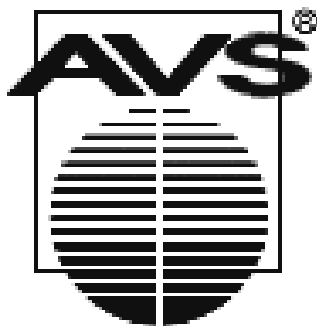


## Thin Films for Energy Storage and Conversion Applications

40th Annual Symposium  
American Vacuum Society – Michigan Chapter

Co-Sponsored by  
Michigan State University  
AVS-MI Chapter  
Fraunhofer USA, Inc.

### Program & Registration Information



Monday , August 25, 2014  
Michigan State University  
International Center  
427 N. Shaw Lane  
East Lansing, MI 48824

### Symposium Objective

The American Vacuum Society Symposium is a one-day conference dedicated to providing an overview of innovative scientific and technological developments in thin films and nanostructures. This year's symposium is focused on Thin Films for Energy Storage and Conversion Applications. We welcome poster presentations from all areas of thin film technology and any applications related to energy applications.

<http://www.avs.org/chapters/michigan/>  
<http://wwwdev.egr.msu.edu/avs2014/home/>

## Meeting Schedule

8:00 Registration, Coffee and Breakfast  
8:25 Opening Remarks

### Keynote Speakers

8:30 Stephen Forrest (U. of Michigan) Excitons in OLEDs and OPVs: Can't live with them, can't operate without them  
9:15 Nancy Dudney (ORNL) Thin film batteries

10:00 Coffee Break, Opening of Exhibition, and Poster setup

### Session I: ALD for energy applications

10:20 Chunmei Ban (NREL) Surface modification of silicon anodes for advanced Li-ion batteries  
10:50 Neil Dasgupta (U of Mich) Atomic layer deposition for energy conversion devices  
11:20 Mat Halls (Schrodinger) Recent advances in the quantum chemistry of semiconductor surface chemistry: automated precursor screening and alternative surface reaction pathways"

11:50 Equipment Exhibit & Lunch

### Session II: Thin film for energy applications

1:30 Tom Hamann (MSU) Photoelectrochemical investigation of thin film metal oxide electrodes for solar energy conversion"  
2:00 Jim Engstrom (Cornell) In situ, real time studies of organic semiconductor thin film growth  
2:30 Rebecca Anthony (MSU) Plasma for controlling the synthesis of semiconductor nanocrystals

### Closing Speaker

3:00 Zhibo Zhao (First Solar) CdTe thin film PV devices: unlocking high performance potential to reality

### Gathering

3:45 Poster Session, Equipment Exhibit, and Wine-and-Cheese Reception  
4:50 Award ceremony for student poster awards  
5:00 Symposium ends

For latest schedule, speaker bios and abstracts please check  
<http://wwwdev.egr.msu.edu/avs2014/home/>

**Location:** The symposium will take place in the International Center at Michigan State University,, located at 427 N. Shaw Lane, East Lansing, MI 48824.. Parking is available in Lot 39 & 79 adjacent to Stadium and Engineering Building.

### Student Poster Session

**Moderators:** Dr. Pilar Herrera-Fierro, Dr. Yue Qi, and Dr. Mark Cheng

The symposium includes a poster session pertaining to the topics of interests to the AVS, namely science and technology of materials, surfaces, interfaces, processing and vacuum science and technology. **Cash prizes will be awarded to the best posters. Students who submit posters receive free registration to the symposium.** . Students can submit an abstract via the symposium website <http://www.egr.msu.edu/avs2014/> before August 15th. Early submission is highly encouraged. **Poster size should be less than 32x40"**.

### Exhibition

As part of the 40th Annual Spring Symposium, an exhibition will be held to showcase related technologies and display analytical and processing equipment of interest to the attendees of the meeting. The exhibition will be open to all symposium attendees during the entire day. The exhibit is open to public viewing at no charge between 10 am and 5 pm.

Companies interested in exhibition may contact Dr. Pilar Herrera-Fierro ([pilarhf@eecs.umich.edu](mailto:pilarhf@eecs.umich.edu); 734.646.1399).

### Organizing Committee

Yue Qi, Richard Lunt, Thomas Schuelke,  
Pilar Herrera-Fierro, Yvone Townse

## Registration Form

40th Annual Spring Symposium,  
Thin Films in Energy  
Storage and Conversion Applications  
Monday, August 25, 2014

REGISTRATION FEE (please circle one)

	Before July 30	After July 30
Member	\$40	\$60
Non-member	\$50	\$75
Full-time student*	\$25	\$35

\*The registration fees are waived for AVS student members and student poster presenters (first author only)

TOTAL DUE \_\_\_\_\_

**New!** Three options to register:

1. Web registration: use this link

<http://wwwdev.egr.msu.edu/avs2014/home/>

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

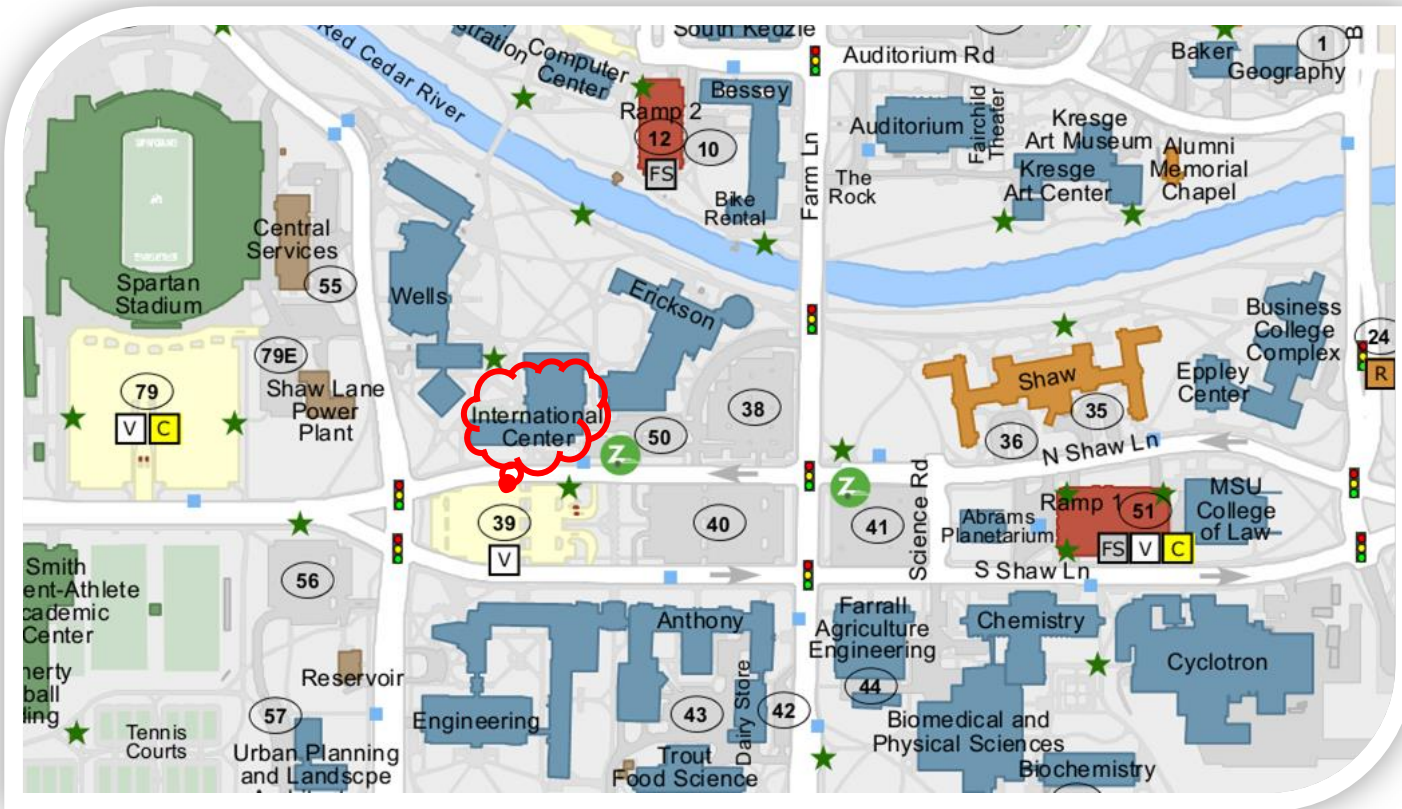
- Payment enclosed  
 Will pay at Symposium

Online payment is preferred.

Cash or check at the door can also be accepted.  
Check or money order should be payable to  
"Michigan Chapter AVS".



International Center, 427 N. Shaw Lane, East Lansing, MI 48824



Suggested public parking: lot 39 & 79.



For more information: <http://wwwdev.egr.msu.edu/avs2014/home/>

