# geCKo Materials Executive Summary

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Overview:

geCKo Materials provides volume manufacturing for a bio-inspired, energy saving, reusable, multi-purpose, industrial and consumer adhesive.

The mechanical adhesive is composed of directional, microscopic inclined features with a tapered geometry. geCKo's unique IP is in the manufacturing method, introduced by Dr. Capella Kerst in her PhD at Stanford and protected by pending patents.
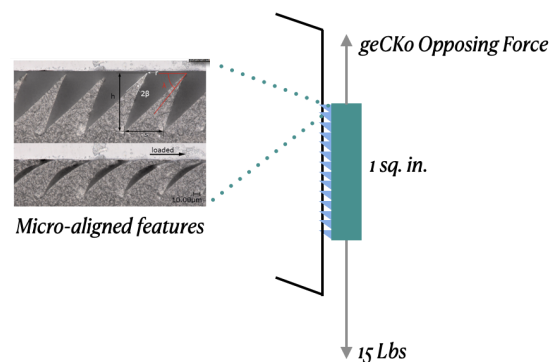
Micro-aligned features providing purely mechanical adhesion
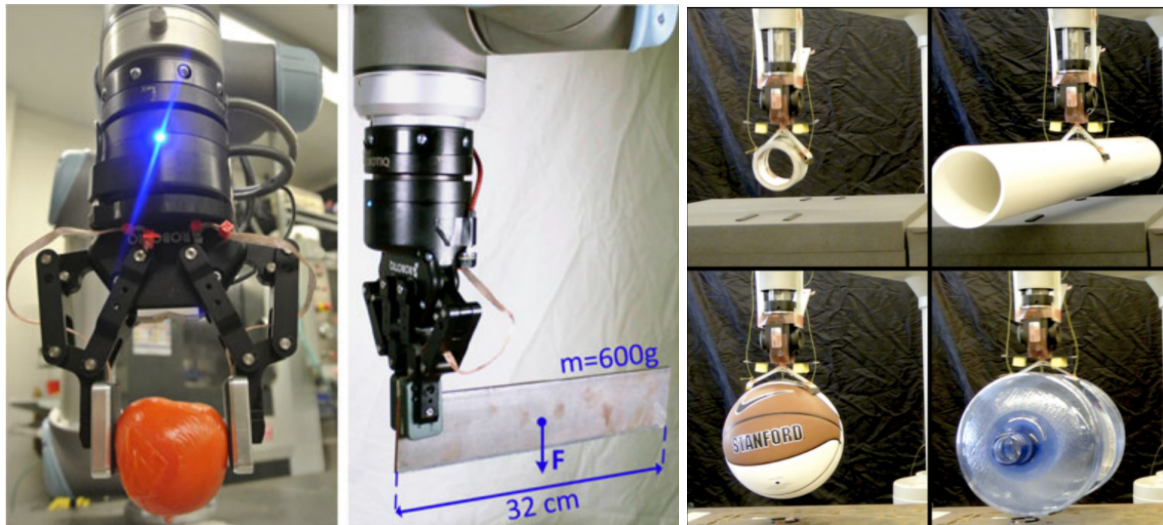
(Left) An industrial robot arm with geCKo adhesive grasping an overripe tomato and a thin acrylic while also exerting considerable torque using only 3/4 of the adhesive's contact surface. (Right) An industrial robot arm grasping a variety of curved surfaces.

(https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8260872 https://ieeexplore.ieee.org/abstract/document/7139505)

Tested in the lab and in use with customers, a 1 square inch adhesive is capable of supporting 15 lbs of weight. The geCKo Opposing Force scales with area and can be purchased at any area. Integrating onto your robot grippers is simple, just a peel and stick. We can offer integration assistance and expertise for simple, quick and easy integration.

This new adhesive is like a versatile 3M tape but with no tacky glue nor residue, taking milliseconds with no need for energy or force to attach or detach, able to be used up over 100k times without any deterioration. This adhesive will attach to all smooth materials. The adhesive rarely gets dirty during manufacturing line use but in the case that it gets dirty it is extremely easy to clean by a lint roller. Oil, grease and hand touching does not affect the adhesive due to the fact it is a microstructure and not a residue or tacky adhesive in the traditional sense.

You can find a quick video of geCKo adhesion working in action [here](#).

Advantages
geCKO Materials allows your company to decrease manufacturing cost and increase throughput.
Decrease Manufacturing Costs -- Trivial Attachment / Detachment Forces
What would the energy consumption be (we fill in how much energy is used on one operation) For you to do a quick saving calculation: how many pick-and-place operations does your company do per day? In each pick-and-place sequence a geCKo adhesive requires no attachment/detachment energy, significantly decreasing cost, while being reliable and robust.

Increase Throughput -- Millisecond Attachment / Detachment Time
geCKo Materials' adhesive is faster than current gripping technology, attaching and detaching in milliseconds, reducing assembly line cycle time, eliminating complex engagement and disengagement trajectories. For example, in an assembly line pick-and-place, gripping technology today includes energy consuming attachment and detachment -- suction, magnets, electrostatics, and others -- require high forces and complicated grasping techniques.

Previous Customers and Applications
Honda, Ford, and Toyota have purchased our material for use in robotics, assembly line, and other applications.

We want to offer you access to the latest technology that is revolutionizing manufacturing. geCKo Materials wants to make sure you have the competitive edge. We have used this material with customers similar to your company, primarily in robot pick and place.

Current applications include robot grippers, attachments in space or zero gravity, continuous variable transmission, and anything that requires high shear force.

Purchasing and Easy Integration
geCKo Materials will work with you to streamline integration by either directly attaching to your existing robot end-effectors or by designing custom fixtures for attaching and detaching the

geCKo adhesive. We are open to exploring other potential applications where this energy saving adhesive might help you take the competitive advantage in your industry.

Thank you for your time looking forward to future collaboration,
Capella Kerst and Jonathan Salfity