

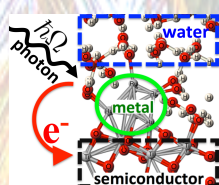


# Photocatalysis and Charge Transfer at Interfaces and Nanomaterials



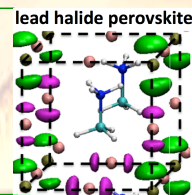
Honolulu, Hawaii, December 17-18, 2015

- ◆ The symposium presents recent experimental and computational synergistic advances addressing the issue of charge transfer at the interfaces of nanomaterials for photovoltaic and photo-electrochemical applications.
- ◆ Symposium focuses at understanding the photoinduced processes of light absorption, formation and breaking of charge transfer excitations, hot carrier relaxation, and reaction dynamics at catalytic sites – affected by lattice vibrations and solvent polarization dynamics. These processes are monitored by femtosecond spectral methods and modeled using nonadiabatic excited state dynamics.
- ◆ The efficiency of photo-catalytic and photovoltaic solar energy conversion is improved by active exploration of composition and morphology of nano-materials. Change of composition, quantum confinement, size, shape, surface functionalization, magnetic doping, and meso-scale structural arrangement provide versatile tuning of timescales of available basic mechanisms and properties of materials.



## Focus

- ◆ Photo-induced dynamics in semiconductor nanostructures: confinement vs. doping
- ◆ Supported metal clusters for photocatalytic applications
- ◆ Photo-induced processes in functionalized metaloxide semiconductor surfaces
- ◆ New materials: Lead halide organometallic perovskites for photovoltaic applications



## International Organizing Committee

Qiang Sun, PekingUniversity, China  
Annabella Selloni, Princeton, USA  
Irene Burghardt, Goethe Univ., Germany

Gregory Scholes, Princeton, USA  
Ryoji Asahi, Toyota Labs. Japan  
Kazunari Domen, U. of Tokyo, Japan

Ulrike Diebold, TU Wien, Austria  
Xueqin Gong, ECUEST, China  
Koichi Yamashita, U. of Tokyo, Japan

### Local organizers:

Dmitri Kilin, USD, USA

Svetlana Kilina, NDSU, USA

Graduate assistant organizer: Stephanie Jensen USD, USA

## Tentative Invited Speakers

Michael Graetzel  
Uri Banin  
George Schatz  
Gustavo Scuseria  
Keiji Morokuma  
Alan Aspuru-Guzik  
Horia Metiu  
Suljo Linic  
Graeme Henkelman  
Tetsuya Hasegawa  
Talgat Inerbaev  
Sergei Tretiak\* (LANL, USA)

Viktor Klimov  
James Durrant  
Juan Bisquert  
Oleg Prezhdo  
Harry Gray  
Tim Lian  
Alessandro Troisi  
Rodney Bartlett  
Xiaosong Li  
Artur Izmaylov  
Kim Hyeon-Deuk

John Yates  
Prashant V. Kamat  
Sharon Hammes-Schiffer  
John Asbury  
Martin Head-Gordon  
Giulia Galli  
Victor Batista  
Dunwei Wang  
Hrvoje Petek  
Volkhard May  
Eduard Zenkevich

Peidong Yang  
Donald Truhlar  
Daniel Nocera  
Filipp Furche  
Georg Kresse  
Ilaria Ciofini  
Thomas Frauenheim  
Christine Aikens  
Yoshitaka Tanimura  
JohnTully  
Bruce Parkinson

David Micha\* (University of Florida, USA)

Kirill Velizhanin\* (LANL, USA)

\* indicates accepted

## Abstract Submission Details

Submit at <http://www.pacificchem.org/technical-program/abstracts/>

**Division Topic Area:** Physical, Theoretical & Computational (PHYS) ,

**Symposium Title:** Photocatalysis and Charge Transfer at Interfaces and Nanomaterials

**Symposium ID:** 344

**Deadline: April 3, 2015**

Speakers are encouraged to accompany the talks by posters presented by a students.

Travel stipends to students may become available.

