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PROFESSIONAL PREPARATION

Postdoctoral Associate, Organometallic Chemistry, University of Virginia, Charlottesville, VA, Research Advisor: W. Dean Harman 6/97 – 5/99

Ph. D., Inorganic Chemistry, University of North Carolina at Chapel Hill 8/93 – 5/97
Research Advisor: Joseph L. Templeton

B. A., Chemistry, West Virginia University, Morgantown, WV 8/89 – 5/93
Research Advisor: Jeffrey L. Petersen, Graduated Summa Cum Laude

APPOINTMENTS AND PROFESSIONAL EXPERIENCE

Editorial Advisory Board, *Inorganics* 2021 – present

Executive Editor, *ACS Catalysis* 3/21 – present

Interim Editor in Chief, *ACS Catalysis* 8/20 – 2/21

Director Graduate Studies, Chemistry Department (UVA) 8/19 – present

Commonwealth Professor of Chemistry 8/17 – present

Director, UVA/MAXNET Energy Partnership (UVA effort) 1/15 – 12/19

Honorable Professor, Shanghai Normal University 1/15 – 12/17

In cooperation with International Joint Laboratory of Resource Chemistry (IJLRC) between Shanghai Normal University, National University of Singapore and Princeton University

Inaugural Associate Editor, *ACS Catalysis* 12/10 – 8/20

Director, Graduate Admission and Recruiting, Chemistry Department (UVA) 8/09 – 7/19

Director, Center for Catalytic Hydrocarbon Functionalization (DOE EFRC) 5/09 – 7/15

Professor of Chemistry, University of Virginia 7/08 – 8/17

Chair, Inorganic Division, Department of Chemistry, NCSU 7/06 – 6/08

Associate Professor of Chemistry, NCSU 7/05 – 6/08

Elected Sigma Xi Treasurer (NCSU Chapter) 5/06 – 5/07

Elected Sigma Xi Secretary (NCSU Chapter) 4/05 – 5/06

Director of Graduate Recruiting, NCSU 8/04 – 6/07

Director of Undergraduate Research, NCSU 3/04 – 6/08

Co-director Research Experience for Undergraduates, NCSU 8/99 – 1/1/04

Assistant Professor of Chemistry, North Carolina State University 7/99 – 7/05

Postdoctoral Research Associate, University of Virginia 6/97 – 5/99

AWARDS, RECOGNITION AND SOCIETIES

ACS George Olah Award in Hydrocarbon or Petroleum Chemistry 2022

Plenary Speaker, XIIIth International School "Marcial Moreno Mañas" on Organometallic Chemistry 2022

Plenary Speaker, Westlake International Symposium on Organic Chemistry (Note: cancelled due to COVID) 2020

Elected for inaugural "Career Journey" presentation by graduate students for Chemistry Department Retreat October 2018	2018
Invited Speaker Catalysis Gordon Conference	2018
Keynote lecture in the Unconventional Catalysis – Target Stable Molecules symposium, 255 th American Chemical Society National Meeting	2018
Keynote Lecture, Department of Energy Catalysis Program	2015
Plenary Speaker, International Symposium on Resource Chemistry (Shanghai)	2014
<i>The Catalyst Review</i> "Movers and Shakers" Feature	2011
Invited Speaker Organometallic Gordon Conference	2010
Invited Speaker International Conference on Organometallic Chemistry (Rennes)	2008
Invited Speaker NSF Inorganic Workshop (Jackson Hole, WY)	2007
LeRoy and Elva Martin Award for Teaching Excellence (NCSU)	2006-2007
Elected Sigma Xi Treasurer (NCSU Chapter)	2006 – 2007
Elected Sigma Xi Secretary (NCSU Chapter)	2005 – 2006
Alfred P. Sloan Research Fellowship	2004 – 2006
Invited Speaker Organometallic Gordon Conference	2004
Sigma Xi Faculty Research Award	2004
Park Scholarship Outstanding Mentor Award, NCSU	2003
Recipient National Science Foundation CAREER Award	2002
Department of Education GAANN Fellowship, UNC	1996 – 1997
Outstanding Senior Chemistry Student, WVU	1993
Outstanding Junior Chemistry Student, WVU	1992
Phi Beta Kappa	1993
Presidential Scholarship, WVU	1989 – 1993

PUBLICATION LIST

Patents

5. "Copper Mediated Conversion of Arenes and Alkenes to Esters, Alcohols and Aldehyde Products" Provisional patent filed June 2022, Gunnoe, T. B., Chen, J., Kong, F., Schinski, W. L.
4. "Methods of Arene Alkenylation" Full patent filed May 2021, Gunnoe, T. B., Jia, X., Frye, L.
3. "Catalytic Synthesis of Super Linear Alkenyl Arenes Using Rhodium Catalysts" U.S. Patent 11,306,041, Schinski, W., Goldman, A., Gunnoe, T. b., Webster-Gardiner, M. S., Schwartz, N. Issued April 19, 2022.
2. "Catalyst and Methods for Forming Alkenyl and Alkyl Substituted Arenes" U.S. Patent 10,967,364, Gunnoe, T. B., Webster-Gardiner, M. S., Vaughn, B. A. Issued April 6, 2021.
1. "Compositions and Methods for Hydrocarbon Functionalization" U.S. Patent US 10,450,259 B2. Gunnoe, T. B., Fortman, G., Boaz, N. C., Groves, J. T. Issued Oct. 22, 2019.

Edited Books

2. "Catalytic Hydroarylation of Carbon-Carbon Multiple Bonds" Eds. Gunnoe, T. B., Ackermann, L., Habgood, L. G. **2018**, Wiley-VCH.
1. "The Changing Landscape of Hydrocarbon Feedstocks for Chemical Production: Implications for Catalysis" **2016**, published based on a workshop (hosted by the National Academies of Sciences, Engineering and Medicine) by the National Academies Press, Workshop Planning Committee: Alexis T. Bell, Monty Alger, Maria Flytzani-Stephanopoulos, T. Brent Gunnoe, Johannes A. Lercher, and James C. Stevens. DOI: 10.2172/1344369

Book chapters

5. "Studies of C–H Activation and Functionalization: Combined Computational and Experimental Efforts to Elucidate Mechanisms, Principles and Catalysts" Schwartz, N. A., Gu, S., McKeown, B. A., Huang, X., Boaz, N. C., Gunnoe, T. B., Groves, J. T. invited chapter in "Computational Materials, Chemistry, and Biochemistry: From Bold Initiatives to the Last Mile: In Honor of William A. Goddard's Contributions to Science and Engineering" **2021**, 767-801.
4. "Alkylation of Arenes Without Chelation Assistance: Transition Metal Catalysts with d^6 Electron Configurations" McKeown, B. A., Habgood, L. G., Cundari, T. R., Gunnoe, T. B. invited chapter in *Catalytic Hydroarylation of Carbon-Carbon Multiple Bonds*, **2018**, Wiley-VCH, Edited by L. Ackermann, T. B. Gunnoe, L. G. Habgood, pp. 83-106.
3. "Introduction: Alkane C-H Activation by Single-Site Metal Catalysis" Gunnoe, T. B.* invited chapter in *Alkane C-H Activation by Single-Site Metal Catalysis*, **2012**, Springer, Edited by Pedro J. Pérez, pp. 1-16.
2. "Metal-Mediated Carbon-Hydrogen Bond Activation" Gunnoe, T. B.* invited chapter in *Physical Inorganic Chemistry: Reactions, Processes, and Applications*, **2010**, Wiley-VCH, Edited by A. Bakac, pp. 495-549.
1. "Ruthenium (II) and Iridium (III) Catalyzed Hydroarylation of Olefins" Gunnoe, T. B.*, Periana, R. A. invited chapter in *Handbook of C-H Transformations*, Volume 1, **2005**, Wiley-VCH, Edited by G. Dyker, pp. 180-187.

Publications

170. "Cu(II) Carboxylate Arene C–H Functionalization: Tuning for Non-Radical Pathways" Kong, F., Chen, S., Chen, J., Liu, C., Zhu, W., Dickie, D. A., Zhang, S., Ess, D.*, Gunnoe, T. B.* *Sci. Adv.* **2022**, 8, eadd1594, 1-14. DOI: 10.1126/sciadv.add1594
169. "Catalytic Hydrogenolysis of the Pt–O_{Ph} Bond of a Molecular Pt(II) Complex using Silica Supported Pd, Rh and Pt Nanoparticles" Luo, Z., Xie, J., Kaylor, N., Dickie, D. A., Ketcham, H. E., Davis, R. J.*, Gunnoe, T. B.* *ChemCatChem* **2022**, 14, e202200582, 1-7. DOI: 10.1002/cctc.202200582

168. "The Reaction Mechanism Underlying Pd(II) Catalyzed Oxidative Coupling of Ethylene and Benzene to Form Styrene: Identification of a cyclic Mono-Pd^{II} Bis-Cu^{II} Complex as the Active Catalyst" Musgrave III, C. B., Bennett, M. T., Ellena, J. F., Dickie, D. A., Gunnoe, T. B.* Goddard III, W. A.* *Organometallics* **2022**, *41*, 1988-2000. DOI: 10.1021/acs.organomet.2c00183
167. "Electron-Deficient Cationic Ru(II) Catalyst Precursors for Ethylene Hydrophenylation" Jia, X., Tian, S., Shivokevich, P. J., Harman, W. D., Dickie, D. A., Gunnoe, T. B.* *Inorganics* **2022**, *10*, 76 (14 pages). DOI: 10.3390/inorganics10060076 (selected as a Feature Paper and for the issue cover feature)
166. "Manganese Catalyzed Partial Oxidation of Light Alkanes" Coutard, N., Musgrave III, C. B., Moon, J., Liebov, N. S., Nielsen, R. M., Goldberg, J. M., Li, M., Jia, X., Lee, S., Dickie, D. A., Schinski, W. L., Wu, Z., Groves, J. T., Goddard III, W. A.*, Gunnoe, T. B.* *ACS Catalysis* **2022**, *12*, 5356-5370. DOI: 10.1021/acscatal.2c00982
165. "Aerobic Partial Oxidation of Alkanes using Photo-driven Iron Catalysis" Coutard, N., Goldberg, J. M., Valle, H. U., Cau, Y., Jia, X., Jeffrey, P. D., Gunnoe, T. B.*, Groves, J. T.* *Inorg. Chem.* **2022**, *61*, 759-766. DOI: 10.1021/acs.inorgchem.1c03086 (paper selected as a Feature Article by *Inorg. Chem.*)
164. "Immobilization of "Capping Arene" Cobalt(II) Complexes on Ordered Mesoporous Carbon for Electrocatalytic Water Oxidation" Liu, C., Geer, A. M., Webber, C., Musgrave III, C. B., Gu, S., Johnson, G., Dickie, D. A., Chhabra, S., Schnegg, A., Zhou, H., Sun, C.-J., Hwang, S., Goddard III, W. A.*, Zhang, S.*, Gunnoe, T. B.* *ACS Catal.* **2021**, *11*, 15068-15082. DOI: 10.1021/acscatal.1c04617
163. "Rhodium and Iridium Complexes Bearing "Capping Arene" Ligands: Synthesis and Characterization" Gu, S., Musgrave III, C. B., Gehman, Z. M., Zhang, K., Dickie, D. A., Goddard III*, W. A., Gunnoe, T. B.* *Organometallics* **2021**, *40*, 2808-2825. DOI: 10.1021/acs.organomet.1c00250
162. "Non-covalent Immobilization of Pentamethylcyclopentadienyl Iridium Complexes on Ordered Mesoporous Carbon for Electrocatalytic Water Oxidation" Geer, A. M., Liu, C., Musgrave, C., Webber, C., Johnson, G., Zhou, H., Sun, C.-J., Dickie, D. A., Goddard III, W. A.*, Zhang, S.*, Gunnoe, T. B.* *Small Science* **2021**, *1*, 2100037, 1-12. DOI: 10.1002/smssc.202100037
161. "Electrocatalytic Water Oxidation by a Trinuclear Copper(II) Complex" Geer, A. M., Musgrave C., Webber, C., Nielsen, R. J., McKeown, B. A., Liu, C., Schleker, P. P. M., Jakes, P., Jia, X., Dickie, D. A., Granwehr, J., Zhang, S., Machan, C. W., Goddard III, W. A., Gunnoe, T. B. *ACS Catalysis* **2021**, *11*, 7223-7240. DOI: 10.1021/acscatal.1c01395
160. "Functionalization of Rh^{III}-Me Bonds: Use of "Capping Arene" Ligands to Facilitate Me-X Reductive Elimination" Gu, S., Chen, J. Musgrave III, C. B., Gehman, Z. M., Habgood, L. G., Jia, X., Dickie, D. A., Goddard III*, W. A., Gunnoe*, T. B. *Organometallics* **2021**, *40*,

- 1889-1906. DOI: 10.1021/acs.organomet.1c00223 (listed as a "Top 3 most read" manuscript for the month and "Super Seven" as the fifth most read manuscript for the 2021 year)
159. "Advances in Group 10 Transition Metal-Catalyzed Arene Alkylation and Alkenylation" Zhu, W., Gunnoe, T. B.* *J. Am. Chem. Soc.* **2021**, *143*, 6746-6766. DOI: 10.1021/jacs.1c01810
158. "Mechanistic Studies of Styrene Production from Benzene and Ethylene using [Rh(μ -OAc)(η^2 -C₂H₄)₂]₂ as Catalyst Precursor: Identification of a Bis-Rh^I Mono-Cu^{II} Complex as Catalyst" Musgrave III, C. B., Zhu, W., Coutard, N., Ellena, J. F., Dickie, D. A., Gunnoe, T. B.*, Goddard III*, W. A. *ACS Catal.* **2021**, *11*, 5688-5702. DOI: 10.1021/acscatal.1c01203
157. "Reductive C–C coupling from Molecular Au(I) Hydrocarbyl Complexes: A Mechanistic Study" Mirando-Pizarro, J., Luo, Z., Moreno, J. J., Dickie, D. A., Campos, J.*, Gunnoe, T. B.* *J. Am. Chem. Soc.* **2021**, *143*, 2509-2522. DOI: 10.1021/jacs.0c11296
156. "Oxidative Alkenylation of Arenes Using Supported Rh Materials: Evidence that Active Catalysts are Formed by Rh Leaching" Luo, Z., Whitcomb, C., Kaylor, N., Zhang, Y., Zhang, S., Davis, R. J.*, Gunnoe, T. B.* *ChemCatChem* **2021**, *13*, 260-270. DOI: 10.1002/cctc.202001526
155. "Role of Axial Ligation in Gating the Reactivity of Dimethylplatinum(III) Diimine Radical Cations" Huffman, B. L., Lee, K., Geer, A. M., McKeown, B. A., Jia, X., Dickie, D. A., Gunnoe, T. B.*, Dempsey, J. L.* *Organometallics* **2021**, *40*, 333-345. DOI: 10.1021/acs.organomet.0c00663
154. "Oxygen Evolution Reaction over Catalytic Single-Site Co in Well-Defined Brookite TiO₂ Nanorod Surface: Experiment with Quantum Mechanics Validation" Liu, C., Qian, J., Ye, Y., Zhou, H., Sun, C.-J., Sheehan, C., Zhang, Z., Wan, G., Liu, Y.-S., Guo, J., Li, S., Hwang, S., Gunnoe, T. B., Goddard III, W. A.*, Zhang, S.* *Nat. Catal.* **2021**, *4*, 36-45. DOI: 10.1038/s41929-020-00550-5
153. "Transition Metal-Catalyzed Arene Alkylation and Alkenylation: Catalytic Processes for the Generation of Chemical Intermediates" Gunnoe, T. B.*, Schinski, W. L.*, Jia, X. *ACS Catal.* **2020**, *10*, 14080-14092. DOI: 10.1021/acscatal.0c03494
152. "Effects of Additives on Catalytic Arene C–H Activation: Study of Rh Catalysts Supported by Bis-phosphine Pincer Ligands" Kong, F., Gu, S., Liu, C., Dickie, D. A., Zhang, S., Gunnoe, T. B.* *Organometallics* **2020**, *39*, 3918-3935. DOI: 10.1021/acs.organomet.0c00623
151. "Rhodium-Catalyzed Arene Alkenylation Using Only Dioxygen as Oxidant" Zhu, W., Gunnoe, T. B.* *ACS Catal.* **2020**, *10*, 11519-11531. DOI: 10.1021/acscatal.0c03439
150. "Synthesis of Stilbenes by Rhodium-Catalyzed Aerobic Alkenylation of Arenes via C–H Activation" Jia, X., Frye, L. I., Zhu, W., Gu S., Gunnoe, T. B.* *J. Am. Chem. Soc.* **2020**, *142*, 10534-10543. DOI: 10.1021/jacs.0c03935

149. "Use of Ligand Steric Properties to Control the Thermodynamics and Kinetics of Oxidative Addition and Reductive Elimination with Pincer-ligated Rh Complexes" Gu, S., Nielsen, R. J.*, Taylor, K. H., Fortman, G. C., Chen, J., Dickie, D. A., Goddard III, W. A.*, Gunnoe, T. B.* *Organometallics* **2020**, *39*, 1917-1933. DOI: 10.1021/acs.organomet.0c00122 (NOTE: List of "Most Read Articles" for *Organometallics*)
148. "Advances in Rhodium Catalyzed Oxidative Arene Alkenylation" Zhu, W., Gunnoe, T. B.* *Acc. Chem. Res.* **2020**, *53*, 920-936. DOI: 10.1021/acs.accounts.0c00036
147. "A Generalized Synthetic Strategy for Transition Metal Doped Brookite-Phase TiO₂ Nanorods" Zhang, Z., Wu, Q., Johnson, G., Ye, Y., Li, X., Li, N., Cui, M., Lee, J., Liu, C., Zhao, S., Li, S., Orlov, A., Murray, C. B., Zhang, X., Gunnoe, T. B., Su, D., Zhang, S.* *J. Am. Chem. Soc.* **2019**, *141*, 16548-16552. DOI: 10.1021/jacs.9b06389
146. "Rhodium-Catalyzed Alkenylation of Toluene using 1-Pentene: Regioselectivity to Generate Precursors for Bicyclic Compounds" Liebov, N. S., Zhu, W., Chen, J., Webster-Gardiner, M. S., Schinski, W. L., Gunnoe, T. B.* *Organometallics* **2019**, *38*, 3860-3870. DOI: 10.1021/acs.organomet.9b00535
145. "Selective Photo-oxygenation of Light Alkanes using Iodine Oxides and Chloride" Liebov, N. S., Goldberg, J. M., Boaz, N. C., Coutard, N., Kalman, S. E., Zhuang, T., Groves, J. T.*, Gunnoe, T. B.* *ChemCatChem* **2019**, *11*, 5045-5054. DOI: 10.1002/cctc.201901175
144. "Styrene Production from Benzene and Ethylene Catalyzed by Palladium(II): Enhancement of Selectivity towards Styrene via Temperature Dependent Vinyl Ester Consumption" Jia, X., Foley, A. M., Liu, C., Vaughan, B. A., McKeown, B. A., Zhang, S., Gunnoe, T. B.* *Organometallics* **2019**, *38*, 3532-3541. DOI: 10.1021/acs.organomet.9b00349 (manuscript was selected for the issue cover)
143. "Mechanistic Studies of Single-Step Styrene Production Catalyzed by Rh Complexes with Diimine Ligands: An Evaluation of the Role of Ligands and Induction Period" Zhu, W., Luo, Z., Chen, J., Liu, C., Yang, L., Dickie, D. A., Liu, N., Zhang, S., Davis, R. J., Gunnoe, T. B.* *ACS Catalysis* **2019**, *9*, 7457-7475. DOI: 10.1021/acscatal.9b01480
142. "DFT Mechanistic Study of Methane Mono-Esterification by Hypervalent Iodine Alkane Oxidation Process" Fu, R., Nielsen, R. J., Liebov, N. S., Goddard III, W. A.*, Gunnoe, T. B., Groves, J. T. *J. Phys. Chem. C* **2019**, *123*, 15674-15684. DOI: 10.1021/acs.jpcc.9b04239
141. "Insights into the Speciation of Cu in the Cu-H-Mordenite Catalyst for the Oxidation of Methane to Methanol" Brezicki, G., Kammert, J. D., Gunnoe, T. B., Paolucci, C. Davis, R. J.* *ACS Catalysis* **2019**, *9*, 5308-5319. DOI: 10.1021/acscatal.9b00852
140. "High Selectivity Towards Formate Production by Electrochemical Reduction of Carbon Dioxide at Copper-Bismuth Dendrites" Hoffman, Z. B., Gray, T. S., Xu, Y., Lin, Q., Gunnoe, T. B., Zangari, G.* *ChemSusChem*. **2019**, *12*, 231-239. DOI: 10.1002/cssc.201801708

139. "Catalytic Synthesis of Super Linear Alkenyl Arenes Using a Rh(I) Catalyst Supported by a "Capping Arene" Ligand: Access to Aerobic Catalysis" Chen, J., Nielsen, R. J.*, Goddard III, W. A., McKeown, B. A., Dickie, D. A., Gunnoe, T. B.* *J. Am. Chem. Soc.* **2018**, *140*, 17007-17018. DOI: 10.1021/jacs.8b07728
138. "Mechanism of Hydrocarbon Functionalization by an Iodate/Chloride System: The Role of Ester Protection" Schwartz, N. A., Boaz, N. C., Kalman, S. E., Zhuang, T., Goldberg, J. M., Fu, R., Nielsen, R. J., Goddard III, W. A., Groves, J. T.*, Gunnoe, T. B.*, *ACS Catalysis* **2018**, *8*, 3138-3149. DOI: 10.1021/acscatal.7b04397
137. "Oxidative Hydrophenylation of Ethylene Using a Cationic Ru(II) Catalyst: Styrene Production with Ethylene as the Oxidant" Jia, X., Gary, J. B., Gu, S., Cundari, T. R.*, Gunnoe, T. B.* *Isr. J. Chem.* **2017**, *57*, 1037-1046 (invited contribution for special issue dedicated to Professor Robert Bergman on occasion of Wolf Award). DOI: 10.1002/ijch.201700099
136. "Electrochemical Reduction of Carbon Dioxide to Syngas and Formate on Dendritic Copper-Indium Electrocatalysts" Hoffman, Z. B., Gray, T. S., Moraveck, K. B., Gunnoe, T. B., Zangari, G.* *ACS Catalysis* **2017**, *7*, 5381-5390. DOI: 10.1021/acscatal.7b01161
135. "Studies of the Decomposition of the Ethylene Hydrophenylation Catalyst TpRu(CO)(NCMe)Ph" Joslin, E. E., McKeown, B. A., Cundari, T. R., Gunnoe, T. B.* *J. Organomet. Chem.* **2017**, *847*, 289-293 (invited contribution to special issue dedicated to Professor John Gladysz "Organometallic Chemistry: from Stereochemistry to Catalysis to Nanochemistry"). DOI: 10.1016/j.jorgchem.2017.03.051
134. "Catalytic Synthesis of "Super" Linear Alkenyl Arenes Using an Easily Prepared Rh(I) Catalyst" Webster-Gardiner, M. S., Chen, J., Vaughan, B. A., McKeown, B. A., Schinski, W., Gunnoe, T. B.* *J. Am. Chem. Soc.* **2017**, *139*, 5474-5480. DOI: 10.1021/jacs.7b01165. This manuscript was highlighted in *Chemical and Engineering News* **2017**, *95(17)*, 8.
133. "Brønsted Acid-Catalyzed Intramolecular Hydroamination of Unactivated Alkenes: Metal Triflates as an *in situ* source of Triflic Acid" Chen, J., Goforth, S. K., McKeown, B. A., Gunnoe, T. B.* *Dalton Transactions* **2017**, *46*, 2884-2891. DOI: 10.1039/C6DT04710F
132. "Mechanistic Studies of Single-Step Styrene Production Using a Rhodium(I) Catalyst" Vaughan, B. A., Khani, S. K., Gary, J. B., Kammert, J. D., Webster-Gardiner, M. S., McKeown, B. A., Davis, R. J., Cundari, T. R.*, Gunnoe, T. B.* *J. Am. Chem. Soc.* **2017**, *139*, 1485-1498. DOI: 10.1021/jacs.6b10658
131. "Electrophilic Rh^I Catalysts for Arene C-H Activation: Electrophilic Aromatic Substitution Mechanism" Webster-Gardiner, M. S., Piszcz, P. E., Fu, R., McKeown, B. A., Nielsen, R. J., Goddard III, W. A.*, Gunnoe, T. B.* *J. Mol. Catal.* **2017**, *426*, 381-388 (invited contribution to special issue "C-H Functionalization in Modern Molecular Catalysis" dedicated to Professor Georgiy B. Shul'pin). DOI: doi.org/10.1016/j.molcata.2016.07.045

130. "Aerobic Epoxidation of Olefin by Platinum Catalysts Supported on Mesoporous Silica Nanoparticles" Munz, D., Wang, D., Moyer, M. M., Webster-Gardiner, M. S., Kunal, P., Watts, D., Trewyn, B. G.*, Vedernikov, A. N.*, Gunnoe, T. B.* *ACS Catal.* **2016**, *6*, 4584–4593. DOI: 10.1021/acscatal.6b01532
129. "Transition-Metal-Mediated Nucleophilic Aromatic Substitution with Acids" O'Reilly, M. A., Johnson, S. I., Nielsen, R. J., Goddard III, W. A.*, Gunnoe, T. B.* *Organometallics* **2016**, *35*, 2053-2056. DOI: 10.1021/acs.organomet.6b00285
128. "Combined Furan C–H Activation and Furyl Ring-Opening by an Iron(II) Complex" Taylor, K. H., Kalman, S. E., Gunnoe, T. B.*, Sabat, M. *Organometallics* **2016**, *35*, 1978–1985. DOI: 10.1021/acs.organomet.6b00276
127. "Transition Metal Mediated C–H Activation and Functionalization: The Role of Poly(pyrazolyl)borate and Poly(pyrazolyl)alkane Ligands" McKeown, B. A., Lee, J. P., Mei, J. J., Cundari, T. R., Gunnoe, T. B.* *Eur. J. Inorg. Chem.* **2016**, 2296-2311 (special issue "The Significance of Scorpionate Ligands 50 Years on"). DOI: 10.1002/ejic.201501470
126. "MAXNET Energy - Focusing Research in Chemical Energy Conversion on the Electrocatalytic Oxygen Evolution" Auer, A. A., Antonietti, M., Antonyshyn, I., Böhm, K.-H., Brüller, S., Cap, S., Cherevko, S., Davis, R. J., Deng, X., Feller, T., Freakley, S., Grin, Y., Gunnoe, T. B., Haj-Hariri, H., Hutchings, G., Liang, H., Mayrhofer, K. J. J., Müllen, K., Neese, F., Papakonstantinou, G., Ranjan, C., Sankar, M., Schlögl, R., Schüth, F., Shalom, M., Spanos, I., Stratmann, M., Sundmacher, K., Tüysüz, H., Vidakovic-Koch, T., Yi, Y., Zangari, G. *Green* **2015**, *5*, 7-21. DOI: 10.1515/green-2015-0021
125. "Organometallic Complexes Anchored to Conductive Carbon for Electrocatalytic Oxidation of Methane at Low Temperature" Joglekar, M., Nguyen, V., Pylypenko, S., Ngo, C., Li, Q., O'Reilly, M.E., Gray, T.S., Hubbard, W.A., Gunnoe, T. B.*, Herring, A. M.*, Trewyn, B.G.*. *J. Am. Chem. Soc.* **2016**, *138*, 116-125. This manuscript was highlighted in *Chemical and Engineering* **2015**, *93* (43), 6; featured on cover of *J. Am. Chem. Soc.*, selected for JACS Spotlights). DOI: 10.1021/jacs.5b06392
124. "A Meeting of Metals—A Joint Virtual Issue between Organometallics and ACS Catalysis on First-Row Transition Metal Complexes" Chirik, P. J., Gunnoe, T. B. Editorial, *ACS Catalysis* **2015**, *5*, 5584-5585 (not peer reviewed).
123. "A Rhodium Catalyst for Single-Step Styrene Production" Vaughan, B. A., Webster-Gardiner, M. S., Cundari, T. R.*, Gunnoe, T. B.* *Science* **2015**, *348*, 421-424. This manuscript was highlighted in *Chemical and Engineering News* **2015**, *93* (17), 26. DOI: 10.1126/science.aaa2260
122. "Phosphine and *N*-Heterocyclic Carbene Ligands on Pt(II) Shift Selectivity from Ethylene Hydrophenylation toward Benzene Vinylation" Brosnahan, A. M., Talbot, A., McKeown, B.

- A., Kalman, S. E., Gunnoe, T. B.*, Ess, D. H.*, Sabat, M. *J. Organomet. Chem.* **2015**, 793, 248-255 (invited contribution for special issue in memoriam of Alexander E. Shilov).
121. "Partial Oxidation of Light Hydrocarbons by Periodate and Chloride Salts" Kalman, S. E., Munz, D., Fortman, G. C., Boaz, N. C., Groves, J. T.*, Gunnoe, T. B.* *Dalton Trans.* **2015**, 44, 5294-5298.
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