



University of Wisconsin-Madison
Research Experience for Undergraduates in Nanotechnology
Summer 2007

The University of Wisconsin-Madison Nanoscale Science and Engineering Center (NSEC) on Templated Synthesis and Assembly at the Nanoscale and Materials Science Research and Engineering Center on Nanostructured Interfaces will host a Research Experience for Undergraduates in Nanotechnology program from May 29, 2007 to August 3, 2007. Participants will spend 10 weeks conducting research in an area of engineering, physics, chemistry, science education or public policy. Students will be exposed to other research available on campus through seminars, tours and academic and social events. At the conclusion of the program, students submit their research paper and present their findings in an open forum.

Research opportunities in Nanoscale Science and Technology will be offered in:

- Directed Self-Assembly and Registration of Nanoscale Chemical Architectures
- Templated Chemical Synthesis of Specific Heteropolymeric Nanostructures
- Driven Nano-Fluidic Self-Assembly of Colloids and Macromolecules
- Research in the Societal Implications of Template Synthesis and Assembly at the Nanoscale
- Education for Students, Teachers and Researchers
- Advanced Lithography, Measurement, Characterization and Transfer of Nano-Patterned Surfaces
- Fundamental Issues in Materials Integration on Silicon
- Functional Organic-Inorganic Electronic Interfaces
- Nanostructured Materials as Interfaces to Biology

Whereas research projects are typically multidisciplinary, faculty that host REU students are from the following departments:

- Chemistry and Chemical Education
- Physics
- Genetics
- Chemical and Biological Engineering
- Biochemistry
- Materials Science and Engineering
- History, History of Science and Medical History & Bioethics
- Sociology
- Public Affairs

Please note that the REU program is available **only to US citizens or Permanent Residents**. We will not be able to consider applications from anyone who is not a US citizen or Permanent Resident.

OBJECTIVES: The program provides students with opportunities that build on their interest in engineering, physics, chemistry, education or public policy careers. Participants conduct research in

an academic environment under the direction of faculty mentors and work as members of research teams investigating problems in engineering, physics, chemistry, education and science policy.

SUPPORT: All participants receive a financial support package consisting of a \$4,200 stipend for the ten-week period, travel expenses to and from the program, housing in University dormitories, and a meal program at an on-campus facility.

ENVIRONMENT: The University of Wisconsin-Madison is located in the city of Madison on the south shore of Lake Mendota, one of several lakes in the area. The UW campus offers opportunities for interdisciplinary work between its many superb undergraduate and graduate programs. Madison is the capital of Wisconsin with a population of 200,000 and offers a wide variety of social, cultural, educational and recreational opportunities. The city is 1½ hours northwest of Chicago and 1 hour west of Milwaukee.

ELIGIBILITY: Undergraduate students majoring in mathematics, chemistry, physics, engineering, biotechnology-related areas, other physical sciences, science education or public policy who have a strong desire to complete a PhD and meet the following criteria:

- Students who have completed their sophomore or junior year.
- Students with an overall GPA of at least 3.0 on a 4.0 scale.
- Students who are U.S. citizens or permanent residents enrolled in an accredited college or university.

APPLICATION: Please note that the applicant is responsible for submitting a complete application package consisting of the following:

1. Completed application form.
2. Statement describing your interests and goals. Include information on previous research experience, post-graduation (undergraduate) plans, experiences which have prepared you for REU participation and your reasons for applying to the program.
3. "Unofficial" college transcripts.

SELECTION: Criteria for selection will be based on academic qualifications as determined by academic record and prior course work, references and the statement describing scientific interests and career goals. Preference will be given to rising juniors and seniors.

APPLICATION DEADLINE: Applications must be received by **FEBURARY 19th, 2007** for full consideration.

Send via mail, fax or Email a completed application together with (1) a statement describing your interests and goals (2) your unofficial college transcripts to:

Dr. Andrew Greenberg
REU in Nanotechnology Program Coordinator
1101 University Avenue
Madison WI 53706
Phone: 608-890-1534
Fax: 608-265-8094
Email: greenberg@chem.wisc.edu

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Summer 2007

Name _____

Current Address _____

Current Phone _____ Cell _____
Including area code

Current Email _____

Permanent Address _____

Phone _____

Gender Female Male

U.S. Citizen Permanent Resident Other

Permanent Resident Number _____

Birth Date _____

Social Security Number _____

- Ethnic/Racial Status***
- Black/African American (not Hispanic)
 - Cambodian, Hmong, Laotian, Vietnamese, admitted to US after 12/31/1975
 - Other Asian/Pacific Islander
 - American Indian or Alaskan Native
 - Mexican American/Chicano/a
 - Puerto Rican
 - Other Hispanic
 - White (not Hispanic)

***Request for Ethnic/Racial Status**

Please check the category that most accurately reflects your heritage. The U.S. Department of Education in connection with civil-rights legislation and enforcement defines these categories. We understand that these categories are under review by the U.S. Department of Education and that the categories may not reflect your "true" heritage. We encourage you to designate the category that best describes your ethnicity. The category "Other Asian/Pacific Islander" includes all those whose origins are traceable to any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; for example, China, Korea, the Philippines, Samoa, etc. "Other Hispanic" applies to persons of Cuban and Central/South American Spanish heritage or Culture, regardless of race.

Current College _____

Current Major

Current Academic Level

Date Degree Expected

Overall G.P.A. (4.0 scale)

**How did you hear about
the UW-NSEC REU
program?**

Send via mail, fax or Email a completed application together with (1) a statement describing your interests and goals (2) your unofficial college transcripts to:

**Dr. Andrew Greenberg
1101 University Avenue
Madison WI 53706**

**Fax: 608-265-8094
Email: greenberg@chem.wisc.edu**

References are individuals who will provide an academic reference for you.

Reference 1

Name _____

Title _____

University/ Organization _____

Address _____

Phone _____ **Fax** _____

Email _____

Reference 2

Name _____

Title _____

University/ Organization _____

Address _____

Phone _____ **Fax** _____

Email _____