



Science and Technology of Materials, Interfaces, and Processing

It's Symposium Time Again ... The Rocky Mountain Chapter of the AVS is holding its annual symposium and equipment exhibit September 21, 2011. This year the symposium will be FREE to all and features a session entitled *Energy Storage – Harnessing the Power*. This session will offer talks that will be of interest to the general public as well as scientists, engineers, technicians and managers. The symposium also includes an equipment exhibit, poster session, and a selection of AVS Short Courses.

2011 Annual Symposium & Equipment Exhibit Rocky Mountain Chapter AVS

7:45 AM	Registration begins
8:30–12:00	Oral Sessions
10:00 AM	Vendor Exhibit and Poster Session opens
12:00–2:00	Free Lunch in the Exhibit Area
2:00–3:30	Oral Sessions
3:30–6:00	Social time – Vendor Exhibit and Poster Session (Authors will be present from 4:00 PM to 5:15 PM)
5:30 PM	Student Poster Winners announced

Exhibit Information

The FREE exhibit of vacuum related equipment will be open from 10:00 AM to 6:00 PM, Wednesday September 21, 2011, at the Doubletree Hotel Denver North in Westminster, Colorado. The exhibit is open to all that are interested in attending. However, a FREE entry badge, available at the door, is required.

Leading manufacturers of vacuum, deposition, and analytical equipment will be represented. Anyone interested in keeping abreast of current innovations in the vacuum related industry is encouraged to attend the free exhibit. Symposium and exhibit registrants will receive complimentary tickets for the wine and cheese social that begins at 3:30 PM. Door Prizes will be given away during the Social Time (3:30 PM to 6:00 PM); you must be present to win.

For more information contact:

J Grant Armstrong – Carberry Technologies

Phone: (direct/cell) 720-350-2662

JGrantA@gmail.com

Dan Bouiliez – Plasma Process Group

dbouiliez@plasmaprocessgroup.com

In addition, Varian will present a 4-hour Vacuum Technology Overview. The Overview will start at 8:30 a.m.

For more information contact:

Tim Gessert at 303-384-6451 or tim.gessert@nrel.gov

Neil Peacock at 720-562-2336 or neil_peacock@mksinst.com

Student Poster Session – Wednesday September 21, 2011

The RMC-AVS Symposium includes the presentation of posters by students from universities and colleges in the Rocky Mountain Chapter region. The posters are judged on technical content and presentation. Cash prizes are awarded. First prize is \$500.00; Second prize is \$300.00; Third prize is \$200.00.

The authors of the posters will be available in the area with their posters from 4:00 PM to 5:15 PM. The awards will be announced at 5:30 PM.

For information on presenting a poster contact Lorelle Mansfield, NREL, phone: (303) 384-7884 or email: lorelle.mansfield@nrel.gov

Rocky Mountain Chapter Symposium Program Wednesday September 21, 2011 Energy Storage – Harnessing the Power

Compressed Air Energy Storage, Frank Barnes, CU Boulder

Smart Grid 1.0 to 3.0: Grid Integrated Communications, Steve Berens, Power Tagging

Wind to Hydrogen W2H2: Electrolyzer Pilot, Kevin Harrison, National Renewable Energy Lab

Impact of Intermittent Generation, Brannin McBee, Bentek Energy

Phase Change Materials: Energy Storage for the Building Industry, Brian Murphy, Fulcrum Technologies

Renewable Energy Integration with Energy Storage: Xcel Battery Projects, Frank Novachek, Xcel Energy

AVS Short Courses

Tuesday September 20 to Friday September 23, 2011

The RMC-AVS will sponsor Short Courses September 20 through September 23, 2011, at the Doubletree Hotel Denver North in Westminster, Colorado. Five courses will be offered, providing practical training in vacuum, characterization, and materials technology.

Reduced registration fees are available for full-time students.

- Students: \$150/day

The following courses will be offered:

Fundamentals of Vacuum Technology

2-day Tues-Wed - \$950 or

4-day Tues-Fri - \$1500

Instructors: Tim Gessert and Neil Peacock

Thin Film Deposition Nucleation, Growth, and Microstructural Evolution

Tues - \$575 - Instructor: Joseph Greene

Thin Film Characterization

Wed - \$575 – Instructor: Tom Christensen

Sputter Deposition

Wed-Thurs - \$850 – Instructor: Joseph Greene

Reactive Sputtering and Deposition

Fri - \$575 - Instructor: Joseph Greene

Vacuum System Troubleshooting - Leak Detection and Hardware Issues Affecting Performance

Wed - \$575 – Instructor: Tim Gessert

Prices increase after September 2, 2011

Short courses vary in length from one to four days and are from 8:30 AM to 4:30 PM daily. Course levels vary from introductory to advanced. Some courses provide specific training for technicians, scientists, and engineers who intend to use the technology every day; other courses provide overviews for supervisors, managers, and novices to these fields.

For more information or to register visit:

<http://www2.avs.org/chapters/rockymtn/courses/courses.html>

More information about the Rocky Mountain Chapter AVS

For more information about the Rocky Mountain Chapter of the AVS and its activities, visit our website at <http://chapters.avs.org/rockymtn> or the American Vacuum Society website at <http://avs.org> and click on “Inside AVS”, at the top of the page, then “Chapters, Groups, Divisions”, then “Rocky Mountain Chapter”.

Symposium Registration Form

The Symposium is **FREE** this year! Lunch included with your pre-registration.

Name: _____ Company: _____
Address: _____
City, State, Zip: _____
E-mail: _____ Phone: _____



Pre-Registration includes lunch, refreshments at the breaks, and the wine and cheese social. The registration desk opens at 7:45 a.m..

Remit registrations to:

RMC-AVS

c/o Paula Robinson E-mail: Paula.Robinson@nrel.gov

NREL Phone: 303-384-6491

1617 Cole Blvd.

Golden, CO 80401

Or register at:

<http://www2.avs.org/chapters/rockymtn/symposia/regform.html>

2011 Annual RMC-AVS Symposium and Equipment Exhibit

September 21, 2011

At the Doubletree Hotel Denver North

8773 Yates Dr.

Westminster, Colorado 80031

Presented by the

Rocky Mountain Chapter of the AVS

Hotel Information

Favorable rates for symposium participants are available at the Doubletree Hotel Denver North, located in Westminster, CO. The hotel is accessible from Denver International Airport by car or airport shuttle van. **Be sure to mention that you are attending the AVS symposium at the Doubletree Hotel when booking a room.** Detailed directions and a map are available on the hotel's web site.

http://doubletree.hilton.com/en/dt/groups/personalized/D/DENNSDT-AVS-20110918/index.jhtml?WT.mc_id=POG

Group Name: American Vacuum Society - Rocky Mountain Chapter

Group Code: AVS

Check-in: 19-SEP-2011

Check-out: 23-SEP-2011

Hotel Name: [Doubletree Hotel Denver - North](#)

Hotel Address: 8773 Yates Drive

Westminster, Colorado

80031-3680

Hotel Phone: 303-411-4000