

Technology Opportunity Bulletin

Superamphiphobic Materials

Tech ID: 2009-086

Description:

Researchers at Queen's University have developed a new class of superamphiphobic materials that repel both water and organics. Through cross-linking, these polymer materials may be strongly bonded on a broad range of substrate surfaces including glass, metals, wood, ceramics, plastics, fibres, fabrics, and paper to generate durable superamphiphobic coatings. It has been successfully demonstrated that both water and organics can readily roll-off from a piece of coated glass and paper. Both transparent and opaque coatings are able to be generated.

Background:

Superamphiphobic surfaces that repel both water and organics are appealing to many industrial and biological applications. Current approaches to create these surfaces include the modification of chemical properties and topographical microstructures by deposition of fluorinated silica particles, plasma treating polymer surfaces, electrospinning and lithographing etc. However, these techniques are either too expensive, tedious of practicing, hard to apply on large surfaces, and low durability.

Benefits:

This new class of materials is practical to apply on various substrates generating durable coating through cross-linking. There is a vast array of potential applications from these materials in comparison to alternative approaches.

Applications:

Potentially these materials can be used to create surfaces or barriers featuring self-cleaning, antifogging, antifouling, anticorrosion and anti-contamination etc.

Status of Commercialization:

PARTEQ Innovations, the technology transfer arm of Queen's University, is currently seeking IP protection. We are actively seeking licensing and collaboration opportunities to further develop these materials in different areas of applications.

Contact:

Lucy Su, PhD
Manager, Commercial Development
Phone: 613. 533. 6000 ext. 79459
Cell: 613. 583. 7227
Fax: 613. 533. 6853
Email: LSu@parteqinnovations.com