Agenda

Wednesday, May 25, 2011
8:30 AM – 7:00 PM

7:30 AM  Registration

8:30 AM  Welcome and Introduction of Keynote Address
Steve Koonin, DOE Under Secretary for Science

8:35 AM  Keynote Address
Steven Chu, DOE Secretary of Energy

9:00 AM  Congressional Keynote Speakers
Senator Jeff Bingaman (D-NM), Congresswoman Judy Biggert (R-IL) (invited),
Congressman Daniel Lipinski (D-IL), Congresswoman Zoe Lofgren (D-CA)

10:00 AM  Break

10:30 AM – 12:15 PM  Leading Perspectives in Energy Research

10:30 AM  Introduction of Session
Bill Brinkman, DOE Director of the Office of Science

10:45 AM  John Hennessy, President of Stanford University

11:15 AM  Mark Little, Senior Vice President and Director of GE Global Research

11:45 AM  Eric Isaacs, Director of Argonne National Laboratory

12:15 – 1:30 PM  Lunch Provided

12:30–1:00 PM  Disruptive Innovations in Computing
Tilak Agerwala, Vice President, Systems at IBM T. J. Watson Research Center

1:30 PM  Fuels from Sunlight Energy Innovation Hub
Nate Lewis, Director of JCAP

2:00 PM  EFRCs: A Response to Five Challenges for Science and the Imagination

Moderator: Paul Alivisatos, Director of Lawrence Berkeley National Laboratory

George Crabtree, Distinguished Fellow at Argonne National Laboratory

Mildred Dresselhaus, Institute Professor at the Massachusetts Institute of Technology

Mark Ratner, Professor at Northwestern University
2:45 PM  **Science for Energy Technology: The Industry Perspective**

Moderator: Jeffrey Wadsworth, President and CEO of Battelle Memorial Institute

David E. Carlson, Chief Scientist of BP Solar

Yet-Ming Chiang, Professor at the Massachusetts Institute of Technology and founder of A123 Systems

Catherine T. Hunt, R&D Director of Innovation Sourcing and Sustainable Technologies at The Dow Chemical Company

3:30 PM  **Break**

4:00 PM  **EFRCs: A View from Senior EFRC Representatives**

Moderator: Persis Drell, Director at SLAC National Accelerator Laboratory

Neal Armstrong, Director of the Center for Interface Science: Solar Electric Materials led by the University of Arizona

Emily Carter, Co-Director of the Combustion Energy Frontier Research Center led by Princeton University and Team Leader of the Heterogeneous Functional Materials Center led by the University of South Carolina

Don DePaolo, Director of the Center for Nanoscale Control of Geologic CO₂ led by Lawrence Berkeley National Laboratory

Brent Gunnoe, Director of the Center for Catalytic Hydrocarbon Functionalization led by the University of Virginia

5:00 PM  **Award Ceremony: Life at the Frontiers of Energy Research Video Competition**

Ivan Amato, Senior communications officer in the Pew Health Group of the Pew Charitable Trusts

Paula Apsell, Senior Executive Producer, NOVA and Director of the WGBH Science Unit

William Phillips, Physicist, Joint Quantum Institute at the National Institute of Standards and Technology and the University of Maryland, and recipient of the 1997 Nobel Prize in Physics

5:30 PM–7:00 PM  **Poster Session and Reception**
Agenda
Thursday, May 26, 2011
8:00 AM – 7:30 PM

8:00–10:00 AM  Global Perspectives on Frontiers in Energy Research

8:00 AM  Facing Our Energy Challenges in a New Era of Science
Patricia Dehmer, Deputy Director for Science Programs at DOE

8:30 AM  Kazunari Domen, Professor at the University of Tokyo, Japan

9:00 AM  Robin Grimes, Professor at Imperial College, United Kingdom

9:30 AM  Jean-Marie Tarascon, Professor at the University de Picardie Jules Verne, France

10:00 AM  Break

10:15 AM  Parallel Scientific Sessions I
A.  Organic photovoltaics, Grand Ballroom
C.  Solar fuels and biomass, Mount Vernon Square
D.  Energy storage and transmission, Congressional Hall A & B
E.  Energy conservation, Renaissance Ballroom East
G.  Materials in extreme environments, Renaissance Ballroom West A
H.  Effective and sustainable materials design: integration of computation, theory and experiment, Renaissance Ballroom West B

12:15–1:45 PM  Lunch on Your Own

12:35–1:35 PM  Optional Bring Your Own Lunch Sessions (3)
Career Opportunities in Energy Sciences and Technology, Renaissance Ballroom East
Michelle Buchanan, Associate Laboratory Director in Physical Sciences at Oak Ridge National Laboratory
Marc Kastner, Dean of the School of Science at the Massachusetts Institute of Technology
Joseph F. Mercurio, Manager New Business Development, Global Research and Development at General Motors

Translating Basic Research to Energy Technology, Congressional Hall A & B
Karina Edmonds, Technology Transfer Coordinator at DOE
Celia Merzbacher, Vice President of Innovative Partnerships at the Semiconductor Research Corporation

Science Policy, the Budget Battles of the 112th Congress, and the EFRCs, Mount Vernon Square
Benjamin L. Brown, Senior Science and Technology Advisor in the Office of Science
### Parallel Scientific Sessions II

1. **A.** Organic photovoltaics, *Grand Ballroom South*
2. **B.** Inorganic photovoltaics, *Grand Ballroom Central*
3. **C.** Solar fuels and biomass, *Grand Ballroom North*
4. **D.** Energy storage and transmission, *Congressional Hall A & B*
5. **E.** Energy conservation, *Renaissance Ballroom East*
7. **G.** Effective and sustainable materials design: integration of computation, theory and experiment, *Renaissance Ballroom West B*

### Break

3:45 PM

### Parallel Scientific Sessions III

4. **A.** Organic photovoltaics, *Grand Ballroom South*
5. **B.** Inorganic photovoltaics, *Grand Ballroom Central*
6. **C.** Solar fuels and biomass, *Grand Ballroom North*
7. **D.** Energy storage and transmission, *Congressional Hall A & B*
8. **E.** Energy conservation, *Renaissance Ballroom East*
9. **F.** Carbon capture and sequestration, *Renaissance Ballroom West A*
10. **I.** New tools and methods for materials synthesis and characterization, *Renaissance Ballroom West B*

6:00 PM  **EFRC and DOE Research and Networking Poster Reception**

7:30 PM  **Adjourn**
Agenda
Friday, May 27, 2011
8:00 AM – 12:30 PM

8:00 AM  Parallel Scientific Sessions IV
A. Organic photovoltaics, Grand Ballroom South
B. Inorganic photovoltaics, Grand Ballroom Central
C. Solar fuels and biomass, Grand Ballroom North
F. Carbon capture and sequestration, Renaissance Ballroom West A
I. New tools and methods for materials synthesis and characterization, Renaissance Ballroom West B

8:00 AM  Scientific Sessions Close-Out Panel
H. Effective and sustainable materials design: integration of computation, theory and experiment, Renaissance Ballroom East

9:00 AM  Scientific Sessions Close-Out Panels
G. Materials in extreme environments, Renaissance Ballroom East
I. New tools and methods for materials synthesis and characterization, Renaissance Ballroom West B

10:00 AM  Poster Session #2

11:30 AM  Scientific Sessions Close-out Panels
A. Organic photovoltaics, Grand Ballroom South
B. Inorganic photovoltaics, Grand Ballroom Central
C. Solar fuels and biomass, Grand Ballroom North
D. Energy storage and transmission, Congressional Hall A & B
E. Energy conservation, Renaissance Ballroom East
F. Carbon capture and sequestration, Renaissance Ballroom West A

12:30 PM  Adjourn
### Graphic Agenda

**Thursday, May 26, 2011**

**10:15 AM – 7:30 PM**

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<td>Session I.6</td>
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**12:35–1:35**  
**Lunch (Optional Lunch Sessions from 12:35–1:35)**

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**3:45–4:00**  
**Break**

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**6:00–7:30**  
**EFRC and DOE Research and Networking Poster Reception I**

**Key:**

- **A.** Organic photovoltaics
- **B.** Inorganic photovoltaics
- **C.** Solar fuels and biomass
- **D.** Energy storage and transmission
- **E.** Energy conservation and efficiency
- **F.** Carbon capture and sequestration
- **G.** Materials in extreme environments
- **H.** Effective and sustainable materials design: integration of computation, theory and experiment
- **I.** New tools and methods for materials synthesis and characterization
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**10:00–11:30**  
**EFRC Poster Session II**

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**Key:**

- A. Organic photovoltaics
- B. Inorganic photovoltaics
- C. Solar fuels and biomass
- D. Energy storage and transmission
- E. Energy conservation and efficiency
- F. Carbon capture and sequestration
- G. Materials in extreme environments
- H. Effective and sustainable materials design: integration of computation, theory and experiment
- I. New tools and methods for materials synthesis and characterization

Slashed sessions are close-out panels.