



## Industrial Advisory Board Meeting Agenda for the Next Generation Photovoltaics I/UCRC

### March 31, 2015

Norman Hackerman Building, Room 1.720  
100 East 24<sup>th</sup> Street, Austin, TX

Wifi details: attwifi network / login card

7:00-8:00 am BREAKFAST

8:00-8:05 am Member Introductions & Welcome Remarks  
Brian Korgel (Center Director, UT Austin)

8:05-9:05 am Directors' Update  
Brian Korgel  
Sampath (Deputy Director, CSU)  
Robert Balog (Proposed Site Director, TAMU)

9:05-9:20 am Jim Sites (Associate Dean for Research, Colorado State University)  
"What are the Key Challenges for Thin-Film Solar Cells?"

9:20-10:00 am NSF I/UCRC presentations  
David Meyer (NSF I/UCRC Evaluator)

10:00-10:15am BREAK

10:15-12:15pm Research Project Presentations (10 mins each + 5 mins to fill out LIFE forms)

- 1.) Towards Realization of Solar Cells on Exfoliated Monocrystalline Silicon Substrates (Ahn)
- 2.) Back Surface Etching and Doping of CdMgTe Films to Form an Electron Reflector for CdTe Devices (Barth)
- 3.) Capacitance-Based Characterization of Thin-Film Solar Cells (Drayton, CSU)
- 4.) Materials Characterization of CdTe and Electron Reflector Films and Devices (Munshi)
- 5.) Understanding the impact of ligand-exchanged CIGS (or CZTS) nanoparticles on the chemical, electronic and device properties of photovoltaic thin-films (Reddy)
- 6.) Sputter Deposition and Doping of CdZnTe films (Shimpi)
- 7.) Printed Microgroove Devices (Pernik)
- 8.) Integration of Production Scheduling and Control in the Supply Chain (Touretzky)

12:15-1:15pm LUNCH & Poster Session

1:15-1:45 pm Center Discussion  
By-laws, Center road map and IAB Chair

- 1:45-2:45 pm IAB Closed Session (IAB, Center Evaluator & NSF Program Manager)
- 2:45-3:15 pm BREAK
- 3:15-6:00 pm Project Proposals from CSU and UT Austin (5 mins each + 5 mins to fill out LIFE forms)
- 1.) Back Surface Doping and Contacting Of CdMgTe Films To Form An Electron Reflector For CdTe Devices (Barth, CSU)
  - 2.) Energy Systems Modeling and Analysis for the US Navy (Korgel, UT Austin)
  - 3.) Modeling & Analysis of Effectiveness of Advanced Voltage Control Technologies for Photovoltaic Integration (Santoso, UT Austin)
  - 4.) Extension of Capacitance-Based Characterization of Thin-Film Solar Cells to Include Light Bias (Drayton, CSU)
  - 5.) High-efficiency flexible photovoltaic sheets (Yu, UT Austin)
  - 6.) Integration of Scheduling and Control for Process Operations using Renewable Energy (Baldea, UT Austin)
  - 7.) Materials Characterization of Advanced CdTe Devices (Barth, CSU)
  - 8.) Metal-Thin Insulator-Semiconductor (MIS) solar cells on exfoliated thin silicon foils (Ahn, UT Austin)
  - 9.) Microgroove Photovoltaic Devices (Korgel, UT Austin)
  - 10.) Optically Reflective Back Electrode For CdTe Devices (Sampath, CSU)
  - 11.) Optimization of co-sublimation hardware (Sampath, CSU)
  - 12.) Printed Photovoltaic Layers that Boost Device Efficiency (Korgel, UT Austin)
  - 13.) Scalable nanophotonics using jet and flash imprint lithography – photovoltaic applications (Yu, UT Austin)
  - 14.) Simulation of CdTe Solar Cells that Utilize Electron Reflection (Sites, CSU)
  - 15.) Sputter deposition of high band gap "top cell" (Sampath, CSU)
  - 16.) Sputter Deposition of Nitrogen-Doped ZnTe for the Back Contact of CdTe Cells (Sites, CSU)
  - 17.) Variable Frequency Drive (VFD) Testing (Strank, UT Austin)
- 6:00-6:30 pm Poster Session
- 7:00 pm DINNER  
Quattro Gatti Ristorante  
908 Congress Ave Austin, Texas 78701

**April 1, 2015**

- 7:00-8:15 am BREAKFAST
- 8:15-10:00 am LIFE Form Review
- 10:00-10:15 am BREAK
- 10:15-11:15am Closed IAB Project Selection (IAB and NSF Only)
- 11:15-11:45am Project Selection results discussion (IAB, NSF and Directors)
- 11:45-noon Future IAB meeting plans, summary, closing remarks
- 12:15-1:30 pm Optional Lab/Facilities Tour  
LUNCH