MAEBL

MEETING FOR ADVANCED E-BEAM LITHOGRAPHY

The Ohio State University
The Ohio Union • Cartoon Room
1739 N High Street • Columbus, Ohio 43210
Wednesday, April 3, 2019

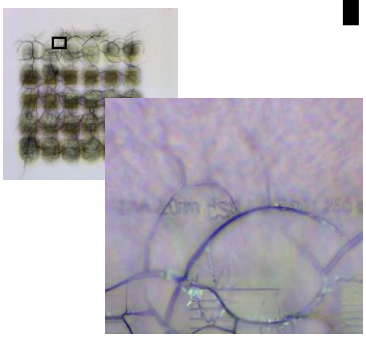
	Topic	Facilitator
07:30	Registration, Networking, Coffee and Light Breakfast	
08:30	Welcome/Opening Remarks	Aimee Price The Ohio State University
08:45	**DATA PREPARATION** A Photonics Application	Kevin Lister, Ph.D., Gerald Lopez, Ph.D.† University of Delaware †University of Pennsylvania
09:00	**TOOL OPERATION** A Cross Platform Panel Discussion Using the Photonics Application in the Previous Talk	Anthony James, Mark Mondol†, Guy Derose, Ph.D.‡ Sandia National Laboratory †Massachusetts Institute of Technology ‡California Institute of Technology
10:30	Coffee Break/Continued Discussion and Networking	
11:00	**COMMON CHALLENGES I** An Open Forum Discussion of Common Issues	Kevin Lister, Ph.D. University of Delaware
12:00	Group Photo and Networking Lunch/Coffee	
13:30	**STITCHING AND DRIFT** Controlling E-Beam Writing Order to Avoid Stitching and Drift Problems	Michael Rooks, Ph.D. Yale University
14:00	**DEVICE FABRICATION** Improvement of Silicon Waveguide Transmission by Advanced E-Beam Data Fracturing Strategies	N. Shane Patrick University of Washington
15:00	Coffee Break/Continued Discussion and Networking	
15:30	**NEW EBL RESIST AND PROCESS** Medusa 82: A Potential Alternative to HSQ	Gerald Lopez, Ph.D. University of Pennsylvania
15:50	**COMMON CHALLENGES II** Open Forum Discussion of Common Issues	Aimee Price The Ohio State University
16:55	Closing Remarks - Continued Discussion and Networking in The Ohio Union Pub	
18:00 - End Meeting		

This event is supported through sponsorship by The Ohio State University Nanotech West Lab, JEOL USA, Raith Nanofabrication, STS-Elionix, AllResist, LatticeGear and DisChem. Program is subject to change without notice.

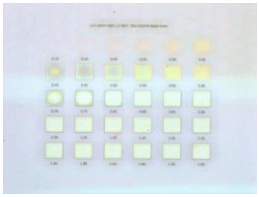
DisChem
CHEMISTRY FOR ADVANCED LITHOGRAPHY

DisCharge

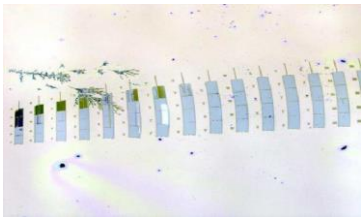
ELECTRON BEAM LITHOGRAPHY ANTI-CHARGING AGENT



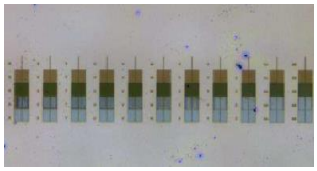
300 nm PMMA 950 A4 / PDMS on bulk Si without charge dissipation agent. Sudden charge accumulation and dielectric breakdown of PDMS can be seen by the cracks within the soft material.



WITH DisCharge: no charge accumulation. Structure appears as expected with no harm to PDMS.



300 nm ZEP520A on fused silica without charge dissipation agent. Poor shape fidelity of the tower pattern.



WITH DisCharge: no charge accumulation. Tower pattern appears as expected

DisCharge *Advantage in Electron Beam Lithography*

- Efficient charge dissipation in electron beam lithography (EBL) on a broad of resist materials (novalac resist, PMMA, HSQ, mr-PosEBR, CSAR 62, ZEP 520A)

  Improved shape fidelity, positioning and line pitch of EBL resist on insulated substrate materials (silicon, fused silica, quartz, glass, PDMS, etc.)

- Water based formulation with excellent wetting properties. Simple spin coat application provides 40 nm conductive film at 1000 RPM.

- Easy residue free removal by water or IPA rinse.

- Competitively priced. Idea for both research and industrial applications.

- Two year shelf life at room temperature. Highly stable permanently charged non-polymer formulation. No filtration required prior to use.

Please contact us to receive additional product information and no-charge product samples for evaluation.

DisChem, Inc.
17295 Boot Jack Rd, Suite A
Ridgway, PA 15853 USA

Tel: 814-772-6603
Fax: 814-772-0946
E-mail: info@dischemінc.com
Web Site: www.dischemінc.com