

**Session 1, Wednesday Morning, January 30, 2019, Corwin Pavilion, UC Santa Barbara**

*Session Chair: Ram Seshadri*

|          |  |  |
|----------|--|--|
| 8:15 am  | <i>Breakfast</i>   |  |
| 8:50 am  | <i>Welcome remarks from Dean <b>Rod Alferness</b> (College of Engineering, UC Santa Barbara)</i> |  |
| 9:00 am  | <b>Ram Seshadri</b><br>UC Santa Barbara  | The State of the MRL   |
| 9:30 am  | <b>Natalie Larson</b><br>Lawrence Berkeley Laboratory  | X-Ray Computed Tomography of Microstructure Evolution During Processing of Ceramic Matrix Composites |
| 10:00 am | <i>Refreshment Break</i>   |  |
| 10:30 am | <b>Phil Christopher</b><br>UC Santa Barbara  | Catalysts are Dynamic Materials  |
| 11:00 am | <b>Brent Melot</b><br>University of Southern California  | Holistic Design of Model Materials for Heterogeneous Catalysis                                       |
| 11:30 am | <b>Lior Sepunaru</b><br>UC Santa Barbara   | <i>In Situ</i> Detection and Characterization of Nanomaterials at the Single Entity Level            |
| 12:00 pm | <i>Lunch</i>   |  |

**Session 2, Wednesday Afternoon, January 30, 2019, Corwin Pavilion, UC Santa Barbara**

*Session Chair: Anton Van der Ven*

|   |  |  |
|---|--|--|
| 1:30 pm   | <b>Joshua Bocarsly</b><br>UC Santa Barbara       | Magnetocaloric Materials for Next-Generation Refrigeration and Waste Heat Recovery                                 |
| 2:00 pm   | <b>Raphaële Clément</b><br>UC Santa Barbara      | Cation-Disordered Lithium Transition Metal Oxyfluoride Cathodes  |
| 2:30 pm   | <b>Julija Vinckevičiūtė</b><br>UC Santa Barbara  | Electronic Structure Implications for Atom Migration in Layered Cathode Materials                                  |
| 3:00 pm   | <i>Refreshment Break</i>                         |  |
| <b>CHEETHAM LECTURE [CHAIR BY CRAIG HAWKER]</b> |  |  |
| 3:30 pm   | <b>Clare Grey FRS</b><br>University of Cambridge | Developing and Applying New Tools to Understand How Materials for Li and "Beyond-Li" Battery Technologies Function |
| 4:30 pm   | <i>Posters and Reception</i>                     |  |

---

**Session 3, Thursday Morning, January 31, 2019, Corwin Pavilion, UC Santa Barbara**

*Session Chair: Chris Van de Walle*

|          |  |  |
|----------|--|--|
| 8:30 am  | <i>Breakfast</i>                             |  |
| 9:00 am  | <b>Tom Devereaux</b><br>Stanford/SLAC        | Theoretical Understanding of Photon Spectroscopies in Correlated Materials                             |
| 9:30 am  | <b>Dave Righer</b><br>Raytheon               | III-V Superlattice Materials for Infrared Sensors  |
| 10:00 am | <i>Refreshment Break</i>                     |  |
| 10:30 am | <b>Nadya Mason</b><br>University of Illinois | Electronic Transport in Strain-Engineered Graphene   |
| 11:00 am | <b>Joshua Lequieu</b><br>UC Santa Barbara    | Architecture and Asymmetry in Block Polymer Self-Assembly  |
| 11:30 am | <b>Meredith Wiseman</b><br>DSM               | Processable Multiple Network Composite Design Using Insights from Sequential Interpenetrating Networks |
| 12:00 pm | <i>Lunch</i>                                 |  |

**Session 4, Thursday Afternoon, January 31, 2019, Corwin Pavilion, UC Santa Barbara**

*Session Chair: Chris Bates*

|         |   |   |
|---------|---|---|
| 1:30 pm | <b>Benny Freeman</b><br>UT Austin             | Surface Modification of Porous Polymer Membranes to Reduce Fouling by Oil/Water Emulsions     |
| 2:00 pm | <b>Nancy Eisenmenger</b><br>Nike              | Rheology and Kinetics of Thermoplastic Urethanes During Processing                            |
| 2:30 pm | <b>Matthew Kade</b><br>Tricida                | Slowing the Progression of Chronic Kidney Disease Through the Treatment of Metabolic Acidosis |
| 3:00 pm | <i>Refreshment Break</i>                      |   |
| 3:30 am | <b>Paresh Ray</b><br>Jackson State University | Molecular Designs of Multi-Photon Absorbing Materials for Bioimaging Applications             |
| 4:00 pm | <b>Caitlin Sample</b><br>UC Santa Barbara     | Metal-Free Synthesis of Functional Silicones  |
| 4:30 pm | <i>Posters and Reception</i>                  |   |

---