CHEMICAL AND BIOMOLECULAR ENGINEERING



The Ohio State University

COLLEGE OF ENGINEERING



A Distinctive Academic Experience

- Vast interdisciplinary research opportunities.
- Close working relationships with world-renowned faculty, many of whom are leaders in their field.
- Small, collegial, "family feel" department.
- State-of-the-art facilities.

Financial Advantages

- Competitive financial support.Affordable: Housing / Utilities are
- 20% / 7% below national average.
- Cost of living overall is 10% lower than the national average.

<u>Lifestyle</u>

- Diverse, technologically sophisticated city with natural beauty and green open spaces.
- Access to top-rated medical facilities.
- Vibrant neighborhoods, art/music; Ohio State football, pro hockey, soccer; top-rated parks, outdoor recreation, science centers, VR, zoo.

Faculty and Research Areas:

Aravind R. Asthagiri, Carnegie Mellon University Computational catalysis, modeling surface chemistry.

Computational catalysis, modeling surface chemistry.

Nicholas A. Brunelli, California Institute of Technology Sustainable catalytic material design.

Jeffrey J. Chalmers, Cornell University

Intrinsic magnetization cell separation and immunomagnetic cell separation, cancer detection, bioengineering, point of care blood testing technology, sickle cell disease.

Stuart L. Cooper, Princeton University

Polymer physics, block polymers, ionomers, polyurethanes, biomaterials.

Liang-Shih Fan, West Virginia University

Particle science and technology, clean energy and environmental systems, electrical capacitance volume tomography, fluidization / multiphase reaction engineering.

Rachel Getman, University of Notre Dame

Computational catalysis, multiscale modeling, computationally-driven materials design.

Lisa Hall, University of Illinois at Urbana-Champaign

Theory and simulation of polymeric materials.

W.S. Winston Ho, University of Illinois at Urbana-Champaign

Molecular and chemical membrane separations; hydrogen purification, CO₂ capture, water desalination and purification, antibiotic recovery, wastewater treatment and metal recovery.

Blaise Kimmel, Northwestern University

Synthetic biology to improve human health and welfare.

Isamu Kusaka, California Institute of Technology

Statistical mechanics, transport phenomena in nano scale systems.

X. Margaret Liu, The Ohio State University

Targeted anti-cancer therapies including monoclonal antibodies, antibody-drug conjugates and gene therapies.

Umit S. Ozkan, Iowa State University

Heterogeneous and electro-catalysis, kinetics, and catalytic materials.

Andre F. Palmer, Johns Hopkins University

Biomaterials for use in transfusion medicine and tissue engineering.

Joel Paulson, Massachusetts Institute of Technology

Smart manufacturing, sustainable process systems engineering, and advanced optimization and control of complex biochemical systems.

Judit Puskas, Hungarian Academy of Sciences

Elastomers and plastics, renewable monomer sources, "green" processes, materials for healthcare.

James F. Rathman, University of Oklahoma

Molecular informatics, modeling chemical effects in biological systems.

Eduardo Reátegui, University of Minnesota

Microtechnologies, biomaterials, spectroscopy, immunoengineering, circulating biomarkers.

Joshua Sangoro, University of Leipzig

Energy and sustainability, ionic liquids, deep eutectic solvents, dynamics of liquids and polymers at interfaces, broadband dielectric spectroscopy.

Katelyn E. Swindle-Reilly, Washington University in St. Louis Polymeric biomaterials, biomimetics and drug delivery systems.

Lauren W. Taylor, Rice University

Smart textiles, sustainable composites, materials processing, and polymer physics.

David L. Tomasko, University of Illinois at Urbana-Champaign Molecular thermodynamics, separations, and STEM retention.

William Xiaoguang Wang, University of Wisconsin-Madison

Design of novel dynamic polymeric materials and systems based on colloidal and interfacial phenomena.

Davita Watkins, University of Memphis

Organic and polymer synthesis, nanomaterials, and theranostics.

Jessica O. Winter, University of Texas at Austin

Nanomanufacturing, nanorobotics, cancer nanotechnology, controlled release for sustainable agriculture.

David Wood, Rensselaer Polytechnic Institute

Biotechnology development through protein engineering.

Shang-Tian Yang, Purdue University

Biochemical, metabolic, and tissue engineering; biotechnology.

Shang Zhai, Stanford University

Thermal sciences, materials chemistry, reaction engineering.