

# Chemical Engineering

Session |

Room: 102 Spalding

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10:00 - 10:20 AM	<b>Yuanyi Dong</b>	Determining the Cytotoxicity of and Cell Tolerance to Bioorthogonal Non-Canonical Amino Acid Tagging	David A. Tirrell <i>Ross McCollum-William H. Corcoran Professor and Professor of Chemistry and Chemical Engineering</i> Alborz Mahdavi <i>Graduate Student in Bioengineering</i>
10:20 - 10:40 AM	<b>Helen Y. Luo</b> <i>Amgen Scholar</i>	A Model System for the Chemical Synthesis of Multivalent Antibody Structures	David A. Tirrell <i>Ross McCollum-William H. Corcoran Professor and Professor of Chemistry and Chemical Engineering</i> James A. Van Deventer <i>Graduate Student in Chemical Engineering</i>
10:40 - 11:00 AM	<b>Karthik Narsimhan</b>	Exploring Evolutionary Pathways of Improved Enzymatic Activity in Different Amino Acid Compositions	David A. Tirrell <i>Ross McCollum-William H. Corcoran Professor and Professor of Chemistry and Chemical Engineering</i> Frank Truong <i>Graduate Student in Chemical Engineering</i>
11:00 - 11:20 AM	<b>Dongying Shen</b> <i>Richard T. Jones SURF Fellow</i>	The Effect of Underlying Substrate Compliance on the Maturation of Cell-Cell Contacts in Multi-Cellular Epithelial Aggregation	Anand R. Asthagiri <i>Assistant Professor of Chemical Engineering</i> Jin-Hong Kim <i>Graduate Student in Bioengineering</i>
11:20 - 11:40 AM	<b>Kevin T. Welch</b>	Computational Modeling of Nanoparticles Under Laminar Flow Conditions	Krishnendu Roy <i>Associate Professor of Biomedical Engineering, The University of Texas at Austin</i> Anand R. Asthagiri <i>Assistant Professor of Chemical Engineering</i>
11:40 AM - 1:00 PM	<b>LUNCH</b>		

1:00 - 1:20 PM	<b>Lucas A. Hartsough</b> <i>Thomas C. Hays SURF Fellow</i>	The Creation of a Highly Thermo-Stable and Highly Active P450 From a Chimeric Parent	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Martina N. Carbone <i>Graduate Student in Chemical Engineering</i>
1:20 - 1:40 PM	<b>Arvind Kannan</b> <i>Richter Scholar</i>	Engineering New Strategies for Improving Cellulose Hydrolysis: A Multifaceted Approach	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Pete J. Heinzelman <i>Postdoctoral Scholar in Biochemistry</i>
1:40 - 2:00 PM	<b>Shannon R. Mohler</b>	Creating a Diverse Group of Thermostable CBHI Cellulases for Use in Biofuel Applications	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Pete J. Heinzelman <i>Postdoctoral Scholar in Biochemistry</i>
2:00 - 2:20 PM	<b>Xinlin Yu</b>	Cellulase Engineering: Multi Carbohydrate Binding Modules to Improve Activity of HJPLUS	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Pete J. Heinzelman <i>Postdoctoral Scholar in Biochemistry</i>
2:20 - 2:30 PM	<b>BREAK</b>		
2:30 - 2:50 PM	<b>Shruti Mishra</b> <i>Edward W. Hughes</i> <i>SURF Fellow</i>	Directed Evolution of Fungal Cellulase Toward Improved Hydrolysis of Cellulose	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Indira Wu <i>Graduate Student in Bioengineering</i>
2:50 - 3:10 PM	<b>Albert H. Ng</b> <i>Richter Scholar</i>	Exploring the Role of Higher-Order Energetic Effects in Protein Structure	Frances H. Arnold <i>Dick and Barbara Dickinson</i> <i>Professor of Chemical Engineering and Biochemistry</i> Christopher Snow <i>Postdoctoral Scholar in Chemical Engineering</i>

3:10 - 3:30 PM

**Aaron M. Levine**

Enzyme Ordering in  
Cellulosomes

Jamie H. Cate  
*Associate Professor of Biochemistry  
and Molecular Biology, University  
of California, Berkeley*  
Veronica Zepeda  
*Graduate Student in Molecular  
and Cell Biology, University of  
California, Berkeley*  
Frances H. Arnold  
*Dick and Barbara Dickinson  
Professor of Chemical Engineering  
and Biochemistry*

3:30 - 3:50 PM

**Gregory J. Rubinstein**  
*Arthur R. Adams SURF Fellow*

Coarse-Graining of Ionic  
Interactions With Amino Acids

Garegin Papoian  
*Assistant Professor of Chemistry,  
University of North Carolina at  
Chapel Hill*  
John H. Seinfeld  
*Louis E. Nohl Professor and  
Professor of Chemical Engineering*