

2026 URPS

Chemical Engineering

Alden Hall

9:00 AM – 12:00 PM

Identifying Detection and Treatment Techniques for TFA in Drinking Water

Brigitte Belanger, Olivia Diorio

Stephen Kmiotek, John Bergendahl, CEAE

High Energy Density Magnesium-Air Battery for Shipping, Rail and Aviation Electrification and Grid Storage

Matthew Murdock, Zachary Sullivan

Stephen Kmiotek, Adam Powell, ME

***presenting in ME**

Coffee Roasting Optimization

Noah Ferreira

Stephen Kmiotek

Chemical Evolution of Brewed Coffee Across Roast Development

Colby Batchelder

Stephen Kmiotek

Exploration of Solvatochromic Molecules

Michael Zamora

Stephen Kmiotek, Christopher Lambert (CBC), Anita Mattson (CBC)

***Presenting in CBC**

Slurry Pumping

Colette Bernier, Arwa Niyazi

Michael Timko, Geoffrey Tompsett, Laila Abu-Lail

Machine Learning

Michael Gorman

Michael Timko, William McCarthy, Mechanical & Materials Engineering

A Computational Study on Energy System Techno-Economic and Environmental Performance Profile Characterization

John Howland

Nickaolas Kazantzis, Michael Timko

Antibiotic Loaded Liposomes Targeting S. Epidermidis

Samyra Guerrier

Christina Bailey-Hytholt, Elizabeth Stewart

Growth Condition Influence on Lipid Nanoparticle Delivery to Placental Trophoblast Cells

Elizaveta Tcherniaeva

Christina Bailey-Hytholt

Process Intensification Through Computational Reaction Engineering

Cameron Milliken

Anthony Dixon

Deuterium Enrichment in Water Using Polymer Membrane Electro

Sydney Kayden, Alexander McCline, Curtis Soloff

Andrew Teixeira, William McCarthy, Mechanical & Materials Engineering

Astaxanthin Production in Red Yeast Using Wireless LED's

Jose Kee Ham, Matthew Stone

Andrew Teixeira, Eric Young

Photochemical Packed Beds for Pharmaceuticals

Gabriel Colebourn, Ella Mesheau

Andrew Teixeira

Overcoming Sabatier Limits Through Forced Periodic Thermal Oscillations

Felipe de Faria Teixeira

Andrew Teixeira

Solvothermal Liquefaction of Green Wastes

Ryan Tat

Alex Maag

Electrochemistry of Self Assembled Alkali Molecular Films

Jacqueline LoVoi

Christopher Lambert, John MacDonald, Chemistry and Biochemistry

Separating Tantalum from Tungsten in Brachytherapy

Jeremy Sobel

David DiBiasio

Paclitaxel Production Under Varied Light Conditions

Maeve McInnis

David DiBiasio, Susan Roberts, UMASS Lowell

Effect of Sugar Type and Feeding on Taxol Production in Taxus x Media Suspension Cultures

Chauncey Michael

Eric Young, Susan Roberts, UMASS Lowell

Deep Learning to Predict Staphylococcus Epidermidis Biofilm Removal from Corresponding Release Cell Images

Michael Herchenroder, Brian Morissette, Cameron Walters

Elizabeth Stewart, Randy Paffenroth, Mathematical Sciences

Alternative Ion Exchange Regenerate Treatments and Optimal Conditions of Polydextrose Synthesis

Ezra Davis, Jake Thomas

Elizabeth Stewart, Eric Young

***Not presenting**