

National Science Foundation Awards Materials Research Laboratory

Largest Single Research Grant Ever Conferred at UCSB

Santa Barbara, Calif.-- The Materials Research Laboratory (MRL) at the University of California at Santa Barbara (UCSB) has received \$16.5 million from the National Science Foundation (NSF). The five-year award, the result of a competitive review process by the NSF, is the largest single research grant ever conferred at UCSB.

The Materials Research Laboratory at UCSB is among 11 existing NSF centers to receive funding. The total NSF allotment to the existing centers is \$110 million, with another \$24 million for the creation of four new centers.

Anthony Cheetham, director of the UCSB Materials Research Laboratory and professor of materials and of chemistry, said, "We are delighted to have received a substantial increase in our funding from the National Science Foundation. The success of the MRL in this recent competition for funding shows the world-class stature of the materials research activities at UC Santa Barbara."

UCSB Chancellor Henry Yang said, "I am extremely proud of my colleagues in the Materials Research Laboratory and its superb director Tony Cheetham for their success in this award from the National Science Foundation. The MRL at UCSB has become a flagship and a national asset for materials research."

The MRL brings together interdisciplinary teams of scientists and engineers who share a mutual interest in materials that are both chemically and structurally complex, including materials that self-assemble. Scientific activities are organized around four interdisciplinary research groups:

Biomaterial Microstructures includes research on drug delivery, artificial tissues, and patterned structures for micromachine development.

Solution Synthesis of Inorganic Materials at Molecular and Atomic Interfaces aims at understanding biominerals, porous materials, and single crystal thin films for optoelectronic circuits.

Mesoscopic Macromolecular Structures focuses on creating novel materials for electronic, optical, and biotechnological applications.

Strongly Nonequilibrium Phenomena in Complex Materials looks, for instance, at the propagation of cracks in materials, including the earth's surface during quakes.

Currently the MRL involves 70 faculty from nine departments and 70 graduate students and postdoctoral scholars. A new 14,000 sq.ft. building (1997) houses laboratory, educational, and office space. Its key location among the Physics, Chemistry, Institute for Theoretical Physics (ITP) and Engineering buildings facilitates the MRL's mission as the focal point for interdisciplinary research. Of particular note are its outstanding facilities for x-ray diffraction, NMR spectroscopy, electron microscopy, and computing.

The NSF intends that its Materials Research Science and Engineering Centers (MRSECs) function as facilitators of partnerships among academic institutions, government laboratories, and industry. The MRL at

UCSB engages in research partnerships with some 20 companies and three national laboratories.

In addition, the MRL runs an extensive educational outreach program for the local community which includes summer internships for Santa Barbara City College students, research opportunities for high school teachers, and an Internet link which area science teachers and students can use to e-mail questions for answers by UCSB scientists.

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