

HARD / SOFT INTERFACES AS EXPLORATION TOOLS FOR PHYSICAL, BIOLOGICAL & MATERIAL DYNAMICS



Prof. Bozhi Tian
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Tuesday, September 18 at 3:30 PM
Room 66-110

Despite numerous studies on either hard or soft materials, our understanding of the fundamentals at hard/soft interfaces has been limited. As different types of energy (such as electrostatic, mechanical, thermal, and chemical energies) display diverse scaling behaviors and can converge, an appropriate selection of the length scale is critical for promoting new scientific discoveries across these interfaces. The Tian group integrates materials science with biophysics to study a range of hard/soft interfaces, and more importantly, uses these interfaces as the exploration platforms for new fundamental discoveries. The Tian group's work spans from the synthesis of new materials to the probe of interfacial dynamics, with a particular focus at the submicrometer and subcellular length scales. The unique contributions of their work have: (1) enabled non-genetic, freestanding, and semiconductor-based neuromodulation; (2) revealed new dynamic aspects of liquid alloy droplets in semiconductor synthesis; and (3) exploited the dynamic behaviors of granular materials in polymeric matrices.

Refreshments will be served. Please join us!

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