

Join the

CHEMICAL AND BIOLOGICAL ENGINEERING

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Department



Evolving from its origins as a school of mining founded in 1873, Colorado School of Mines is a unique, highly focused university dedicated to scholarship and research in earth, energy, and the environment. With approximately 800 undergraduate and graduate students and \$7-8 million in annual research funding, the Chemical and Biological Engineering Department at Mines maintains a high-quality and dynamic program. Research funding sources include federal agencies as the NSF, DOE, DARPA, ONR, NREL, NIST, and NIH, as well as multiple industries. Our research areas include:



ADVANCED MATERIALS

Organic and inorganic membranes (Carreon, Herring, Koh)

Catalysts and Mesoporous Materials (Carreon, Herring, Kwon)

Colloids and complex fluids (Marr, Samaniuk, D.T. Wu, N. Wu)

Electronic materials (Agarwal, Wolden)

Molecular simulation and modeling (Gomez-Gualdron, Pak, Sum, D.T. Wu)



BIOMEDICAL AND BIOENGINEERING

Microfluidics / biotransport (Marr)

Biological membranes (Sum)

Metabolic engineering (Boyle)

Drug delivery / tissue engineering (Chauhan, Krebs, Farnsworth)

Biosensors (Cash)



ENERGY AND SUSTAINABILITY

Natural gas hydrates (Koh, Sum, D. T. Wu, N. Wu)

CO₂ capture and catalysis (Carreon, Gomez-Gualdron, Kwon)

H₂ separation and fuel cell membranes (Herring)

Solar Cells and Batteries (Wolden, Agarwal)

Biofuels (Boyle)

FACULTY

- S. Agarwal (UCSB 2003)
- T. Barbari (UT Austin 1986)
- N. Boyle (Purdue 2009)
- M. Carreon (Cincinnati 2003)
- K.J. Cash (UCSB 2010)
- A. Chauhan (CUNY 1998)
- N. Farnsworth (CU Boulder 2012)
- D.A. Gomez-Gualdron (Texas A&M 2012)
- A. Herring (Leeds 1989)
- C.A. Koh (W. London 1991)
- M.D. Krebs (Case 2010)
- S. Kwon (Northwestern 2015)
- D.W.M. Marr (Stanford 1993)
- A. Pak (UT Austin 2016)
- J.R. Samaniuk (Wisconsin 2012)
- A.K. Sum (Delaware 2001)
- C.A. Wolden (MIT 1995)
- D.T. Wu (Berkeley 1991)
- N. Wu (Princeton 2008)

Top-notch faculty, including 1 PECASE Award winner, 8 NSF CAREER Award winners, 1 DOE YIA winner, and 1 American Diabetes Association Career Award winner, represent a significant and ongoing upwards trend for the department. For more information, email cbe@mines.edu or call 303-273-3246

Located at the foot of the Rocky Mountains, less than 60 miles from world-class skiing and only 15 miles from downtown Denver, Golden, Colorado, enjoys over 300 days of sunshine per year. These factors combine to provide year-round cultural, recreational, and entertainment opportunities virtually unmatched anywhere in the United States.