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# 5TH UNIVERSITY OF CALIFORNIA SYMPOSIUM ON SURFACE SCIENCE AND ITS APPLICATIONS

JUNE 18, 2008 THROUGH JUNE 20, 2008

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University of California at Santa Barbara  
1601 Elings Hall, California NanoSystems Institute (CNSI)

## PROGRAM

**Wednesday, June 18, 2008**

7:45 – 8:15 a.m.            **Continental Breakfast**

8:15 – 8:20 a.m.            **Opening Remarks and Announcements by Horia Metiu**  
**1601 Elings Hall**

**SESSION CHAIR: STEVEN K. BURATTO**

8:20 – 9:10 a.m.            **Steve Bernasek, Princeton University**  
*“Organic Monolayers in Organic Electronic Devices”*

9:10 – 10:00 a.m.         **Horia Metiu, UC Santa Barbara**  
*“Catalysis on atomic-sized centers”*

10:00 – 10:30 a.m.        **Break**

10:30 – 11:20 p.m.        **Richard Lambert, University of Cambridge**  
*“Recent Work on Self Assembly of Discrete Structures and  
on Enantioselective Catalysis”*

11:20 – 12:10 p.m.        **Wilson Ho, UC Irvine**  
*“Single Molecule Optical Spectroscopy Requiring Large Background”*

12:10 – 2:00 p.m.         **Lunch**  
***Elings Hall***

**SESSION CHAIR: MICHAEL BOWKER**

2:00 – 2:50 p.m.            **Alec Wodtke, UC Santa Barbara**  
*“Born-Oppenheimer Breakdown at the Gas-Solid Interface”*

2:50 – 3:40 p.m.            **Robert J. Madix, Stanford University**  
*“Structure Sensitivity in the Epoxidation of Styrene  
on Silver Single Crystals”*

3:40 – 4:10 p.m.            **Break**

4:10 – 5:00 p.m.            **Eric McFarland, UC Santa Barbara**  
*“Design and Synthesis of Optimized Material Systems and Structures  
for Photoelectrocatalytic Production of Chemicals and Fuels From Sunlight”*

5:00 – 5:50 p.m.            **Lanny Schmidt, University of Minnesota**  
*“Catalytic autothermal reforming of biomass”*

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## PROGRAM

**Thursday, June 19, 2008**

7:45 – 8:15 a.m.            **Continental Breakfast**

8:15 – 8:20 a.m.            **Announcements by Horia Metiu**  
**1601 Elings Hall**

**SESSION CHAIR: STEVE BERNASEK**

8:20 – 9:10 a.m.            **Daniel Auerbach, Gas Reaction Technologies (GRT), Inc.**  
*“A new bromine based gas to liquids technology:  
catalysis and materials challenges”*

9:10 – 10:00 a.m.           **Hrvoje Petek, University of Pittsburgh**  
*“The charge-lattice coupling at a photocatalytic interface”*

10:00 – 10:30 a.m.           **Break**

10:30 – 11:20 p.m.           **Costas G. Vayenas, University of Patras**  
*“Electrochemical and Chemical Promotion of Catalysis”*

11:20 – 12:10 p.m.           **Xi Chen, Tsinghua University**  
*“Probing the spin state at the single atomic/molecular level by STM”*

12:10 – 2:00 p.m.           **Lunch**  
**Elings Hall**

**SESSION CHAIR: ALEC WODTKE**

2:00 – 2:50 p.m.            **Joachim Sauer, Humboldt University of Berlin**  
*“Structure and Reactivity of Oxides:  
Gas Phase Species, Surfaces, Thin Films, Supported Catalysts”*

2:50 – 3:40 p.m.            **Thomas Bligaard, Technical University of Denmark**  
*“Informatics in materials design”*

3:40 – 4:10 p.m.            **Break**

4:10 – 5:30 p.m.            **POSTER SESSION**  
*Main Lobby, First Floor, Elings Hall*

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## PROGRAM

Friday, June 20, 2008

7:45 – 8:15 a.m.            **Continental Breakfast**

8:15 – 8:20 a.m.            **Announcements by Horia Metiu**  
**1601 Elings Hall**

**SESSION CHAIR: COSTAS G. VAYENAS**

8:20 – 9:10 a.m.            **Johannes Lercher, Technical University of Munich**  
*“Elementary steps in alkane activation on oxide catalyst”*

9:10 – 10:00 a.m.           **Gianfranco Pacchioni, University of Milan-Bicocca**  
*“Ultrathin Oxide Films: New Materials at the Nanoscale  
with Unprecedented Properties”*

10:00 – 10:30 a.m.        **Break**

10:30 – 11:20 p.m.        **Michael Bowker, Cardiff University**  
*“Surface Science Investigations of the Selective Oxidation of Methanol”*

11:20 – 12:10 p.m.        **Steven K. Buratto, UC Santa Barbara**  
*“A Catalysis Informatics Approach for Hydrogenation Reactions”*

12:10 – 2:00 p.m.         **Lunch**  
**Elings Hall**

**SESSION CHAIR: THOMAS BLIGAARD**

2:00 – 2:50 p.m.            **Leon Lefferts, University of Twente**  
*“Heterogeneous Catalysis in Liquid Phase; Fundamental  
and Engineering Challenges”*

2:50 – 3:40 p.m.            **Galen Stucky, UC Santa Barbara**  
*“The synthesis and use of nanophase heterostructures  
and interfaces in catalysis”*

3:40 – 4:10 p.m.            **Break**

4:10 – 5:00 p.m.            **Stefan Wendt, University of Aarhus**  
*“O vacancies versus Ti interstitials:  
Searching for the Origin of the Defect State in the Band Gap of Titania”*

5:00 – 5:50 p.m.            **Wayne Goodman, Texas A&M University**  
*“Reactivity Trends in CO oxidation from UHV to Elevated Pressures:  
Never Mind the Gap”*

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## MEETING LOCATION

All sessions of the symposium will be held in Elings Hall, Room 1601.

The room is located on the first floor of Elings Hall near the main entrance of the UCSB campus.

