

CHEMICAL ENGINEERING DEPARTMENT
10.991 Student Seminar Series
FALL 2023

All Student Seminars are MIT ONLY events and will be held in-person in room 66-110 unless otherwise noted.

MONDAY, September 11th		
3:00 pm	Brian Smith	Safety Training
MONDAY, September 18th		
3:00 pm	Daniel Markiewitz	“Unification of Nanofluidics and Biological Nanochannels through Local Electroneutrality Breakdown”
MONDAY, September 25th		
3:00 pm	Devosmita Sen	“Quantifying Cyclic Topology in Polymer Networks”
3:30 pm	Jun Law	“The Role of Negative Emission Technologies in a Net-Zero Electricity and Hydrogen Production System”
4:00 pm	Sayandeep Biswas	“Design of Liquid Organic Hydrogen Carrier (LOHC) Powertrain to Decarbonize Long-haul Trucking”
MONDAY, October 2nd		
3:00 pm	Philippe Jean-Baptiste	“Functional Hollow Fibers Made from Polymers of Intrinsic Microporosity (PIMs) for Membrane-Based Separations”
MONDAY, October 16th		
3:00 pm	Thomas Sheehan	“Impacts of Nanocrystal Assembly Structure on Exciton Diffusion in Lead Halide Perovskites”
3:30 pm	Joules Provenzano	“Trace Analysis of Pesticide Degradation using High-resolution LC-MS”
MONDAY, October 23rd		
3:00 pm	Alexis Hocken	“Rescuing Small Format Plastics from Falling through the Cracks”
3:30 pm	Elizabeth Fink	“Spatiotemporal Engineering of Cancer Immunotherapy”

MONDAY, October 30th		
3:00 pm	Lucas Attia	“Templating Drug Nanoparticles in Hydrogels for Next Generation Pharmaceutical Formulation”
3:30 pm	Thomas Porter	“Decoding Adaptive Plant Signaling Using Carbon Nanotube Sensors”
MONDAY, November 6th		
3:00 pm	Anna Brenner	“Tunable Catalytic Systems for Selective Plastic Depolymerization via Bifunctional Hydrocracking”
3:30 pm	Shuyan Jin	“Anti-HIV-1 Neutralizing Antibody Screening via High-throughput Droplet Microfluidics”
4:00 pm	Barathkumar Baskaran	“N-nitrosodimethylamine Destruction in Drinking Water:”
MONDAY, November 13th		
3:00 pm	Trent Weiss	“Characterizing the Impact of Oligomerization on Redox Flow Cell Performance”
3:30 pm	David Krum	“PROTAC Antibody Drug Conjugates”
MONDAY, November 20th		
3:00 pm	Alexis Dubs	“Continuous Manufacturing Testbed Development for a Monoclonal Antibody Production Process”
3:30 pm	Karl Westendorff	“Electrically-Driven Proton Transfer Promotes Brønsted Acid Catalysis by Orders of Magnitude”
4:00 pm	Kariana Moreno Sader	“Assessing the Potential of Electrification to Decarbonize Long-Haul Trucks in the US”
MONDAY, November 27th		
3:00 pm	Jinwook Rhyu	“Surrogate Modeling Approach to Replace the Integral Term for Computationally Efficient Forward Simulation of Yeast Manufacturing”
3:30 pm	Alex Zappi	“Bioproduction of Monomers for Biodegradable Polyester Ureas and Advancing Polymer Biodegradation Testing Methods”
MONDAY, December 4th		
3:00 pm	Christopher Canova	“Mechanistic Modeling of Viral Particle Production”
3:30 pm	Pedro Seber	“Developing and Applying AI for Biopharmaceuticals and Biomanufacturing”
MONDAY, December 11th		
3:00 pm	Emma Peterman	“Design of a Single Vector, Multistable Gene Circuit for Cell-fate Determination”
3:30 pm	Shaylin Cetegen	“Nonsmooth Modeling of Liquid Air Energy Storage Systems”