

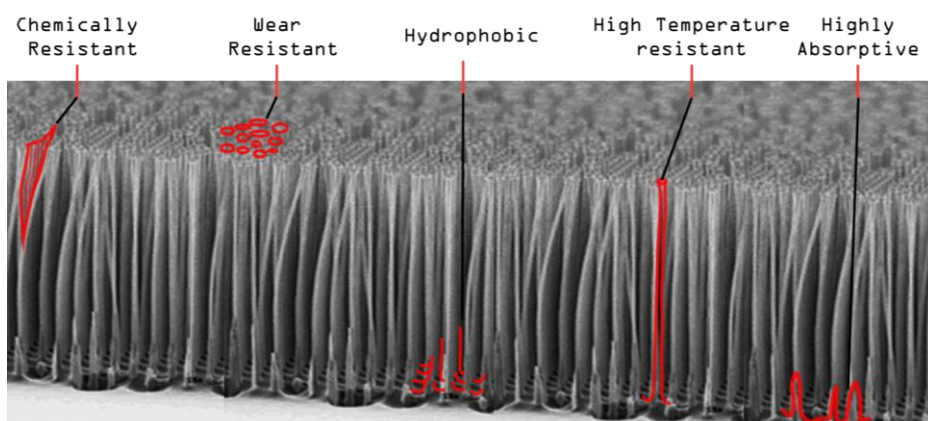


Large Scale Carbon Nanotube Sheets

- *Magnitude lower cost than current processing technology*

Vertically Aligned Carbon Nanotubes

Features:



Opportunity:

Single-walled carbon nanotubes (SWNTs) have emerged as one of the leading additives for improving the thermoelectric properties of organic materials due to their unique structure and excellent electronic transport properties. However the ability to structure them in highly dense aligned arrays and scale them at economical cost have limited their commercial opportunities. Researchers at UCD have developed a new method to produce large scale highly aligned nanotube sheets which bypasses the limitations of traditional vacuum deposition methods.

Applications:

The outstanding mechanical properties of SWNTs have led to their application in a wide range of areas including sensors, high frequency oscillators, and thermal properties. Additionally SWNTs show exceptional radial elasticity, namely their radial deformation under high static pressure conditions which is highly reversible. These properties are now available in large coatings allowing industry to realise the potential of SWNT based technologies.

Key Features/Advantages:

- Magnitude lower cost than current processing technology (CVD)
- Can supply both small scale to large m² scale
- Commercial (and environmentally friendly) technology
- Ability to coat various substrates and shapes.

Value Proposition:

Ultra-high density of horizontal single-walled carbon nanotube array.
Scalable, low cost manufacture method on both flat and curved substrate.

Market:

Advanced Coating Companies
Electronics
Photovoltaic manufacturers
Heat exchange technologies

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Patent pending.



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