

CONFERENCE PROGRAM as of 010608

Invited speakers are from important Danish and American institutes and industries that research new methods and materials for the improvement of catalytic materials.

Sessions:

- Session 1: Multi-electron transfer catalysts for fuel generation
- Session 2: Interface science for integrating catalysts into nanostructured supports
- Session 3: Semiconductor materials for efficient solar water splitting
- Session 4: Model systems and catalysts
- Session 5: Theory and catalyst design
- Session 6: Nanostructures for electrodes and artificial photosynthetic assemblies
- Session 7: Sustainable chemical production

Moderators:

- Dr. Heinz Frei, Helios Solar Energy Research Center, Lawrence Berkeley National Laboratory
- Professor Jens K. Nørskov, Director of the Center for Atomic-scale Materials Design, Technical University of Denmark
- Professor Steve Louie, UC Berkeley, Dept. of Physics and LBNL
- Professor Alex Bell, UC Berkeley, Dept. of Chemical Engineering and LBNL

Agenda:

Sunday, January 13, 2008

8:00 PM – 9:00 PM	Reception for all participants and speakers	Bancroft Hotel, 2680 Bancroft Way, Berkeley
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Day 1 Monday, January 14, 2008

Time		Speaker	Title and topics
8:00 AM	8:30 AM		Registration & Breakfast
8:30 AM	8:45 AM		Welcome by organizers
		Session 1 Moderator: Heinz Frei	Multi-electron transfer catalysts for fuel generation
8:45 AM	9:15 AM	Dan Nocera (MIT)	Molecular catalysts for water oxidation and hydrogen generation
9:15 AM	9:45 AM	Jan Rossmeisl (DTU)	Electrochemical water splitting -- comparison to Photo System II
9:45 AM	10:05 AM		Q&A - Discussion
10:05 AM	10:15 AM		Coffee break
		Session 2 Moderator: Heinz Frei	Interface science for integrating catalysts into nanostructured supports

10:15 AM	10:45 AM	Don Tilley (UCB/LBNL)	Electrocatalytic water splitting: Immobilization of the catalytic sites
10:45 AM	11:15 AM	Gabor Somorjai (UCB/LBNL)	Pt, Rh and bimetallic nanoparticle synthesis with size and shape control. Characterization and catalytic reaction studies as monolayer films (2d) and when dispersed on high surface area oxide supports (3D)
11:15 AM	11:45 AM	Thomas H. Rod (Atomistix A/S)	Next generation software for modeling in catalysis and cleantech
11:45 AM	12:15 PM		Q&A - Discussion
12:15 PM	1:00 PM		Lunch
		Session 3 Moderator: Jens Norskov	Semiconductor materials for efficient solar water splitting
1:00 PM	1:30 PM	Paul Alivisatos (UCB/LBNL)	Nanoparticles for photocatalysis
1:30 PM	2:00 PM	Nate Lewis (Caltech)	Membrane-bridged nanostructured materials for fuel production from the sun
2:00 PM	2:30 PM		Q&A - Discussion
2:30 PM	2:45 PM		Coffee break
		Session 4 Moderator: Jens Norskov	Model systems and catalysts
2:45 PM	3:15 PM	Ib Chorkendorf (DTU)	Design of new Catalyst for Hydrogen Production
3:15 PM	3:45 PM	Bjerne Clausen (Haldor Topsøe A/S)	The experimental basis for rational design of heterogeneous catalysts
3:45 PM	4:15 PM		Q&A - Discussion
4:15 PM	5:30 PM		Poster Session and refreshments
7:00 PM			Dinner – Men’s Faculty Club, UC Berkeley

Day 2 Tuesday, January 15, 2008

Time		Speaker	Title and topics
8:00 AM	8:30 AM		Breakfast
		Session 5 Moderator: Steve Louie	Theory and catalyst design

8:30 AM	9:00 AM	Martin Head-Gordon (UCB/LBNL)	Advances in quantum chemistry for modeling catalytic processes
9:00 AM	9:30 AM	Jens Norskov (DTU)	Electronic factors in heterogeneous catalysis
9:30 AM	10:00 AM	Thomas Bligaard (DTU)	Computational Catalyst Design
10:00 AM	10:30 AM		Q&A - Discussion
10:30 AM	10:45 AM		Coffee break
		Session 6 Moderator: Steve Louie	Nanostructures for electrodes and artificial photosynthetic assemblies
10:45 AM	11:15 AM	Peidong Yang (UCB/LBNL)	Nanostructured semiconductors for photoelectrochemical applications
11:15 AM	11:45 PM	Heinz Frei (LBNL)	Assembly of inorganic photocatalysts on nanoporous supports for artificial photosynthesis
11:45 PM	12:15 PM		Q&A - Discussion
12:15 PM	1:00 PM		Lunch
		Session 7 Moderator: Alex Bell	Sustainable chemical production
1:00 PM	1:30 PM	Karl Anker Jorgensen (Uni. of Aarhus)	Catalysis without metals: Asymmetric Organocatalysis
1:30 PM	2:00 PM	Harvey Blanch (UCB/LBNL)	Conversion of biomass to biofuels
2:00 PM	2:30 PM	Claus Hviid Christensen (DTU)	Catalysis for Optimal Valorisation of Biomass
2:30 PM	3:00 PM		Q&A - Discussion
3:00 PM	3:10 PM		Organizers - wrap-up
3:10 PM	4:30 PM		Poster session and refreshments
4:30 PM	5:30 PM		Optional Tour of LBNL

List of speakers:

- Professor Don Tilley, Helios Solar Energy Research Center, Lawrence Berkeley National Laboratory
- Dr. Heinz Frei, Helios Solar Energy Research Center, Lawrence Berkeley National Laboratory
- Professor Gabor Somorjai, UC Berkeley and Lawrence Berkeley National Laboratory

- Professor Dan Nocera, MIT
- Professor Paul Alivisatos, UC Berkeley and Lawrence Berkeley National Laboratory
- Professor Claus H. Christensen, Center for Sustainable and Green Chemistry, Technical University of Denmark
- Professor Ib Chorkendorff, Center for Individual Nanoparticle Functionality, Technical University of Denmark
- Bjerne S. Clausen, Division Manager, Research and Development, Haldor Topsoe
- Professor Jens K. Nørskov, Director of the Center for Atomic-scale Materials Design, Technical University of Denmark
- Thomas H. Rod, Atomistix
- Assistant Professor Thomas Bligaard, Center for Atomic-scale Materials Design, Department of Physics, Technical University of Denmark
- Assistant Professor Jan Rossmeisl, Department of Physics, Technical University of Denmark
- Professor Karl Anker Jørgensen, Department of Chemistry, The University of Aarhus, Denmark
- Professor Martin Head-Gordon, Department of Chemistry, UC Berkeley
- Professor Nate Lewis, Division of Chemistry and Chemical Engineering, California Institute of Technology
- Associate Professor Peidong Yang, Department of Chemistry, UC Berkeley
- Professor Harvey Blanch, UC Berkeley and Lawrence Berkeley National Laboratory