

**ORCAS 2010 –
INTERNATIONAL CONFERENCE ON ENERGY CONVERSION**

**The Friday Harbor Laboratories, Friday Harbor, WA
September 19-22, 2010**



September 19th (Sunday)

- 2:00 pm – 9:00 pm Arrival and Check-In
6:00 pm Dinner
- 7:30 pm – 8:00 pm Hector Abruña, Cornell
*Discovery and Characterization of Novel Materials for Electrical
Energy Generation and Storage: Fuel Cells, Batteries and Super Caps*
- 8:00 pm – 8:10 pm Discussion
8:10 pm – 8:40 pm Daniel Dubois, PNNL
*Development of molecular electrocatalysts for CO₂ reduction and H₂
oxidation and production*
- 8:40 pm – 8:50 pm Discussion
8:50 pm – 9:20 pm Daniel Gamelin, UW
*Surface modification and doping/alloying of oxide photoanodes for
solar water oxidation*
- 9:20 pm – 9:30 pm Discussion
- 9:30 pm Reception

September 20th (Monday)

- 7:30 am – 8:30 am Breakfast
- 9:00 am – 9:30 am Richard McCullough, Carnegie Mellon University/Plextronics
*Transistor and solar cell paint: “Amorphous” or disordered approach
to highly stable, printable electronics*
- 9:30 am – 9:45 am Discussion
9:45 am – 10:15 am Hugh Hillhouse, Purdue/UW
*Next generation low-cost and high-efficiency solar cells via
nanocrystals and double-gyroid nanowire arrays*
- 10:15 am – 10:30 am Discussion
- 10:30 am – 11:00 am Coffee and Group photo
- 11:00 am – 11:30 am James Durrant, Imperial College London
Charge photogeneration and recombination in organic solar cells
- 11:30 am – 11:45 am Discussion
11:45 am – 12:15 pm Yue Wu, Solarmer
*Advancement of OPV materials development and production
technology*
- 12:15 pm – 12:30 pm Discussion
- 12:30 pm Lunch

1:30 pm – 4:00 pm Free time

4:00 pm – 6:00 pm Poster Session 1

6:00 pm Dinner

7:30 pm – 8:00 pm Franky So, University of Florida
Interface effect and bulk carrier transport in organic photovoltaic cells

8:00 pm – 8:10 pm Discussion

8:10 pm – 8:40 pm Natalie Stingelin, Imperial College London/ETH Zurich
Revisiting Molecular-Weight Dependence of Charge-Carrier Mobility in Polymer Semiconductors

8:40 pm – 8:50 pm Discussion

8:50 pm – 9:20 pm David Ginger, UW
Probing nanostructure materials for solar energy conversion

9:20 pm – 9:30 pm Discussion

September 21st (Tuesday)

7:30 am – 8:30 am Breakfast

9:00 am – 9:30 am Bill Mulligan, SunPower Corp.
Development and commercialization of 24% efficient silicon solar cells

9:30 am – 9:45 am Discussion

9:45 am – 10:15 am Jennifer Dionne, Stanford
Single nanoparticle photocatalysts: Towards solar-fuels with nonlinear optics and plasmonics

10:15 am – 10:30 am Discussion

10:30 am – 11:00 am Coffee

11:00 am – 11:30 am Kazunori Domen, University of Tokyo
Overall water splitting on nitride-type photocatalysts

11:30 am – 11:45 am Discussion

11:45 am – 12:15 pm Mike Henderson, PNNL
Making and breaking bonds at oxide surfaces using light

12:15 pm – 12:30 pm Discussion

12:30 pm Lunch

1:30 pm – 4:00 pm Free time

4:00 pm – 6:00 pm Poster Session 2

6:00 pm Dinner/Banquet

September 22nd (Wednesday)

7:30 am – 8:30 am Breakfast

8:30 am – 9:00 am John Turner, NREL
Materials issues for photoelectrochemical water splitting

9:00 am – 9:15 am Discussion

9:15 am – 9:45 am Yong Wang, PNNL
Conversion of Renewable Energy Sources

9:45 am – 10:00 am Discussion

10:00 am – 10:30 am Coffee

10:30 am – 11:00 am Antoni Llobet, Institute of Chemical Research of Catalonia
O-O bond formation reaction mechanisms promoted by Ru complexes

11:00 am – 11:15 am Discussion

11:15 am – 11:45 am Jim Mayer, UW
Transferring electrons and protons together

11:45 am – 12:00 pm Discussion

12:00 pm Lunch/Departure