NANO STRUCTURE FOR ADHESION, FRICTION AND CONDUCTION

Tech ID: 16921 / UC Case 2000-046-0

ABSTRACT

Researchers at the University of California, Berkeley have applied the principles of intermolecular attractive forces to develop nano-structures with extraordinary adhesive properties. These biomimetically inspired nano-structures can stick to wet, dry, rough or smooth surfaces, and can be peeled-off and re-used; they are also self-cleaning, leave no residue, and are bio-compatible. The original research was published in Nature (2000.405:681-5) and PNAS (2002.99:12252-6).

The University has filed US and international patent applications that broadly cover this inventive concept as well as its manufacturing methods and end-user applications.

APPLICATIONS

Applications for these nano-structures are vast -- covering virtually all adhesive and fastening markets, with the potential to create new applications.

ADVANTAGES

Sticks to wet, dry, rough and smooth surfaces

Peels-off, leaves no residue, and is re-usable

Self-cleaning

Bio-compatible

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	8,815,385	08/26/2014	2000-046

RELATED TECHNOLOGIES

- Nano Structure With Compliant Angled Hairs And Filter Fabrication Method
- Nano Structure For Electrical Interconnect Including Integrated Circuit Mounting
- Nano Structure With Side Contact For Friction Enhancement
- Nano Structure For Actively Switchable Adhesion
- Nano Structure With Compliant Support For Adhesion
- Nano Structure With Spatulae For Permanent Adhesion

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OTHER INFORMATION

KEYWORDS

materials, assembly and packaging, electronics packaging, engineering, medical devices, surgical, polymers, general engineering

CATEGORIZED AS

- » **Materials & Chemicals**
  - » Electronics Packaging
  - » Polymers
- » **Medical**
  - » Devices
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RELATED CASES

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