

Matthew S. Thompson
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EDUCATION

- Boston College, Chestnut Hill, MA** Aug 2016 – present
Candidate for Doctor of Philosophy in Chemistry (expected Aug 2021)
Thesis Advisor: Professor Jeffery A. Byers
Awards: Best Oral Presentation—2021 Northeast Section Chemistry Research Conference, Northeast Section Younger Chemists Committee, Best Poster—2018 Graduate Student Symposium, Boston College Department of Chemistry
Affiliations: National Science Foundation—Center for Integrated Catalysis: Researcher and scientific blog editor
- University of North Carolina at Chapel Hill, Chapel Hill, NC** Aug 2012 – May 2016
Bachelor of Science in Chemistry, minor in Geography
Awards: Dean's List (2012-2013)

RESEARCH EXPERIENCE

- Byers Research Group, Chestnut Hill, MA** Jan 2017 – present
Graduate Research Assistant
Advisor: Professor Jeffery A. Byers
- Studies focused on the development of redox-switchable polymerizations for underutilized monomers. Synthesized biodegradable polycarbonate-polyester copolymers using redox-switchable copolymerizations with transition metal catalysts. Studied the redox-switchable polymerization of *N*-carboxyanhydrides and epoxides. Investigating the direct synthesis of polyamides from amino acids using surface-bound, transition metal catalysts.
- G. Meyer Research Group, Chapel Hill, NC** Dec 2014 – May 2016
Undergraduate Research Assistant
Advisor: Professor Gerald J. Meyer
- Studies directed towards the synthesis of transition metal complexes for iodine oxidation in dye-sensitized solar cells. Pulsed-laser fluorescence was utilized to measure the absorbance and lifetime of the catalyst excited state in the presence of iodide.
- T. Meyer Research Group, Chapel Hill, NC** Mar 2014 – Dec 2014
Undergraduate Research Assistant
Advisor: Professor Thomas J. Meyer
- Studies focused on the synthesis of asymmetric, pentadentate ligands for ruthenium-based dye-sensitized solar cells. Synthesized ruthenium complexes with single open sites for water oxidation.

WORK EXPERIENCE

- Boston College—Department of Chemistry, Chestnut Hill, MA** Aug 2016 – Dec 2019
Teaching Assistant
- Served as teaching assistant for undergraduate-level Organic Chemistry (CHEM 2231 and CHEM 2232) with Professor T. Ross Kelly, General Chemistry (CHEM 1109 and CHEM 1110) with Professor Daniel J. Fox, and Organic Chemistry Lab with Dr. Lynne O'Connell (CHEM 2233).
 - Led up to four discussion sections per semester, designed problem sets and exams, provided supplementary work and reviewed lecture topics to classes of up to 250 students.
- Morehead Planetarium, Chapel Hill, NC** May 2016 – Aug 2016
Science Camp Counselor
- Designed and ran a murder mystery/CSI module for children grades 6-8. Taught participants forensics skills used in investigatory crime laboratories.
 - Oversaw the water conservation exhibit that was open for guests of all ages. Performed general upkeep on projectors and demo equipment. Explained how the water cycle operated on a global scale to guests of non-science backgrounds.
- University of North Carolina at Chapel Hill—Department of Mathematics, Chapel Hill, NC** Sep 2013 – May 2016
Department Math Tutor
- Tutored students in all courses from pre-calculus to calculus III and trigonometry.

PUBLICATIONS

‡ denotes equal contribution * indicates corresponding author

3. **Thompson, M. S.** ‡; Zhang, H. ‡; Jolly, B. J.; Wang, D.; Liu, C.; Byers, J. A. * “Redox-switchable polymerization of N-carboxyanhydrides on titanium oxide surfaces in flow.” *In preparation*.
2. **Thompson, M. S.** ‡; Byers, J. A. * “ReSPCT, a redox-switchable method for the copolymerization of lactones, epoxides and carbon dioxide.” *In preparation*.
1. **Thompson, M. S.** ‡; Gonsales, S. A. ‡; Brown, G. M.; Kristufek, S. L.; Byers, J. A. * “Adding Polyamides to the Toolbox for Redox-Switchable Polymerization and Copolymerization Catalysis.” *Macromolecules*. *In revision*.

PRESENTATIONS

7. **Thompson, M. S.**; Byers, J. A. “Redox-Switchable Polymerization by Chain-Transfer (ReSPCT) of Lactide, Epoxides and Carbon Dioxide”, *Northeast Section Chemistry Research Conference*, Virtual. April 24th, **2021**, oral presentation.
6. **Thompson, M. S.**; Byers, J. A. “Redox-Switchable Polymerization by Chain-Transfer (ReSPCT) of Lactide, Epoxides and Carbon Dioxide”, *261st American Chemical Society National Meeting*, Virtual. April 13th, **2021**, oral presentation.
5. **Thompson, M. S.**; Gonsales, S. A.; Brown, G. M.; Kristufek, S. L.; Byers, J. A. “Redox-Switchable Iron-based Catalysts, For Polyamide Block-Copolymers”, *Beckman New England Macro Workshop*, Virtual. June 9th, **2020**, oral presentation.
4. **Thompson, M. S.**; Gonsales, S. A.; Brown, G. M.; Byers, J. A. “Synthesis of Block Copolymers of Polyamides Through Ring-opening Polymerization Catalyzed by Redox-switchable Iron Alkoxide Complexes”, *258th American Chemical Society National Meeting*, San Diego, CA. August 25th, **2019**, oral presentation.
3. **Thompson, M. S.**; Gonsales, S. A.; Byers, J. A. “Expanding the scope of iron-catalyzed, redox-switchable polymerization”, *Boston College Graduate Research Symposium*, Chestnut Hill, MA. October 8th, **2018**, poster presentation.
2. **Thompson, M. S.**; Gonsales, S. A.; Byers, J. A. “Synthesis of polyamides and poly(ester-amides) through ring-opening polymerization catalyzed by iron alkoxide complexes”, *256th American Chemical Society National Meeting*, Boston, MA. August 20th, **2018**, poster presentation.
1. **Thompson, M. S.**; Gonsales, S. A.; Byers, J. A. “Using redox-switchable, catalytic systems to produce biodegradable polymers”, *Boston Inorganic Supergroup 2018*, Cambridge, MA. July 27th, **2018**, oral presentation.