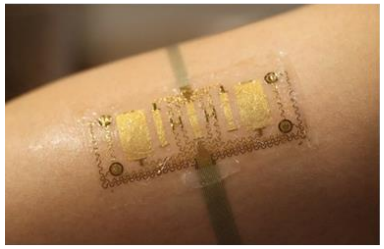

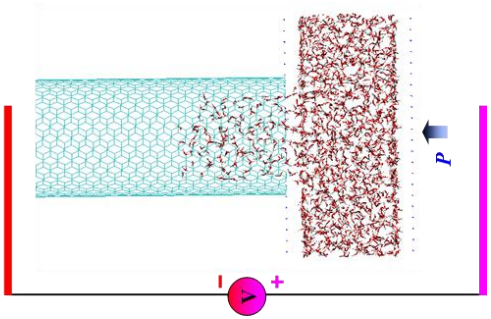

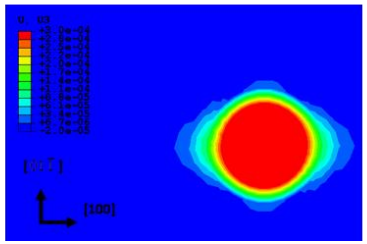

Xu Research Group

Multiscale Mechanics for Functional Material and Device Design

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Our group research is focused on:

(1) Multiscale mechanics for functional material and device design with applications in energy, environment, manufacturing and healthcare. The interest of research system includes nanoporous functional materials, nanopore-liquid functional materials, bioinspired soft actuation, soft-hard integration and adaptive soft materials.

(2) Nanomechanics at extreme conditions, including nanofluidics, mechanics of nano/energy materials, mechanics-guided unusual fabrication technique, and nanoindentation.

(3) Multiscale modeling and computations through integration of various computational (FEM, CPFEM, MD, DFT) tools

"Exploring mechanics strategies for functional material and device design down to the nanoscale with applications in energy, environment, healthcare and manufacturing"

NanoSTAR University of Virginia