

- 1. Ahmed Aboelenen** (Ohio University) Advisor: Michael Jensen  
*Transition- metal borohydride complexes as masked hydrides*
- 2. Dinesh Amarasinghe** (Wayne State University) Advisor: Federico A. Rabuffetti  
*Average and Local Crystal Structure of  $\beta$ -Er:Yb:NaYF<sub>4</sub> Upconverting Nanocrystals Probed by X-ray Total Scattering*
- 3. Nadia Asous** (The Ohio State University) Advisor: Shiyu Zhang  
*Hydrogen Atom Transfer Reactivity of Bio-inspired Unsymmetrical Dicopper-oxo Complexes*
- 4. Matthew Bailey** (Wayne State University) Advisor: Matthew J. Allen  
*Effect of Linker Rigidity on Efficiency of Dimetallic Eu(II)-Cryptates for T1-Weighted Contrast-Enhanced Magnetic Resonance Imaging*
- 5. Derrick Barenbrugge** (University of Toledo) Advisor: Giolando  
*TBD*
- 6. Lina Basal** (Wayne State University) Advisor: Matthew J. Allen  
*Eu(II)-containing Complexes with Applications in Redox Sensing*
- 7. Allison Batka** (University of Michigan) Advisor: Nicolai Lehnert  
*Design of copper catalysts for electrochemical production of NO on demand*
- 8. Jenna Bouquot** (Kenyon College) Advisor: Yutan Getzler  
*Synthesis of  $\gamma$ -(2-bromo-2-methylpropionyl)- $\epsilon$ -caprolactone and polymerization using a pseudo-alumatrane catalyst*
- 9. Christopher Boyd** (Cleveland State University) Advisor: None (faculty member)  
*Transition Metal Coordination Chemistry of N,N'-Azodioxides*
- 10. Trent Carpenter** (Indiana State University) Advisor: Ryan Van Hoveln  
*Synthesis of Stable Copper Fluorides and Reactivity with Disilanes*
- 11. Alyssa Chow** (Oberlin College) Advisor: Catherine Oertel  
*Synthesis and Structural Analysis of Pyridinium Metal Halides*
- 12. Wyatt Cole** (Kenyon College) Advisor: Yutan Getzler  
*Synthesis of  $\gamma$ -(2-bromo-2-methylpropionyl)- $\epsilon$ -caprolactone and polymerization using a pseudo-alumatrane catalyst*
- 13. Scott Crawford** (University of Pittsburgh) Advisor: Jill Millstone  
*Using Gold Nanoparticle Surface Chemistry to Control Electronic Behavior: Towards Energy Transfer Applications*
- 14. Ankit Dara** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Investigating Excited State Dynamics in Supramolecular Polymers.*
- 15. Harrison Davis** (Kent State University) Advisor: Scott Bunge  
*Copper, Silver, and Gold Clusters: A Synthetic and Structural Investigation*
- 16. Dulani Dhanapala** (Wayne State University) Advisor: Federico A. Rabuffetti  
*Crystallochemical study of monometallic A(CF<sub>3</sub>COO)<sub>2</sub> · nH<sub>2</sub>O (A = Mg, Ca, Sr, Ba, Mn) as a tool for the synthesis of Mg–Mn and Ca–Mn bimetallic trifluoroacetates*
- 17. Nathan Diemler** (University of Pittsburgh) Advisor: Jill Millstone  
*Ligand Mediated Deposition of Noble Metals at Nanoparticle Plasmonic Hotspots*
- 18. Desislava Dikova** (University of Michigan) Advisor: Stephen Maldonado  
*Investigations into sensitizing GaP photocathodes with CdSe quantum dots*

- 19. K.Tauni Dissanayake** (Wayne State University) Advisor: Federico A. Rabuffetti  
*NIR-to-visible upconversion luminescence in Er:Yb:SrFX nanocrystals*
- 20. Hai Dong** (University of Michigan) Advisor: Nicolai Lehnert  
*New Diiron complex capable of reducing NO to N2O mimics the reactivity of FNORs*
- 21. Kalani Edirisinghe** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Photo responsive polysaccharide based hydrogels with tunable properties by incorporating different vanadium ions*
- 22. Nour El Harakeh** (Wayne State university) Advisor: Claudio N. Verani  
*TBD*
- 23. Ahmed Elshewy** (University of Cincinnati) Advisor: Michael Baldwin  
*Formation of new Bimetallic complexes containing two  $\alpha$ -hydroxy acid moieties*
- 24. Alissa Geisse** (Youngstown State University) Advisor: Douglas Genna  
*The Removal of Pb Ions from Water Using Thiophene-Containing Metal-Organic Frameworks*
- 25. Amanda Grass** (Wayne State University) Advisor: Stanislav Groysman  
*Synthesis, Characterization, and Reactivity of High-Valent Cobalt Carbene Complexes in Bis(alkoxide) Ligand Environments*
- 26. Matthew Gray** (The Ohio State University) Advisor: Patrick Woodward  
*Understanding the Solid Solutions Cs2AgBiBr6-xClx [x = 0, 1, 2, 3, 4, 5, 6]*
- 27. Travis Green** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Characterization of Copper Metallopolymer as a Biomimetic Catalyst for Catechol Oxidase*
- 28. Cameron Griffith** (Indiana University Purdue University Fort Wayne) Advisor: Donald Linn  
*Catalytic Reactions of Hydrogen Using [Co2H9]5-*
- 29. Pavithra H. A. Kankanamalage** (Wayne State University) Advisor: C. N. Verani  
*Efficient electro/photocatalytic hydrogen generation from water using a novel nickel-based polypyridine complex*
- 30. Lillian Hale** (University of Michigan) Advisor: Nathaniel Szymczak  
*Ligand Design Strategies for Ru(II)-Catalyzed Hydrogen Transfer Reactions*
- 31. Arden Hammer** (Oberlin College) Advisor: Catherine Oertel  
*Ligand Shape Directs the Symmetry of Extended Inorganic Motifs in Lead Oxide Naphthoates*
- 32. Matthew Hannigan** (University of Michigan) Advisor: Anne McNeil/Paul Zimmerman  
*A Surprising Ni Oxidative Addition into a C-S bond, and its Implications for Catalyst Transfer Polymerization with Complex Monomers*
- 33. Stephan Harruff** (Indiana State University) Advisor: Ryan Van Hoveln  
*Progress towards Copper Catalyzed Hydrosilylation of Styrenes*
- 34. Nicholas Harvey** (The Ohio State University) Advisor: Patrick Woodward  
*Synthesis and Characterization of Br Double Perovskite Precursors: Cs2AgBr3 and CsAgBr2*
- 35. Zachery Hatten** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Photoresponsive polysaccharide materials for alternative fertilization methods*

- 36. Jeffrey Henke** (Kent State University) Advisor: Scott Bunge  
*Synthesis of Quadruply-Bonded di-Tungsten Complexes for Use as n-Dopants*
- 37. Indika Hewavitharana** (Wayne State University) Advisor: Stephanie L. Brock  
*When Ligand Exchange Leads to Ion Exchange: Nanocrystal Facets Dictate the Outcome*
- 38. Thilini Hollingsworth** (Wayne State University) Advisor: Stanislav Groysman  
*Bioinspired Heterobimetallics for Carbon Monoxide Oxidation*
- 39. Jessica Hovey** (Wayne State University) Advisor: Matthew J. Allen  
*Luminescence differences between two divalent europium complexes*
- 40. Jakub Husek** (The Ohio State University) Advisor: L. Robert Baker  
*Achieving Surface Sensitivity in XUV Spectroscopy: Probing Electron Dynamics of Hematite Using XUV Transient Reflectivity*
- 41. Christopher James** (Miami University) Advisor: David L. Tierney  
*Spectroscopic studies of five-coordinate cobalt (II) model complexes: Fluorine substituted hydroxamic acids*
- 42. Morteza Jandaghi** (University of Toledo) Advisor: Mark R. Mason  
*Zinc complexes of a bulky dipyrromethene ligand and application to the ring-opening polymerization of  $\epsilon$ -caprolactone.*
- 43. Samuel Jeffrey** (University of Toledo) Advisor: Dean M. Giolando  
*Electrodeposited Nickel Phosphides to Promote Hydrogen Evolution Reaction: Optimization of Electrodeposition Parameters*
- 44. Tyler Jenks** (Wayne State University) Advisor: Matthew J. Allen  
*Photoredox catalysis using a lanthanide-containing cryptate*
- 45. Katie Johnston** (University of Pittsburgh) Advisor: Jill Millstone  
*Impacts of Broth Chemistry on Silver Ion Release, Surface Chemistry Composition, and Bacterial Cytotoxicity of Silver Nanoparticles*
- 46. Mohit Kapoor** (The University of Toledo) Advisor: Michael Young  
*Carbon Dioxide Mediated C-H Activation: A Traceless Directing Group Strategy for the Arylation of Aliphatic Amines*
- 47. Jayan Karunarathna** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Photo responsive polysaccharide based hydrogel beads for slow release of plant nutrients*
- 48. Jerod Kieser** (Case Western Reserve University) Advisor: John D. Protasiewicz  
*Synthesis of zirconophosphaalkene through insertion of sodium phosphoethynolate, Na[OCP]*
- 49. Wendell Kirkman** (Indiana State University) Advisor: Ryan Van Hoveln  
*Ligated copper silyl complexes and their reactivity towards electrophiles*
- 50. Daniela Klink** (The University of Toledo) Advisor: Cora Lind-Kovacs  
*One-pot in-situ synthesis of poly(3-hexylthiophene) composites with metal oxide fillers*
- 51. Sudheer Kurup** (Wayne State University) Advisor: Stanislav Groysman  
*Design and synthesis of bichelating first row transition metal based bis-alkoxide complexes*
- 52. Chamika Lenora** (Wayne State University) Advisor: Matthew J. Allen  
*Kinetic Inertness of Eu(II)-Containing Complexes*

- 53. Amanda Leone** (University of Michigan) Advisor: Anne McNeil  
*Mechanistic Insight into Thiophene Catalyst-Transfer Polymerization mediated by Ni Diimine Precatalysts*
- 54. Yingze Li** (University of Cincinnati) Advisor: Hairong Guan  
*Development of New Cobalt Pincer Complexes for Catalytic Applications*
- 55. Lauren Loftus** (The Ohio State University) Advisor: Claudia Turro  
*Unusual Role of Excited State Mixing in the Enhancement of Photoinduced Ligand Exchange in Ru(II) Complexes*
- 56. Beatriz Lopez Bermudez** (University of Michigan) Advisor: Vincent Pecoraro  
*Development of Luminescent PAMAM Dendrimers formed via a Ga<sub>8</sub>Ln<sub>2</sub> Metallocrown Core*
- 57. Jacob Lutter** (University of Michigan) Advisor: Vincent Pecoraro  
*Incorporation of iodine onto metallocrown species which exhibit lanthanide-based luminescence*
- 58. Molly MacInnes** (University of Michigan) Advisor: Nicolai Lehnert/Stephen Maldonado  
*Heterogeneous photoelectrocatalytic proton reduction with a molecular catalyst immobilized on RGO thin films on gallium phosphide photocathodes*
- 59. Kotiba Malek** (Wright State University) Advisor: Kuppuswamy Arumugam  
*Silver N-Heterocyclic Carbene Complexes: A New Hope in The Fight Against Bacteria*
- 60. Bethany McCarty** (Indiana State University) Advisor: Ryan Van Hoveln  
*Ligated copper silyl complexes and their reactivity towards electrophiles*
- 61. Eric McClure** (The Ohio State University) Advisor: Patrick Woodward  
*Synthesis and Properties of Halide Double Perovskites*
- 62. Bradley McCullough** (Ohio University) Advisor: Travis White  
*Visible light-induced water reduction using heteroleptic Cu(I) photosensitizers and Rh(III) catalysts*
- 63. David Merz** (University of Wollongong) Advisor: Patrick Woodward  
*Luminescent phosphor emission in Sr<sub>2</sub>Al<sub>3</sub>O<sub>6</sub>F:Eu<sup>2+</sup> --- Manipulating emission via cation substitution*
- 64. Meredith Miles** (Wright State University) Advisor: Kuppuswamy Arumugam  
*Development of N-Heterocyclic Carbene-Gold(I) Complexes for Therapeutic Applications*
- 65. Rick Morasse** (The Ohio State University) Advisor: Joshua Goldberger  
*Low temperature, solution-phase route towards carbides*
- 66. Danielle Mullis** (University of Michigan) Advisor: Nathaniel Szymczak  
*Synthesis of NNN-Os(II) Pincer Complexes and Investigation of Catalytic Activity*
- 67. Hashini Munasinghe** (Wayne State University) Advisor: Federico A. Rabuffetti  
*Bimetallic Trifluoroacetates as Single-Source Precursors for Alkali-Manganese Fluoroperovskites*
- 68. Brad Musselman** (University of Michigan) Advisor: Nicolai Lehnert  
*Group Transfer Catalysis with Iridium Corroles*
- 69. Nadeesha Nambukara Wellala** (University of Cincinnati) Advisor: Hairong Guan  
*Nickel N(CH<sub>2</sub>CH<sub>2</sub>PiPr<sub>2</sub>)<sub>2</sub>-Dialkylamides: Synthesis and Reactivity*
- 70. Bertrand Neyhouse** (Ohio University) Advisor: Travis White

- Re(I) Phenanthroline Catalysts for the Electrochemical Reduction of CO<sub>2</sub>*
- 71. Lisa Nguyen** (The Ohio State University) Advisor: Terry Gustafson  
*Ultrafast Time-Resolved Infrared Spectroscopy for Direct Analysis of Charge Carrier Dynamics of Hybrid Perovskites*
- 72. Weixuan Nie** (University of Michigan) Advisor: Charles McCrory  
*Electrocatalytic CO<sub>2</sub> reduction by a cobalt bis(pyridylmonoimine) complex: effect of acid concentration on catalyst activity and stability*
- 73. Tim O'Connor** (The Ohio State University) Advisor: Hannah Shafaat  
*Electron Transfer in Nickel-Substituted Azurin: A Model System*
- 74. Sameera Perera** (Wayne State University) Advisor: Federico A. Rabuffetti  
*Group VI Metalates as Hosts for Thermosensitive Phosphors*
- 75. Sophia Perlini** (University of Toledo) Advisor: Cora Lind-Kovacs  
*Low temperature synthesis of tungsten oxide for future use in composites*
- 76. Rachael Pickens** (Ohio University) Advisor: Jessica White  
*Using Visible Light to Release CO and a Singlet Oxygen Photosensitizer from Ru(II)-Mn(II) Bimetallic Complexes*
- 77. Mikaylah Poli** (Wayne State University) Advisor: Stephanie L. Brock  
*FexNi<sub>2</sub>-xP Nanoparticle Assemblies for Potential Magnetic Refrigeration*
- 78. Allison Rabon** (University of Toledo) Advisor: Michael Young  
*Developing metal organic frameworks for catalysis applications*
- 79. Pinaki Ranadive** (The Ohio State University) Advisor: Nicholas Brunelli  
*Controlling Nanoparticle Size Using Jet-mixing Synthesis*
- 80. Anton Razgoniaev** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Restricted Photoinduced Conformational Change in the Cu(I) Complex for Sensing Mechanical Properties*
- 81. Grayson Ritch** (University of Michigan) Advisor: Szymczak  
*Reactivity of Metal Complexes with pendent Phosphines*
- 82. Thomas Rohrabough** (The Ohio State University) Advisor: Claudia Turro  
*Photoactivation of Two Fluorescent Dyes via Ruthenium(II) Polypyridyl Ligand Exchange*
- 83. Dominic Ross** (The Ohio State University) Advisor: Joshua Goldberger  
*Electrocatalytic Properties of Hydrogen Absorbing Zintl Phases*
- 84. Sandeep Kumar Sahoo** (Bowling Green State University) Advisor: Alexis Ostrowski  
*Metallosupramolecular based Heterogeneous Catalysts for Improved Recyclability*
- 85. Fatemeh Saleh** (University of Toledo) Advisor: Mark Mason  
*Aerobic Oxidation of Bulky Dipyrromethanes to Dipyrromethenes*
- 86. Hannah Sayre** (The Ohio State University) Advisor: Claudia Turro  
*Naphthyridine-Bridged Rh<sub>2</sub>(II,II) Dimers as Red-Light Absorbers for Photocatalysis*
- 87. Bernadette Schneider** (University of Michigan) Advisor: Vincent Pecoraro  
*Linking Amphipathic 15-MC-5 complexes into solution stable nanocompartments*
- 88. Jonas Schneider** (University of Toledo) Advisor: Cora Lind-Kovacs  
*Low Temperature Synthesis of Transparent Conducting Oxides*
- 89. Briana Schrage** (University of Akron) Advisor: Chris Ziegler  
*Sulfonamide Linked Water Soluble Ferrocene Dimers*
- 90. Michael Scudder** (The Ohio State University) Advisor: Joshua Goldberger

*Axis-Dependent Conduction Polarity in Re<sub>4</sub>Si<sub>7</sub> Single Crystals*

- 91. Erica Slogar** (Saint Mary's College) Advisor: Kathryn Haas  
*Investigating the Structure of Ctr1 bound to Cu(I) and Cu(II) using X-ray absorption and SERS*
- 92. Zach Smith** (The Ohio State University) Advisor: Hannah Shafaat  
*Spectroscopic Investigations of the Novel Mn/Fe Ligand Binding Oxidases*
- 93. Julian Sobieski** (Kent State University) Advisor: Scott Bunge  
*Assessing Steric Bulk of Protecting Groups and Bidentate Ligands via a Computational Determination of Exact Cone Angle ( $\vartheta_0$ ) and Exact Solid Angle ( $\Theta_0$ )*
- 94. Ewelina Stefaniak** (Institute of Biochemistry and Biophysics Polish Academy of Sciences)  
Advisor: Wojciech Bal  
*Interaction between Cu(AB<sub>4</sub>-16) and glutathione in the light of the physiological role of AB<sub>4</sub>-16*
- 95. Joseph Strozier** (Youngstown State University) Advisor: Douglas Genna  
*Halogen mediated synthesis of noninterpenetrated metal organic frameworks (MOFs).*
- 96. Naheya Su** (University of Toledo) Advisor: Dean M. Giolando  
*Electrodeposited Iron-Cobalt-Phosphide as a Water-Splitting Catalyst for Dihydrogen Production*
- 97. Maggie Sutton** (Ball State University) Advisor: Zhihai Li  
*Fabrication of Dye Sensitized Solar Cells (DSSC) for Energy Conversion*
- 98. Caleb Tatebe** (Purdue University) Advisor: Suzanne Bart  
*Organometallic Uranium Complexes Supported by Scorpionate Ligands*
- 99. Diamond Thomas** (University of Michigan) Advisor: Nicolai Lehnert  
*TDB*
- 100. Audrey Tolbert** (University of Michigan) Advisor: Vincent Pecoraro  
*Lead assisted heterotrimer formation in a designed coiled-coil peptide*
- 101. Phuong Tran** (The Ohio State University) Advisor: Patrick Woodward  
*Investigating the Effect of Crystal Structure on the Magnetic Ground State of Osmate Double Perovskites*
- 102. Regina Trevino** (The Ohio State University) Advisor: Hannah Shafaat  
*Investigations of Interfacial Electron Transfer in Enzymes: An Electrochemical Study of Native and Nickel-Substituted Rubredoxin*
- 103. Corey Turpin** (Ashland University ) Advisor: Nicholas A. Johnson  
*Cyclophosphazenes as Drug Delivery Systems*
- 104. Michael Wade Wolfe** (University of Michigan) Advisor: Nathaniel Szymczak  
*Synthesis and Mechanistic Inquiry of Anionic Trifluoromethyl Transfer Reagents*
- 105. Duleeka Wannipurage** (Wayne State University) Advisor: Stanislav Groysman  
*Catalytic nitrene coupling by iron(II) bis(alkoxide) complex: Bulking up the alkoxide enables wider range of substrates and provides insight into the reaction mechanism*
- 106. Skyler Ware** (The Ohio State University) Advisor: Robert Baker  
*Improved stability of a C-C bond coupling catalyst for CO<sub>2</sub> reduction using O<sub>2</sub> as a sacrificial electron acceptor*
- 107. Mary Warmin** (University of Cincinnati) Advisor: Michael Baldwin

*Effect of metal size and valence on the structure of siderophore-inspired complexes bearing alpha hydroxy acids*

- 108. Ruwani Wasalathanthri** (University of Toledo) Advisor: Dean M. Giolando  
*Electrodeposited metal phosphides as active and stable water splitting catalysts*
- 109. A.D.K. Isuri Weeraratne** (Wayne State University) Advisor: Claudio N. Verani  
*New Molecular Precursors for Current Rectification using Langmuir-Blodgett Monolayers of Early Transition Metal Complexes*
- 110. Kody Whisnant** (Wayne State University) Advisor: Stephanie L. Brock  
*Visible Light Induced Photocatalytic Hydrogen Evolution Using a CdS-Ni<sub>2</sub>P Hybrid Aerogel System*
- 111. Corey White** (University of Michigan) Advisor: Nicolai Lehnert  
*Evaluating the Mechanism of NO Reduction in Flavodiiron Nitric Oxide Reductases*
- 112. Tyler Whittemore** (The Ohio State University) Advisor: Claudia Turro  
*Excited State Electron Transfer in Dirhodium(II,II) Paddlewheel Complexes*
- 113. Caroline Williams** (University of Cincinnati) Advisor: William B. Connick  
*Evaluating the Reversibility of Vapochromism in a Platinum(II) Salt*
- 114. Brittany Wilson** (The University of Toledo) Advisor: Cora Lind-Kovacs  
*Low temperature synthesis of molybdenum oxide for future use in composites*
- 115. Jessica Wilson** (University of Michigan) Advisor: Nathaniel Szymczak  
*Reduction of NO<sub>2</sub> to NO by a Modified Cu(I)tpa Complex*
- 116. Congcong Xue** (The Ohio State University) Advisor: Claudia Turro  
*Low Energy Absorbing Dirhodium Formamidinate Complexes and Observed Electron Injection to Titanium Dioxide*
- 117. Yuan Xue** (University of Akron) Advisor: Claire Tessier  
*A Synthesis of Phosphazene Trimer – Ruthenium(III) Conjugates*
- 118. Alex Zuhl** (Wayne State University) Advisor: Matthew J. Allen  
*Reduction of Eu(III) in liposomes as a responsive contrast system for magnetic resonance imaging*
- 119. Austin Lanquist** (The Ohio State University) Advisor: Claudia Turro  
*Investigation of Ligand electronic Effects on the Photodissociation of Acetonitrile from Ruthenium polypyridyl Complexes*