



ESA Newsletter

Electrostatics Society of America - The Friendly Society

President's Message

I am excited that our 2008 ESA Annual Meeting will return to Minneapolis, MN and be held at the Ramada Mall of America. Al Seaver and Dan Lacks are doing a great job organizing our meeting and putting together a strong technical agenda. Please mark your calendar with these important dates:

Abstract Deadline	3/1/08
Manuscript Deadline	4/18/08
Early Registration Deadline	5/18/08
2008 ESA Annual Meeting	6/17-19/08

Our Annual Meeting provides a unique opportunity to learn new things, think of new ideas, greet colleagues from across the country and around the world, and establish new friendships with people that share our passion for electrostatic technologies and applications.

Electrostatics is relevant and important today. For example:

- ✎ New devices and sensors operate using interactions between charges.
- ✎ Electrostatic attraction and adhesion of particles and granules cause surface contamination.
- ✎ Cohesion between charged granules and powders affects material flow and handling.
- ✎ Coating of liquids, droplets and powders is accomplished or enhanced by electrostatic charge.
- ✎ Living cells interact electrically
- ✎ Living cells can be moved and sorted by externally applied electric fields.
- ✎ Electrostatic discharges damage electronic devices and systems.
- ✎ Electrostatic discharges can ignite solvents and powders.
- ✎ Measurements of electrical material properties, charge and currents are a continuing challenge.

Several trends insure that electrostatics will grow in importance.

- ✎ Devices and structures have increasingly smaller length scales.
- ✎ Polymers, plastics and composite materials are increasing used rather than metals.
- ✎ Products are becoming more complex (laminates, multiple layers, surface coatings, engineered surfaces, etc.) and are increasingly sensitive to contamination or electrostatic discharge.
- ✎ Manufacturing operations are becoming faster.
- ✎ Electronic devices are ubiquitous and becoming more ESD sensitive.

Our 2008 ESA Annual Meeting will be very interesting! I look forward to welcoming you to our meeting, to learning more about the technical challenges ahead, and to sharing new ideas.

Kelly Robinson,
ESA President

ESA-2008 Annual Meeting

Read, See and Hear Technical Papers – We Are Going to Do It.

In the last ESA Newsletter (Number 188, Nov/Dec 2007) the concept of an e-Proceedings of the ESA Annual Meeting was discussed where both the written papers and the talks (screen-capture of the PowerPoint slides with speaker's voice superimposed) would be freely accessible on the Internet. Your thoughts on this concept were solicited and several of you responded. All the responses were extremely positive. It was clear from the responses that this format would be of great use to our Membership as well as the electrostatics community at large.

As a result of your favorable input, we plan to reduce the concept to practice at ESA 2008. If all goes according to plan the changes for the authors and the presenters will be minimal. Here are the only changes:

Authors The two changes for authors are: 1) The authors, when obtaining their institution's clearance, should note the paper will be submitted to the Electrostatics Society of America for publication in the ESA e-Proceedings which also includes the paper being submitted to arXiv [an open-access (free) technical papers depository]. 2) The authors are also asked to submit (if applicable) their institution's locally assigned publication number for their specific paper. That is it; the ESA will take care of the rest.

Presenters The two changes for presenters are: 1) The presenters will be asked to wear a headband microphone that will be hardwired into the conference PC. 2) The presenters will be asked to use the mouse (rather than a laser pointer) to point to information on their PowerPoint slides. That is it; the ESA will take care of the rest.

arXiv The word arXiv is pronounced archive where the X stands for the Greek capital letter Chi. For those who want more information about arXiv go to the arXiv home page at: <http://www.arXiv.org> or better yet go to <http://www.arXiv.org/help> to get all the information needed to understand and discuss arXiv. Here is what arXiv asks you to agree to:

- ✦ I grant arXiv.org a perpetual, non-exclusive license to distribute this article.
- ✦ I certify that I have the right to grant this license.
- ✦ I understand that submissions cannot be completely removed once accepted.
- ✦ I understand that arXiv.org reserves the right to reclassify or reject any submission.

Stray question Why do you need your institution's locally assigned publication number? For the answer go to <http://www.arxiv.org/help/prep> and look under Title/Authors/Abstract/Report-no/etc. and you will see the Report-no field needs this number. So the simple answer is arXiv requests it. But it also serves another purpose in that, if you ever need to show an earlier publication date than arXiv, you have your own institution's paper numbering date-stamp referenced.

*For the Friendly Society – Al Seaver, 1995-1999
Past President of ESA*

ESA 2008 – It's a Schedule filled with Education and Fun

Both education and fun await you at the ESA 2008 Annual Meeting scheduled for Tuesday through Thursday June 17-19, 2008 in Minneapolis, Minnesota USA. All lodging and technical events will be at the Ramada – Mall of America hotel, and you will be struck by the hotel's uniqueness. Its interior was designed to pay homage to the Native American influence in Minnesota's history. Its halls display some of the most exquisite American Indian sculptures and artwork found anywhere. Its staff is warm and friendly, and the amenities are the type you want; such as complimentary shuttle service to and from the hotel to the airports (HHH and MSP), complimentary shuttle service to and from the Mall of America, and free high speed wireless Internet access throughout the hotel.

This year's meeting will start with a Welcome Reception from 11:00 AM till 1:00 PM on Tuesday June 17, 2008, with technical sessions following in the afternoon. Tuesday evening will be open so that you can visit the multi-featured Mall of America. For more information on this special attraction you can go to <http://www.MallOfAmerica.com>.

On Wednesday the day will be filled with technical talks, but in the evening you will go to Boom Island which is located in the heart of the historic Minneapolis Riverfront District. There you will walk onto the Minneapolis Queen – a new paddle-wheeler – for a delightful excursion down the Mississippi River.

Thursday will give you another full day of technical presentations with more opportunities to further your electrostatics education. In the evening a Happy Hour, the ESA Banquet, the Awards Ceremony, and the "Best Banquet Speaker Ever" will round out the conference. Afterwards, the ESA hospitality suite will be open for you to say your goodbyes. (cont'd. on page 5)

Electrostatics
Society of America



CALL FOR PAPERS

2008 ANNUAL MEETING OF THE ELECTROSTATIC SOCIETY OF AMERICA

The 2008 Annual Meeting of the Electrostatics Society of America will be held June 17-19, 2008. The venue is the Ramada Mall of America in Minneapolis, MN, USA.

Technical program

We invite papers in all scientific and technical areas involving electrostatics. Contributions can range from fundamental investigations of electrostatic phenomena to studies of the implications, mitigation, or utilization of electrostatic phenomena in diverse settings. Technical sessions will include:

- I. Atmospheric and space applications
- II. Biological and medical applications
- III. Breakdown and discharge
- IV. Flows, forces, and fields
- V. Materials behavior and processing
- VI. Measurement and instrumentation
- VII. Particle control and charging
- VIII. Safety and hazards

Abstract submission: Abstracts should be submitted online, at <http://www.electrostatics.org>

Student paper competition: Presentations by students (undergraduate and graduate) are eligible; please indicate if a student will present when submitting abstract.

Important dates

February, 2008	Detailed conference information available at http://www.electrostatics.org
March 1, 2008	Abstract submission deadline
March 17, 2008	Notification of paper acceptance
April 18, 2008	Final manuscripts due
June 17, 2008	Reception and late registration, 11 AM. Conference begins, 1 PM
June 19, 2008	Conference ends after evening banquet (Banquet: 7 PM – 10 PM)

Contact information

For questions about the technical program and abstract submission, contact the Technical Chair:
Prof. Daniel Lacks, Dept. of Chemical Engineering, Case Western Reserve University
daniel.lacks@case.edu, (216)368-4238

For other questions, contact the General Chair:
Dr. Albert Seaver, aseaver@electrostatics.us, (651)735-6760

	<h2>ESA 2008 Registration Form</h2> <p>June 17-19, 2008 Ramada – Mall of America Near the Mall of America and both the MSP & HHH Airports Bloomington, Minnesota USA</p>	Mail or e-mail this form to: Albert E. Seaver 7861 Somerset Ct. Woodbury, MN 55125 USA E-mail: aseaver@electrostatics.us Tel: 651-735-6760 (See ESA website for this form.)
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Date:			
Name:		Name on Badge:	
Affiliation:			
Address:			
City:	State:	Zip:	
Email:	Phone:		

CONFERENCE REGISTRATION FEES

Full Conference registration fee – ESA Members Includes Welcome Reception, lunches, snacks at breaks, Wednesday evening cruise down the Mississippi and Thursday evening banquet.	by 5/18/08	\$315	\$
	after 5/18/08	\$400	
Full Conference registration fee – Non-Members Includes all the above and a one year ESA membership.	by 5/18/08	\$335	\$
	after 5/18/08	\$420	
Student Registration – requires student ID Includes a one year ESA membership + everything in the Full Conference registration.		\$160	\$
Single Day Registration -- member or non-member Includes either Reception or lunch that day & snacks at breaks. Does not include the banquet		\$175	\$
Extra Mississippi River Cruise Tickets	#	@ \$35	\$
Extra Welcome Reception Tickets	#	@ \$15	\$
Extra Banquet Tickets	#	@ \$40	\$
TOTAL			\$

CONFERENCE REGISTRATION PAYMENT METHOD

<input type="checkbox"/>	I will pay on-line using Pay-Pal (www.electrostatics.org).
<input type="checkbox"/>	I have enclosed an international money order or check in \$US drawn on a US bank, made out to “ Electrostatics Society of America ”
<input type="checkbox"/>	I will pay at conference (sorry, no credit cards accepted)
Note: No matter which method of payment you choose, please either mail or e-mail this Registration Form to Al Seaver (addresses: see top right corner) by the registration due date to avail those rates.	

HOTEL ACCOMMODATIONS

Reservations can be made at the Ramada MOA (Ramada Mall of America) hotel. The special ESA Room Rate is \$89.00/night (not included in conference registration). This special rate is available for June 15-21, 2008. Reservations must be made by May 27, 2008 to qualify, but reserve rooms early to guarantee availability.

Reserve on-line at: www.ramadamo.com Click on the “Reservations” tab then click on the button “Make a Group Reservation” and then enter ELECTROSTA to get the special ESA rate. (Why Group button? -- ESA is a Group)

Or Reserve by phone: Call: 952-854-3411, and mention “Electrostatics Society of America” for these rates.

ESA-2008 Annual Meeting

Toni Seaver is planning some daytime activities for those (spouses, significant others, etc.) who are not attending the technical talks. If that is you, please contact her at tseaver@comcast.net as soon as possible so that she can include you in the final plans.

The ESA has a special hotel rate, but you are advised to make your hotel reservation early to get this rate (see the hotel information in the ESA 2008 Registration Form which can be found elsewhere in this newsletter and at the ESA website <http://www.electrostatics.org>). Also, the special hotel rate can be applied for up to two days before and up to two days after the conference for those who may want to stay a little longer.

Hope to see you at the conference!

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Past President of ESA*

Current Events

Rolling Out The Oil: Chemistry and microstructure together repel organic liquids

Carmen Drahl

Inspired by lotus leaves, scientists at MIT and the Air Force Research Laboratory have devised a route to super oil-repellent surfaces (Science 2007, 318, 1618). Materials that repel organic liquids could be used to clean up hazardous waste or to oil proof aircraft parts. Lotus leaves naturally repel water and have inspired many synthetic water-repellent surfaces. These surfaces work like wax on a car, inducing water droplets to bead up on contact and roll away. But organic liquids spread out and wet these surfaces, because compared with water, they have lower surface tension—the attractive force that clusters molecules into droplets.

A team led by two MIT professors, mechanical engineer Gareth H. McKinley and chemical engineer Robert E. Cohen, circumvented the surface tension problem by using specially designed material structures to make surfaces oil-repellent. According to Cohen, lotus leaves possess small structures that let water droplets ball up instead of spread out. The team reasoned that these features—bumps and nubs that curve underneath themselves—might be adapted to make oil-repellent surfaces.

To make curvy textures suitable for repelling organic liquids, the team took pointers from lotus leaves but altered both their surface chemistry and microscopic geometry. The right surface chemistry came from a polymer blend with an ultrahydrophobic material developed by researchers at Edwards Air Force Base, in California (C&EN, April 10, 2006, page 71). Using a process called

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Steve Cooper, Mystic Tan

Nathaniel Green, University of Bloomsburg

CALENDAR

✦ ESA-2008, June 17-19, 2008, Minneapolis, MN, USA
Contact: Al Seaver, Tel: 651-735-6760,
aseaver@electrostatics.us, or Daniel Lacks, Tel: 216-368-4238, daniel.lacks@case.edu, website:

<http://www.electrostatics.org>

✦ 16th Int'l. Conf. on Diel. Liquids, June 30-July 4, 2008, Poitiers, France, Contact: H. Romat, Tel: 33-(0)5-49-49-69-31, icdl2008@lea.univ-poitiers.fr, (abstracts due Oct. 15, 2008), info at

<http://lea.sp2mi.univ-poitiers.fr/icdl/>

✦ 6th Conf. of the French Electrostatic Society, July 7-9, 2008, Gif-Sur Yvette, France, Contact: Philippe Molinie, Tel: 33-(0) 1-69-85-15-25, sfe2008@sup-elec.fr, (title due Dec. 15, 2007), website:

<http://www.supelec.fr/invisfe2008/Welcome.html>

✦ 11th Int'l. Conf. of Electrostatics, May 27-29, 2009, Valencia, Spain, Contact: Dr. Pedro Segovia, Tel: (+34) 96 136 66 70, pedro.llovera@ite.es, website: <http://electrostatics.ite.es> (abstracts due Feb. 29, 2008)

✦ ESA-2009, June 16-19, 2009, Boston, MA Contact: Mark Horenstein, Tel: 617-353-5437, mnh@bu.edu, website:

<http://www.electrostatics.org>

Current Events (cont'd.)

electrospinning, the team created a tissue-thin microfiber material from the polymer blend that contained air pockets spaced and angled just right for cushioning oils at the surface. "Electrospinning can be scaled up to coat surfaces of various shapes and sizes," Cohen says, making it practical for oil-proofing applications. For example, the team gently wrapped microfibers around lotus leaves, creating coated surfaces that repel octane and hexadecane, as well as water.

(for more info and cool video go to <http://pubs.acs.org/cen/news/85/i50/8550notw1.html>)

Electrostatics
Society of America



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ESA Information

ESA Home Page: <http://www.electrostatics.org>

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Call for Papers, Registration Form,
& Other Details Inside