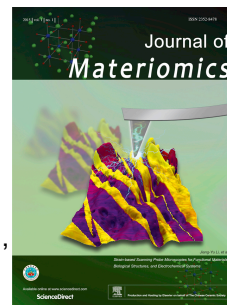


# Accepted Manuscript

Mechanical properties of nanocomposites reinforced by carbon nanotube sponges

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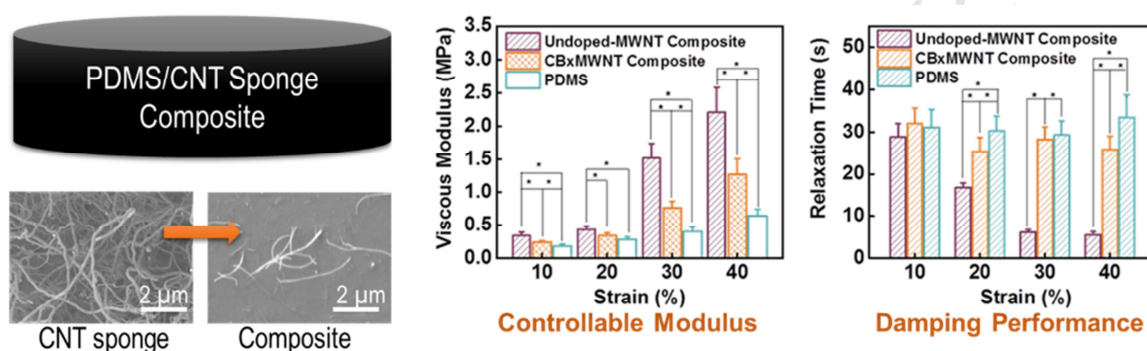
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## Mechanical Properties of Nanocomposites Reinforced by Carbon Nanotube Sponges

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### Graphic Abstract



### Highlights:

- Nano-composites are fabricated and characterized using PDMS and 3D CNT sponge or boron-doped CNT sponge.
- Mechanical strength and viscoelastic behaviors of the new composites are improved significantly by the 3D CNT sponges.
- CNT composites show 70% increase in elastic modulus, 243% increase in viscous modulus in comparison to the pure PDMS.
- Mechanical properties of the new composites are highly dependent on the 3D structure of CNTs.
- The new nano-composite can advance the design of engineering materials that require outstanding viscoelastic behaviors.

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