

 From humble beginnings...to a second century of research, education and outreach

 Sweeney Hall
 Center for Biorenewable Chemicals

 42,721 square feet of laboratory, office, meeting and classroom space
 18,853 sq. feet of research laboratory and office space









#### **Unique and Advanced Research Facilities**

Cutting-edge research projects at ISU CBE are supported by top-notch facilities, including:

- Small-angle X-ray scattering facility
- Atomic force microscopy
- Biotechnical and protein separations
- Catalyst characterization
- Cell and tissue culture
- Chemical vapor deposition and reactive sputtering
- Gene delivery
- Particle imaging velocimetry
- Particle size analysis and light scattering
- Polymer characterization

#### IOWA STATE UNIVERSITY Department of Chemical and Biological Engineering

Sweeney Hall 618 Bissell Rd. Ames, IA 50011-1098 515-294-7642



Web: www.cbe.iastate.edu Faculty: www.cbe.iastate.edu/the-department/ facultystaff/page/1/

Faculty research: www.cbe.iastate.edu/ research/faculty-research-pages/



twitter.com/ lowaStateCBE

## IOWA STATE UNIVERSITY

Department of Chemical and Biological Engineering

### A culture of research & innovation



## **IOWA STATE UNIVERSITY**

#### **Department of Chemical and Biological Engineering**



Seeking answers and launching new ideas for more than a century

Since 1913, Iowa State University's Department of Chemical and **Biological Engineering has been home to passionate leaders** impacting society with excellence in research. Today these dedicated scientists advance their causes in the fields of sustainability, energy, health science and more.

Department faculty works with an undergraduate and graduate student body of nearly 800 individuals who receive valuable classroom and laboratory experience. Graduates enter careers in biorenewables and bio-based products, food products, the chemical and petroleum industries, biomedical disciplines and much more. More than 6.000 students have graduated from the program.

#### **Primary research areas include:**



**Catalysis & Reaction** Engineering





**Renewable Energy** 



Health Care Technology & **Biomedical Engineering** 



Advanced & Nanostructured **Materials** 



**Computational Fluid Dynamics** 

### **Faculty Researchers and Primary Research Areas**



Ph.D., Rice University Nanomedicine and nanophotonics for bioimaging and therapies



Ph.D., Univ. of California-Biomaterials and drug delivery



**Rodney Fox** Ph.D., Kansas State University Computational fluid dynamics and reaction enaineerina

Kurt Hebert Ph.D., University of Illinois Corrosion and electromechanical engineering



Ph.D., Univ. of Minnesota Interfacial engineering and electrochemistry



Monica H. Lamm Ph.D., North Carolina State University Molecular simulation of advanced materials



#### Ph.D., Dalian Institute of Chemical Physics, Chinese Academy of Electrocatalysis, electrochemical energy, biorenewables

Surya Mallapragada Ph.D., Purdue University **Biomaterials and** bioinspired materials









Thomas Mansell Ph.D., Cornell University Synthetic biology for microbial community engineering

Balaii Narasimhan Ph.D., Purdue University **Biomaterials and** nanomedicine

**Matthew Panthani** Ph.D., The University of Texas-Austin Nanoscience and renewable energy

**Nigel Reuel** Ph.D., Massachusetts Institute of Technology **Optical & resonant** biosensors, biomaterials, custom tools desian

Luke Roling Ph.D., University of Wisconsin-Madison Heterogeneous catalysis and alternative energy





lan Schneider Ph.D., North Carolina State University Engineering tumor micromovements

**Brent Shanks** Ph.D., California Institute of Technology Heterogeneous catalysis and biorenewables





Zengyi Shao Ph.D., University of Illinois Biorenewables production by synthetic biology

Jean-Philippe Tessonnier Ph.D., Universite de Strasbourg, France Heterogeneous catalysis and biorenewables



**R. Dennis Vigil** Ph.D., University of Michigan Transport phenomena and reaction engineering in multiphase systems

Qun Wang Ph.D., The University of Kansas: Wuhan University, China Biomaterials, intestinal stem cells, nanotechnology and drug delivery



Ph.D., Harvard University Functional nanostructured materials for energy harvest, conversion and storage



# Andrew Hillier

