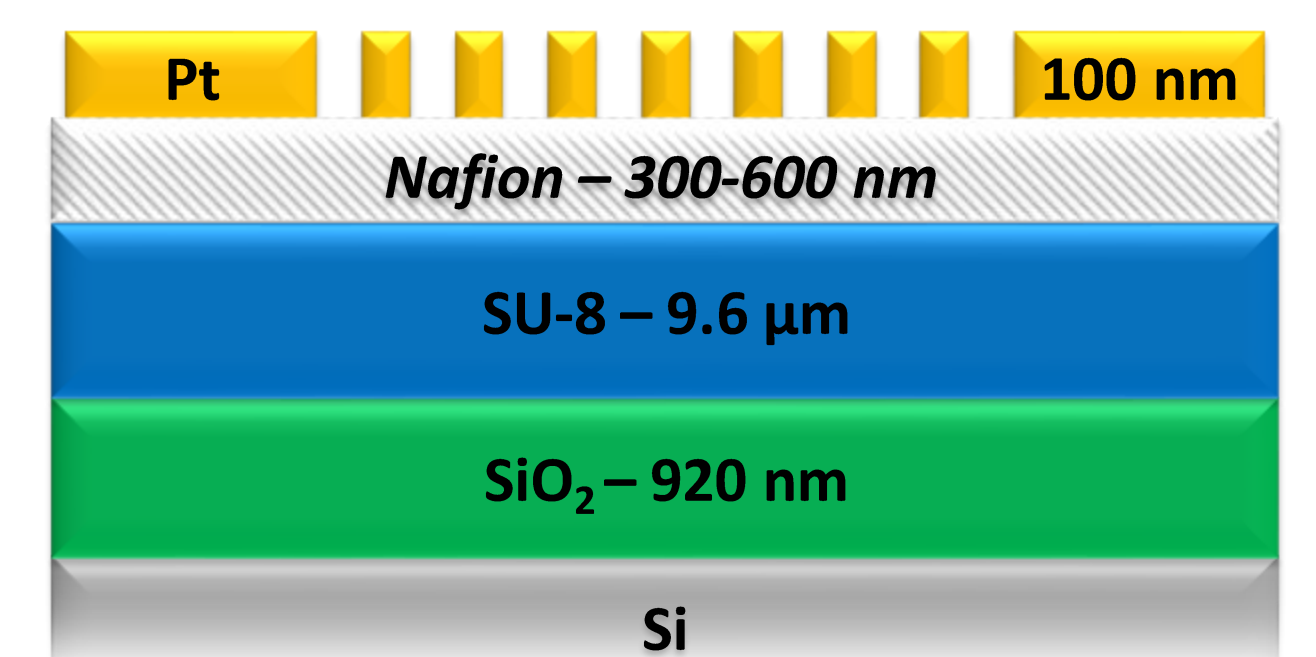
Fabrication process



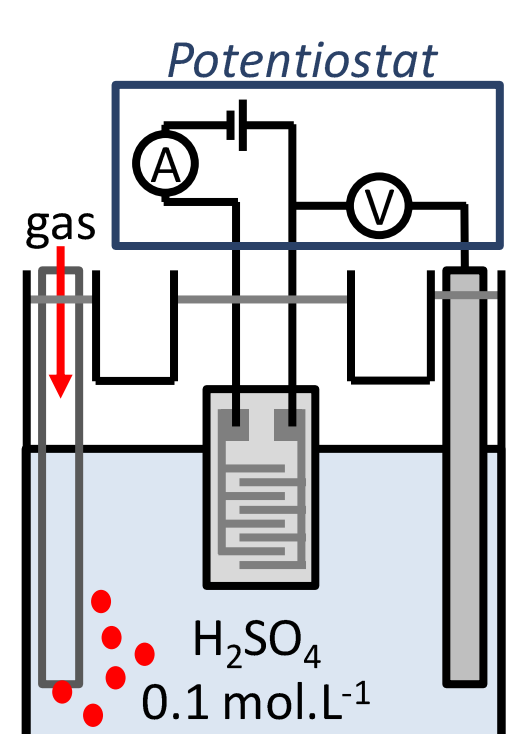
- Wet oxidation



- **SU-8**: spin coating, OAI® UV exposure, baking
- **Nafion®**: spin coating, baking

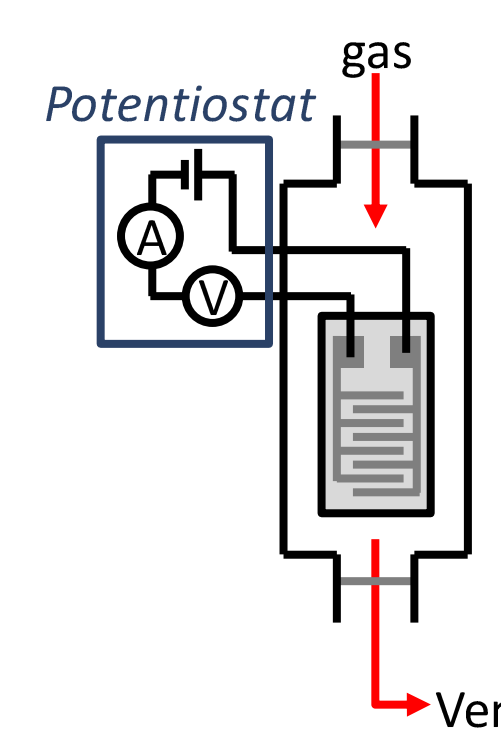
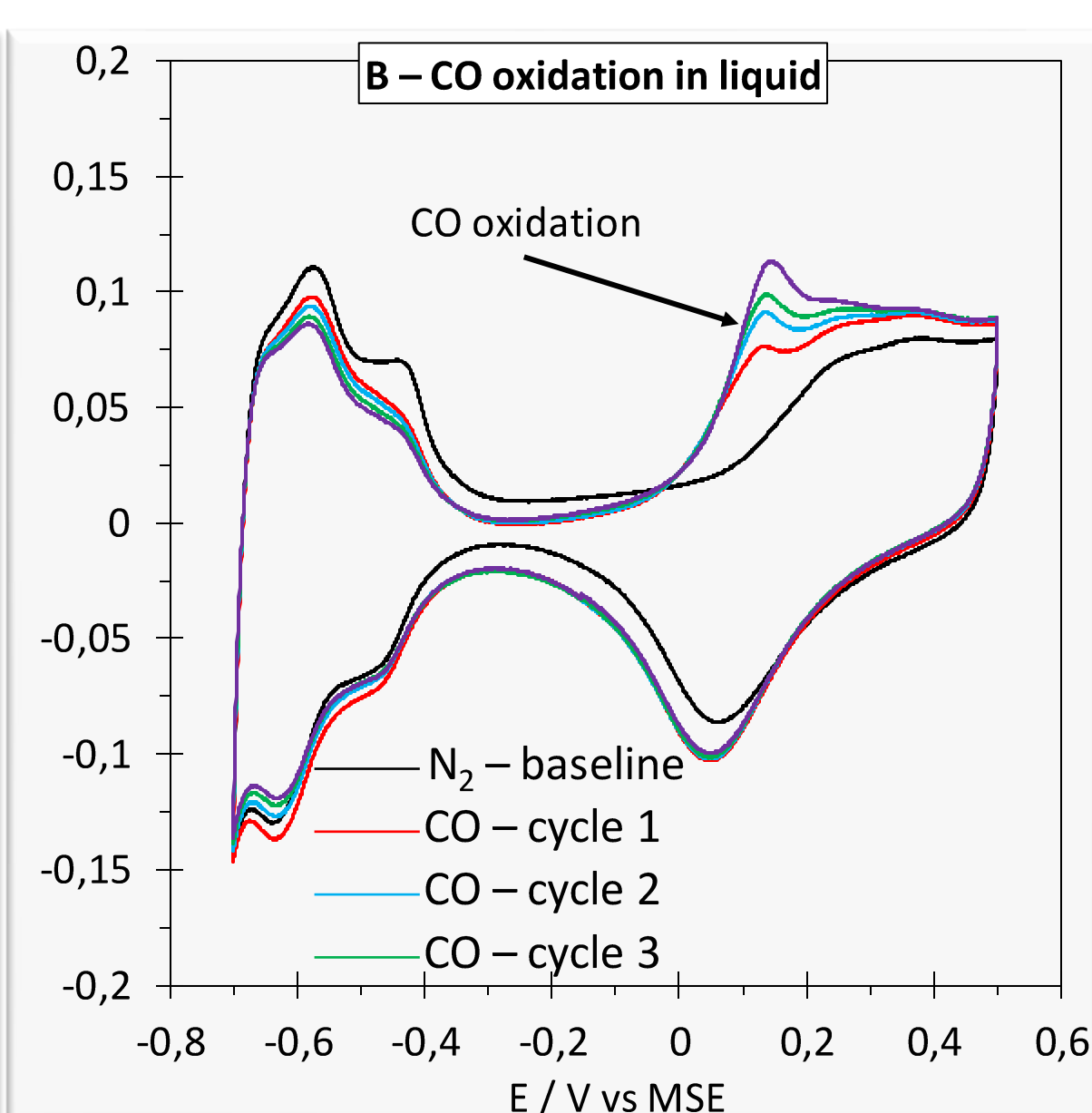
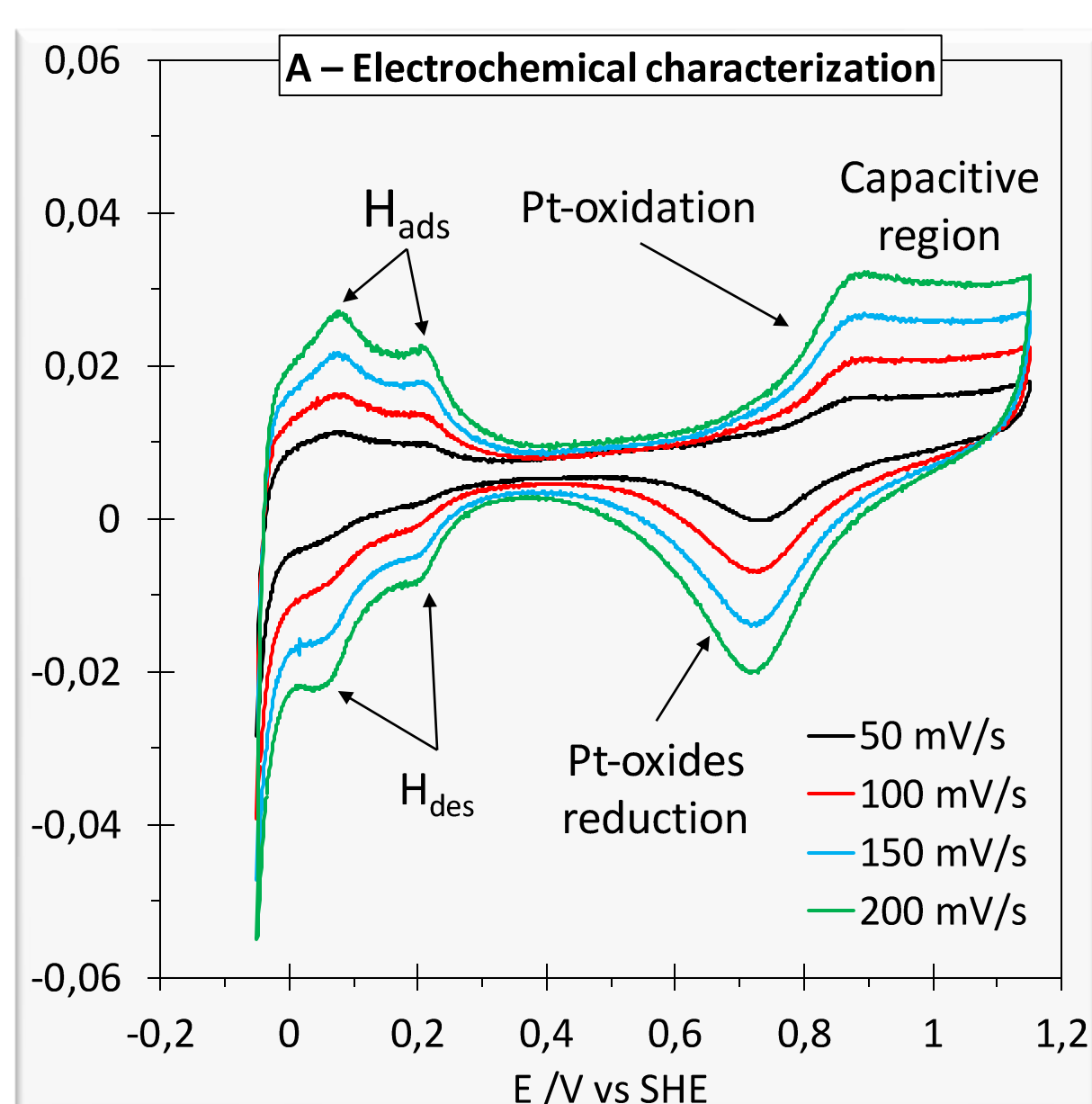


- 100 nm Pt e-beam, liftoff



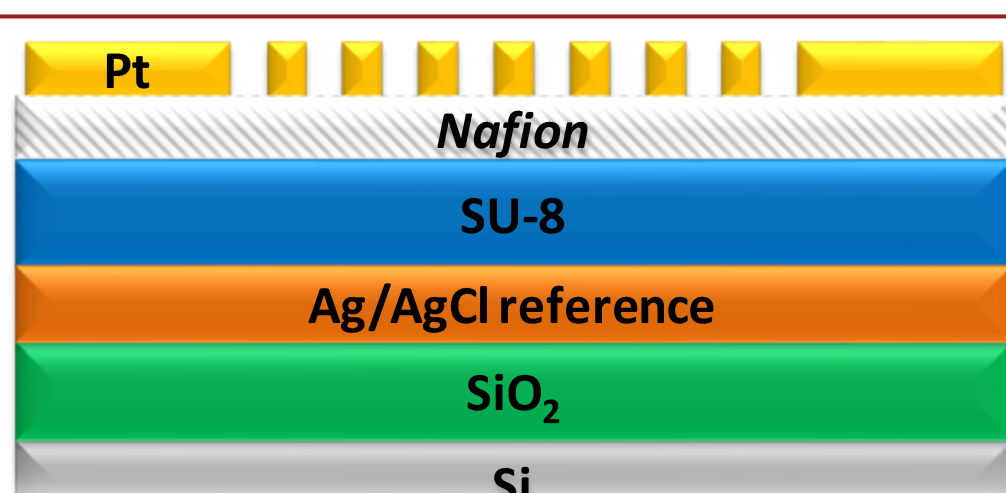
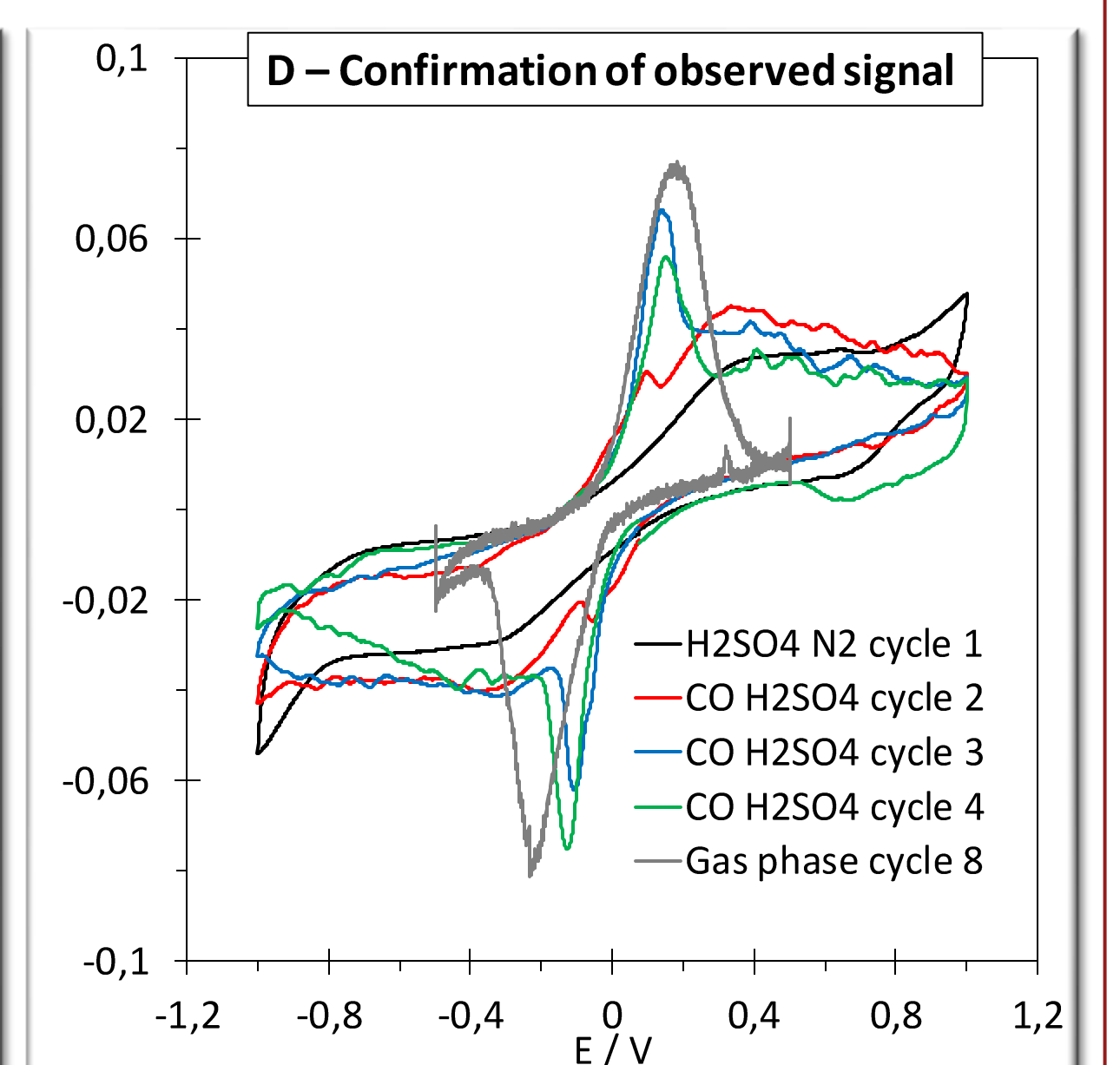
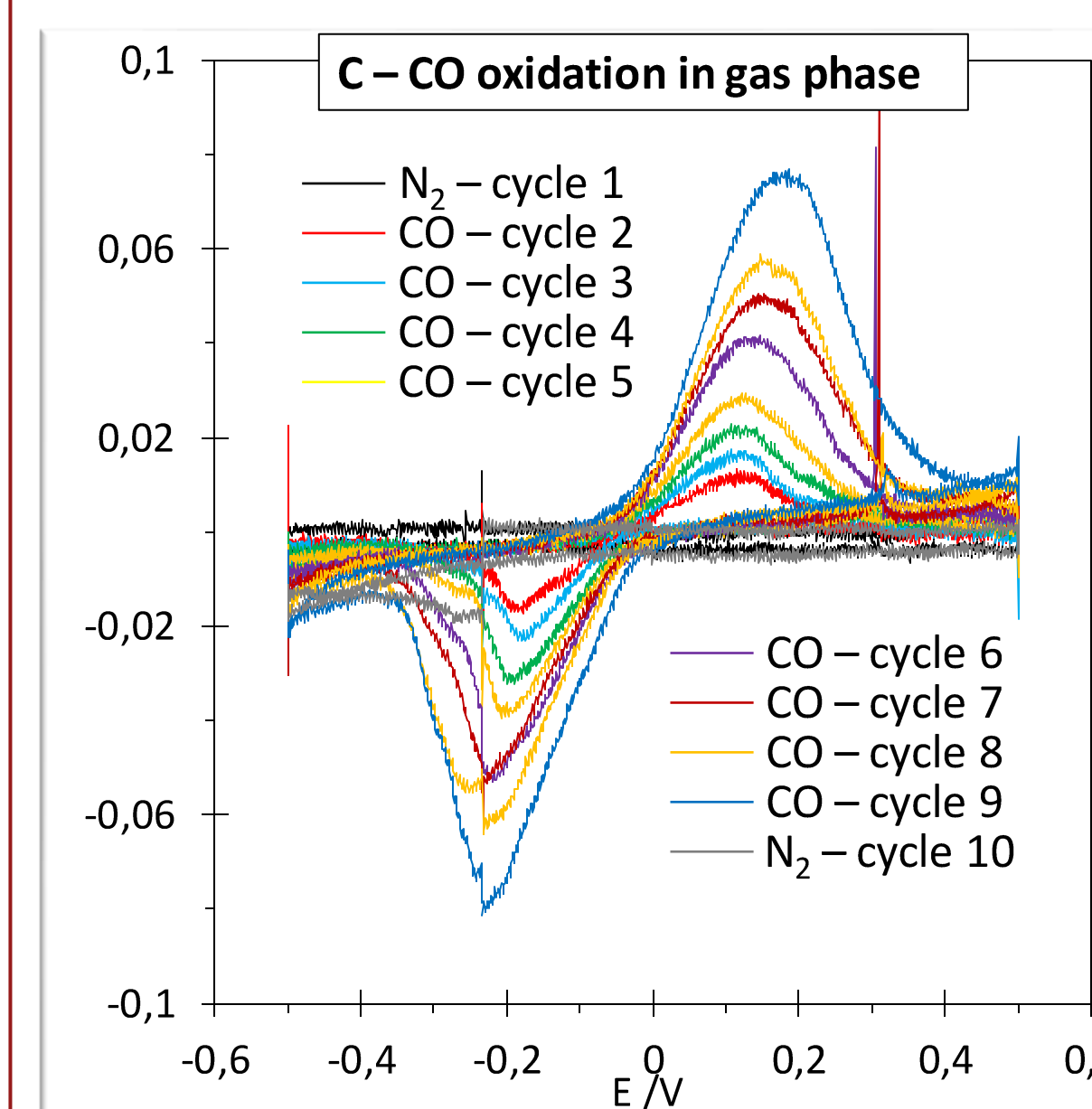
Electrochemistry

- A. The shape of the CVs are typical for Pt in acidic medium.
- The Pt surface is available
 - The *Nafion* transports H⁺ correctly
- B. The CO oxidation peak confirms the ability of the sensor to detect CO



CO detection

- C. The shape of the CVs are typical for Pt in acidic medium.
- The Pt surface is available
 - The *Nafion* transports H⁺ correctly
- D. The CO oxidation peak confirms the ability of the sensor to detect CO



Current development

- Integration of a reference electrode layer

ACKNOWLEDGEMENTS

Authors would like to acknowledge the funding contribution of the **French Department of Defense (DGA)** and **OAI®**.