

CSTEC Annual External Workshop - August 4, 2010

CSTEC's Annual External Workshop offered a detailed view of the center's current and future research to the 18 faculty and 50 students and post docs attending and also to the four members of our external advisory board - David Eaglesham, Chief Technology Officer at First Solar; Larry Kazmerski, Director of the National Center for Photovoltaics at NREL; Venky Narayanamurti, Benjamin Peirce Professor of Technology and Public Policy and Professor of Physics at Harvard University; and Jeff Tsao, a

principal member of the technical staff at Sandia National Laboratories. University of Michigan faculty members Ted Goodson (Chemistry), Max Shtein (MSE), Jamie Phillips (EE), Pramod Reddy (ME), Ctirad Uher (Physics), and John Kieffer (MSE) each discussed areas of key research within CSTEC. Two experts in the field of thermoelectrics were featured later in the afternoon- Joseph Heremans from Ohio State University and Doug Medlin from Sandia National Laboratories.

After the final talk, attendees mingled over punch and platters at a reception and enjoyed conversations stimulated by research topics illustrated at the accompanying poster session. Everything about this workshop helped focus CSTEC's vision for producing unique, cutting-edge research, from the forethought and preparations which went into the presentations to the feedback from the external advisory board the next day.



Center for Solar & Thermal Energy Conversion (CSTEC)

CSTEC ANNUAL WORKSHOP WITH INVITED GUESTS AND FEATURED SPEAKERS

AUGUST 4, 2010

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| 8:30 | Peter Green, University of Michigan, Materials Science and Engineering
<i>Opening remarks and Overview of the Center Activities</i> |
| 9:00 | Ted Goodson, University of Michigan, Chemistry
<i>Absorption in Novel Photovoltaic Materials and Devices</i> |
| 9:40 | Max Shtein, University of Michigan, Materials Science and Engineering
<i>Solar Energy Conversion in Thin Film Organic and Hybrid Systems</i> |
| 10:20 | Break |
| 10:40 | Jamie Phillips, University of Michigan, Electrical Engineering
<i>Solar Energy Conversion in Nanostructures and Intermediate Band Materials</i> |
| 11:20 | Ctirad Uher, University of Michigan, Applied Physics
<i>Thermoelectric Phenomena in Thin Films</i> |
| 12:00 | Lunch and Poster session |
| 1:00 | Pramod Reddy, University of Michigan, Mechanical Engineering
<i>Thermoelectric Effects in Molecular Junctions</i> |
| 1:40 | John Kieffer/Massoud Kaviani/Anton van der Ven, University of Michigan,
Materials Science and Engineering (MSE)/Mechanical Engineering/MSE
<i>Modeling and Simulation of Materials Properties and Processes in
Hybrid Thermoelectric/Photovoltaic Structures</i> |
| 2:20 | Break |
| 2:40 | Joseph Heremans - Ohio State University, Mechanical Engineering & Physics
<i>Resonant Energy Levels Improve the Thermoelectric Figure of Merit</i> |
| 3:25 | Doug Medlin - Sandia National Laboratory, Materials Physics
<i>Interfaces in Thermoelectric Tellurides</i> |
| 4:10 | Reception and Poster session |

