Climate, Energy, and the Changing Environment

A Dreyfus Foundation Symposium on Environmental Chemistry Research

Friday, October 24, 2008

The Camille and Henry Dreyfus Foundation
The New York Academy of Sciences

The Dreyfus Foundation and Environmental Chemistry

In 1994, the Camille and Henry Dreyfus Foundation invited distinguished chemists and chemical engineers to a conference to discuss the importance of chemistry research to the environment. Based on the presentations and discussions, the Foundation initiated the Camille and Henry Dreyfus Postdoctoral Program in Environmental Chemistry.

The program invites experts in environmental science to submit proposals for the training of Ph.D. chemists and chemical engineers as postdoctoral scientists through leading-edge research.

The first awards were made in 1996. Through 2008, nearly 100 awards totaling more than $10,000,000 have been granted to principal investigators towards training the next generation of leaders in environmental chemistry.

Since 1996, the field of environmental chemistry has grown substantially in size and scope. This symposium is intended to provide a current view of some of the most exciting areas of investigation that constitute the ever-expanding field of environmental chemistry, as presented by Dreyfus principal investigators.

8:30 Coffee and refreshments

WELCOME

9:00 Dorothy Dinsmoor
President, The Camille and Henry Dreyfus Foundation

Ellis Rubinstein
President, New York Academy of Sciences

SESSION I

Chair: François Morel
Albert G. Blanke Professor of Geosciences, Princeton University

9:20 James Anderson
Philip S. Weld Professor of Atmospheric Chemistry, Harvard University

Strategic choices for global energy: Constraints from feedbacks in the climate system

10:00 Kimberly Prather
Professor of Chemistry and Biochemistry, University of California, San Diego

New insights into the role of aerosols in climate change

10:40 Break

11:00 Dianne Newman
John and Dorothy Wilson Professor of Biology and Geobiology, Massachusetts Institute of Technology

From iron oxides to infections: Roles for redox-active antibiotics in microbial survival and development

11:40 Break

12:00 Lunch

SESSION II

Chair: Beatrice Renault
Chief Scientific Officer, New York Academy of Sciences

1:30 Paul Anastas
Professor in the Practice of Green Chemistry, and Director, Center for Green Chemistry and Green Engineering, Yale University

Transformative innovations in green chemistry needed for sustainability

2:10 Eric Jacobsen
Sheldon Emery Professor of Chemistry, Harvard University

Selective yet general catalysts

2:50 Break

SESSION III

Chair: John Seinfeld
Louis E. Nohl Professor and Professor of Chemical Engineering, California Institute of Technology

3:10 Nathan Lewis
George L. Argyros Professor of Chemistry, California Institute of Technology

Artificial photosynthesis: Fuel from the sun

3:50 Daniel Nocera
The Henry Dreyfus Professor of Energy and Professor of Chemistry, Massachusetts Institute of Technology

The chemistry of renewable energy

4:30 Break

SESSION IV

Chair: John Brauman
J. G. Jackson–C. J. Wood Professor of Chemistry, Stanford University

4:50 Ralph Cicerone
President, National Academy of Sciences

Putting science to work in developing science policy

5:30 Discussion

5:45 Adjournment and reception

Note: Ten minutes of each scheduled talk is reserved for discussion.

VENUE

The New York Academy of Sciences
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