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Super-Hydrophobic (-Oleophobic) Biomimetic Surfaces

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Abstract.

Superhydrophobicity is characterized by the repellency of water on a surface with an apparent contact angles of water above 150° and various adhesive properties characterized by dynamic contact angle measurements. The potential applications of superhydrophobic materials are extremely wide and include anti-icing coatings, anti-corrosion coatings, anticorrosion coatings, anti-bacteria coatings, textiles, oil/water separation, water purification and desalinization, microfluidic devices, optical devices, batteries, sensors, drug delivery or heterogeneous catalysis. Recent advances in the potential applications of superhydrophobic materials will be carefully described in this presentation and a focus on surfaces built up from electrodeposition of conductive polymers [1-5].

References.

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