THE INSTITUTE FOR MOLECULAR ENGINEERING

Seminar Series

SPEAKER

Moshe Herzberg

Zuckerberg Institute for Water Research, Ben Gurion University

Relations between biofilm viscoelasticity and biofouling extent of Reverse Osmosis membranes: Case study of cellulose in the EPS matrix

This project aims to investigate in a controlled manner, if changes in the extracellular polymeric matrix (EPS) compartments will influence the biofilm-membrane relationship that is in charge for changes in permeate flux and salt rejection. We examine the effects of cellulose, contained in the EPS, on its coherence and viscoelastic properties. Also, we show how the extent of cellulose in the EPS influences the RO membranes performance as a consequent reduction in permeate flux during the desalination process in a laboratory scale. We claim that there is a relation between the mechanical strength and elasticity that cellulose provides to the extracellular matrix and the decrease in membrane performance.

Thursday, June 5th

10:30 AM GCIS W301

http://ime.uchicago.edu/