

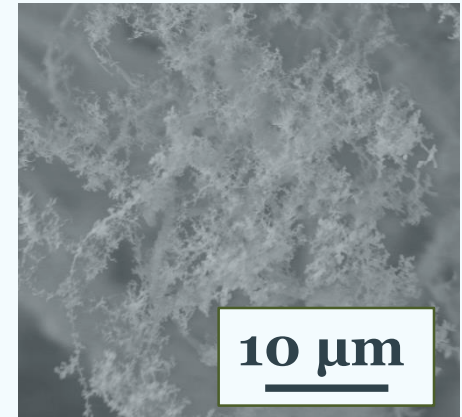
Laser-fabricated nanofoam for particulate sensors to monitor air-quality



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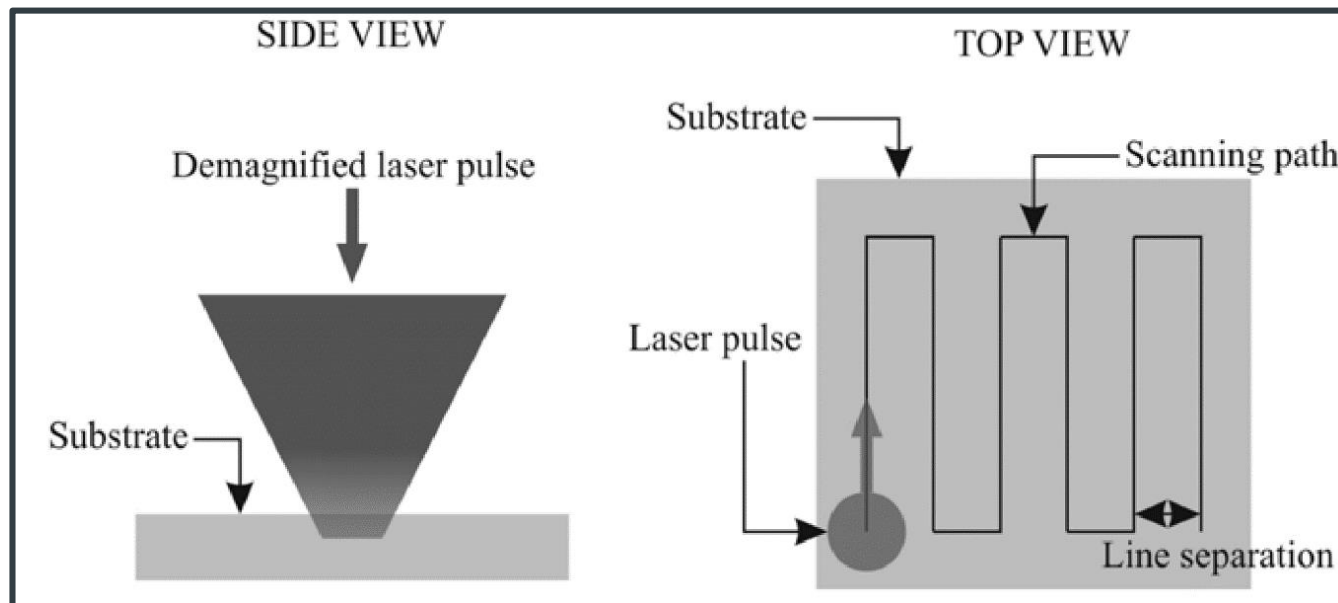
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pulsed laser

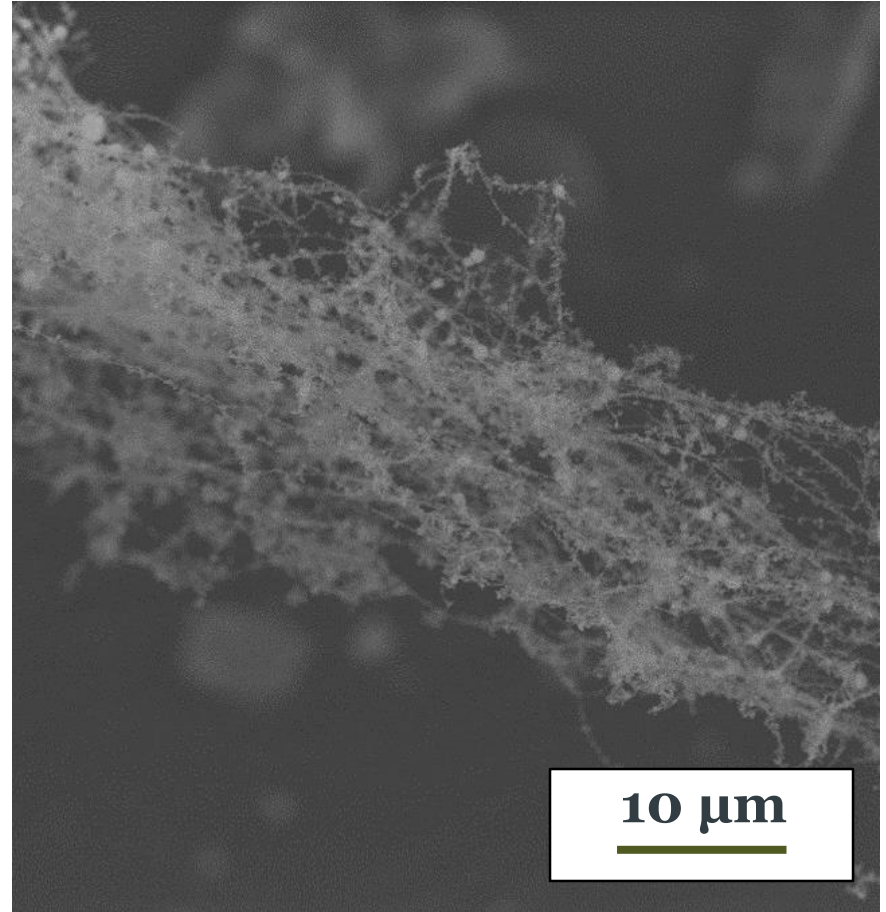
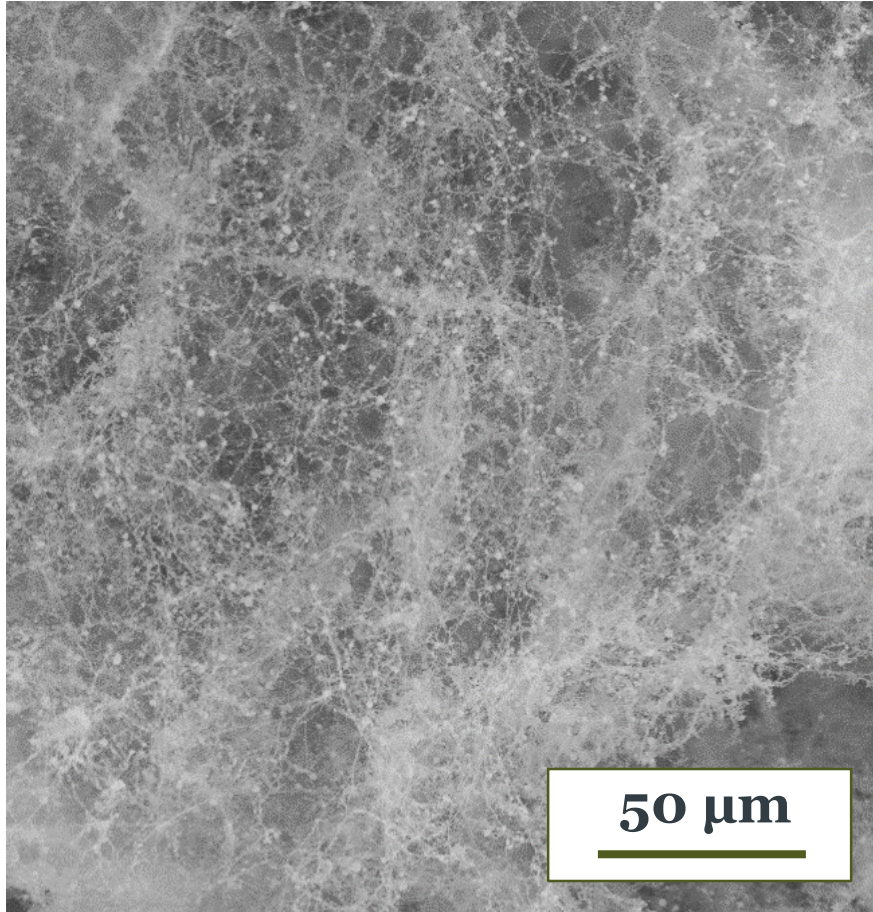
any material *

nanofoam!



* silica, silicon, GLS, polymers, metals, ceramics, and many others

Laser-fabricated nanofoam for particulate sensors to monitor air-quality



silica nanofoam

Laser-fabricated nanofoam for particulate sensors to monitor air-quality

Step 1: Fabrication

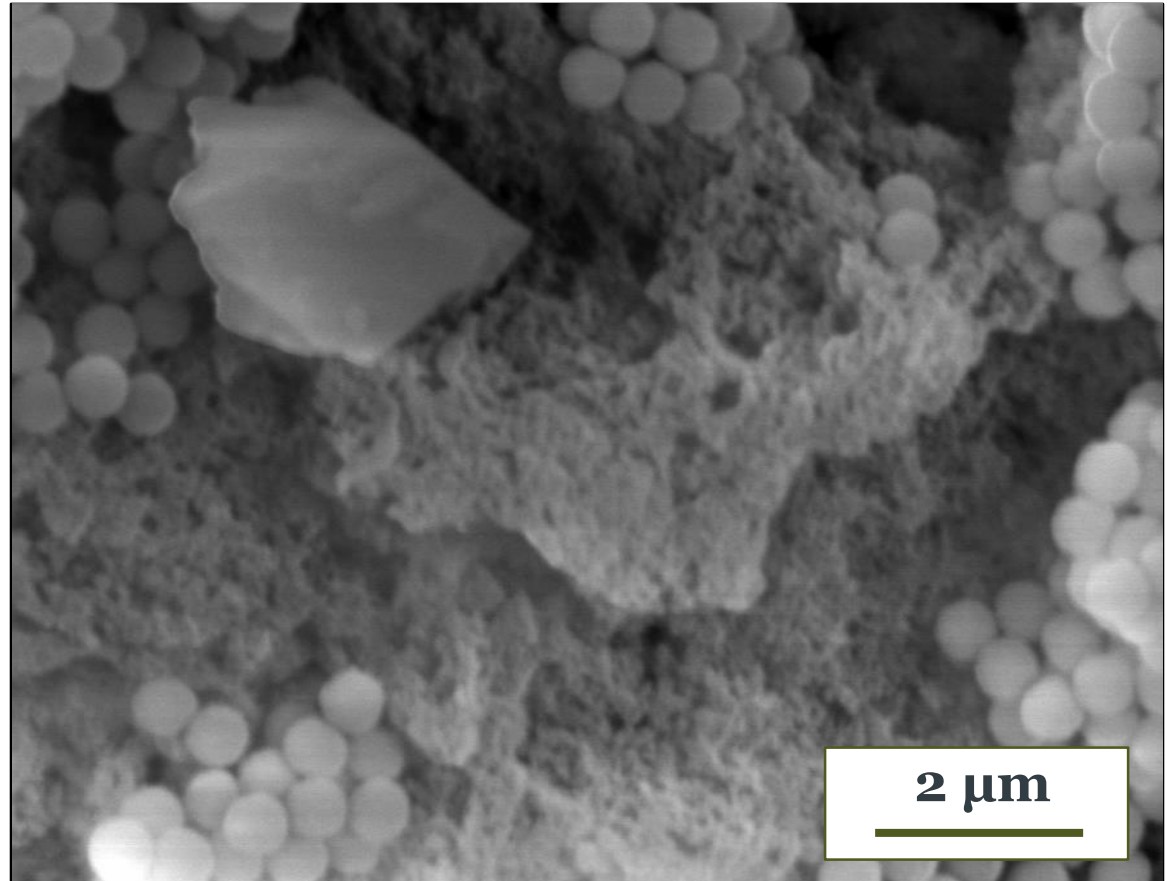
- Can make nanofoam from almost any material

Step 2: Capture

- First demonstration of ability to attract and hold particles

Step 3: Detection

- Need to detect size, material and number of particles
- Mie Scattering
- Absorption/Reflection
- Electrical resistivity
- Hough transforms
- And others...



500 nm diameter particles captured by silica nanofoam