

Christopher E. Hobbs, Ph.D.

Assistant Professor

Department of Chemistry, Sam Houston State University

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Education

- *Ph.D. Chemistry* Department of Chemistry 2011
Texas A&M University, College Station, Texas
Research Advisor: Prof. David E. Bergbreiter
Dissertation: *The Use of Soluble Polyolefins as Supports for Transition Metal Catalysts*
- *B.S. Chemistry* Department of Chemistry and Biochemistry 2006
Angelo State University, San Angelo, Texas
Research Advisor: Prof. Donna K. Howell
Research: *Preparation and Use of Tetrathiophene-containing Macrocycles*

Professional Appointments

- *Assistant Professor* Department of Chemistry 8/2017-present
Sam Houston State University
Huntsville, Texas
- *Assistant Professor* Department of Chemistry 6/2014-5/2017
Texas A&M University-Kingsville,
Kingsville, Texas
- *Assistant Professor* Department of Chemistry and Biochemistry 8/2011-6/2014
Angelo State University, San Angelo, Texas

Awards/Funding

- *National Science Foundation*, \$409,910 2019
CAREER: Developing New Polymer-Supported Catalysts with High School,
Undergraduate, and Graduate Students
- Sam Houston State University, *Faculty Research Grant*, \$5,000 2018
- *National Science Foundation*, \$229,395.00 2016
RUI: Utilization of a Thio-Bromo Substitution Reaction for the
Preparation of a New Class of ROMP Hydrogels
- Texas A&M Univ.-Kingsville *University Research Award*, \$15,000.00 2016
- Texas A&M Univ.-Kingsville *Summer Research Award*, \$3,000.00 2015
- Texas A&M Univ.-Kingsville Dept. of Chemistry *John S. Thompson Award* 2015
- Texas A&M Univ.-Kingsville *University Research Award*, \$15,000.00 2014
- *Robert A. Welch Foundation Department Grant*, \$30,000.00 2014 - 2017

- Angelo State Univ. *Faculty Excellence in Research/Creative Endeavor, Finalist* 2013
- American Chemical Society Petroleum Research Fund, \$50,000.00 2013
- Angelo State University *Research Enhancement Award*, \$15,000.00 2012

Publications

(undergraduate coauthors denoted with an underline, corresponding author denoted with an asterisk)

· Independent Career:

Ashlin, M.; **Hobbs*, C. E.** "Thiol Substitutions Facilitated by Mechanochemistry." *Macromol. Chem. Phys.* **2019**, 220, 1900350.

Subnaik, S.; **Hobbs*, C. E.** "Flow-Facilitated Ring Opening Metathesis Polymerization (ROMP) Reactions and Post-Polymerization Modification Reactions." *Polym. Chem.* **2019**, 10, 4524

Hobbs*, C. E.; Vasireddy, M. "Combining ATRP and ROMP with Thio-Bromo, Copper-Catalyzed, and Strain-Promoted Click Reactions for Brush Copolymer Synthesis Starting from a Single Initiator/Monomer/Click Partner." *Macromol. Chem. Phys.* **2019**, 220, 1800497

Hobbs*, C. E. "Recent Advances in Bio-Based Flame Retardant Additives for Synthetic Polymeric Materials." *Polymers* **2019**, 11, 224.

-Invited Article

Grubb, J.; Carosio, F.; Vasireddy, M.; Moncho, S.; Brothers, E. N.; **Hobbs*, C. E.** "Ring Opening Metathesis Polymerization (ROMP) and Thio-Bromo "Click" Chemistry Approach Toward the Preparation of Flame-Retardant Polymers." *J. Polym. Sci., Part A: Polym. Chem.* **2018**, 56, 645.

Liu, Y.; **Hobbs, C. E.*** "Phase-Selectively Soluble, Polymer-Supported Salen Catalyst Prepared Using Atom Transfer Radical Polymerization (ATRP)." *Polymer*, **2018**, *Polymer*, **2018**, 135, 25.

Yao, Q.; Gutierrez, D. C.; Hoang, N. H.; Kim, D.; Wang, R.; **Hobbs, C.***; Zhu, L.* "Efficient Codelivery of Paclitaxel and Curcumin by Novel Bottlebrush Copolymer-Based Micelles." *Mol. Pharmaceutics.* **2017**, 14, 2378.

Fredlund, A.; Kothapalli, V. A.; **Hobbs, C. E.*** "Phase-Selectively Soluble Polynorbornene as a Catalyst Support." *Polym. Chem.* **2017**, 8, 516.

Kothapalli, V. A.; Shetty, M.; de los Santos, C.; **Hobbs, C. E.*** "Thio-Bromo "Click", Post-Polymerization Strategy for Functionalizing Ring Opening Metathesis Polymerization (ROMP)-Derived Materials." *J. Polym. Sci. Part A: Polym. Chem.* **2016**, 54, 179. *Spotlight Article*

Shetty, M.; Kothapalli, V. A.; **Hobbs, C. E.*** "Toward the (Nearly) Complete Elimination of Solvent Waste in Ring Opening Metathesis Polymerization (ROMP) Reactions." *Polymer*, **2015**, *80*, 64.

Suriboot, J.; **Hobbs, C. E.**; Guzman, W.; Bazzi, H. S.; Bergbreiter, D. E. "Polyethylene as a Cosolvent and Catalyst Support in Ring-Opening Metathesis Polymerization." *Macromolecules*, **2015**, *48*, 5511.

Hobbs, C. E.*; Lin, B.; Malinski, T. "Norbornene Derivatives From a Metal-free, Strain-Promoted Cycloaddition Reaction: New Building Blocks for Ring-Opening Metathesis Polymerization (ROMP) Reactions." *J. Polym. Sci., Part A: Polym. Chem.* **2015**, *53*, 2357.

Hicks, A.; Lin, B.; Osburn, P.; **Hobbs*, C. E.** "Use of an Isotactic-Propylene/Hexene Copolymer as a New, Versatile, Soluble Support." *J. Polym. Sci., Part A: Polym. Chem.* **2013**, *52*, 600. *Inside Cover Image*

Lin, B.; Lawler, D.; McGovern, G.; Bradley, C.; **Hobbs*, C. E.** "Terminal Functionalization of Atactic Polypropylene: A New, Soluble Polymer Support." *Tet. Lett.* **2013**, *54*, 970.

· *Graduate School (Texas A&M University):*

Suriboot, J.; **Hobbs, C. E.**; Yang, Y.-C.; Bergbreiter*, D. E. "Protective Encapsulation of Acid-Sensitive Catalysts Using Polyethylene Ligands." *J. Polym. Sci.: Part A* **2012**, *50*, 4840.

Bergbreiter*, D. E.; Yang, Y.-C.; **Hobbs, C. E.** "Polyisobutylene-Supported Phosphines as Recyclable and Regenerable Catalysts and Reagents." *J. Org. Chem.* **2011**, *76*, 6912.

Hobbs, C. E.; Yang, Y.-C.; Ling, J.; Nicola, S.; Su, H.-L.; Bazzi*, H. S.; Bergbreiter*, D. E. "Thermomorphic Polyethylene-Supported Olefin Metathesis Catalysts." *Org. Lett.* **2011**, *13*, 3904.

Bergbreiter*, D. E.; **Hobbs, C. E.**; Hongfa, C. "Polyolefin-Supported Recoverable/Reusable Cr(III)-salen Catalysts." *J. Org. Chem.* **2011**, *76*, 523.

Bergbreiter*, D. E.; **Hobbs, C.**; Tian, J.; Koizumi, H.; Hongfa, C. "Syntheses of Aryl-Substituted Polyisobutylenes as Precursors for Ligands for Greener, Phase-Selectively Soluble Catalysts." *Pure and Appl. Chem.* **2009**, *81*, 1981.

Book Chapters

Hobbs*, C. E. Recoverable Polymer-Supported DMAP Derivatives. In *Hazardous Reagent Substitution: A Pharmaceutical Perspective*; Sharma R. K. and Bandichhor, R., Ed.; RSC: Croydon, UK, 2018; 53-69

Selected Presentations (underline denotes undergraduate presenters)

· *Independent Career:*

Hobbs, C. E. "Polymer Chemistry at Sam Houston State University." Houston Baptist University, February 2, 2018. (***Invited Oral Presentation***)

Hobbs, C. E. "Use of Thio-Bromo "Click" Chemistry for Functionalizing Polymers." Abstracts, 73rd Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, United States, October 29-November 1, 2017 (2017)

Grubb, J.; **Hobbs, C. E.** "Thio-bromo click approach for developing new, ROMP- based flame-resistant materials." Abstracts of Papers, 253rd ACS National Meeting & Exposition, San Francisco, CA, United States, April 2-6, 2017 (2017).

Gutierrez, D.; **Hobbs, C. E.** "Thio-bromo click approach for the preparation of a new class of cross-linked, ROMP-based gels." Abstracts of Papers, 253rd ACS National Meeting & Exposition, San Francisco, CA, United States, April 2-6, 2017 (2017).

Hobbs, C. "Green(er) Routes Toward the Synthesis, Functionalization, and Use of Polymers." Texas A&M University-Commerce, Commerce, Texas, United States, February 26, 2016. (***Invited Oral Presentation***)

Hobbs, C. "Green(er) Routes Toward the Synthesis, Functionalization, and Use of Polymers." Texas State University, San Marcos, Texas, United States, February 15, 2016. (***Invited Oral Presentation***)

de Los Santos, C.; Hobbs, C. E. "Functionalization of Polymers Using Thio-Bromo Click Reactions." Abstracts of Papers, 250th National Meeting of the American Chemical Society, Boston, Massachusetts, United States, August 16-20, 2015. (***Student Poster Presentation***)

Tovar, C.; Lopez, A.; Hobbs, C. E. "Utilization of a Catalyst-Free, Strain Promoted Reaction Between Azides and Norbornenes in Dendrimer Synthesis." Abstracts of Papers, 250th National Meeting of the American Chemical Society, Boston, Massachusetts, United States, August 16-20, 2015. (***Student Poster Presentation***)

Hobbs, C. "Development and Use of Propylene-based Oligomers as Supports for Homogeneous Catalysis." Gordon Research Conference: Polymers, Mount Holyoke College, South Hadley, MA, United States, June 14-19 (2015).

Hobbs, C. "Soluble Polypropylene-based Supports in Synthesis and Catalysis." Abstracts of Papers, 70th Southwest Regional Meeting of the

American Chemical Society, Fort Worth, Texas, United States, November 19-22, (2014).

Hobbs, C. E. "Polypropylene Oligomers as Synthetic Scaffolds Toward Supported Ligands/Catalysts." University of Texas-Arlington, Arlington, Texas, United States, October 17 (2014). (***Invited Oral Presentation***)

Lin, B.; Hobbs, C. E. "Atactic-Polypropylene, a New Catalyst Support Towards Green Chemistry." Abstracts of Papers, 247th National Meeting of the American Chemical Society, Dallas, Texas, United States, March 16-20, 2014. (***Student Poster Presentation***)

Hobbs, C. E. "Polypropylene Oligomers as Synthetic Scaffolds Toward Supported Ligands/Catalysts." Abstracts of Papers, 69th Southwest Regional Meeting of the American Chemical Society, Waco, TX, United States, November 16-19 (2013). (***Invited Oral Presentation***)

Hicks, A.; Lin, B.; Hobbs, C. E. "Preparation and Use of an Isotactic-poly(propylene-co-hexene)-Supported Organocatalyst." Abstract of Papers, 69th Southwest Regional Meeting of the American Chemical Society, Waco, TX, United States, November 16-19 (2013). (***Student Poster Presentation***)

Lin, B.; Lawler, D.; Hobbs, C. E. "Terminal Functionalization of Atactic-Polypropylene Oligomers: Toward the Development of Polymer-Bound Ligands and Catalysts." Abstract of Papers, 244th National Meeting of the American Chemical Society, Philadelphia, PA, United States, August 19-23 (2012). (***Student Poster Presentation***)

· *Graduate School (Texas A&M University):*

Hobbs, C. E.; Bazzi, H. S.; Bergbreiter, D. E. "Soluble Polyethylene Oligomers as Supports for NHC Ligands." Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, (2010).

Hobbs, C.; Hongfa, C.; Bergbreiter, D. E.; Bazzi, H. S. "Designing separable polyolefinic ligands for transition metal catalysts." Gordon Research Conference: Green Chemistry, Davidson, NC, July 25-30 (2010). (***Poster***)

Hobbs, C. E.; Hongfa, C.; Bergbreiter, D. E. "Polyisobutylene as a soluble polymer support for salen ligands." Abstracts of Papers, 238th ACS National Meeting, Washington, DC, United States, August 16-20 (2009). (***Poster***)

Teaching/Leadership Experience

· *Assistant Professor*

Department of Chemistry
Sam Houston State University
Huntsville, Texas

2017-present

Courses: Organic Chemistry (undergraduate)
Polymer Chemistry (graduate)

· <i>Assistant Professor</i>	Department of Chemistry Texas A&M University-Kingsville Kingsville, Texas <i>Courses:</i> Organic Chemistry (undergraduate) Reaction Mechanisms (graduate) Polymer Chemistry (graduate) Spectroscopic Analysis (graduate)	2014-2017
· <i>Assistant Professor</i>	Department of Chemistry and Biochemistry Angelo State University, San Angelo, Texas <i>Courses taught:</i> Organic Chemistry lecture and laboratory (undergraduate)	2011-2014
· <i>Research Mentor</i>	Department of Chemistry Texas A&M University, College Station, Texas	2006-2011
· <i>Teaching Assistant</i>	Department of Chemistry Texas A&M University, College Station, Texas <i>Courses taught:</i> Chem 237/238 Organic Chemistry laboratory	2006-2007

Professional Affiliations

- American Chemical Society Committee on Minority Affairs (CMA)
- South Texas Local Section of the American Chemical Society
- Permian Basin Local Section of the American Chemical Society
- The American Chemical Society
- Society of Plastics Engineers
- Phi Lambda Upsilon