

Chemical Engineering

Session **E**

Room: 135 Gates-Thomas

1:20 - 1:40 PM	Amelia Saffron <i>Professor Fredrick H. Shair SURF Fellow</i>	Validation of cryolite as a proxy porous media for bacterial models	Sujit Datta <i>Professor of Chemical Engineering, Bioengineering, and Biophysics</i> Pablo Bravo <i>Postdoctoral Scholar Research Associate in Chemical Engineering</i>
1:40 - 2:00 PM	Grace F. Davis <i>William N. Lacey SURF Fellow</i>	Enhancement of heat transfer in porous materials with polymer solution flows	Sujit Datta <i>Professor of Chemical Engineering, Bioengineering, and Biophysics</i> Craig Singiser <i>Graduate Student in Chemical Engineering</i>
2:00 - 2:20 PM	Lila I. Rodriguez-Aceves <i>Edward W. Hughes SURF Fellow</i>	Visualizing and understanding spatial microbial dynamics of free-living vs. symbiotic nitrogen-fixing bacteria in a novel cryolite soil proxy system	Sujit Datta <i>Professor of Chemical Engineering, Bioengineering, and Biophysics</i> Pablo Bravo <i>Postdoctoral Scholar Research Associate in Chemical Engineering</i>
2:20 - 2:40 PM	Maryam Malkosh <i>Dr. and Mrs. Daniel C. Harris SURF Fellow</i>	Developing systems for multi-modal measurements of microbial activity	Sujit Datta <i>Professor of Chemical Engineering, Bioengineering, and Biophysics</i> Pablo Bravo <i>Postdoctoral Scholar Research Associate in Chemical Engineering</i>
2:40 - 3:00 PM	Alexis N. Lindenfelser <i>David S. Koons SURF Fellow</i>	PdCu catalyst engineering for electrochemical transformation of 1-butene to 2-butanone	Karthish Manthiram <i>Professor of Chemical Engineering and Chemistry; William H. Hurt Scholar</i> Chenyu Jiang <i>Graduate Student in Chemistry</i>
3:00 - 3:10 PM	BREAK		

3:10 - 3:30 PM	Aarohi R. Patel <i>John Stauffer SURF Fellow</i>	Measuring energy usage in research labs towards reducing Caltech's energy consumption	Julia A. Kornfield <i>Elizabeth W. Gilloon Professor of Chemical Engineering</i> Dennis L. Ko <i>Staff Scientist in Chemical Engineering</i> Tasha Cammidge <i>Green Labs Manager</i> Maximilian Christman <i>Manager of Sustainability Programs</i>
3:30 - 3:50 PM	Bhakti P. Ahir Ahir <i>John Stauffer SURF Fellow</i>	Enhancing Motion and Sash Height (MASH) alarms to increase fume hood energy efficiency	Julia A. Kornfield <i>Elizabeth W. Gilloon Professor of Chemical Engineering</i> Dennis L. Ko <i>Staff Scientist in Chemical Engineering</i> Tasha Cammidge <i>Green Labs Manager</i> Maximilian Christman <i>Manager of Sustainability Programs</i>
3:50 - 4:10 PM	Shrila Esturi	Utilizing nuclear magnetic resonance spectroscopy and machine learning for tree health monitoring	Jeffrey Reimer <i>Professor of Chemical and Biomolecular Engineering, University of California, Berkeley</i> Sophia Fricke <i>PMRC Fellow in Chemistry, University of California, Berkeley</i> Paul O. Wennberg <i>R. Stanton Avery Professor of Atmospheric Chemistry and Environmental Science and Engineering</i>
4:10 - 4:30 PM	Noor E. Ibrahim <i>John Stauffer SURF Fellow</i>	Ultrasonic control of ion channel functions via a sonogenetic redox switch	Mikhail G. Shapiro <i>Max Delbrück Professor of Chemical Engineering and Medical Engineering; Investigator, Howard Hughes Medical Institute</i> Hengyu Li <i>Graduate Student in Chemistry</i>
4:30 - 4:50 PM	Sudarshanagopal Kunnavakkam <i>Arthur A. Noyes SURF Fellow</i>	Building cell radios for deep-tissue wireless detection of biochemical factors	Mikhail G. Shapiro <i>Max Delbrück Professor of Chemical Engineering and Medical Engineering; Investigator, Howard Hughes Medical Institute</i> William Benman <i>Postdoctoral Scholar Research Associate in Chemical Engineering</i>