

15th Annual Amgen-Clorox Graduate Student Symposium

8:00 AM	Breakfast	ESB Courtyard
8:30 AM	Welcome Rachel Segalman , <i>E.N. Kramer Professor and Department Chair</i>	ESB 1001
8:40 AM	Session I: Solid State Materials Synthesis and Characterization	ESB 1001
Michael Schmithorst	Distributions of Al atoms in chabazite zeolite frameworks & their effects on catalytic reaction properties	
Tobias Mazal	Modeling impurity-mediated crystal growth via kMC	
Maxwell Berkow	Understanding the kinetic processes and thermodynamic driving forces to incorporate transmembrane proteins in inorganic/organic hybrid materials	
Jordan Finzel	Dynamic coordination of dilute alloys: Short-range restructuring with long-term effects	
Muna Saber	Ab initio property predictions of Wadsley-Roth phases for high power density lithium-ion battery applications	
10:20 AM	Break	ESB Courtyard
10:30 AM	Keynote Talk Hannah Murnen , <i>Activate Anywhere: Membranes from benchtop to commercial scale</i>	ESB 1001
10:55 AM	Session II: Membrane Science—Transport and Molecular Interactions	ESB 1001
Varun Hegde	A two-phase model that unifies and extends the classical models of membrane transport	
Sally Jiao	Inverse design of pore wall chemistry to control solute transport and selectivity	
Thomas Webber	Advanced magnetic resonance tools to investigate poly(ethylene oxide) hydration	
Dennis Robinson Brown	Decoding the molecular-scale determinants of antifouling at polymer membrane selective layers	
Audra DeStefano	Sequence-defined polymers as a platform to understand interfacial water	
12:35 PM	Lunch Break	ESB Courtyard
1:10 PM	Poster Session	ESB Courtyard
1:50 PM	Session III: Bioengineering	ESB 1001
Patrick Leggieri	Model-driven design of anaerobic consortia for lignocellulose valorization	
Kellie Heom	Targeted rRNA depletion for efficient RNA-seq in microbial monocultures and co-cultures	
Stephen Lillington	Fungal cellulosomes as a platform for stimuli-responsive protein assembly	
David Podorefsky	Simultaneous measurement of DNA methylation and genome-nuclear lamina interactions in single cells	
3:10 PM	Break	ESB 1001
3:20 PM	Session IV: Complex Fluids and Soft Matter	ESB 1001
Chelsea Edwards	Structural evolution of coacervate emulsions from initial polyelectrolyte mixing	
Julia Fisher	Understanding interfacial composition and structure of lipid-based surfactant monolayers for treatment of pulmonary diseases	
Parth Shah	Microscale steering of colloidal particles using chemical gradients	
My Nguyen	Multiscale simulation of complex coacervates with molecularly-informed field theories from systematic, bottom-up coarse-graining	
Kimberlee Keithley	Coherent states field theory: Bridging polymers and ultracold quantum gasses	
5:00 PM	Conclusion	ESB 1001
5:30 PM – 8:30 PM	Dinner & Awards	Mosher Alumni House