

Summer 2009 Collaborative Undergraduate Research in Energy (CURE) Program University of Massachusetts Amherst

Name: First Last College:
Expected Graduation Date: Citizenship:

PERSONAL INFORMATION (Optional):

Gender: Race/Ethnicity:
Disability:

CONTACT INFORMATION

Current/College Permanent/Home
Address: Address:
City, State, ZIP: City, State, ZIP:
Phone: Email:

ACADEMIC INFORMATION

Academic major: Current grade point average:
List any previous REU programs attended and dates:

List all science and math courses taken and grades earned, including those you are taking now:

Do you have academic plans after college? Indicate your interest level in each of the following advanced degree options.

Ph.D. Science or Engineering	M.S. in Science or Engineering	Medical or Dental School	Business School	Other academic advanced degree	Plan to take time off after graduation
---------------------------------	-----------------------------------	-----------------------------	-----------------	-----------------------------------	---

At present, what do you see yourself doing after you complete your education? Are you considering a career in industry? Government? Academia? Medicine?

Have you had any previous experience doing scientific research? If so, tell us briefly what you worked on, when, where and with whom.

What interests you about chemically-based renewable energy research?

RESEARCH ACTIVITY PREFERENCE

Rank each of the following green energy application areas by your relative interest level (1 = highest interest, 2 = next highest, etc.)

Solar energy, photovoltaic cells	
Fuel cells, energy conversion devices,	
Batteries, energy storage devices	
Biofuels, biomass conversion	

Rank each of the following research approaches by your relative interest level (1 = highest interest, 2 = next highest, etc.)

Organic/polymer synthesis	
Spectroscopy and material characterization	
Nanomaterials synthesis and fabrication	
Biological chemistry in energy research	
Theory, modeling, simulation, computation	

Out of the 10 available project placements, please rank ONLY your top five choices from 1 (top choice) to 5:

Collaborative Project Area	Individual REU Project	Faculty Mentor	Selection
Using a biological proton transporter to build a proton exchange membrane	Synthetic method for incorporating proteins onto polymers	Sankaran Thayumanavan (Chemistry)	
	Modification of proteins for membrane integration	Jeanne Hardy (Chemistry)	
Polymer Electrolyte Membranes for Use in Fuel Cells	Synthesis and optimizing of polymers for PEMs	Bryan Coughlin (Polymer Science & Engineering)	
	Characterizing proton transport materials	Mark Tuominen (Physics)	
Novel Processes and Materials for Fabrication of Photovoltaic Devices	Imprinting of semiconductor nanostructures	Kenneth Carter (Polymer Science & Engineering)	
	Synthesis of coupling reagents	Dhandapani Venkataraman (Chemistry)	
Opportunities for Renewable Fuels using Molecular Sieve Basic Catalysts	Investigation of catalysis	George Huber (Chemical Engineering)	
	Theoretical analysis and modeling	Scott Auerbach (Chemistry)	
Modeling and Characterization of Mesoscale Structures in Proton Conducting Materials	Characterization of mesoscale polymer structural assemblies	Ryan Hayward (Polymer Science & Engineering)	
	Theoretical modeling studies on polymer assemblies	Peter Monson (Chemical Engineering)	

REFERENCES

Two letters of reference are required, sent directly to the address below. List here the names and contact information of two faculty members who have agreed to write letters on your behalf:

Reference #1

Name:

College:

Email:

Phone:

Reference #2

Name:

College:

Email:

Phone:

TRANSCRIPT

An official academic transcript from your current college/university is required, sent directly to the address below.

TO SUBMIT YOUR MATERIALS

Postal mail: MassCREST-REU, Department of Chemistry, 701 Lederle Graduate Research Tower, 710 North Pleasant St., University of Massachusetts, Amherst MA 01003-9305.

Email: fff@research.umass.edu or cure-reu@chem.umass.edu.

Fax: (413) 545-4490

Deadline for receipt of all application materials is Monday, February 16, 5:00 p.m. EST.