Pre-doctoral Fellowship Awards in Green Materials
University of California Toxic Substances Research and Teaching Program
Irvine-Davis-Riverside Lead Campus Component

Overview

Applications are now being accepted for competitive pre-doctoral fellowships to be awarded annually to pursue the mission of the Research and Education in Green Materials (REGM) lead campus component of the UC Toxic Substances Research and Teaching Program (TSRTP). Our mission is to advance interdisciplinary research and education on the invention, assessment, and adoption of less-toxic "green" materials as alternatives to toxic substances currently used in consumer products. REGM aims to vigorously pursue research including:

I. Intuitive measures for comparative toxicity of alternative materials that includes objective and subjective measures of population health impacts, including occupational hazards, and the assigning of appropriate "weights" to these measures.

II. Assessment of trade-offs among material toxicity indices, product performance and reliability, economic costs, component recyclability, and potential ecological impacts.

III. Inclusion of geographical, national, and consumer behavior differences and valuation of toxicity into the assessments of material life cycle impacts on the environment and human health.

We envisage that individual graduate student research and REGM-teams activities will address important and urgently needed research topics such as:

i. Review and comparison of toxicity rating or classification schemes that link materials science with experimental toxicology and exposure assessment so that engineers, product designers, and policy makers are better able to choose and recognize 'greener' alternative materials.

ii. Evaluation of the toxic effects of high production volume chemicals (> 500 Metric Tons or about 1 million lbs per year) to characterize, through experimentation, biomedical informatics database mining, and modeling, the potential risks associated with new, alternative materials being developed in the laboratory as potential green alternatives.

iii. Identification of the different modes of action by which chemicals cause pathologies, focusing on linear or non-linear approaches needed to make informed decisions about low dose exposures relevant for legacy chemicals and their greener alternatives used in consumer products.

iv. Developing methods to integrate indices of material life cycle impacts so that technical product design engineers can simultaneously evaluate the environmental burden and technical feasibility of new materials.

v. Developing strategies to integrate information on consumer behavior and declared preferences with the formulation of public policy to evaluate the effectiveness of alternative legislative or regulatory methods.

We welcome all innovative research proposals that are justified within the scope of the green materials mission.
**Application Requirements**

All applicants must be currently enrolled or admitted into an appropriate academic unit within the University of California. To apply for funding, students are requested to submit in a single PDF file the following items:

1. **Application for Traineeship Form**

2a. For new graduate students, a description of Research and Career Goals (not to exceed 1000 words)

OR

2b. For continuing graduate students, a report of accomplishments during graduate studies so far, including plans for advancing to doctoral candidacy. Include all relevant publications. Indicate whether published, in press, or in preparation. For Ph.D. candidates, clear statement about how this award will enhance the quality of the research must be included.

3. Curriculum Vitae including list of publications

4. Undergraduate transcripts (these may be unofficial records, photocopies will do)

5. Graduate school transcripts (these also may be photocopies)

6. Copy of official GRE scores and TOEFL score (if relevant)

7. The names, addresses, E-mail addresses, and telephone numbers of at least two professional references (excluding mentor) from whom letters of recommendations have been requested. It is the applicant’s responsibility to ensure that the letters are received by the deadline. Copies of reference letters sent to the mentor or the program at the time of graduate admission can also be used.

8. A letter of nomination and support from the faculty mentor explaining the Research Program to be undertaken by the applicant during the period of training. Include the relevance to the goals of the Green Materials Lead Campus Program. The letter must include a brief description of the overall research activities in the mentor’s group, and a statement that the mentor agrees to the participation of the awardee in the activities of the Lead Campus program as outlined in the Award Description. The mentor also agrees to actively support REGM lead campus programs. This letter must be signed by both the applicant and the faculty mentor.

9. The faculty mentor’s Biosketch or CV (not to exceed 3 pages)

The PDF file containing all application materials should be sent as E-mail attachment to the program directors at the respective campuses:

Irvine: Oladele.Ogunseitan@uci.edu  Davis: jmschoenung@ucdavis.edu  Riverside: david.eastmond@ucr.edu

Applications may be submitted at anytime during the year, but award decisions will be made before each quarter begins. For applications to be considered for a following quarter, please submit all materials no later than 5.00 PM on December 4, 2009, and March 10th, 2010.
**The Award**

Funding will be effective the quarter immediately following the application deadline. Graduate student awards will range in value up to a maximum of $29,529 per calendar year, including stipend, fees (in-state, but not out-of-state), and health insurance. Requests for periods less than a year must be supported by the mentor’s agreement to supplement student salaries to maintain a 0.49 GSR/TA appointment and provide support of appropriate research expenses.

Awardees are required to participate in the following activities:

1. The Lead Campus seminar series of invited outside speakers
2. Complete one or more lead-campus core course(s) in green materials or equivalent
3. Regular campus meetings associated with the Lead Campus program
4. An annual multi-campus meeting/workshop of participating faculty and students (expenses will be paid by the Lead Campus program to cover off-campus travel)
5. The annual meeting of the UC system-wide Toxic Substances Research and Teaching Program (expenses will be covered)

**All research publications from trainees supported by the award must acknowledge support from the University of California Toxic Substances Research and Teaching Program if they result from work performed during the appointment period.**

**Fellowship Renewal**

The awardees may request a renewal of the fellowship to continue work on the same project funded by the original award. The application for renewal requires an electronic submission of:

1. A progress report, including copies of any presentations or publications resulting from the research (there are no page limits)
2. A letter from faculty advisor supporting the continuation of the project and affirming her/his role as a mentor.