



## Call for Abstracts

### Area 2: CIGS and CdTe Thin Film Solar Cells and Related Materials

Dear Colleagues,

On behalf of the technical program committee it is our pleasure to invite you to submit papers for Area 2: “**CIGS and CdTe Thin Film Solar Cells and Related Materials**” of the **35th IEEE Photovoltaic Specialists Conference**, which will be held in **Honolulu, Hawaii**, from **June 20th-25th in 2010**. The IEEE PVSC meeting is the established international platform for presenting PV related research of high scientific level.

As the CdTe and CIGS technologies move from the lab to the factory, we encourage contributions addressing recent advances in manufacturing processes utilizing vacuum and/or atmospheric conditions, process controls and diagnostics, alternative buffers, transparent conductive oxides (TCOs), novel contacts, moisture barriers and other measures related to stability/reliability of the solar cell. To maintain a strong and broad science foundation for these two thin film technologies, we solicit contributions on the science and engineering of thin-film deposition, characterization of structural, optical and electrical properties, modeling, and the role of electrically active defects and impurities. Looking forward, we also solicit contributions exploring new materials, wide band gap absorbers, novel device structures, and tandem cells.

#### **Subarea 2.1: Thin Film Deposition and Characterization of Absorber and Related Wide Band Gap and Novel Materials**

We would like to address the continuous progress in the understanding of the polycrystalline nature of CIGS, CdTe, and related materials such as their microstructure, opto-electronic, phase contents, tolerance to deviation from stoichiometry, etc.

#### **Subarea 2.2: Transparent Conductors, Buffer Layers, and Back Contacts**

In the CIGS and CdTe technologies, the natures of the buffers and back contacts have significant effects on the properties of the absorbers as the device is completed. Also these devices, especially in the case of CIGS, have demonstrated good performance using several buffers with differing bandgaps and band alignments. We also solicit papers on progress in the cross-cutting area of transparent conductors as windows and moisture barriers.

#### **Subarea 2.3: Device Properties and Modeling/Characterization**

We seek further understanding of the operation of the two devices (CdTe and CIGS), and guidance from two- and three-dimensional modeling for further improvements/limitations in performance.





**Subarea 2.4: Advanced Processes and Controls: Atmospheric and Vacuum**

There are several approaches to the deposition of the components of these thin film devices. Some use high/low vacuum, some use liquid-based, or atmospheric vapor transport. We solicit contributions from all, showing the progress in deposition controls as well as understanding of the benefits of these alternative processes toward enhanced performance and potential for reducing cost.

**Subarea 2.5: Modules and Manufacturing: Process Controls, Performance, Interconnect, and Reliability**

In this area we solicit contributions from industry showing the progress in manufacturability, process and quality controls, cell integration, and module architecture. We encourage the community to share experiences in reliability at the cell and module level, to shed light as to why some modules are stable and some fail in the field.

Please check our website for the 35th IEEE PVSC at [www.ieee-pvsc.org](http://www.ieee-pvsc.org) . Extended abstracts of 3 pages in length need to be submitted before the deadline on February 15, 2010, on the conference website.

Looking forward to see you all during an exciting and thought-provoking meeting in Honolulu, Hawaii.

Sincerely yours,

**Rommel Noufi**, *National Renewable Energy Laboratory (NREL), USA*  
Area 2 Chair

**Tokio Nakada**, *Aoyama Gakuin University, Japan*  
**Hans-Werner Schock**, *Helmholtz-Zentrum Berlin, Germany*  
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