



Colorado School of Mines
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Web site: <http://www.mines.edu/Research/>

Colorado Institute for Macromolecular Science and Engineering (CIMSE)

The Colorado Institute for Macromolecular Science and Engineering (CIMSE) was established in 1999 by an interdisciplinary team of faculty from several CSM departments. It is sponsored by the National Science Foundation, the Environmental Protection Agency, and the Department of Energy. The mission of the Institute is to enhance the training and research capabilities of CSM in the area of polymeric and other complex materials as well as to promote education in the areas of materials, energy, and the environment.

Fourteen CSM faculty members from eight departments are involved with the Institute's research. The research volume is more than \$1 million and supports around 15 full-time graduate students in polymers, colloids and complex fluids. Current research projects include plastics from renewable resources, computer simulation of polymers, novel synthetic methods, and the development of new processing strategies from polymer materials.

CIMSE works to improve the educational experience of undergraduate and graduate students in polymers and complex fluids as well as maintain state-of-the-art lab facilities. Currently CSM has the largest polymeric materials effort in the State of Colorado. Materials are a dominant theme at CSM, and CIMSE will play an important role in ensuring that our students remain competitive in the workforce.

Background:

- Established in 1999
- Interdisciplinary teams involving faculty from Chemistry, Physics, Chemical Engineering, and Materials Science.
- Several on-going University-Industry collaborative projects

Areas of Expertise:

- Polymeric materials science
- Design and synthesis of new macromolecular species
- Polymer Rheology and Processing
- Polymers at Surfaces and Interfaces
- Directed self-assembly of colloidal particles
- Theoretical methods
- Biological fluids

Sponsoring Organizations:

- National Science Foundation
- Environmental Protection Agency
- U. S. Department of Energy

Method of Technology Transfer:

- Publication of scientific results
- Technical presentations
- M.S. and Ph.D. graduates from program
- Start up of small commercial ventures
- Consulting and research for local industries
- Annual meeting of the external advisory committee

***Contact CIMSE Director, Dr. John R. Dorgan, Chemical Engineering and Petroleum Refining,
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