

# PIRE-ECCI/ICMR Summer Conference

## Monday, August 14 through Friday, August 25, 2006

### Contact Numbers:

Gold Cab Taxi, available 24/7: (805) 685-9797

Department of Chemistry and Biochemistry: (805) 893-8085

*All lectures will be held in the Engineering Sciences Building (ESB) 1001 unless otherwise noted.*

### Sunday, August 13

Time	Speaker and Title
5:30 PM to 7:30 PM	Registration And Reception Buffet
	Jameson Center Patio Santa Ynez Apartments 6750 El Colegio Road, Goleta (805) 893-2626 (apartment office)

### Monday, August 14

Time	Speaker and Title
8:30 AM	Welcome Breakfast Meeting Room ESB 1001, Sponsored By: <b><i>Catalytic Solutions, Incorporated, Oxnard, California</i></b>
8:45 AM to 9:15 AM	Introductions: Susannah Scott, Co-Director PIRE-ECCI Program Welcome: Matt Tirrell, Dean, Engineering; Martin Moskovits, Dean, Mathematical, Life and Physical Sciences; Alec Wodtke, Director PIRE-ECCI Program
9:15 AM to 11:15 AM	John Yates, University of Pittsburgh <i>"Photochemistry on TiO<sub>2</sub> Semiconductor Surfaces – How Kinetic Measurements Can Provide Insight into the Behavior of Charge Carriers"</i>
11:30 AM to 12:30 PM	Lunch at de La Guerra Dining Commons
12:30 PM to 2:30 PM	Matthias Scheffler, FHI, Berlin and UC Santa Barbara <i>"ab initio kinetic Monte Carlo"</i>
2:45 PM to 5:15 PM	Campus Tour
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons
7:00 PM to 9:30 PM	Dessert and Introductions at UCSB Multicultural Center

### Tuesday, August 15

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	Tony Cheetham, Director, International Center for Materials Research (ICMR) <i>"The Evolution of Shape Selective Catalysts through the Zeolites and AlPOs"</i>
11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Song-I Han, UC Santa Barbara <i>"Electron Paramagnetic Resonance: Basics and Electron Paramagnetic Resonance: Application to Inorganic Materials."</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 5:15 PM	Wilson Ho, UC Irvine <i>"Single Molecule STM and Surface Photochemistry"</i>
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

### Wednesday, August 16

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	Jens Norskov, Technical University of Denmark <i>"Surface Reactivity and Heterogeneous Catalysis"</i>

11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Chuck Peden, Pacific Northwest National Laboratory <i>"Surface Science Studies of Catalytic Vehicle Emission Control"</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 5:15 PM	Jeroen van Bokhoven, ETH, Swiss Federal Institute of Technology <i>"Structure of heterogeneous catalysts using X-ray absorption spectroscopy"</i>
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons
7:00 PM	Karaoke: UCSB Multicultural Center

#### Thursday, August 17

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	Masatake Haruta, Osaka National Research Institute (ORNI), Japan <i>"Modern Alchemy: Catalysis by Gold Nano-particles"</i>
11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Bob Maughon, Dow Chemical, <i>"Redefining Feedstocks for the Chemical Industry: Opportunities and Challenges for Catalysis"</i> Karen Smith-Pilkington, Managing Director, Management Savvy
3:00 PM to 3:15 PM	Break
3:15 PM to 4:15 PM (DW) 4:15 PM to 5:15 PM (Disc)	David Wong, Chairman and CEO, D2 Technologies Group Discussion, Moderator: Gary Hansen, UCSB Technology Management
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

#### Friday, August 18

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 10:00 AM	Dean Martin Moskovits, College of Letters and Science, UC Santa Barbara
10:00 AM to 11:00 AM	Xinhe Bao, Dalian Institute of Chemical Physics, Dalian, P.R. China <i>"1. Introduction to Dalian Institute of Chemical Physics. 2. Concept and Practice of Nano Catalysis"</i>
11:30 PM to 12:30 PM	Lunch at de La Guerra Dining Commons
12:30 PM to 2:30 PM	Ron Shen, UC Berkeley <i>"Surface-Specific Sum-Frequency Spectroscopy: Basic Principles and Applications"</i>
2:45 PM to 5:30 PM	Poster Session: Material's Research Laboratory, Ground Floor Breezeway, ICMR
7:00 PM meet on campus for dinner at 7:30 PM	Dinner at El Paseo in Downtown Santa Barbara

### PIRE-ECCI/ICMR Summer School Program Monday, August 14 through Friday, August 25, 2006

#### Monday, August 21

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
8:45 AM to 10:45 AM	Horia Metiu, UC Santa Barbara
10:45 AM to 11:45 AM	Rick Wormsbecker, W. R. Grace
11:45 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Daniel Auerbach, Hitachi Global Storage Technologies <i>"Molecular Beam Scattering as a Probe of Surface Chemical Dynamics"</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 5:15 PM	Alec Wodtke, UC Santa Barbara <i>"Experimental Approaches To Optically Pumping Molecules For Beam/Surface Scattering Studies"</i>
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

#### Tuesday, August 22

Time	Speaker and Title
8:00 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 9:30 AM	Xinhe Bao, Dalian Institute of Chemical Physics, Dalian, P.R. China

	<i>"Overview of the DICP"</i>
9:30 AM to 10:30 AM	Wei-Xue Li, Dalian Institute of Chemical Physics <i>"Oxidation of Transition Metal Surfaces and the Effect on Catalysis"</i>
10:30 AM to 11:30 AM	Xiulian Pan, Dalian Institute of Chemical Physics <i>"Direct catalytic conversion of methane"</i>
11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Al Stiegman, Florida State University <i>"Vibration Spectra of Supported Catalysts"</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 5:15 PM	Brad Chmelka, UC Santa Barbara <i>"NMR Applications To Catalysis Research: Characterizing Solid Catalysts, Or Using NMR To Monitor Catalytic Reactions; Use Of In Situ And Flow Techniques"</i>
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

### Wednesday, August 23

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	Juergen Eckert, UC Santa Barbara <i>"Applications Of Neutron Scattering Methods In Heterogeneous Catalysis"</i>
11:30 AM to 1:30 PM	Lunch at de La Guerra Dining Commons
1:30 PM to 2:30 PM (SG) 2:30 PM to 3:30 PM (MG)	Steve Golden, Catalytic Solutions, Inc., <i>"Materials Science in the World of Catalysis: Technology to Business"</i> Marcos Gomez, BASF, <i>"Innovation At The Chemical Company, Challenges and New Perspectives"</i>
3:30 PM to 3:45 PM	Break
3:45 PM to 4:00 PM (RN) 4:00 PM to 4:45 PM (EMcF)	Richard Nader, East Asia and Pacific Program, National Science Foundation Eric McFarland, GRT and UC Santa Barbara <i>"Methane Activation: A Grand Challenge in Surface Chemistry"</i>
4:45 PM to 5:45 PM (Disc)	Group Discussion, Moderator: Gary Hansen, UCSB Technology Management
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

### Thursday, August 24

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	Bas Hendriksen, Lawrence Berkeley National Laboratory <i>"The Use Of STM To Study Catalysis"</i>
11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	Susannah Scott, UC Santa Barbara <i>"Probing Functionality on Solid Catalysts and Catalyst Supports by Chemisorption"</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 4:15 PM	Steve Buratto, UC Santa Barbara <i>"Size-Selected Au and Ag Nanoclusters on TiO<sub>2</sub>: Cluster Shapes and Binding Sites Probed by UHV-STM"</i>
5:45 PM to 7:15 PM	Dinner at de La Guerra Dining Commons

### Friday, August 25

Time	Speaker and Title
8:30 AM	Continental Breakfast, Meeting Room ESB 1001
9:00 AM to 11:00 AM	John Vohs, University of Pennsylvania <i>"X-ray Photoelectron Spectroscopy: Theory, Instrumentation, and Applications in Catalysis"</i>
11:30 AM to 1:00 PM	Lunch at de La Guerra Dining Commons
1:00 PM to 3:00 PM	D. Wayne Goodman, Texas A&M University <i>"Catalysis by Au and Au alloys"</i>
3:00 PM to 3:15 PM	Break
3:15 PM to 5:00 PM	Alec Wodtke/Tony Cheetham, UC Santa Barbara Sam Fleischman and Rob Savinelli, PIRE-ECCI Program Participants in China Close
5:30 PM to 7:30	BBQ Dinner at the Beach

**Saturday, August 26: Depart PIRE-ECCI/ICMR Conference**