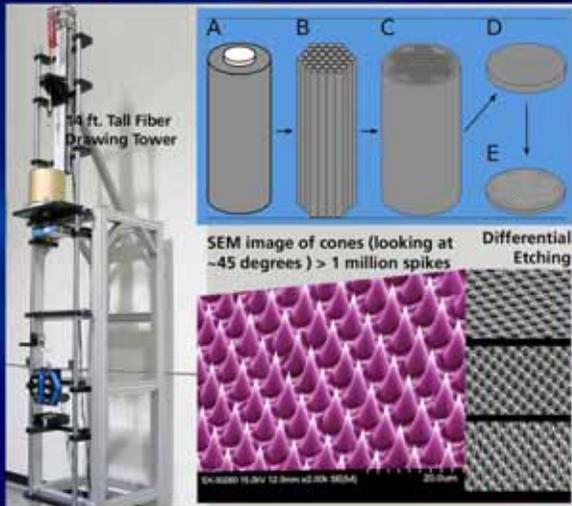


Nanostructured Superhydrophobic Materials

Nanotechnology Material Breakthrough

John T. Simpson and Brian R. D'Urso • Engineering Science & Technology Division
Phillip F. Britt • Chemical Sciences Division

Nanocone Array Glass Fabrication

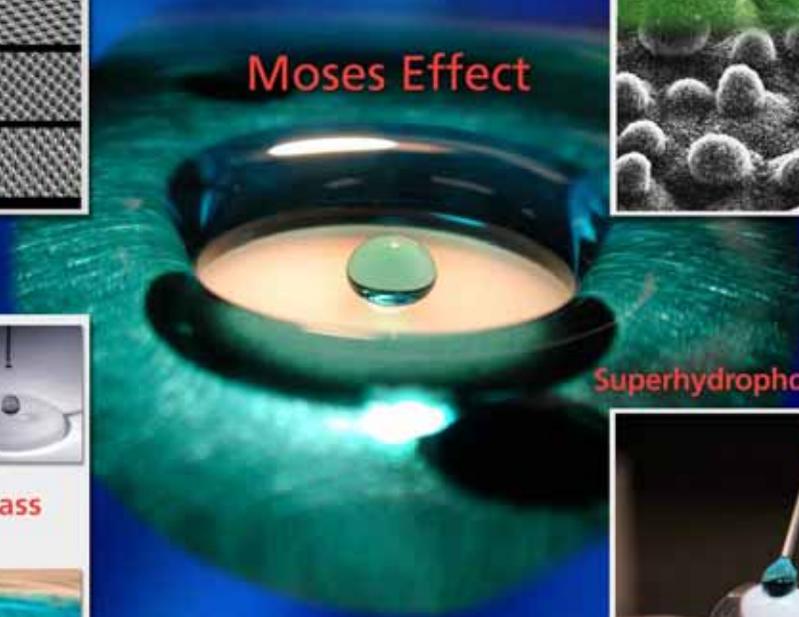


Natural Superhydrophobic Surfaces

- Lotus leaf is superhydrophobic
 - Water beads up on surface
 - Waxy hydrophobic material
 - Nanoscale and microscale structure
- Superhydrophobic applications:
 - Water-repellent, self-cleaning coatings
 - Microfluidics
 - Drag reduction



Moses Effect



Water Drop Sequence



Transparent Superhydrophobic Glass



Superhydrophobic Polymer



Potential Impact

