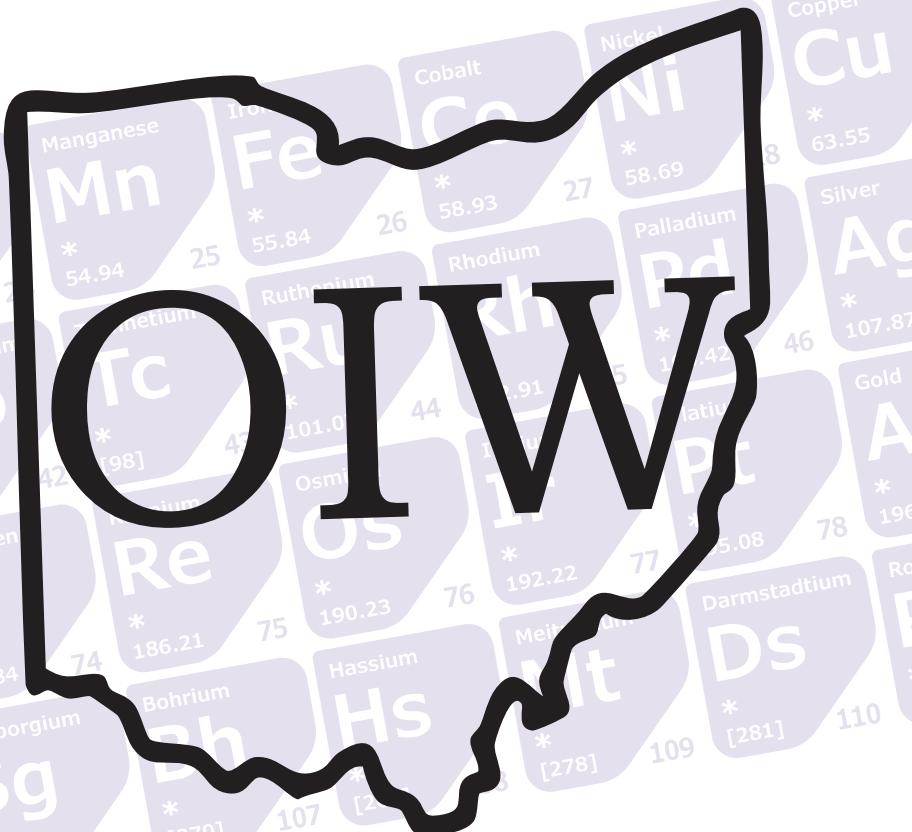


# Ohio Inorganic Weekend

PRESENTED BY THE DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY AND  
THE DIVISION OF RESEARCH & ECONOMIC DEVELOPMENT



***Friday, November 7-***  
***Saturday, November 8, 2025***  
***Kent State University***

# **SCHEDULE OF EVENTS**

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## **Friday, November 7, 2025**

Integrated Sciences Building, Main Street

*Pizza, water, and soft drinks will be served throughout the poster event. Poster judging will occur during both sessions, and Best Poster Award recipients will be announced at the Saturday award ceremony*

<b>5:00 PM</b>	Registration opens
<b>5:00-5:50 PM</b>	Session 1 poster set-up
<b>6:00-7:30 PM</b>	Posters: Session 1
<b>7:30-9:00 PM</b>	Posters: Session 2
<b>9:00 PM</b>	Conclusion of event

## **Saturday, November 8, 2025**

Williams Hall, Room 110

*Coffee and donuts will be provided for breakfast. Refreshments will be provided over breaks.*

<b>8:00 AM</b>	Registration opens
<b>8:30-8:35 AM</b>	Opening remarks
<b>8:35-10:05 AM</b>	Oral presentations: Session 1
<b>10:05-10:20 AM</b>	Break
<b>10:20-11:50 AM</b>	Oral presentations: Session 2

# **SCHEDULE OF EVENTS**

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**11:50AM-12:50 PM**      Lunch break

*Complimentary buffet provided to presenters and faculty judges/chairs at Eastway Dining Hall*

**12:50-2:20 PM**      Oral presentations: Session 3

**2:20-2:35 PM**      Break

**2:35-4:05 PM**      Oral presentations: Session 4

**4:05-4:30 PM**      Judge tabulation and awards, with award announcements for Best Oral and Poster Presentations to follow

## **Conference Information**

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*The Ohio Inorganic Weekend (OIW) is an annual gathering of inorganic chemists from across Ohio and neighboring states, providing a supportive forum for students and faculty to share research, connect, and foster collaborations.*



# Poster Presentations

## Session 1

### Session #1: 6:00-7:30 PM

**#1:** Shirin Akter (Kent State University), “Near-Infrared (NIR)-Controlled Activation of G-Quadruplex Binders via a Platinum(IV) Photo-uncaging Scaffold”

**#2:** Radha Kondapalli (University of Toledo), “Pd-catalyzed o-arylation of protected and unprotected amino alcohol”

**#3:** Milan Pandey (Kent State University), “Investigating the Excited State Dynamics of Pt(IV) Complexes”

**#4:** Daniel Castella (University of Michigan), “Utilizing Asymmetric Ligand Design to Model Reactive Intermediates of Fungal Nitric Oxide Reductase with bis-Picket Fence Porphyrins”

**#5:** Kelli Hummel (Wayne State University), “Cytochrome P450 Induction through the Efficient Photoinduced Release of a Pyridine-Substituted Agent from Ru(II)”

**#6:** Emma Kelley (Kenyon College and Ohio State University), “The Synthesis and Characterization of a (PNNP)Cr Complex”

# Poster Presentations

**#7:** Preston Myers (Ohio State University), “Mechanistic Crossover of Proton-Coupled Electron Transfer at Tricopper Clusters”

**#8:** Lucinda Marie Busselle (Bowling Green State University), “Iron coordination to enhance properties of corn-starch-based bioplastic materials”

**#9:** Chukwu Felix Onyemaechi (Wayne State University), “Rhodium-Catalyzed Z-selective Synthesis of Trisubstituted Olefin bearing Tertiary Allylic Amine”

**#10:** Emma DeLuca (Kent State University), “Synthesis and Characterization of a Series of Magnesium and Zinc Pre-Catalysts for the Ring Opening Polymerization of Cyclic Esters”

**#11:** Elle Lewandowski (Wayne State University), “Solution-Phase Electrochemical Characterization of Acyclic Complexes of Divalent Europium”

**#12:** Rohan Maji (Ohio State University), “Tuning olefin isomerization with a heterobimetallic Zr-Co scaffold: remote ligand effects on reactivity and selectivity”

**#13:** Md Sydul Islam (Wayne State University), “Controlling the MRI-Relevant Kinetic and Electrochemical Properties of Eull-Containing Macroyclic Complexes Using Peripheral Charges”

# Poster Presentations

## Session 1

**#14: Elliot Furr** (Wayne State University), “Protein Based Lanthanide Capture from Coal Fly Ash”

**#15: Margaret Ball** (Ohio State University), “C-H [18F] Trifluoromethylation of (Hetero)arenes via a Formal Copper(III) [18F]-Trifluoromethyl Complex”

**#16: Summer Wu** (University of Michigan), “Redox-Tuning of Flavodiiron Nitric Oxide Reductase (FNOR) Model Complexes Using an Asymmetric Ligand Scaffold”

**#17: Alexander Arnette** (Penn State University), “Biologically Inspired Methods of Oxygen Atom Transfer”

**#18: Ashleigh Sherman** (Ohio State University), “Investigation of Copper-Zinc Pre-Transmetalation Intermediates”

**#19: Shannon Leahy** (Pennsylvania State University), “Supramolecular Separation of Metal Oxides”

**#20: Syeda Rahimon Naher** (Bowling Green State University), “Photoresponsive and Biodegradable Cu(II) Biopolymer Films ”

**#21: Anthony Kornokovich** (Case Western Reserve University), “Dealkylation as a Strategy to Unconventional Lithium Salts from ortho-Phenyl-Phosphinoborane Oxides”

# Poster Presentations

**#22:** Nisha Rao (Pennsylvania State University), “Heterolytic Activation of H<sub>2</sub> at the Lewis Acidic Extreme”

**#23:** Caden Frost (Kalamazoo College), “Coordination Chemistry of Dimeric Hybrids of Polyoxotungstates Assembled with Bisphosphonyl Groups”

**#24:** Nneka Damola Ajayi (University of Akron), “Synthesis and Characterization of a Novel Open Ring Macrocycle Incorporating Pyridine”

**#25:** Adwitiya Singh (Ohio State University), “Side-on N<sub>2</sub> Binding and Reduction by a Heterotetrametallic Zr<sub>2</sub>Co<sub>2</sub> Cluster”

**#26:** Marek Vavrović (University of Michigan), “Valorization of alcohols via decarbonylative radical C-C bond coupling”

**#27:** Karli Sipps (Penn State University), “Thermodynamic Benefits of Shapeshifting Ligands”

**#28:** Rahul Giri (Ohio State University), “Solid-phase Electrochemical Synthesis Enables General Alkene Functionalization”

# Poster Presentations

## Session 1

**#29:** Kerri Julevich (Ohio State University), “Photophysical Properties of Ruthenium(II) Polypyridyl Complexes with Homoleptic and Heteroleptic Tridentate Ligands”

**#30:** Arup Sarkar (University of Michigan), “Development of TACN Derivatives and Respective Copper Complexes for Electrocatalytic Nitrite Reduction”

**#31:** Maryam Yousif (University of Findlay), “Synthesis and DFT Study of Tetrakis (5-X-picolinato)tungsten(IV) Complexes with Electron-Donating and Electron-Withdrawing Substituents”

**#32:** Morgan Deal (Wayne State University), “Multimodal Contrast Agent Synthesis and Oxidation Slowing toward Hypoxia Imaging”

**#33:** Lauren Sprow (University of Michigan), “Catalytic Seleniferous Oxyanion Reduction Enabled by Non-Heme Iron Complexes”

**#34:** Rei Fejzulla (Wayne State University), “Low-Valent Lanthanide Precursors for Atomic Layer Deposition”

**#35:** Lauren Dunsmore (Marshall University), “Self-Assembled Dendritic Catalysts – New Biphasic Approach for Homogeneous Catalyst Recycling”

# Poster Presentations

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**#36:** Chashitha Padukka (Wayne State University),  
“Eu(II)- containing dendrimer conjugates with potential  
application as hypoxia-responsive contrast agents for  
magnetic resonance imaging”

**#37:** Lindsay Israel (Wayne State University),  
“Supramolecular approach toward enhancing the  
oxidative stability of divalent europium to study  
luminescence”

# Poster Presentations

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## Session #2: 7:30-9:00 PM

(Note: Please rotate posters by 7:30 PM to prepare for the second session)

**#1:** Kirsty Mary Mamattah (University of Akron), “A Ring Open Porphyrinoid with Helical Chirality”

**#2:** Towhidi Illius Jeaydi (University of Akron), “Solvent-based reactivity of rhenium carbonyl and ethylene diamines: Activation a bond by making it stronger”

**#3:** Joan Bore (University of Akron), “Synthesis and characterization of a bis(urea) isoindoline ligand and its metal complexes”

**#4:** Niyati Patel (Ohio State University), “Synthesis and Reactivity of Heterobimetallic FeIII/MnIII Complex”

**#5:** Brandon Landis (Ohio State University), “High Spin Iron and Heterospin Copper/Nickel-Nitroxide Complexes for Next Generation EPRI Spin Probes”

**#6:** Thomas Judd (Bowling Green State University), “Growth Dynamics of Lead Selenium Helical Nanowires”

**#7:** Ruwandhi Virajitha Jayasundara (Wayne State University), “Similar but not Identical: Synthesis and Coordination Chemistry of New Chelating C<sub>2</sub>- and Cs-symmetric Bis(Alkoxide) Ligands on Terphenyl Platform”

# Poster Presentations

**#8:** Julia Feresin (Ohio State University), “Heterobimetallic Multi-site Concerted Proton Electron Transfer (MS-CPET) Promotes Coordination-induced Bond Weakening”

**#9:** Clara Hoffert (University of Akron), “New Vanadium(V) Complexes from Isoindoline-Based Ligands”

**#10:** Allison Jessup (Ohio State University), “Counterions Effects on Coherence in Vanadium(IV)-Based Molecular Qubits”

**#11:** Man Kshetri (Kent State University), “Mechanistic Study of Photoreduction of Platinum(IV)-Carbamate Complexes”

**#12:** Guanyu Chen (Kent State University), “Potentiation of naphthoquinone-derivative by gallium to become broad-spectrum antimicrobial and overcome resistance”

**#13:** Levi G. Wolff (Ohio State University), “Immobilization of Monodentate Phosphine Ligands for Single-Site Transition Metal Catalysis within MFU-4l”

**#14:** Chris Nieto (Ohio State University), “Development of Fell and Rhl catalysts for alkene hydroboration using  $\pi$ -acceptor-containing pincer ligands”

**#15:** Srikanth Dasari (Ohio State University), “Clock-like Zero-Field Spin Dynamics in Ni(II) Complex Spin Qubit”

# Poster Presentations



**#16:** Race Schwartz (Ohio State University), “Axial Ligand Effects on Nuclear Spin Relaxation Dynamics in Co(III) Complexes”

**#17:** Nicholas Cedron (Ohio State University), “Catalytic C–H Borylation of Arenes With (PPRP)Co complexes”

**#18:** Keely Weber (University of Michigan), “Synthetic optimization of elusive porphyrin ligand scaffolds for modelling biologically relevant reactive heme intermediates”

**#19:** Peyton McCarley (Wayne State University), “Synthesis and Characterization of a Complex of Divalent Ytterbium Bromide as a Convenient Starting Material”

**#20:** Benjamin Farris (University of Michigan), “Upgrading Ethanol to 1°/2° Alcohols with Ru-Pincer Catalysts”

**#21:** Jiehye Shin (Ohio State University), “Synthesis and characterization of new zirconium metal-organic cages (MOCs) with PPh<sub>2</sub>NBz<sub>2</sub> linkers (Ph = phenyl, Bz = benzoic acid or benzoate)”

**#22:** Megan Ford (Ohio State University), “Probing BDFE Trends: Varying pi-acceptor ability of L-type ligands at the redox-active site of a Zr/Co heterobimetallic”

# Poster Presentations

**#23:** Aseni Sahasri Pathiraja Pathiraja Mudiyanselage (Wayne State University), “Formation and Reactivity of Transition Metal Carbene”

**#24:** Sierra Rupp (Ohio State University), “Utilizing Metal-Metal Cooperativity within a Zr/Co Heterobimetallic for White Phosphorus (P4) Activation”

**#25:** Gregory Jimison (Marshall University), “Degradative Functionalization and Transformations of Polyfluoroalkyl Substances”

**#26:** Christian Andre (University of Michigan), “Iron bis-NHC Complexes Bearing Sulfur Ligands for Small Molecule Activation”

**#27:** Okten Ungor (Ohio State University), “Harnessing Molecular Spins for Quantum Sensing”

**#28:** Sona Shaju Rose (Ohio State University), “Influence of defects and doping on transverse thermoelectric properties in single crystal Re<sub>4</sub>Si<sub>7</sub>”

**#29:** Sabin Aryal (Bowling Green State University), “Bright Colloidal PbS Nanoplatelets with Lead Sulfobromide Shells”

**#30:** Sravya (University of Akron), “Structure and function studies of Human Cytochrome P450 46A1”

# Poster Presentations

**#31:** Anuradha Jayathissa (Wayne State University), “Tuning Interface Chemistry of Cadmium Sulfide Quantum Dot Aerogels for Photocatalytic Water Reduction”

**#32:** Fathima Innasa Mohamed Saheed (Wayne State University), “Oxidative Assembly of Cds Ultra Small Quantum Dots and Their Electronic and Structural Properties”

**#33:** Writhabrata Sarkar (University of Michigan), “Catalytic Nitrate Reduction Enabled by Non-heme Iron Complex with Secondary Sphere Hydrogen Bonds”

**#34:** Fatima Abla (Wayne State University), “Catalytic Activity of Transition Metal Phosphide Nanomaterials in the Oxygen Reduction Reaction for Fuel Cell Devices”

**#35:** Erika Brown (University of Michigan), “Influence of Oxidation State and Boron Topology on Anion Binding in Ferrocene-Derived Lewis Acid Sensors”

**#36:** Felipe Alves Garcia (University of Michigan), “Synthesis and Characterization of a Mononuclear Iron Complex with Relevance for the Secondary Coordination Sphere (SCS) H-Bonding in Flavodiiron Nitric Oxide Reductases”

**#37:** Glorimar Miranda-Mendez (University of Michigan), “Design and Analysis of Novel Copper Complexes for the Reduction of Nitrite to Nitric Oxide (NO)”

# POSTER SESSION MAP

## 2025 Ohio Inorganic Weekend Poster Session & Oral Presentation Locations

110 Williams Hall  
(location of oral presentations Saturday)

### Williams Hall

#### WMH Lobby

Main Street  
Posters #1-40 (Friday)

To Summit St.

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#### Registration

North Commons  
Refreshments and  
Seating

190 ISB

186 ISB

182 ISB

174 ISB

Integrated Sciences Building

To University Esplanade

# Oral Presentations

**Session I: 8:35-10:05 AM**

**Chair: Dr. Hao Shen, Kent State University**

Time	Presenter	Institution	Title
8:35-8:50	Shamima Akhter	Kent State University	Circularly polarized red-NIR emission with high dissymmetry factor from achiral $[\text{Mo}_6\text{I}_8(\text{OCOC}_2\text{F}_5)_6]^{2-}$ cluster anion embedded in a bent-core liquid crystal host
8:50-9:05	Yetunde Odeyemi	Ohio State University	Semiconducting hybrid organic-inorganic layered chalcogenides via topotactic substitution
9:05-9:20	Firoz Khan	Ohio State University	Tuning magnetic noise through asymmetry in metal complexes
9:20-9:35	Folake Amoo	Wayne State University	Synthesis, structure, and size-dependent superparamagnetism in Mn-based pnictide nanomaterials: correlating nanoscale order with magnetocaloric performance
9:35-9:50	Ebenezer Adom Mensah	Bowling Green State University	Fe(III) coordination as a strategy to reinforce mechanical strength, enhance water stability, and induce photoresponsivity in renewable polysaccharide-based bioplastic films
9:50-10:05	Smrutimedha Parida	Ohio State University	Cobalt anilate materials for quantum spin-liquid candidates

**Break (10:05-10:20 AM) - Coffee, donuts, cookies provided**

# Oral Presentations

**Session II: 10:20-11:50 AM**

**Chair: Dr. Yilin Liu, University of Akron**

Time	Presenter	Institution	Title
10:20-10:35	Brian Ferguson	Ohio State University	Dirhodium (II,II) photosensitizers with long-lived high-energy excited states
10:35-10:50	Noorul Bashar	University of Cincinnati	Photocatalytic aryl radical chemistry through proton-coupled electron transfer via an organic photocatalyst
10:50-11:05	William C. Tocco	Kalamazoo College	Photoactive low-spin manganese (II) complexes with N-heterocyclic carbene ligands
11:05-11:20	Taylor Matthews	Ohio State University	Photoactivated dual-action Ru(II) complexes with planar aryl hydrocarbon receptor ligand
11:20-11:35	Fatima Naser Aldine	Bowling Green State University	Ligand-engineered RuNO(salen) complexes and materials for enhanced photoinduced nitric-oxide release under red and near-infrared light
11:35-11:50	Sukh Singh	Ohio State University	Investigation of steric effects on ligand-dissociation efficiency of dual-action Ru(II) complexes

**Lunch Break (11:50-12:50 PM) - Complimentary buffet provided to presenters and faculty judges/chairs at Eastway Dining Hall (5 min walk)**

# Oral Presentations

**Session III: 12:50-2:20 PM**

**Chair: Dr. Nathanael Hunter, Kenyon College**

Time	Presenter	Institution	Title
12:50-1:05	Alice Atkins	University of Michigan	Cooperative substrate binding dependent on the proximity of a second-sphere Lewis acid
1:05-1:20	José A. Sanabria-Gracia	Ohio State University	C-H bond activation and functionalization enabled by a Zr/Co bimetallic system through metal-metal cooperativity
1:20-1:35	Aditya Basu	University of Michigan	Redox tuning of flavodiiiron nitric-oxide reductase model complexes enabled by a carboxylate-containing ligand scaffold
1:35-1:50	Mitchell Walsh	Ohio State University	Synthesis, characterization, and reactivity of a manganese(II) bis(amido)bis(phosphine) complex
1:50-2:05	Alexander Stone	Case Western Reserve University	Room-temperature acid-catalyzed P-H dehydrocoupling reactions of primary and secondary phosphines
2:05-2:20	Graden Snyder	University of Michigan	Labile untethered arene enables hydrogenation with Co( <i>o</i> -NHC

**Break (2:20-2:35 PM) - Coffee and cookies provided**

# Oral Presentations

**Session IV: 2:35-4:05 PM**

**Chair: Dr. Songping Huang, Kent State University**

Time	Presenter	Institution	Title
2:35- 2:50	Shaya Khosravibavandpoori	Bowling Green State University	Photoresponsive behavior of copper(II)-coordinated polysaccharide hydrogels under light irradiation
2:50- 3:05	Emily Doss	Ohio State University	Copper(II/III) redox couple enables methyl- transfer analogous to radical SAM enzymes
3:05- 3:20	Faria Sultana	Wayne State University	Trimetallic Synergy Rocks Stability in $Ni_{2-x-y}Co_xFe_yP$ Precatalysts for Robust Oxygen Evolution
3:20- 3:35	May Cheline	Ohio State University	Iridium-catalyzed arene C-H borylation via immobilized bipyridine ligands within MOFs
3:35- 3:50	Shehnaz Khan	Ohio University	Modular construction of coordination cages via ligand exchange
3:50- 4:05	Jude Stapf	Ohio State University	Enhancing $^{59}Co$ NMR sensitivity and accuracy for next-generation MRI probe design

**Judge Tabulation and Awards (4:05-4:30 PM)**

**Awards for Best Oral and Poster Presentations will be  
announced.**

# **Thank you to our judges!**

Christopher J. Ziegler (University of Akron)  
Diana Gonçalves Schmidt (Kent State University)  
Songping Huang (Kent State University) Arkaprabha  
Konar (Kent State University)  
Man Kshetri (Kent State University)  
Nicolai Lehnert (University of Michigan)  
Yilin Liu (University of Akron)  
Hanbin Mao (Kent State University)  
Bishal Pokhrel (Kent State University)  
Pravin Pokhrel (Kent State University)  
Marianne Prévôt (Kent State University)  
John Protasiewicz (Case Western Reserve University)  
Hao Shen (Kent State University)  
Zhiqiang Molly Wang (Kent State University) Michael  
Young (University of Toledo)  
Maryam Yousif (University of Findlay)  
Yaorong Zheng (Kent State University)

