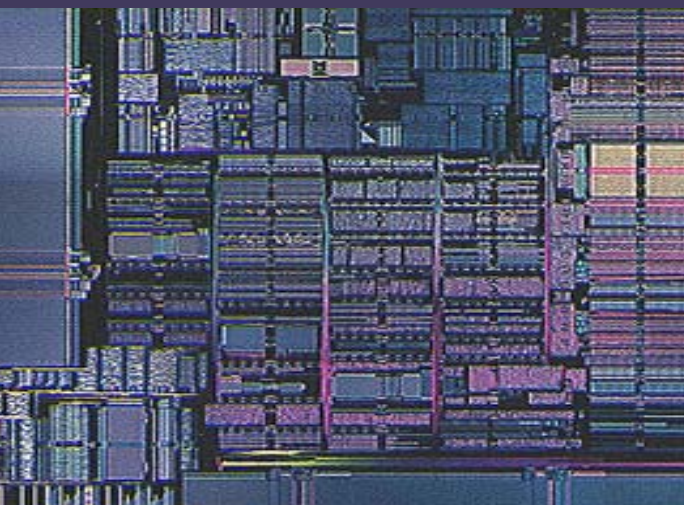


For an application to the Materials
Creation Training Program (MCTP)
at UCLA:

Exotic Materials Institute
University of California Los Angeles
Box 951569
Los Angeles, CA 90095-1569

Phone: (310) 206-2798
Fax: (310) 825-0767
e-mail: lut@chem.ucla.edu

<http://mctp.chem.ucla.edu>



University of California Los Angeles
Department of Chemistry and Biochemistry
607 Charles E. Young Drive East
Los Angeles, CA 90095-1569



UCLA



MATERIALS CREATION TRAINING PROGRAM

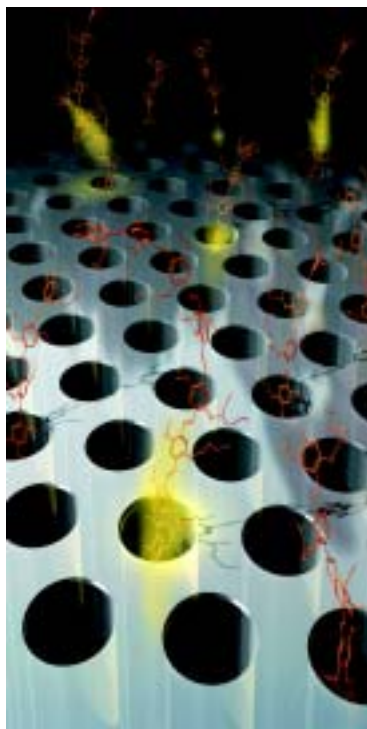
An exciting, new multi-disciplinary
program that provides a foundation in
the language, methods, intellectual
problems, and technical challenges in
materials science and engineering.



About MCTP

The goal of MCTP is to produce Ph.D.'s who have a much broader science and engineering skills base than students trained in single disciplines. Students are trained to take a holistic view of research that equips them with the tools necessary to make major advancements in the synthesis and characterization of new materials, and in the design, fabrication, and characterization of electronic and photonic devices of those materials. In addition, students are trained in science issues beyond the laboratory, such as intellectual property and ethics. Trainees are mentored by two research sponsors from the MCTP training faculty.

MCTP is an Integrative Graduate Education and Research Traineeship (IGERT) sponsored by the National Science Foundation. Students receive a stipend of \$27,500 for 12 months, as well as medical insurance and registration fee coverage. The grant also includes \$3,500 per year in materials and supplies for use by each trainee, and a travel allowance of \$400 per year.



The MCTP Leadership Executive Committee members are: Dr. Fred Wudl, Dr. Kendall N. Houk, Dr. Chang-Jin Kim, Dr. Robin L. Garrell, Dr. Bruce S. Dunn, and Dr. Richard B. Kaner.

Admission

Trainees are generally selected at the end of their first year of study. Students from Physics & Astronomy, Chemistry & Biochemistry, Chemical Engineering, Materials Science & Engineering, Mechanical & Aerospace Engineering, and Electrical Engineering are eligible.

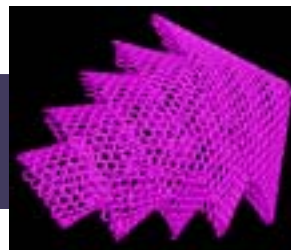
Selection of trainees is based on the following:

- Undergraduate record
- Standardized test scores
- Academic record at UCLA
- Letters of recommendation
- Relevance of research and training goals to MCTP objectives
- Academic diversity

Program

The formal components of the training program are the:

- MCTP Graduate Laboratory (Chem 285, Fall)
- MCTP Course, "The Evolution of a Device: From Concept to Product" (Chem 283, Winter/Spring)
- MCTP Brown Bag Lunch Seminar (Chem 284 Fall/Winter/Spring)
- One to three month internship with industrial partner or national laboratory
- Visiting speaker seminar program
- Mentoring MCTP undergraduates during the summer



Faculty

Stuart Brown, *Physics & Astronomy*
Magnetic and electronic properties of low-dimensional materials

Emily A. Carter, *Chemistry & Biochemistry*
Theoretical structure and dynamics of surfaces and interfaces

Bruce S. Dunn, *Materials Science & Engineering*
Electrical properties of ceramics and glasses, optical materials

Miguel A. Garcia-Garibay, *Chemistry & Biochemistry*
Crystal engineering, supramolecular organic photochemistry

Robin L. Garrell, *Chemistry & Biochemistry*
Molecular self-assembly, adhesion, wetting, biosensors

James Gimzewski, *Chemistry & Biochemistry*
Micromechanical sensors, nanofabrication, cell sonics

George Gruner, *Physics & Astronomy*
Electrodynamics of materials

H. Thomas Hahn, *Mechanical & Aerospace Engineering*
Processing, structure and properties of nanocomposites

Karoly Holczer, *Physics & Astronomy*
Physics of organic conductors and superconductors

Kendall N. Houk, *Chemistry & Biochemistry*
Modeling reactivity of organic molecules and materials

Richard B. Kaner, *Chemistry & Biochemistry*
Solid state synthesis, conductive polymers

Chang-Jin Kim, *Mechanical & Aerospace Engineering*
MEMS, electrowetting, microfluidics

Steven Kivelson, *Physics & Astronomy*
Correlation effects in electronic superconductivity

Harold G. Monbouquette, *Chemical Engineering*
Biosensors, thermophilic archaea biotechnology, nanopatterning

Benjamin J. Schwartz, *Chemistry & Biochemistry*
Solution dynamics, conjugated polymers, photolithography

Selim M. Senkan, *Chemistry & Biochemistry*
Optimization of solid state materials with catalytic properties

J. Fraser Stoddart, *Chemistry & Biochemistry*
Molecular machines, shuttles and switches, dendrimers

Sarah H. Tolbert, *Chemistry & Biochemistry*
Organic/inorganic nanostructured composites, phase transitions

Kang L. Wang, *Electrical Engineering*
New properties of nanostructures for electronic devices

Fred Wudl, *Chemistry & Biochemistry*
Optical and electrooptical properties of conjugated polymers

Eli Yablonovitch, *Electrical Engineering*
Photonic crystals, quantum information science, nano-imaging

Yang Yang, *Materials Science & Engineering*
The invention of novel polymer/organic electronic devices