

Session 5 — Chair: Golam Rahman

SFH 221

10:00 am Jacob Furst (UCF): Photoredox Catalytic Formylation of Non-innocent Reductants in Multivariate Titania Metal-Organic Frameworks with Blue Light

10:20 am Selena Keunzig (UF): Probing Structure-Activity Relationships in Heterogeneous Niobium Catalysts from High to Low Oxidation States

10:40 am Coffee break and FIMS 2025 Picture 

11:00 am **Drago Session — Dr. George Christou**

2025 Drago Lecture
Dr. Jeffrey Keaffaber

From the Seas to the Desert and Back: Career Harmonic Oscillation

12:00 pm Coffee break / Poster set-up 

12:15 pm **Lunch — provided**

SFH 2nd Floor

1:30 pm **Poster Session** Chemistry Lab Building (CLB) 4th Floor

3:20 pm Coffee Break / Take down posters 

Session 6 — Chair: Gina Pedro

SFH 221

3:30 pm Md Roxy Islam (UCF): Pillared 2D Clay for Biocompatible Clay Supercapacitor

3:50 pm Charlotte Bailey (UF): The Influence of Chloride Ions on the Structure and Reactivity of Molecular Nanoparticles of Cerium Dioxide

4:10 pm Adrian Bahri (UF): Metallization of Naphthalocyanine Molecules on Ag(100)

4:30 pm Divya Kumar (FSU): Investigation of Iron Complexes with Tridentate Schiff-Base Ligands for Surface Deposition of Spin Crossover Materials

4:50 pm Presentation of poster prizes
Closing remarks by Dr. George Christou

Florida Inorganic and Materials Symposium 2025 (FIMS 2025)



presented by the



University of Florida
Department of Chemistry
and
Center for Catalysis



November 7th and 8th, 2025

2025 Drago Lecturer

Dr. Jeffrey Keaffaber

*Corporate Director, Environmental and Habitat Design,
United Parks and Resorts*



Jeffrey (Jeff) has served United Parks and Resorts, the parent company for SeaWorld and Busch Gardens parks, as corporate Director of Environmental and Habitat Design since 2016. In this role, based in Orlando, Jeff leads the design of dynamic environmental systems needed to support the Company's animal habitats and their engineered life support systems. These include air, water, and lighting systems. More recently, Jeff served on the project design and delivery team for SeaWorld Abu Dhabi in the UAE, which opened in 2023.



Jeff works closely with the corporate and park zoological teams to establish goals and opportunities that will continue SeaWorld and Busch Gardens' legacy of designing state-of-the-art facilities for the animals in its care.

Starting his professional career in 1989 with the Walt Disney Company, Jeff has 36 years of combined experience as a corporate scientist, University of Florida lecturer, restaurateur, self-employed consultant, and podcast co-host. Jeff received his Ph.D. in physical organic chemistry having worked in Bill Dolbier's group at the University of Florida. For fun, Jeff spends a lot of time visiting the red rocks of Sedona, Arizona, where he has family.

Symposium Program

November 7th (Friday)

1:00 pm Check-in and coffee Scott Family Hall (SFH) 2nd Floor

2:00 pm Welcome speech - Dr. George Christou

Session 1 — Chair: Naomi Selejan SFH 221

2:10 pm Thomas Brandte (USF): AI-Assisted Spectral Fingerprinting of Mg-Doped ZnO Tracer Phosphors: Tuning PL Emission and Lifetime

2:30 pm Gina Pedro (UF): Cyclic Polyacetylene: Processing and Materials Applications

2:50 pm Shaocheng Shen (UM): Probing and Understanding Quantum Transport in Open-Shell Donor-Acceptor Molecular Systems

3:10 pm Coffee Break 

Session 2 — Chair: Selena Kuenzig

SFH 221

3:30 pm Obinwanne Bosah (Florida A&M): EIS-DRT and Drive-Cycle Modeling of the Influence of PEMFC Cathode Catalyst Application Method on its Degradation

3:50 pm Zain Becerra (UF): Exploring Nanoencapsulation Strategies to Enhance Oxalate Decarboxylase Activity and Redox Behavior

4:10 pm Noah Smith (UNF): Investigating Structure-Function Relationships for the Valorization of Fly Ash through Carbon Capture

4:30 pm Coffee Break 

Session 3 — Chair: Titto Sunil John

SFH 221

4:50 pm Ani Davis (UF): Composite COF Electrodes for High Ionic Mobility Lithium-Ion Batteries

5:10 pm Nishtha Tikalal (UCF): 0th Order Solutions of the Wavefunctions for the Quantum Elliptical Box and the Microstrip Antenna

5:30 pm Alissa Anderson (USF): Microwave-Assisted Synthesis of Water-Stable Phosphine-Bismuth Halide Semiconductors with Photo-Selective Antifungal Activity

November 8th (Saturday)

8:00 am Breakfast (SFH 2nd Floor) and poster preparation (CLB 4th Floor)

Session 4 — Chair: Jack Schlamkowitz

SFH 221

8:40 am Junyan Liu (UF): Spin-crossover-induced Strain to Actuate Two-Dimensional Materials

9:00 am Vasilisa Krivovicheva (FIU): Development of Various Vanadium Alkylidenes for Carbon Isotope Exchange

9:20 am Alex Bottorf (UF): Highly Absorbing EUV Resists Using Late Transition Metal Organometallics

9:40 am Coffee Break 