

The Gene and Linda Voiland School of Chemical Engineering and Bioengineering

Addressing critical societal challenges

- Developing clean, novel sources of energy
- Maintaining and remediating the environment
- Advancing health care

Offering unique internship and training programs

Internships at the Pacific Northwest National Laboratory (PNNL)
Participate in biofilm and catalysis research, and other programs.

Training program in protein biotechnology, sponsored by the
National Institutes of Health
Collaborate with leading engineers and scientists.



Leading the nation in key research areas

CATALYSIS & KINETICS

Yong Wang

Voiland Distinguished Professor and PNNL Fellow

Washington State University
*Development of novel catalytic
materials and reaction engineering for
the conversion of fossil and biomass
feedstocks to fuels and chemicals*

Norbert Kruse

Voiland Distinguished Professor and PNNL Fellow

Technical University of Berlin
*Heterogeneous catalysis: from
fundamentals to industrial applications*

Marc Levin

Brion Wise Professor of Energy Production

University of California, Berkeley
*Process/Technical Safety, Catalysis,
Plant Design*

Kirk Schulz

Professor and Washington State University President

Virginia Polytechnic Institute and
State University
Reactive Surface Analysis

Mary Rezac

Dean of the Voiland College of Engineering and Architecture

University of Texas at Austin
*Polymeric membranes to separate gas
and liquid mixtures*

Peter Pfromm

University of Texas at Austin
*Fundamentals and applications of
membrane separations*

Su Ha

University of Illinois
Urbana-Champaign
Energy generation from alternative fuels

Hongfei Lin

Louisiana State University
*Catalytic conversion of biomass into
liquid fuels*

Jean-Sabin McEwen

Dalhousie University, Canada
*Atomistic modeling of catalytic
processes for energy and
environmental applications*

Steven Saunders

Auburn University
*Nanotechnology for novel
catalytic systems, sustainable
solvent technologies*

Di Wu

University of California, Davis
*Heterogeneous and Homogeneous
catalysis*

Xiao Zhang

University of British Columbia
*Biomass chemistry, biomass conversion
to bioproducts and bioenergy*

BIOFILM ENGINEERING

Nehal Abu Lail

Worcester Polytechnic Institute
*Microbial adhesion, friction
and sensing*

Haluk Beyenal

Hohenschuh Distinguished
Professor
Hacettepe University
Biofilm engineering

MOLECULAR & CELLULAR ENGINEERING

Cornelius Ivory

Princeton University
*Electrofocusing, forensic microelectrophoresis,
nanochannel separations, diagnostic
microfluidic devices, microchannel
sample preparation*

Birgitte Ahring

University of Copenhagen
Microbiology and biofuels

James Petersen

Professor and Director
Iowa State University
*Bioremediation of contaminated aqueous
systems, modeling of biological processing
operations and online optimization
of biological processes*

Wen-ji Dong

University of London, England
*Cardiac muscle biology and mechanics,
protein chemistry and engineering,
fluorescence techniques, computer
modeling, nanoscale biosensor design
and engineering*

Alla Kostyukova

Institute of Protein Research,
Russian Academy of Sciences &
Moscow State University
*Regulation of actin dynamics
by actin-binding proteins; protein
structure and protein-protein
interactions; circular dichroism*

ENGINEERING EDUCATION

Howard Davis

University of Oregon
*Engineering and entrepreneurship
pedagogy, technology development
and clinical applications of biomedical
instrumentation*

David Thiessen

University of Colorado at Boulder
*Fluid mechanics of drops, bubbles and
capillary channels, applications in
microgravity*

Bernard Van Wie

Oklahoma University
*Biotechnology including biosensors
and bioanalytical devices, cell and
tissue culture, engineering
education research*

BIOMECHANICS

David Lin

Northwestern University
*Integrated mechanical properties
of skeletal muscle and spinal reflexes*

Anita Vasavada

Northwestern University
*Biomechanics and neural control of
the musculoskeletal system, focusing on the
human head and neck system*

TWO DOCTORAL DEGREES:

- Chemical engineering
- Engineering science
(bioengineering emphasis)