

**Materials Research Outreach Symposium  
February 4 & 5, 2014, Corwin Pavilion, University Center**

**Ania Jayich, Symposium Host  
Session 1, Tuesday Morning, February 4, 2014, Corwin Pavilion  
Session Chair: Glenn Fredrickson**

8:15 am	<b>Continental Breakfast</b>	
8:45 am	<b>Rod Alferness, Auhll Professor and Dean, College of Engineering</b>  <b>Michael Witherell, Vice Chancellor for Research</b>	<i>Welcome</i>  <i>UCSB College of Engineering update and overview</i>
9:00 am	<b>Yan Borodovsky, Intel Corp.</b>	<i>DSA Lithography - Expectations and Challenges</i>
9:30 am	<b>Grant Willson, University of Texas at Austin</b>	<i>Orienting Block Copolymers with High Interaction Parameters</i>
10:00 am	<b>Refreshment Break</b>	
10:30 am	<b>Peter Trefonas, Dow Electronic Materials</b>	<i>Designing for High Resolution Lithography using Assembled Block Copolymers: From Simple Linear Copolymers to Intricately Designed Materials</i>
11:00 am	<b>Nabil Laachi, Fredrickson Group, UCSB</b>	<i>Directed Self-Assembly of Block Copolymers: Insights from Field-Theoretic Simulations</i>
11:30 am	<b>Gurtej Sandhu, Micron</b>	<i>Emerging Memory Technology Materials - Opportunities and Challenges</i>
12:00 pm	<b>Lunch</b>	<b>Corwin Pavilion</b>

**Session 2, Tuesday Afternoon, February 4, 2014, Corwin Pavilion  
Session Chair, Ania Jayich**

1:30 pm	<b>John Martinis, UCSB</b>	<i>Design of a Superconducting Quantum Computer</i>
2:00 pm	<b>Jon Schuller, UCSB</b>	<i>Dielectric and Molecular Optical Antennas</i>
2:30 pm	<b>Lars Bjaalie, Van de Walle Group, UCSB</b>	<i>Complex Oxide Interfaces for Novel Electronic Applications</i>
3:00 pm	<b>Refreshment Break</b>	
3:15 pm	<b>Katharine Page, Los Alamos National Laboratory</b>	<i>Atomic Structure Studies for Nanoscale Material Insights</i>
3:45 pm	<b>James Rogers, aPEEL Technology, Inc.</b>	<i>Agricultural Skin Grafting: from a dream on Del Playa to field trials in Kenya</i>
4:00pm <b>Cheetham Lecture</b>	<b>Ellen Williams, University of Maryland</b>	<b><i>Research in the Energy Industry</i></b>
5:00 pm	<b>Symposium Banquet</b>	<b>Corwin Pavilion</b>

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**Session 3, Wednesday Morning, February 5, 2014, Corwin Pavilion  
Session Chair: Craig Hawker**

<b>8:30 am</b>	<b>Continental Breakfast</b>	
9:00 am	<b>Megan Valentine, UCSB</b>	<i>Mechanics of Mussel Adhesion</i>
9:30 am	<b>Joan Emma Shea, UCSB</b>	<i>Effects of Surfaces in Modulating Biopolymer Assembly</i>
10:00 am	<b>Refreshment Break</b>	
<b>10:30 am</b>	<b>Andrea Corrion, HRL Laboratories</b>	<i>GaN HEMT Materials and Devices for RF Applications</i>
11:00 am	<b>McLean Echlin, Pollock Group, UCSB</b>	<i>The TriBeam for Femtosecond Laser Aided 3D Tomography</i>
11:30 am	<b>Jinwoo Hwang, Stemmer Group, UCSB</b>	<i>Advanced Materials Characterization in Scanning Transmission Electron Microscopy</i>
<b>12:00 pm</b>	<b>Lunch</b>	<b>Corwin Pavilion</b>

**Session 4, Wednesday Afternoon, February 5, 2014, Corwin Pavilion  
Session Chair: Joan Emma Shea**

1:30 pm	<b>Rachel Segalman, UC Berkeley</b>	<i>Molecular Junctions, Polymers, and Composites for Thermoelectrics</i>
2:00 pm	<b>Ruth Schlitz, Chabiny Group, UCSB</b>	<i>Organic Thermoelectrics: Solution Processable Materials for Thermal Energy Conversion</i>
2:30 pm	<b>Mark Herrema, New Light Technologies, LLC</b>	<i>AirCarbon: Carbon-Negative Plastic, From Concept to Commercialization</i>
<b>3:00 pm</b>	<b>Refreshment Break</b>	
3:30 pm	<b>Cora Leibig, Segetis</b>	<i>Levulinic Acid: A Bio-based Building Block</i>
4:00 pm	<b>Kimberly See, Seshadri and Stucky Groups, UCSB</b>	<i>Beyond Li-ion: Conversion Reaction Systems for Next Generation Batteries</i>
<b>4:30 pm</b>	<b>Karen Wooley, Texas A&amp;M University</b>	<i>The Transformation of Natural Products into Engineering Polymers and Functional Nanoscopic Objects</i>
<b>5:00 pm</b>	<b>Poster Session &amp; Reception</b>	<b>Corwin Pavilion</b>