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Durable, Water Repellent Coatings

A method to make and apply a durable, water repellent coating to polymeric fabrics

Georgia Tech inventors have developed a fluorine-free, durable, water repellent coating for polymeric fabrics and an application method for the coating. The inorganic, molecule, based coating wraps around the individual fibers in the fabric, allowing the coating to strongly adhere to the overall fabric. Coated fabrics are super-hydrophobic and show excellent resistance against various types of wear damage.

Summary Bullets

- **Durable** – coating is wear-resistant against many types of damage and retains its water repellent properties over a long period of time
- **Low Cost** – production process is simple and straight-forward
- **Functional** – can be used for both indoor and outdoor applications

Solution Advantages

- **Durable** – coating is wear-resistant against many types of damage and retains its water repellent properties over a long period of time
- **Low Cost** – production process is simple and straight-forward
- **Functional** – can be used for both indoor and outdoor applications
- **Versatile** – process can be easily scaled up for production
- **Environmentally Friendly** – does not require a complex line of production, cutting energy

Potential Commercial Applications

- Indoor and Outdoor Furniture
- Outdoor Activities Equipment
- Any other equipment that requires protection from moisture

Background and More Information

Polymeric fabrics are an important component in manufacturing commercial products for both indoor and outdoor activities. The structure of these fabrics make them naturally hydrophilic, however, many applications require that these fabrics be hydrophobic. While water-repellent coatings are widely available, they often degrade under environmental conditions.

Inventors

- Dr. Laurens Breedveld
  Associate Chair for Undergraduate Studies, Associate Professor and Frank Dennis Faculty Fellow - Georgia Tech School of Chemical and Biomolecular Engineering
- Dr. Dennis Hess
  Professor and Thomas C. DeLoach, Jr. Chair - Georgia Tech School of Chemical and Biomolecular Engineering
- Cornelia Rosu
  Postdoctoral Fellow – Georgia Tech School of Chemical and Biomolecular Engineering

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Publications

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Images

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