




Second workshop



***Sustainable Energy Future:  
Focus on Organic Photovoltaics***

*The goals of this workshop are to:*

- ☀ Review the current state of research activities in nanomaterial-based organic photovoltaics
- ☀ Introduce in-house capabilities for synthesis and measurements at CNMS and SNS
- ☀ Facilitate discussions of user research proposals and opportunities for collaboration among attendees



September 14-15, 2009

Oak Ridge National Laboratory

**Organizers:** Ilia Ivanov (CNMS) [ivanovin@ornl.gov](mailto:ivanovin@ornl.gov) (865) 771-6213, Bin Hu (UTK) [bhu@utk.edu](mailto:bhu@utk.edu) (865) 974-3946

Second workshop



# *Sustainable Energy Future: Focus on Organic Photovoltaics*

**Monday, September 14<sup>th</sup>, 2009**

- **8:45-9:00** Introduction
- **9:00-10:00** Prof. Alex Jen (University of Washington) Molecular Design and Interface Engineering for High Performance Polymer Solar Cells.
- **10:00-11:00** Prof. Luping Yu (The University of Chicago) New Semiconducting Polymers for Highly Efficient Polymer Solar Cells
- **11:00-12:00** Dr. Gang Li (Solarmer Energy Inc.) Improving Polymer Solar Cell through Morphology Control and Molecular Engineering
- **12:00-13:00** Lunch
- **13:00-13:40** Dr. Fernando Reboredo (ORNL)
- **13:40-14:40** Prof. Jiangeng Xue (University of Florida) Photocarrier behavior and nanostructures in molecular heterojunction photovoltaic cells.
- **14:40-15:40** Dr. Carl-Albrecht Schiller (Zahner Messtechnik, Germany) Spectroscopic Methods in Dye Sensitized and Organic Solar Cell Research




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# *Sustainable Energy Future: Focus on Organic Photovoltaics*

**Tuesday, September 15<sup>th</sup>, 2009**

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- 9:45-10:00** Organization announcements
  - 10:00-10:40** Dr. Kai Xiao (CNMS) Synthesis of organic nanowires for OPV.
  - 10:40-11:20** Dr. Kunlun Hong (CNMS) Novel and D-polymers for OPV.
  - 11:20-12:00** Prof. Bin Hu (University of Tennessee, Knoxville) Exciton Dissociation and Charge Transport Processes in Organic Solar Cells
  - 12:00-13:00** Lunch
  - 13:00-13:40** Dr. Ilia Ivanov (CNMS) Carbon nanotubes for OPV.
  - 13:40-14:20** Drs. Greg Smith, Jim Browning, Valeria Lauter (SNS) Neutrons for OPV- overview of SNS capabilities.
  - 14:20-14:30** Final remarks
  - 14:30-15:30** tour of CNMS OPV related facilities
  - 15:30- 16:30** tour of SNS

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# ***Sustainable Energy Future: Focus on Organic Photovoltaics***



***Molecular Design and Interface Engineering  
for High Performance Polymer Solar Cells.***

Prof. Alex Jen, University of Washington



***New Semiconducting Polymers for Highly  
Efficient Polymer Solar Cells***

Prof. Luping Yu, The University of Chicago



***Improving Polymer Solar Cell through  
Morphology Control and Molecular  
Engineering***

Dr. Gang Li, Solarmer Energy Inc.



***Spectroscopic Methods in Dye Sensitized  
and Organic Solar Cell Research***

Dr. Carl-Albrecht Schiller, Zahner, Germany



***Photocarrier behavior and nanostructures in  
molecular heterojunction photovoltaic cells.***

Prof. Jiangeng Xue, University of Florida



***Exciton Dissociation and Charge Transport  
Processes in Organic Solar Cells***

Prof. Bin Hu, University of Tennessee Knoxville



September 14-15, 2009