



DEPARTMENT OF CHEMICAL & BIOMOLECULAR ENGINEERING



Faculty research in sustainable energy, advanced materials, and biomolecular engineering

Belinda Akpa - Computational biomedicine, systems physiology, mechanistic mathematical modeling

Steven Abel - Statistical mechanics applied to cell biology and immunology; multiscale modeling of cell signaling networks, the cytoskeleton, and membranes

Rigoberto Advincula - Polymers, nanoscience, macromolecule science and engineering, organic materials, hybrid materials, and ultrathin films

Eric Boder - Molecular biotechnology and bioengineering; protein engineering and directed evolution; adhesive and fusogenic proteins

Robert Counce - Green engineering; process design; separations and sustainable energy

Paul Dalhaimer - Drug delivery vehicles; lipid droplet biology

Manolis Doxastakis - Multi-scale simulation; multicomponent systems at interfaces; dynamics of cell membranes; polymer nano-composites and films

Brian Edwards - Thermodynamics; fluid mechanics; molecular modeling and sustainable energy

Paul Frymier - Engineering and optimization of photosynthetic routes to biohydrogen; development and implementation of biosensors and sustainable energy

Zhanhu Guo - Multifunctional nano-fluids, nano-gels, and nano-solids for energy, environmental remediation, electronics and safety applications

S. Michael Kilbey - Interface engineering; soft materials

Bamin Khomami - Dynamics of complex fluids; renewable energy; composite materials; rheology; multi-scale modeling and simulation

Siris Laursen - Heterogeneous catalysis; non-precious metal catalysts; surface chemical reactivity; electronic structure of materials; photo- & electro-catalysis

Stephen Paddison - Computational materials science as applied to fuel cell electrolytes and electrocatalysts and sustainable energy

Art Ragauskas - Physical organic chemistry; advanced NMR; materials and chemicals from renewable biosources

Joshua Sangoro - Materials for electrochemical energy; batteries & supercapacitors; eutectics; dynamics under confinement; charge transport in amorphous materials

Gila Stein - Design and characterization of functional polymer films; semiconductor device manufacturing, plastic electronics, membranes, and coatings

Cong Trinh - (Bio)chemical engineering; systems and synthetic biology; metabolic engineering; development of modular microbial cell factories; biofuels and bioenergy

Tom Zawodzinski - Electrochemical energy, batteries and fuel cells; Transport and structure in materials; electrolytes; multi-functional materials; molecular devices

T CHEMICAL & BIOMOLECULAR ENGINEERING

cbe.utk.edu • (865) 974-2421