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PROFESSIONAL APPOINTMENTS

Texas A&M University	College Station, TX
Professor, Department of Chemistry	2023 – present
Associate Professor, Department of Chemistry	2021 – 2023
Assistant Professor, Department of Chemistry	2015 – 2021
Texas A&M Energy Institute	2017 – present

EDUCATION

Harvard University	Cambridge, MA
Ph.D. Chemistry and Chemical Biology	2012
A.M. Chemistry and Chemical Biology	2008
Franklin & Marshall College	Lancaster, PA
B.A. Chemistry, <i>summa cum laude with departmental honors</i>	2006

RESEARCH EXPERIENCE

Massachusetts Institute of Technology and Harvard University	Cambridge, MA
Ruth L. Kirschstein NIH Post-Doctoral Fellow with Prof. Daniel G. Nocera <i>Molecular H–X Splitting Photocatalysis for Solar Energy Conversion</i>	2011 – 2015
Harvard University	Cambridge, MA
Graduate Research with Prof. Tobias Ritter <i>Bimetallic Redox Chemistry in Carbon–Heteroatom Bond Formation</i>	2006 – 2011
Franklin & Marshall College	Lancaster, PA
Undergraduate Research with Prof. Phyllis A. Leber <i>Experimental Evidence for Nonstatistical Diradical Intermediates</i>	2002 – 2006

AWARDS

Independent Work	
Alexander von Humboldt Fellowship	2023
Texas A&M College of Arts and Science Research Impact Award	2023
Association of Former Students College Level Undergraduate Research Mentoring Award	2022
Association of Former Students College Level Teaching Award	2021
NIH Outstanding Investigator Award (MIRA – Maximizing Investigators' Research Award)	2020
Alfred P. Sloan Fellowship	2020
Montague-Center for Teaching Excellence Scholar	2019
ACS Organic Division Academic Young Investigator	2019

NSF CAREER Award	2019
Thieme Chemistry Journal Award	2019
DOE Early Career Award	2018
Ralph E. Powe Junior Faculty Enhancement Award	2017

Mentored Work

Ruth Kirschstein NIH Postdoctoral Fellowship	2012
Christensen Prize for Outstanding Research Achievement	2011
Fieser Lectureship	2010
Sanofi-Aventis Graduate Fellowship	2009
Theodore Alexander Saulnier Chemistry Prize	2006
F. A. Snavelly Research Award	2006
Rawnsley Science Prize	2006
Pi Mu Epsilon Mathematics Honor Society	2006
John Kershner Scholar in Mathematics	2005
Phi Beta Kappa	2005
Schappell Research Fellowship	2004
Moore Mentorship	2002

PUBLICATIONS

Independent Work (*corresponding author, undergraduate co-author)

85. Sur, A.; Simmons, J. D.; Ezazi, A. A.; Korman, K. J.; Sarkar, S.; Bloch, E. D.*; **Powers, D. C.*** Unlocking Solid-State Organometallic Photochemistry with Optically Transparent, Porous Salt Thin Films. **2023**, *submitted*.
84. Roychowdhury, P.; Waheed, S.; Sengupta, U.; Herrera, R. G.; **Powers, D. C.*** Synthesis of Secondary Amines via Self-Limiting Alkylation of *N*-Aminopyridinium Salts. *ChemRxiv* **2023**, DOI: 10.26434/chemrxiv-2023-jm56l.
83. Paikar, A.; Van Trieste, G. P., III; Das, A.; Wang, C.-W.; Sill, T. E.; Bhuvanesh, N.; **Powers, D. C.*** Development of Non-Classical Photoprecursors for Rh₂ Nitrenes. *Inorg. Chem.* **2023**, *62*, 12557–12564. DOI: 10.1021/acs.inorgchem.3c01820.
82. Maity, A.; Frey, B. L.; **Powers, D. C.*** Iodanyl Radical Catalysis. *Acc. Chem. Res.* **2023**, *56*, 2026–2036. DOI: 10.1021/acs.accounts.3c00231.
81. Cosio, M. N.; Alharbi, W. S.; Sur, A.; Wang, C.-H.; Najafian, A.; Cundari, T. R.*; **Powers, D. C.*** On the Mechanism of Intermolecular Nitrogen-Atom Transfer from a Lattice-Isolated Diruthenium Nitride Intermediate. *Faraday Discuss.* **2023**, *244*, 154–168. DOI: 10.1039/D2FD00167E.
80. Roychowdhury, P.; Samanta, S.; Tan, H.; **Powers, D. C.*** *N*-Amino Pyridinium Salts in Organic Synthesis. *Org. Chem. Front.* **2023**, *10*, 2563–2580. DOI: 10.1039/d3qo00190c.
79. Thai, P.; Frey, B. L.; Figgins, M. T.; Thompson, R. R.; **Powers, D. C.*** Selective Multi-Electron Aggregation at a Hypervalent Iodine Center by Sequential Disproportionation. *Chem. Comm.* **2023**, *59*, 4308–4311. DOI: 10.1039/D3CC00549F. (Pre-print: *ChemRxiv* **2023**, DOI: 10.26434/chemrxiv-2023-jzczw).
78. Frey, B. L.; Thai, P.; Patel, L.; **Powers, D. C.*** Structure-Activity Relationships in Hypervalent Iodine Electrocatalysis. *Synthesis* **2023**, *55*, *accepted*. DOI: 10.1055/a-2029-0617.
77. Cosio, M. N.; **Powers, D. C.*** Prospects and Challenges for Nitrogen-Atom Transfer Catalysis. *Nat. Rev. Chem.* **2023**, *7*, 424–438. DOI: 10.1038/s41570-023-00482-1.
76. Kooij, B.; Varava, P.; Fadaei-Tirani, F.; Scopelliti, R.; Pantazis, D. A.; Van Trieste, G. P., III; **Powers, D. C.***; Severin, K.* Copper Complexes with Diazoolefin Ligands and their Photochemical Conversion into Alkenylidene Complexes. *Angew. Chem. Int. Ed.* **2023**, *62*, e202214899. DOI: 10.1002/anie.202214899.
75. Van Trieste, G. P., III; Reibenspies, J. H.; Chen, Y.-S.; Sengupta, D.; **Powers, D. C.*** Oxygen-Atom Transfer Photochemistry of a Molecular Copper Bromate Complex. *Chem. Commun.* **2022**, *58*, 12608–12611. DOI: 10.1039/D2CC04403J.

74. Mullins, J. C.; Yuvaraj, K.; Jiang, Y.; Van Trieste, G. P., III; Maity, A.; Powers, D. C.*; Jones, C.* C–H Activation of Inert Arenes using a Photochemically Activated Guanidinato-Magnesium(I) Compound. *Chem. Eur. J.* **2022**, *28*, e202202103. DOI: 10.1002/chem.202202103.
73. Frey, B. L.; Figgins, M. T.; Van Trieste, G. P., III; Carmieli, R.; Powers, D. C.* Iodine–Iodine Cooperation Enables Metal-Free C–N Bond-Forming Electrocatalysis via Isolable Iodanyl Radicals. *J. Am. Chem. Soc.* **2022**, *144*, 13913–13919. DOI: 10.1021/jacs.2c05562. (Pre-print: *ChemRxiv* **2022**, DOI: 10.26434/chemrxiv-2022-q01tz).
72. Tan, H.; Samanta, S.; Powers, D. C.* Pyridinium, 1-Amino-2,4,6-Triphenyl, Perchlorate (and Tetrafluoroborate) Salt. *Encyclopedia of Reagents for Organic Synthesis*, **2022**. DOI: 10.1002/047084289X.rm02502.
71. Tan, H.; Samanta, S.; Maity, A.; Roychowdhury, P.; Powers, D. C.* *N*-Aminopyridinium Reagents as Traceless Activating Groups in the Synthesis of *N*-Aryl Aziridines. *Nat. Comm.* **2022**, *13*, 3341. DOI: 10.1038/s41467-022-31032-w. (Pre-print: *ChemRxiv* **2022**, DOI: 10.26434/chemrxiv-2022-lmgppq). (Highlighted in: *Synform* **2022**, *11*, A169–A171.)
70. Roychowdhury, P.; Herrera, R. G.; Tan, H.; Powers, D. C.* Traceless Benzylic C–H Amination via Bifunctional *N*-Aminopyridinium Intermediates. *Angew. Chem. Int. Ed.* **2022**, *61*, e20220066. DOI: 10.1002/anie.202200665.
69. Maity, A.; Roychowdhury, P.; Herrera, R. G.; Powers, D. C.* Diversification of Amidyl Radical Intermediates Derived from C–H Aminopyridylation. *Org. Lett.* **2022**, *24*, 2762–2766. DOI: 10.1021/acs.orglett.2c00869. (Pre-print: *ChemRxiv* **2021**, DOI: 10.26434/chemrxiv-2022-868tg-v2).
68. Sur, A.; Jernigan, N. B.; Powers, D. C.* Kinetic Probes of the Origin of Activity in MOF-Based C–H Oxidation Catalysis. *ACS Catal.* **2022**, *12*, 3858–3867. DOI: 10.1021/acscatal.1c05415. (Pre-print: *ChemRxiv* **2021**, DOI: 10.26434/chemrxiv-2021-8nllf).
67. Schmidt-Räntsch, T. Verplancke, H.; Lienert, J. N.; Otte, M. Van Trieste, G. P., III; Reid, K. A.; Reibenspies, J. H.; Powers, D. C.*; Holthausen, M. C.*; Schneider, S.* Nitrogen Atom Transfer Catalysis by Metallonitrene C–H Insertion: Photocatalytic Amidation of Aldehydes. *Angew. Chem. Int. Ed.* **2022**, *61*, e202115626. DOI: 10.1002/anie.202115626.
66. Frey, B. L.; Maity, A.; Tan, H.; Roychowdhury, P.; Powers, D. C.* Sustainable Methods in Hypervalent Iodine Chemistry. In *Iodine Catalysis in Organic Synthesis*; Muniz, K., Ishihara, K. (Eds.); Wiley-VCH, **2022**, 335–386.
65. Van Trieste, G. P., III; Reid, K. A.; Hicks, M. H.; Das, A.; Figgins, M. T.; Bhuvanesh, N.; Ozarowski, A.; Telser, J.; Powers, D. C.* Nitrene Photochemistry of Manganese *N*-Haloamides. *Angew. Chem. Int. Ed.* **2021**, *60*, 26647–26655. DOI: 10.1002/anie.202108304. (Pre-print: *ChemRxiv* **2021**, DOI: 10.33774/chemrxiv-2021-plww9).
64. Hyun, S.-M.; Reid, K. A.; Vali, S. W.; Lindahl, P. A.; Powers, D. C.* *Cis*-Divacant Octahedral Fe(II) in a Dimensionally Reduced Family of 2-(Pyridin-2-yl)pyrrolide Complexes. *Inorg. Chem.* **2021**, *60*, 15617–15626. DOI: 10.1021/acs.inorgchem.1c02240. (Pre-print: *ChemRxiv* **2021**, DOI: 10.33774/chemrxiv-2021-t8vdn).
63. Huh, D. N.; Maity, A.; Van Trieste, G. P.; Schley, N. D.; Powers, D. C.*; Tonks, I. A.* Electronic Structure Analysis and Reactivity of the Bimetallic *Bis*-Titanocene Vinylcarboxylate Complex, [(Cp₂Ti)₂(O₂C₃TMS₂)]. *Polyhedron*, **2021**, *207*, 115368. DOI: 10.1016/j.poly.2021.115368.
62. Reid, K. R.; Powers, D. C.* *In Crystallo* Organometallic Chemistry. *Chem. Commun.* **2021**, *57*, 4993–5003. DOI: 10.1039/D1CC01684A.
61. Ezazi, A. A.; Gao, W.-Y. Powers, D. C.* Leveraging Exchange Kinetics for the Synthesis of Atomically Precise Porous Catalysts. *ChemCatChem* **2021**, *13*, 2117–2131. DOI: 10.1002/cctc.202002034.
60. Sengupta, D.; Powers, D. C.* Synthesis and Characterization of Nitrogen Subvalence in a Pt Metallonitrene. *Trends Chem.* **2021**, *3*, 251–253. DOI: 10.1016/j.trechm.2020.11.005.
59. Dau, H.; Keyes, A.; Basbug Alhan, H. E.; Liu, Y.-S.; Ordonez, E.; Gies, A. P.; Auteung, E.; Zhou, Z.; Maity, A.; Das, A.; Powers, D. C.; Beezer, D. B.*; Harth, E.* Dual Polymerization Pathways for Polyolefin-Polar Block Copolymer Synthesis *via* a Palladium Diimine Complex: Mechanism and Scope. *J. Am. Chem. Soc.* **2020**, *142*, 21469–21483. DOI: 10.1021/jacs.0c10588.
58. Das, A.; Wang, C.-H.; Van Trieste, G. P., III; Sun, C.-J.; Chen, Y.-S.; Reibenspies, J. H.; Powers, D. C.* *In Crystallo* Snapshots of Rh₂-Catalyzed C–H Amination. *J. Am. Chem. Soc.* **2020**, *142*, 19862–19867. DOI:

- 10.1021/jacs.0c09842. (Pre-print: *ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.12934784.v1). (Highlighted in: *Nat. Rev. Chem* **2021**, 5, 2.)
57. Cosio, M.; Cardenal, A. D.; Maity, A.; Hyun, S.-M.; Akwaowo, V.; Hoffman, C.; Powers, T. M.*; Powers, D. C.* Exploring Green Chemistry with Aerobic Hypervalent Iodine Catalysis. *J. Chem. Ed.* **2020**, 97, 3816–3821. DOI: 10.1021/acs.jchemed.0c00410.
56. Gao, W.-Y.; Van Trieste, G. P., III; Powers, D. C.* Synthesis of Atomically Precise Single-Crystalline Ru₂-Based Coordination Polymers. *Dalton Trans.* **2020**, 49, 16077–16081. DOI: 10.1039/D0DT02233K. (Pre-print: *ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.12556160.v1).
55. Baek, Y.; Das, A. Zheng, S.-L.; Reibenspies, J. H.; Powers, D. C.; Betley, T. A.* C–H Amination Mediated by Organoazide-bound Dipyrrinato Cobalt Complexes and the Corresponding Cobalt Nitrene Intermediates. *J. Am. Chem. Soc.* **2020**, 142, 11232–11243. DOI: 10.1021/jacs.0c04252.
54. Hyun, S.-M.; Upadhyay, A.; Das, A.; Burns, C. P.; Sung, S.; Beaty, J. D.; Bhuvanesh, N.; Nippe, M.*; Powers, D. C.* Kinetic versus Thermodynamic Metalation Enables Synthesis of Isostructural Homo- and Heterometallic Trinuclear Clusters. *Chem. Commun.* **2020**, 56, 5893–5896. DOI: 10.1039/D0CC02346A. (Pre-print: *ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.12056028.v1).
53. Gao, W.-Y.; Sur, A.; Wang, C.-H.; Lorzing, G. R.; Antonio, A. M.; Ezazi, A. A.; Bhuvanesh, N.; Bloch, E. D.; Powers, D. C.* Atomically Precise Crystalline Materials Based on Kinetically Inert Metal Ions via Reticular Mechanopolymerization. *Angew. Chem. Int. Ed.* **2020**, 59, 10878–10883. DOI: 10.1002/anie.202002638. (Pre-print: *ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.11879304.v1).
52. Das, A.; Van Trieste, G. P., III; Powers, D. C.* Crystallography of Reactive Intermediates. *Comm. Inorg. Chem.* **2020**, 40, 116–158. DOI: 10.1080/02603594.2020.1747054.
51. Maity, A.; Frey, B. L.; Hoskinson, N. D.; Powers, D. C.* Electrocatalytic C–N Coupling via Anodically Generated Hypervalent Iodine Intermediates. *J. Am. Chem. Soc.* **2020**, 142, 4990–4995. DOI: 10.1021/jacs.9b13918. (Pre-print: *ChemRxiv* **2019**, DOI: 10.26434/chemrxiv.11472549.v1).
50. Wang, C.-H.; Gao, W.-Y.; Powers, D. C.* Measuring and Modulating Substrate Confinement during Nitrogen-Atom Transfer in a Ru₂-Based Metal-Organic Framework. *J. Am. Chem. Soc.* **2019**, 141, 19203–19207. DOI: 10.1021/jacs.9b09620. (Pre-print: *ChemRxiv* **2019**, DOI: 10.26434/chemrxiv.9784514.v1).
49. Das, A.; Chen, Y.-S.; Reibenspies, J. H.; Powers, D. C.* Characterization of a Reactive Rh₂ Nitrenoid by Crystalline Matrix Isolation. *J. Am. Chem. Soc.* **2019**, 141, 16232–16236. DOI: 10.1021/jacs.9b09064. (Pre-print: *ChemRxiv* **2019**, DOI: 10.26434/chemrxiv.9273395.v1).
48. Gao, W.-Y.; Ezazi, A. A.; Wang, C.-H.; Moon, J.; Abney, C.; Wright, J.; Powers, D. C.* Metallopolymers as a Strategy to Translate Ligand-Modulated Chemoselectivity to Porous Catalysts. *Organometallics* **2019**, 38, 3436–3443. DOI: 10.1021/acs.organomet.9b00162. (Pre-print: *ChemRxiv* **2019**, DOI: 10.26434/chemrxiv.7538747.v1).
47. Hyun, S.-M.; Yuan, M.; Maity, A.; Gutierrez, O.*; Powers, D. C.* The Role of Iodanyl Radicals as Critical Chain Carriers in Aerobic Hypervalent Iodine Chemistry. *Chem* **2019**, 5, 2388–2404. DOI: 10.1016/j.chempr.2019.06.006. (Highlighted in: *Chem* **2019**, 5, 2287–2289.)
46. Cardenal, A. D.; Maity, A.; Gao, W.-Y.; Ashirov, R.; Hyun, S.-M.; Powers, D. C.* Iodosylbenzene Coordination Chemistry Relevant to Metal-Organic Framework Catalysis. *Inorg. Chem.* **2019**, 58, 10543–10553. DOI: 10.1021/acs.inorgchem.9b01191.
45. Bucinsky, L.; Breza, M.; Powers, D. C.; Hwang, S. J.; Kyzystek, J.; Nocera, D. G.; Telser, J.* High-Frequency and -Field EPR (HFEP) Investigation of a Pseudotetrahedral Cr^{IV} Siloxide Complex and Computational Studies of Related Cr^{IV}L₄ Systems. *Inorg. Chem.* **2019**, 58, 4907–4920. DOI: 10.1021/acs.inorgchem.8b03512.
44. Gao, W.-Y.; Cardenal, A. D.; Wang, C.-H.; Powers, D. C.* In Operando Analysis of Diffusion in Porous Metal-Organic Framework Catalysts. *Chem. Eur. J.* **2019**, 25, 3465–3476. DOI: 10.1002/chem.201804490.
43. Wang, C.-H.; Gao, W.-Y.; Ma, Q.; Powers, D. C.* Templating Metastable Pd₂ Carboxylate Aggregates. *Chem. Sci.* **2019**, 10, 1823–1830. DOI: 10.1039/C8SC04940H.
42. Maity, A.; Powers, D. C.* Hypervalent Iodine Chemistry as a Platform for Aerobic Oxidation Catalysis. *Synlett* **2019**, 30, 257–262. DOI: 10.1055/s-0037-1610338. (Invited Contribution).
41. Das, A.; Maher, A. G.; Telser, J.; Powers, D. C.* Observation of a Photogenerated Rh₂ Nitrenoid Intermediate in C–H Amination. *J. Am. Chem. Soc.* **2018**, 140, 10412–10415. DOI: 10.1021/jacs.8b05599.

40. Maity, A.; Hyun, S.-M.; Wortman, A. K.; Powers, D. C.* Oxidation Catalysis by an Aerobically Generated Dess-Martin Periodinane Analogue. *Angew. Chem. Int. Ed.* **2018**, *57*, 7205–7209. DOI: 10.1002/anie.201804159. (Pre-print: *ChemRxiv* **2018**, DOI: 10.26434/chemrxiv.6149276).
39. Wang, C.-H.; Das, A.; Gao, W.-Y.; Powers, D. C.* Probing Substrate Diffusion in Interstitial MOF Chemistry with Kinetic Isotope Effects. *Angew. Chem. Int. Ed.* **2018**, *57*, 3676–3681. DOI: 10.1002/anie.201713244. (Pre-print: *ChemRxiv* **2018**, DOI: 10.26434/chemrxiv.5883142.v1).
38. Maity, A.; Hyun, S.-M.; Powers, D. C.* Oxidase Catalysis via Aerobically Generated Hypervalent Iodine Intermediates. *Nat. Chem.* **2018**, *10*, 200–204. DOI: 10.1038/NCHEM.2873. (Pre-print: *ChemRxiv* **2017**, DOI: 10.26434/chemrxiv.5419270.v1).
37. Cardenal, A. D.; Park, H. J.; Chalker, C. J.; Ortiz, K. G.; Powers, D. C.* *Cis*-Decalin Oxidation as a Stereochemical Probe of *in*-MOF versus *on*-MOF Catalysis. *Chem. Commun.* **2017**, *53*, 7377–7380. DOI: 10.1039/c7cc02570j.
36. Das, A.; Reibenspies, J. H.; Chen, Y.-S.; Powers, D. C.* Direct Characterization of a Reactive Lattice-Confining Ru₂ Nitride by Photocrystallography. *J. Am. Chem. Soc.* **2017**, *139*, 2912–2915. DOI: 10.1021/jacs.6b13357.
35. Cardenal, A. D.; Powers, D. C.* Oxidation of Metal–Carbon Bonds. *Chem. Molec. Sci. Chem. Eng.* **2016**, 1–27. DOI: 10.1016/B978-0-12-409547-2.13796-5.

Mentored Work

34. Lemon, C. M.; Powers, D. C.; Huynh, M.; Maher, A. G.; Nocera, D. G.* Ag(III)···Ag(III) Argentophilic Interaction in a Cofacial Corrole Dyad. *Inorg. Chem.* **2023**, *62*, 3–17. DOI: 10.1021/acs.inorgchem.2c02285.
33. Lemon, C. M.; Maher, A. G.; Mazzotti, A. R.; Powers, D. C.; Gonzalez, M. I.; Nocera, D. G.* Multielectron C–H Photoactivation with an Sb(V) Oxo Corrole. *Chem. Commun.* **2020**, *56*, 5247–5250. DOI: 10.1039/C9CC09892E.
32. Lemon, C. M.; Hwang, S. J.; Maher, A. G.; Powers, D. C.; Nocera, D. G.* Halogen Photoelimination from Sb^V Dihalide Corroles. *Inorg. Chem.* **2018**, *57*, 5333–5343. DOI: 10.1021/acs.inorgchem.8b00314.
31. Lemon, C. M.; Powers, D. C.; Brothers, P. J.; Nocera, D. G.* Gold Corroles as Near-IR Phosphors for Oxygen Sensing. *Inorg. Chem.* **2017**, *56*, 10991–10997. DOI: 10.1021/acs.inorgchem.7b01302.
30. Powers, D. C.; Hwang, S. J.; Anderson, B. L.; Yang, H.; Zheng, S.-L.; Chen, Y.-S.; Cook, T. R.; Gabbai, F. P.; Nocera, D. G.* Stereoelectronic Effects in Cl₂ Elimination from Binuclear Pt(III) Complexes. *Inorg. Chem.* **2016**, *55*, 11815–11820. DOI: 10.1021/acs.inorgchem.6b01887.
29. Lemon, C. M.; Huynh, M.; Maher, A. G.; Anderson, B. L.; Bloch, E. D.; Powers, D. C.; Nocera, D. G.* Electronic Structure of Copper Corroles. *Angew. Chem. Int. Ed.* **2016**, *55*, 2176–2180. DOI: 10.1002/anie.201509099.
28. Hwang, S. J.; Anderson, B. L.; Powers, D. C.; Maher, A. G.; Hadt, R. G.; Nocera, D. G.* Halogen Photoelimination from Monomeric Nickel(III) Complexes Enabled by the Secondary Coordination Sphere. *Organometallics* **2015**, *34*, 4766–4774. DOI: 10.1021/acs.organomet.5b00568.
27. Hwang, S. J.; Powers, D. C.; Maher, A. G.; Anderson, B. L.; Hadt, R. G.; Zheng, S.-L.; Chen, Y.-S.; Nocera, D. G.* Trap-Free Halogen Photoelimination from Mononuclear Ni(III) Complexes. *J. Am. Chem. Soc.* **2015**, *137*, 6472–6475. DOI: 10.1021/jacs.5b03192.
26. Hwang, S. J.; Powers, D. C.; Maher, A. G.; Nocera, D. G.* Tandem Redox Mediator/Ni(II) Trihalide Complex Photocycle for Hydrogen Evolution from HCl. *Chem. Sci.* **2015**, *6*, 917–922. DOI: 10.1039/c4sc02357a.
25. Ullman, A. M.; Liu, Y.; Bediako, D. K.; Huynh, M.; Wang, H.; Anderson, B. L.; Powers, D. C.; Breen, J. J.; Abruña, H. D.; Nocera, D. G.* Water Oxidation Catalysis by Co(II) Impurities in Co(III)₄O₄ Cubanes. *J. Am. Chem. Soc.* **2014**, *136*, 17681–17688. DOI: 10.1021/ja5110393.
24. Powers, D. C.; Anderson, B. L.; Hwang, S. J.; Powers, T. M.; Pérez, L. M.; Hall, M. B.; Zheng, S.-L.; Chen, Y.-S.; Nocera, D. G.* Photocrystallographic Observation of Halide-Bridged Intermediates in Halogen Photoeliminations. *J. Am. Chem. Soc.* **2014**, *136*, 15346–15355. DOI: 10.1021/ja508218v. (Highlighted in: *Nat. Chem.* **2015**, *7*, 12–13.)

23. Solis, B. H.; Maher, A. G.; Honda, T. **Powers, D. C.**; Nocera, D. G.; Hammes-Schiffer, S.* Theoretical Analysis of Cobalt Haptan Porphyrins: Ligand Dearomatization and Mechanistic Implications for Hydrogen Evolution. *ACS Catal.* **2014**, *4*, 4516–4526. DOI: 10.1021/cs501454y.
22. **Powers, D. C.**; Hwang, S. J.; Zheng, S.-L.; Nocera, D. G.* Halide-Bridged Binuclear HX-Splitting Catalysts. *Inorg. Chem.* **2014**, *53*, 9122–9128. DOI: 10.1021/ic501136m.
21. **Powers, D. C.**; Ritter, T.* Oxidation of Carbon–Metal Bonds. *Comp. Org. Synth.* **2014**, Chapter 7.23. DOI: 10.1016/B978-0-08-097742-3.00727-8.
20. Kornecki, K.; Berry, J. F.; **Powers, D. C.**; Ritter, T.* Metal–Metal Bond-Containing Complexes as Catalysts for C–H Functionalization. *Prog. Inorg. Chem.* **2014**, *58*, 223–300. DOI: 10.1002/9781118792797.ch04.
19. **Powers, D. C.**; Anderson, B. L.; Nocera, D. G.* Two-Electron HCl to H₂ Photocycle Promoted by Ni(II) Polypyridyl Halide Complexes. *J. Am. Chem. Soc.* **2013**, *135*, 18876–18883. DOI: 10.1021/ja408787k.
18. **Powers, D. C.**; Chambers, M. B.; Teets, T. S.; Elgrishi, N.; Anderson, B. L.; Nocera, D. G.* Halogen Photoelimination from Dirhodium Phosphazane Complexes via Chloride-Bridged Intermediates. *Chem. Sci.* **2013**, *4*, 2880–2885. DOI: 10.1039/C3SC50462J.
17. **Powers, D. C.**; Ritter, T.* A Transition State Analogue for the Oxidation of Binuclear Palladium(II) to Binuclear Palladium(III) Complexes. *Organometallics* **2013**, *32*, 2042–2045. DOI: 10.1021/om4000456.
16. **Powers, D. C.**; Ritter, T.* Bimetallic Catalysis with Palladium. In *Science of Synthesis*; Trost, B. M.; Stoltz, B. M., Eds.; Thieme: Stuttgart, 2012; Vol. 1, 1–31.
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PATENTS

3. Maity, A.; Hyun, S.-M.; **Powers, D. C.** Synthesis of Hypervalent Iodine Reagents with Dioxide. US Patent, Filing 62527662, June 30, 2018.
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1. Ritter, T.; **Powers, D. C.**; Campbell, M. G.; Raynaud, J. B. Palladium Nanowires and Methods of Preparation. Patent WO/2012/109389, February 8, 2012.

RESEARCH PRESENTATIONS

Independent Work

Invited Talks

77 th Northwest Regional Meeting, American Chemical Society, Bozeman, MT	Jun 2023
Telluride Workshop on Catalysis in Confined Spaces, Telluride, CO	Jun 2023
Faraday Discussions, Harnessing Non-Covalent Interactions for Synthesis and Catalysis, York, England	Apr 2023
3 rd Anatolian Conference on Organic Chemistry, Antalya, Turkey	Mar 2023
Tulane University, Student-Invited Speaker	Mar 2023
University of Illinois – Chicago	Mar 2023
University of Utah	Feb 2023
Harvard-MIT Joint Inorganic Symposium	Feb 2023
University of Minnesota – Minneapolis	Jan 2023
Chicago Catalysis Club Young Scientist Symposium, Keynote Speaker	Jan 2023
Department of Energy, Catalysis Program Meeting	Sept 2022
44 th International Conference on Coordination Chemistry, Rimini, Italy	Aug 2022
Florida Heterocyclic and Synthetic Chemistry Conference, Gainesville, FL	Mar 2022
Columbia University	Mar 2022
Southwest Regional ACS Meeting, Austin, TX	Nov 2021
Temple University	Oct 2021
University of Minnesota – Duluth	Sept 2021
Workshop on Organic Synthesis, Steamboat, CO	Aug 2021
University of Göttingen	Apr 2021
University of California – Berkeley	Mar 2021
University of Illinois – Urbana-Champaign	Mar 2021
Cornell University	Feb 2021
University of Chicago	Jan 2021
Dalhousie University	Dec 2020
University of Adelaide, Australia	Sept 2020
New Mexico Institute of Technology	Sept 2020
260 th American Chemical Society Meeting, San Francisco, CA	Aug 2020

2 nd Hypervalent Iodine Virtual Symposium	Aug 2020
University of Rochester	Mar 2020
University of Delaware	Feb 2020
University of Memphis	Feb 2020
3 rd International Symposium on Carbene and Nitrene Chemistry, San Antonio, TX	Feb 2020
University of California – San Diego	Jan 2020
University of California – Los Angeles	Jan 2020
California Institute of Technology	Jan 2020
ChemMatCARS, Advanced Photon Source, Argonne National Laboratory	Dec 2019
Harvard University	Dec 2019
Georgetown University	Nov 2019
Johns Hopkins University	Nov 2019
Princeton University	Nov 2019
North Carolina State University	Oct 2019
University of North Carolina – Chapel Hill	Oct 2019
Texas A&M – Prairie View	Oct 2019
University of South Florida	Oct 2019
University of Florida	Oct 2019
The Ohio State University	Oct 2019
University of Maryland, College Park	Sept 2019
Smith College	Sept 2019
Boston College	Sept 2019
Southern Methodist University	Sept 2019
American Chemical Society Organic Division Academic Young Investigator Symposium, San Diego, CA	Aug 2019
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2019
Oregon State University	Apr 2019
Portland State University	Apr 2019
University of California – Riverside	Nov 2018
University of Wisconsin – Madison	Oct 2018
University of Houston	Oct 2018
256 th American Chemical Society Meeting, Boston, MA	Aug 2018
Stone Symposium, Baylor University	May 2018
Texas Southern University	Apr 2018
University of Texas – San Antonio	Jan 2018
Franklin and Marshall College	Nov 2017
Lafayette College	Nov 2017
Inorganic Reaction Mechanisms Gordon Research Conference, Galveston, TX (poster talk)	Mar 2017
Contributed Presentations	
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2022
258 th American Chemical Society Meeting, San Diego, CA	Aug 2019
258 th American Chemical Society Meeting, San Diego, CA	Aug 2019
Inorganic Reaction Mechanisms Gordon Research Conference, Galveston, TX	Mar 2019
6 th International Conference on Metal-Organic Frameworks and Open Framework Compounds, Auckland, New Zealand	Dec 2018
Emerging Investigator Symposium, Rotorua, New Zealand	Dec 2018
256 th American Chemical Society National Meeting, Boston, MA	Aug 2018
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2018
6 th International Conference on Hypervalent Iodine, Cardiff, Wales	July 2018

Inorganic Chemistry Gordon Research Conference, Biddeford, ME	June 2018
255 th American Chemical Society National Meeting, New Orleans, LA	Mar 2018
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2017
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2016

Mentored Work

Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2014
35 th Reaction Mechanisms Conference, Davis, CA	June 2014
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2013
Center for Chemical Innovation – Solar Retreat, Huntington Beach, CA	Jan 2013
29 th Boston Regional Inorganic Colloquium, Northeastern University, Boston, MA	Oct 2012
Inorganic Reaction Mechanisms Gordon Research Conference, Galveston, TX	Mar 2011
33 rd Reaction Mechanisms Conference, Amherst, MA	June 2010
31 st Reaction Mechanisms Conference, College Park, MD	June 2006
231 st American Chemical Society Meeting, Atlanta, GA	Mar 2006
Intercollegiate Student Chemists Convention, Collegeville, PA	Mar 2006
229 th American Chemical Society National Meeting, San Diego, CA	Mar 2005