

TECHNOLOGY OPPORTUNITY SHEET

The University of Houston is actively seeking companies interested in commercializing novel nanoscale coatings



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DISCLOSURE ID: 9612 & 9913 Nanoscale Coatings

CATEGORY: Materials and Nanotechnology

DESCRIPTION

Fluorinated agents have been designed and synthesized to be used as nanoscale coatings. These nanoscale Teflon[®]-like coatings are an enhanced class of surface modifying agents that can be used to tailor the interfacial properties (such as wetting, adhesion/lubrication, and friction) of both metallic and non-metallic surfaces. Applications include micro-electromechanical system (MEMS) devices, information storage devices, and biomedical implants. These nanoscale coatings are resistant to oxidation and corrosion, are water-resistant and non-adhesive, and exhibit high thermal (up to 200 °C or 392 F) and mechanical stabilities.

COMPETITIVE ADVANTAGE

- Uses only an ultrathin (1 to 2 nm) layer of coating to impart the desired macroscopic surface properties
- Can be used on metal and non-metallic surfaces
- Can be used to uniformly and readily coat surfaces with complex geometries in 2 and 3 dimensions, allowing quick manufacture process with high throughput
- Increases MEMS working life

MARKET INTERESTS

- Aerosol nozzles, spray nozzles, fuel injector nozzles, and ink-jet nozzles
- Semi-conductor surfaces
- Computer and hard disk surfaces
- MEMs and magnetic storage devices
- Biomedical implants

PATENT STATUS

- US Patents [6,153,322](#) & [6,509,100](#)

AVAILABILITY

- Available for exclusive or non-exclusive licensing

OFFICE OF INTELLECTUAL PROPERTY MANAGEMENT

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