

2012 Schoenborn Graduate Research Symposium

Coffee 8:00 – 8:30 AM

Oral Presentations 8:30 – 10:00 AM

- 8:30 AM **Prasenjit Sarkar**
Differentiation of Trophectoderm sub-lineages from human embryonic stem cells
- 9:00 AM **Christina Tang**
High temperature biocatalyst immobilization on nanofibrous supports
- 9:30 AM **Inci Ozdemir** (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/3.png>)
Lignocellulose biodegradation by extremely thermophilic bacteria: Critical role of surface layer domain proteins in attachment to and hydrolysis of complex plant polysaccharides

COFFEE BREAK 10:00 – 10:30 AM

Oral Presentations 10:30 AM – 3:00 PM

- 10:30 AM **Shoeb Ahmed**
Application of elastomer networks as functional materials for cell adhesion and migration studies
- 11:00 AM **Andrew Loebel**
Performance of surface modified carbonized nanofibers as Li-ion anodes
- 11:30 AM **Bo Gong**
Atomic layer deposition on polymer substrates

Lunch 12:00 – 1:00 PM

Ying Liu

1:30 PM

Self-folding of pre-stressed polymer using local light absorption: mechanism study and applications

2:00 PM

Casey Galvin (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/2.png>)
Functional and patterned surfaces via organosilane vapor deposition

2:30 PM

Emily Curtis (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/1.png>)
Multiscale modeling for phospholipid bilayer simulations

Poster Session 3:00 – 4:30 PM

Ezinne Achinivu

Selective extraction of lignin using protic ionic liquids (PILs) – A novel biomass pretreatment method

Josh AllenSolvent-LiBF₄ phase diagrams, ionic association and solubility – cyclic Carbonates and Lactones**Sarah Atanasov** (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/3.png>)

Molecular layer deposition of poly(3,4-ethylenedioxy-thiophene)

Erich Bain

Stable initiator for surface-grafted radical polymerization

Mandi Burns

Cyclodextrin-chitosan nanofibers

Preeta Datta

Frontal polymerization in confined spaces

Sang Don Han

Delving into the Properties and Solution Structure of Nitrile-Lithium Difluoro(oxalato)borate (LiDFOB) Electrolytes for Li-ion Batteries

Aaron HawkinsUtilizing the carbon fixation pathway from the extremely thermoacidophilic archaeon *Metallosphaera sedula* for non-photosynthetic electrofuel production

Feng He

Chemical looping gasification with oxygen uncoupling

Alina Higham

Nanofibers of water-soluble polymers via foam electrospinning

Jessica Jenkins

Progress towards modeling multifunctional living paints: Thin biocomposite coatings of live cells and latex particles deposited by continuous convective assembly

Chris Johnson

Novel material platform for detection of pathogens, chemical warfare agents, and biological threats

Heath Johnson

Microscopy and analysis of the dynamic interplay between PI3K and Rac signaling and the actin cytoskeleton

Marc Kai

Determination of the role of shape, size, and flexibility of nanoparticles on biodistribution

Mohammad Khan (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/1.png>)

(<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/1.png>) Engineering the yield properties of an oxide skin on a liquid metal alloy

David Latshaw

The simulation of amyloid beta in the presence of aggregation inhibiting compounds

Josh McClure

Dioxygen electro-reduction study of metal-free nitrogen-doped carbon nanowalls grown using PECVD

Daniel Morales

Hydrogels and liquid metals: Soft matter actuation devices

Moaataz Mousa (<https://www.cbe.ncsu.edu/wp-content/uploads/2016/07/2.png>)

Effect of temperature and gas velocity on atomic layer deposition at atmospheric pressure

Arpan Mukherjee

Metal-mobilizing thermoacidophiles have different capacities to tolerate and solubilize uranium

Katherine Phillips

Effect of carbon pore morphology on solvation of RbBr solutions

Alex Richter

Synthesis and characterization of environmentally friendly nanoparticles

Lauren Ridge

Predicting the nature of the protein corona surrounding nanoparticles

Phillip Schoch (and C. Galvin)

Anti-fouling surface coatings based on zwitterionic polyelectrolyte brushes

Vikram Seshadri

Pyrolysis and combustion of biomass-related compounds

Keyi Sun

Catalytic deoxygenation of caprylic acid over PdAu/C

Tian Tian

Synthesis of fibers and other morphologies from polymer solutions by shear-nanospinning technique

Oscar Bernal Zúñiga

Engineering highly reactive microbial coatings and microbial paper as model systems for biomimetic leaves