

CHEMICAL ENGINEERING DEPARTMENT  
10.992 Student Seminar Series  
SPRING 2021

**All Student Seminars are MIT ONLY events and will be held via Zoom unless otherwise noted.**

<b>MONDAY, January 4<sup>th</sup></b>		
3:00 pm	Sachin Bhagchandani	“Toward, Safe, Systemic Delivery of Synthetic Immunomodulators for Treatment of Metastatic Disease”
3:30 pm	Matthew Dobbins	“Multiscale Modelling of Blown Film Extrusion”
<b>MONDAY, January 11<sup>th</sup></b>		
3:00 pm	Nicholas Townsend Haas	“Towards Scalable and Rapid Organ-scale Transcriptomics”
3:30 pm	Bertrand Neyhouse	“Low-dimensional Models for Predicting Material Performance in Redox Flow Batteries”
<b>MONDAY, January 25<sup>th</sup></b>		
3:00 pm	Haley Beech	“Adding Loops to the Equation for Polymer Network Swelling with Experiments and Theory”
3:30 pm	Anthony Tabet	“Multi-functional Hydrogel Neural Interfaces”
4:00 pm	Fabian Mohr	“Smart Process Data Analytics for Manufacturing Processes”
<b>MONDAY, February 1<sup>st</sup></b>		
3:00 pm	Hyunhee Lee	“Branched Metal-organic Frameworks (MOFs) for Efficient Gas Separation”
3:30 pm	Elvin Yang	“Engineering Yeast for Human Glycan Production”
4:00 pm	Taigyu Joo	“Precise Free Volume Modification of Polymer Membranes for Gas Separations”
<b>MONDAY, February 8<sup>th</sup></b>		
3:00 pm	Lauren Clarke	“Thermodynamic Modeling of CO <sub>2</sub> Separation Systems with Soluble, Redox-Active Capture Species”
3:30 pm	Brandon Johnston	“Understanding the Role of Dendrimer Surface Modifications for Osteoarthritis Drug Delivery”
<b>MONDAY, February 22<sup>nd</sup></b>		
3:00 pm	Kyle Lennon	“Exploring Hidden Dimensions in Soft Materials”

3:30 pm	Marc Berliner	“Open-source High-performance Computing Implementation of the Porous Electrode Theory Model for Lithium-ion Batteries”
<b>MONDAY, March 1<sup>st</sup></b>		
3:00pm	Brianna Lax	“Mechanism Elucidation of Anti-CTLA-4 Antibodies”
3:30pm	Naveen Arunachalam	“Design Space Considerations for High-Throughput Transition Metal Complex Discovery”
<b>MONDAY, March 15<sup>th</sup></b>		
3:00 pm	Alexander Khechfe	“Electrochemical Promotion of Acid Catalysis”
3:30pm	Leerang Yang	“A Computational Approach to Inducing Broadly Neutralizing Antibodies Against Highly Mutable Pathogens”
4:00 pm	Dennis Shi	“Development of a siRNA Delivery System to Peritoneal Myeloid Cells for Cancer Immunotherapy”
<b>MONDAY, March 29<sup>th</sup></b>		
3:00 pm	Patrick Andrew Asinger	“Predicting and Optimizing Li-ion Battery Lifetimes with Machine Learning”
3:30pm	Minju Chung	“Chlorine-Mediated Electrochemical Ethylene Oxidation in Saline Water”
<b>MONDAY, April 5<sup>th</sup></b>		
3:00 pm	Spencer (Weikun) Zhu	“Controlled Integration of Nanocrystals into Functional Structures”
3:30pm	Keith Ming Hong Cheah	“Development of a Cell-Permeable Protein Therapeutic”
<b>MONDAY, April 12<sup>th</sup></b>		
3:00pm	Nathan Rebello	“Developing Tools for BigSMILES in Polymer Informatics”
3:30 pm	Matthew VanBeek	“Effect of Memory B Cell Dynamics on Immune Responses”
<b>MONDAY, April 26<sup>th</sup></b>		
3:00 pm	Allen Jiang	“Development of a Self-Adjuvanting mRNA Vaccine Platform Technology against COVID-19”
3:30pm	Amber Phillips	TBA

<b>MONDAY, May 3<sup>rd</sup></b>		
3:00 pm	Huanhuan Tian	“Separation by Shock Electrodialysis”
3:30pm	Deepak Subramanian	“Developing Methods of Selective, Location-specific Drug Delivery in the Gastrointestinal Tract”
4:00 pm	Grace Noel	“Flexible Piezoelectric Fiber Enabling Fabric-based Microphones”
<b>MONDAY, May 10<sup>th</sup></b>		
3:00 pm	Ryan Hawtof	“Designing a Novel Shock Tube Apparatus for Kinetics Research”
3:30pm	David Lundberg	TBA