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Ashley B. Biernesser, Ph.D.

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Overview

Ashley Biernesser, Ph.D., focuses her practice on patent prosecution in the chemical sciences. Her areas of technical expertise include organic, inorganic, organometallic, and polymer chemistry.

Prior to her patent practice, Ashley worked as a synthetic chemist, where she developed resin products with applications in coatings, paints, and adhesives. Ashley's graduate research focused on developing iron-based catalysts for the redox-controlled synthesis of biodegradable polymers.

Additional insights

Publications

- M.A. Ortuño, B. Dereli, K.R. Delle Chiaie, A.B. Biernesser, M. Qi, J.A. Byers, C.J. Cramer. "The Role of Alkoxide Initiator, Spin State, and Oxidation State in Ring Opening Polymerization of ε-Caprolactone Catalyzed by Iron Bis(imino)pyridine Complexes." Inorg. Chem. 2018, 57, 2064-2071.
- J.A. Byers, A.B. Biernesser, K.R. Delle Chiaie, A. Kaur, J.A. Kehl. "Catalytic Systems for the Production of Poly(lactic acid)." Synthesis, Structure, and Properties of Poly(lactic acid), M.L. Di Lorenzo, R. Androsch, Eds.; Adv. Polym. Sci. 279; Springer International Publishing, 2018, 67-118. (book chapter)
- K.R. Delle Chiaie, A.B. Biernesser, M.A. Ortuño, B. Dereli, D.A. Iovan, M.J.T. Wilding, B. Li, C.J. Cramer, J.A. Byers. "The Role of Ligand Redox Non-innocence in Ring-Opening Polymerization Reactions Catalysed by Bis(imino)pyridine Iron Alkoxide Complexes." Dalton Trans. 2017, 46, 12971-12980.
- K.R. Delle Chiaie, L.M. Yablon, A.B. Biernesser, G.R. Michalowski, A.W. Sudyn, J.A. Byers. "Redox-Triggered Crosslinking of a Degradable Polymer." Polym. Chem. 2016, 7, 4675-4681.
- A.B. Biernesser, K.R. Delle Chiaie, J.B. Curley, J.A. Byers. "Block Copolymerization of Lactide and an Epoxide Facilitated by a Redox Switchable Iron-Based Catalyst." Angew. Chem. Int. Ed. 2016, 55, 5251-5254.
- A.B. Biernesser, B. Li, J.A. Byers. "Redox-Controlled Polymerization of Lactide Catalyzed by Bis(imino)pyridine Iron Bis(alkoxide) Complexes." J. Am. Chem. Soc. 2013, 135 (44), 16553-16560.
- W.T. Eckenhoff, A.B. Biernesser, T. Pintauer. "Kinetic and Mechanistic Aspects of Atom Transfer Radical Addition (ATRA) Catalyzed by Copper Complexes with Tris(2-pyridylmethyl)amine." Inorg. Chem. 2012, 51, 11917-11929.

Services

Patent
Patent Prosecution

Industries

Energy & Chemicals
Life Sciences
Pharmaceuticals

Admissions

U.S. Patent and Trademark Office (2019)
Massachusetts (2022)

Education

J.D. *summa cum laude*, University of Pittsburgh School of Law (2022)
Ph.D., Chemistry, Boston College (2017)
B.S. *summa cum laude*, Chemistry, with minor in Mathematics, Duquesne University (2011)
