UNIVERSITY of CALIFORNIA IRVINE
Department of Chemical & Biomolecular Engineering

We offer a vibrant academic community for those seeking educational opportunities in chemical and biomolecular engineering. Our faculty expertise and active research programs span topics ranging from the production of biofuels, commodity chemicals, pharmaceuticals, and biomaterials; to materials, processes, and systems for sustainable energy storage and conversion; to the development of nano- and bio-technologies for novel sensing, diagnostic, imaging, and therapeutic applications; to computational modeling and simulation.

DIVERSITY

Commitment to excellence through
Diverse faculty & student body
Upward socioeconomic mobility

- Office of Inclusive Excellence
- Office of Equal Opportunity & Diversity
- Office of Access and Inclusion

RESEARCH THRUSTS

- Energy & Sustainability
- **Biomolecular Eng.** & Biotechnology
- **Macromolecular Engineering**

Department's new home Interdisciplinary Science and Engineering Building comprises more than 200,000 square feet of research, office and meeting space

FACULTY

Vasan Venugopalan, Chair: laser-generated transport processes for application in medical diagnostics, imaging, therapeutics, and biotechnology

Tayloria Adams: dielectrophoresis, microfluidic devices, stem cells, biomarker development, cell membrane biophysics, cell sorting

Herdeline (Digs) Ardoña: biomaterials, self-assembly, biosensors, optoelectronics, stimuli-responsive materials, in vitro tissue models

Plamen Atanassov: electrocatalysis and electrocatalysts for energy conversion processes, bio-electrocatalysis and energy harvesting

Nancy Da Silva: molecular biotechnology, metabolic engineering and synthetic biology, eukaryotic expression systems

Alon Gorodetsky: cephalopods, adaptive materials, camouflage, bioelectronics

Daniel Knight: engineering pedagogy

Han Li: metabolic engineering, synthetic biology, biomanufacturing renewable chemicals, protein engineering

Ali Mohraz: colloid science, soft matter engineering with applications in health care and energy materials

Robert (Smith) Nielsen: electronic structure, electrocatalysis, alkane activation, homogeneous catalysis

Elizabeth Read: dynamics of complex biochemical systems, stochastic processes in cell biology, computational modeling

Erdem Sasmaz: heterogeneous catalysis and nanoparticle synthesis for clean energy production and CO_2 utilization

Frank Shi: optoelectronic devices and materials, optoelectronic device packaging materials, white LED technologies

Quinton Smith: pluripotent stem cells, organoids, microfluidics, tissue engineering, regenerative medicine

Vojislav Stamenkovic: energy conversion and storage, surface modifications, thin films, electrochemical interfaces, fuel cells

Szu-Wen Wang: bioinspired materials, immunomodulatory materials, nanoparticle vaccines, therapeutics, drug delivery

Albert Fan Yee: physics of polymers and soft materials, and their applications in nanotechnology and biomedical devices

Iryna Zenyuk: renewable energy, fuel cells, electrolyzers, batteries, X-ray imaging techniques, multi-scale modeling, transport

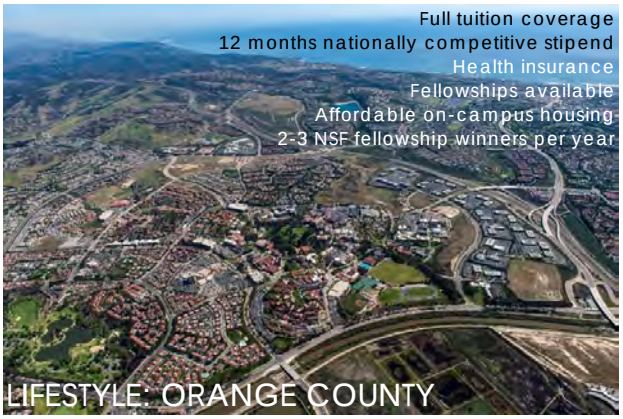
Beckman Laser Institute; Institute for Immunology
Center for Complex Biological Systems
Edwards Lifesciences Cardiovascular Center
NSF-Simons Center for Multiscale Cell Fate Research
NIH Skin Biology Resource Center
Sue & Bill Gross Stem Cell Research Center

https://engineering.uci.edu/dept/cbe

Ph.D. and M.S. degrees offered in Chemical & Biomolecular Engineering

Deadline for fall applications
December 15th, 2021

STUDENT BENEFITS



UCI is located next to the famed sailing and surfing beaches of Newport, Laguna, and Huntington and is near Los Angeles, San Diego, and Palm Springs. Enjoys 281 sunny days per year, with average temperatures from 64° F in January to 82° F in August. Home to thousands of multinational businesses in a variety of industries: pharmaceutical, manufacturing, biotechnology/medicine, batteries, design etc.
16,000 acres of open space preservation,
1000 miles of bikeways,
60 public parks, wildlife sanctuaries and ecological reserves.

UCI Samueli School of Engineering