

# Basic Energy Sciences Advisory Committee

July 31-August 1, 2007

## Agenda

Hilton Washington DC/Rockville Executive Meeting Center

1750 Rockville Pike

Rockville, MD 20852

Phone: 301-468-1100

Tuesday, July 31, 2007		
8:00am - 9:00am	Continental Breakfast	
9:00am - 9:15am	Welcome and Introduction	John Hemminger, BESAC Chair University of California, Irvine
9:15am - 9:45am	News from the Office of Basic Energy Sciences	Patricia Dehmer, Director Office of Basic Energy Sciences
9:45am - 10:00am	Break	
10:00am - 10:45am	Introduction and Executive Summary of the BESAC Grand Challenges Report	BESAC Panel Co-Chairs Graham Fleming, U of California, Berkeley Mark Ratner, Northwestern University
10:45am - 11:15am	Grand Challenges Report: Control of Electron in Atoms, Molecules and Materials – Creating a New Language for the Behavior of Electrons	Philip Bucksbaum, Stanford University
11:15am - 11:45am	Grand Challenges Report: The Basic Architecture of Matter-- Directed Assembly, Structure and Properties	Tobin Marks, Northwestern University
11:45am - 1:00pm	Lunch	
1:00pm - 1:30pm.	Grand Challenges Report: Emergence of Complex Phenomena-- Strongly Correlated Multiparticle Systems	Leon Balents, U of California, Santa Barbara Julia Philips, Sandia National Laboratories
1:30pm - 2:00pm	Grand Challenges Report: Nanoscale Communication – Energy, Entropy and Information	Jay Groves, Lawrence Berkeley National Lab
2:00pm - 2:30pm	Grand Challenges Report: Science of Matter Beyond Equilibrium	Mark Ratner, Northwestern University
2:30pm - 3:00pm	Break	
3:00pm - 4:00pm	Discussion	BESAC
4:00pm - 4:20pm	Report on the BES Workshop on Basic Research Needs for Clean and Efficient Combustion of 21 <sup>st</sup> Century Transportation Fuels	Andrew McIlroy, Workshop Co-Chair Combustion Research Facility, SNL (CA)
4:20am - 4:40pm	Report on the BES Workshop on Basic Research Needs for Geosciences: Facilitating 21 <sup>st</sup> Century Energy Systems	Workshop Co-Chairs Donald DePaolo, U of California, Berkeley Lynn Orr, Stanford University
4:40pm - 5:00pm	Report on the BES Workshop on Basic Research Needs for Electrical Energy Storage	Workshop Co-Chairs John Goodenough, U of Texas Hector Abruna, Cornell University <b>Michelle Buchanan, ORNL</b>
5:00pm - 5:15pm	Public Comment Session	
5:15pm	Adjourn	
6:00pm	Dinner on your own	

Wednesday, August 1, 2007		
8:00am - 8:30am	Continental Breakfast	
8:30am - 9:00am	Report on the Committee of Visitors for the BES Scientific User Facilities Division	Richard Osgood, COV Chair Columbia University
9:00am - 9:20am	Report on the BES Workshop on Basic Research Needs for Materials under Extreme Environments, June 10-14, 2007	Workshop Co-Chairs Jeff Wadsworth, ORNL <b>George Crabtree, ANL</b> Russell Hemley, Carnegie Inst of Washington
9:20am - 9:30am	Workshop Update: BES Basic Research Needs for Catalysis for Energy August 5-10, 2007	Raul Miranda, Basic Energy Sciences
9:30am - 9:50am	Summary of Chemistry and Physics Gender Equity Workshops and Planning for a Related Workshop	Linda Blevins, Basic Energy Sciences
9:50am - 10:20am	Grand Challenges Report: Infrastructure, Facilities & Human Resources	BESAC Panel Co-Chairs Graham Fleming, University of California, Berkeley Mark Ratner, Northwestern University
10:20am - 11:45am	Discussion of Grand Challenges Report  (Break timing at the discretion of the BESAC Chair)	BESAC
11:45am - 12:00pm	Public Comment Session	
12:00pm	Adjourn	