Advanced Materials

at Colorado State University

Advanced Materials Processing *combines fundamental concepts of mass, momentum, and heat transfer, thermodynamics, chemical equilibrium, and reaction kinetics and applies these to the synthesis of thin films, composites, metals, polymers, and ceramics. This interdisciplinary degree prepares graduates for careers in industry, government, and research.*

The Chemical Engineering Department at CSU offers both the M.S. and Ph.D degrees. Specialized courses in Materials Processing include *Advanced Mass Transfer, Advanced Materials Analysis,* and *Macromolecular Physical Chemistry.* As part of the College of Engineering, the Advanced Materials Program also provides students with opportunities to broaden perspectives through advanced coursework in interdepartmental courses such as *Semiconductor Devices, Plasma Processing, Thin Film Growth,* and *Optical Materials.*

Research is a vital component of both the M.S. and Ph.D. programs. The Department of Chemical Engineering at Colorado State University plays a vital role in research and teaching at the graduate level. Student research experiences in the Advanced Materials Processing program include laboratory experimentation, modeling, or a combination, in the areas listed below.

Eligibility

Program prerequisites include coursework in mathematics (at least through differential equations), chemistry, physics, and undergraduate chemical engineering thermodynamics, kinetics, and transport phenomena. Applications are particularly encouraged from interested persons with degrees in Chemical Engineering, Mechanical Engineering, and Chemistry.

Faculty and Research Areas

Laurence A. Belfiore
B.E., Chemical Engineering, Stevens Institute of Technology;
Ph.D., Chemical Engineering, University of Wisconsin
Compatibilized Polymers; Polymeric Coordination Complexes

David S. Dandy
B.S., Chemical Engineering, University of California, Davis;
M.S. and Ph.D., Chemical Engineering, California Institute of Technology
Thin Film CVD and MOCVD; Heterogeneous Nucleation

For more information:

Email: cvd@stokes.engr.colostate.edu
Web: http://stokes.engr.colostate.edu/grad

For application materials, contact:

Dr. Vincent Murphy, Head
Department of Chemical and Bioresource Engineering
Colorado State University
Fort Collins, CO 80523-1370
Phone: (970) 491-5253
Fax: (970) 491-7369

Colorado State University