

## Chemical Engineering

Poster Session  
8:00 AM – 12:00 PM  
Salisbury Labs 402

### **Encapsulation and Characterization Of Bacteriophage Loaded in Liposomes**

Julia Afthim, Dylan Rapoport, Wasef Raza  
Advisor: Christina Bailey-Hytholt

### **Assessing Gene Expression in Trophoblast Cells after Delivery of Nucleic Acid Loaded Nanoparticles**

Michela Benazzi, Matthew Shea  
Advisor: Christina Bailey-Hytholt

### **Fouling in a Diffusiophoretic Water Separations System**

Albert Foun, Sam Qu, Maheer Quasem  
Advisor: Andrew Teixeira

### **Pharmaceutical Catalysis: Continuous Flow Enantiopurification Reactor Design**

Griffin Carloni, Zachary Carney, Robert Dec  
Advisor: Andrew Teixeira

### **Photocatalytic Degradation of Tetracycline using Batch and Flow Reactors**

Michelle Barboza, Brent Ditzler  
Advisor: Andrew Teixeira

### **Metallic Alloy Design for Additive Manufacturing**

Patrick Devine, Grace Fitzpatrick-Schmitt  
Advisor: Danielle Cote (ME)

### **High Energy Density Magnesium-Air Battery for Shipping, Rail & Aviation Electrification & Grid Storage**

Kurt Lindenthal, Edward Miller, Tyler Riggs,  
Jacqueline Simon Villacis  
Advisor: Adam Powell (ME)

Poster Session  
8:00 AM – 12:00 PM  
Salisbury Labs 406

### **Modeling Interactions Between Carbon Dioxide & Biomolecules**

Nathan Demers  
Advisor: Aaron Deskins

### **Modeling Carbon Nitride Materials**

Naomasa Tanaka  
Advisor: Aaron Deskins

### **Surface Passivation of Hydride Fuel Cell for Process Safety**

Abigail Calistra, Nathan Crock, Kristen Soden  
Morgan Watson  
Advisor: Stephen Kmiotek

### **Beverage Industry Optimization Project 1**

Katelyn Bergeron, Edward Carrillo, Emily Donovan  
Jessica Goode, Henry Liro, Lucas Wilson-Wuestefeld  
Advisor: Stephen Kmiotek

### **Analysis of Pesticide Content in Cannabis Extract**

Abigail Cummings, Adam Lee, Brandon Nieto,  
Reya Singh  
Advisor: Steohen Kmiotek

### **CO<sub>2</sub> Removal by Moss**

Derek Baker  
Advisor: Stephen Kmiotek

### **High Energy Passive Solar Systems**

Sarah Abatiello, Emma Driscoll, Effelia Loscoucki,  
Sydney Smith, Jade Veth  
Advisor: Stephen Kmiotek

### **Degradation of Per- and Poly - fluoroalkyl Substances via Advanced Oxidation Processes**

**Development of Module**

**for Fire Dynamics**

Alana Miska

*Advisor: James Urban (FPE)*

**Fire & Fracture Resistant**

**Smartphone Case for First Responders**

Noah Kantor, Jacob Morin

*Advisor(s): Ali Rangwala (FPE), James Urban(FPE)*

**Development of a C-H Acylation**

**Reaction in Batch & Flow**

Rachel Swanson

*Advisor: Patricia Musacchio (CBC)*

**Valorization of Stranded Natural Gas**

Elitumaini Swai

*Advisor(s): Nikolaos Kazantzis, Michael Timko*

**Techno-Economic Analysis of**

**Ammonia Production in the**

**Presence of Uncertainty**

William Garvey, Paul Jasmin

*Nikolaos Kazantzis*

**Lab Development of Electrical**

**Resistance Heating for Soil Remediation**

Rainier Vaughn

*Advisor(s): David DiBiasio, Kristen Boudreau*

Alexis Clark, Katherine Lacroix,

Shayla Nguyen

*Advisor(s): Stephen Kmiotek, John Bergandahl (CE)*

**Residential PFAS Sources**

Christopher Harvill, Katherine Lacroix

*Advisor: John Bergandahl (CE)*

**Characterization of a Well-Type**

**HPGe Detector Using Standard**

John Alonzo

**\*Not Presenting\***

**An Exploration of Tea Tannis**

**Impact on Mouthfeel in Wine**

Cameron Cronin, Toni Vigliotti

*Advisor(s) Elizabeth Stewart, Eric Young*