

CHEMICAL ENGINEERING DEPARTMENT
10.992 Student Seminar Series
SPRING 2026

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

MONDAY, February 9th		
3:00 pm	Junghyun Yoon	“Quantum Theory of the Metal Dependence of Electrocatalysis”
MONDAY, February 23rd		
3:00 pm	Wallace Tan Gian Yion	“Efficient Algorithms for Stochastic Model Predictive Control of Chemical Processes”
3:30pm	Yein Yoon	“Tröger’s Base Polymers as a Platform to Study Structure–Property Relationships in Microporous Ion Transport Membranes”
4:00pm	Marieke De Bock	“Engineering In Vitro Transcription for Scalable and Affordable Gene Therapy Manufacturing”
MONDAY, March 2nd		
3:00 pm	Tom Goodwin	“Design of thin-film composite membranes for nonaqueous redox flow batteries”
3:30 pm	Anupama Jayaraman	“Understanding feedback mechanisms involved in the sequential vaccination of distinct flaviviruses”
MONDAY, March 9th		
3:00 pm	Juliet Okorie	“Applying Selection-based Biosensors to the High-throughput Screening of Myo-inositol-1-Phosphatase and Myo-inositol Oxygenase Variants for the Improvement of Titer Yields in the D-glucaric Acid Pathway”
3:30 pm	Marco Machado	“Model-Aided Design and Evaluation of Glucose-Responsive Glucagon Therapeutics for Diabetes”
4:00 pm	Zhi Kai Tio	“Supercharged hemoglobin – polypeptide complex as artificial oxygen carrier”
MONDAY, March 16th		
3:00 pm	Richard Huang	“Mechanics of DNA Nanostructures in Elongational Flow”

3:30 pm	Alex Stoneman	“Data-Driven Optimization of Nanoparticles for Ovarian Cancer Delivery”
MONDAY, March 30th		
3:00 pm	Arun Johnson	“Low-cost Green Hydrogen with Transition Metal-Mediated Decoupled Electrolysis”
3:30 pm	Anh Nguyen	“Computational Elucidation of New-to-nature Ketone Reduction in Metalloenzymes”
4:00pm	Andrea Goertzen	“Energy-Constrained Operator Learning for Chaotic Dynamics with Boundedness Guarantees”
MONDAY, April 6th		
3:00 pm	Chien-Rung Shih	“Investigating effects of SEI reactivity and solubility on ether-based electrolyte performance for Na metal anode”
3:30 pm	Wezi Mkandawire	“Microbial Cross-Species Communication using Orthogonal Arbitrium Peptides”
MONDAY, April 13th		
3:00 pm	Amelia Dai	“Rare Earth Element Separation via Electrodeposition in an Aqueous System”
3:30 pm	Matthew Moy	“Theory and Modeling of Electrochemical Rare Earth Element Separations”
MONDAY, April 27th		
3:00 pm	Jacob Rosenfeld	“Multiscale modeling of extracellular vesicle production and post-production loading”
3:30 pm	Younghyeon Kim	“Precipitation kinetics of messenger RNA (mRNA)”
MONDAY, May 4th		
3:00 pm	Swathi Ganesh	“State Estimation for Particle Size Monitoring in LNP Manufacturing”
3:30 pm	Stathis Iliakis	“A Koopman–Polynomial Chaos Framework for Stochastic Model Predictive Control”