

# DAVID CHARLES POWERS

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## PROFESSIONAL APPOINTMENTS

Texas A&M University	College Station, TX
Assistant Professor, Department of Chemistry	2015 – present
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

## PUBLICATIONS

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

- 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**, *advance article*. DOI: 10.1039/D0CC02346A. (Pre-print: *ChemRxiv*, **2020**, DOI: 10.26434/chemrxiv.12056028.v1).
- 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**, *early view*. DOI: 10.1002/anie.202002638. (Pre-print: *ChemRxiv*, **2020**, DOI: 10.26434/chemrxiv.11879304.v1).
- 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.

50. 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).
49. Wang, C.-H.; Gao, W.-Y.; **Powers, D. C.\*** Measuring and Modulating Substrate Confinement during Nitrogen-Atom Transfer in a Ru<sub>2</sub>-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).
48. Das, A.; Chen, Y.-S.; Reibenspies, J. H.; **Powers, D. C.\*** Characterization of a Reactive Rh<sub>2</sub> 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).
47. 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).
46. 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.)
45. 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.
44. Bucinsky, L.; Breza, M.; **Powers, D. C.**; Hwang, S. J.; Kyzystek, J.; Nocera, D. G.; Telser, J.\* High-Frequency and -Field EPR (HF-EPR) Investigation of a Pseudotetrahedral Cr<sup>IV</sup> Siloxide Complex and Computational Studies of Related Cr<sup>IV</sup>L<sub>4</sub> Systems. *Inorg. Chem.* **2019**, *58*, 4907–4920. DOI: 10.1021/acs.inorgchem.8b03512.
43. 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.
42. Wang, C.-H.; Gao, W.-Y.; Ma, Q.; **Powers, D. C.\*** Templating Metastable Pd<sub>2</sub> Carboxylate Aggregates. *Chem. Sci.* **2019**, *10*, 1823–1830. DOI: 10.1039/C8SC04940H.
41. 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).
40. Das, A.; Maher, A. G.; Telser, J.; **Powers, D. C.\*** Observation of a Photogenerated Rh<sub>2</sub> Nitrenoid Intermediate in C–H Amination. *J. Am. Chem. Soc.* **2018**, *140*, 10412–10415. DOI: 10.1021/jacs.8b05599.
39. 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).
38. 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).
37. 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).
36. 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.
35. Das, A.; Reibenspies, J. H.; Chen, Y.-S.; **Powers, D. C.\*** Direct Characterization of a Reactive Lattice-Confining Ru<sub>2</sub> Nitride by Photocrystallography. *J. Am. Chem. Soc.* **2017**, *139*, 2912–2915. DOI: 10.1021/jacs.6b13357.
34. 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.

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. Comm.* **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<sup>V</sup> 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 Cl<sub>2</sub> 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)<sub>4</sub>O<sub>4</sub> 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 Hangman 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 H<sub>2</sub> 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.
15. **Powers, D. C.**; Lee, E.; Ariafard, A.; Sanford, M. S.; Yates, B. F.\*; Canty, A. J.\*; Ritter, T.\* Connecting Binuclear Pd(III) and Mononuclear Pd(IV) Chemistry by Pd–Pd Bond Cleavage. *J. Am. Chem. Soc.* **2012**, *134*, 12002–12009. DOI: 10.1021/ja304401u.

14. **Powers, D. C.**; Ritter, T.\* Bimetallic Redox Synergy in Oxidative Palladium Catalysis. *Acc. Chem. Res.* **2012**, *45*, 840–850. DOI: 10.1021/ar2001974.
13. Campbell, M. G.; **Powers, D. C.**; Raynaud, J.; Graham, M. J.; Xie, P.; Lee, E.; Ritter, T.\* Synthesis and Structure of Solution-Stable One-Dimensional Palladium Wires. *Nat. Chem.* **2011**, *3*, 949–953. DOI:10.1038/nchem.1197.
12. Lee, E.; Kamlet, A. S.; **Powers, D. C.**; Neumann, C. N.; Boursalian, G. B.; Furuya, T.; Choi, D. C.; Hooker, J. M.\*; Ritter, T.\* A Fluoride-Derived Electrophilic Late-Stage Fluorination Reagent for PET Imaging. *Science* **2011**, *334*, 639–642. DOI: 10.1126/science.1212625.
11. **Powers, D. C.**; Ritter, T.\* Palladium(III) in Synthesis and Catalysis. *Top. Organomet. Chem.* **2011**, *35*, 129–156. DOI: 10.1007/978-3-642-17429-2\_6.
10. **Powers, D. C.**; Xiao, D. Y.; Geibel, M. A. L.; Ritter, T.\* On the Mechanism of Palladium-Catalyzed Aromatic C–H Oxidation. *J. Am. Chem. Soc.* **2010**, *132*, 14530–14536. DOI: 10.1021/ja1054274.
9. **Powers, D. C.**; Benitez, D.; Tkatchouk, E.; Goddard, W. A., III; Ritter, T.\* Bimetallic Reductive Elimination from Dinuclear Pd(III) Complexes. *J. Am. Chem. Soc.* **2010**, *132*, 14092–14103. DOI: 10.1021/ja1036644.
8. **Powers, D. C.**; Geibel, M. A. L.; Klein, J. E. M. N.; Ritter, T.\* Bimetallic Palladium Catalysis: Direct Observation of Pd(III)–Pd(III) Intermediates. *J. Am. Chem. Soc.* **2009**, *131*, 17050–17051. DOI: 10.1021/ja906935c.
7. **Powers, D. C.**; Ritter, T.\* Bimetallic Pd(III) Complexes in Palladium-Catalysed Carbon–Heteroatom Bond Formation. *Nat. Chem.* **2009**, *1*, 302–309. doi:10.1038/nchem.246. (Highlighted in: *Nature* **2009**, *459*, 917–918.)
6. Leber, P. A.\*; Bogdan, A. R.; **Powers, D. C.**; Baldwin, J. E.\* Thermal Isomerizations of *cis,anti,cis*-Tricyclo[6.4.0.0<sup>2,7</sup>]dodec-3-ene to *trans*- and *cis-endo*-Tricyclo[6.2.2.0<sup>2,7</sup>]dodec-9-ene: Diradical Conformations and Stereochemical Outcomes in [1,3] Carbon Shifts. *Tetrahedron* **2007**, *63*, 6331–6338. DOI: 10.1016/j.tet.2007.02.088.
5. **Powers, D. C.**; Leber, P. A.\*; Gallagher, S. S.; Higgs, A. T.; McCullough, L. A.; Baldwin, J. E. Thermal Chemistry of Bicyclo[4.2.0]oct-2-enes. *J. Org. Chem.* **2007**, *72*, 187–194. DOI: 10.1021/jo061964x.
4. Baldwin, J. E.\*; Leber, P. A.; **Powers, D. C.** Thermal Reactions of 7-*d*- and 8-*d*-Bicyclo[4.2.0]oct-2-enes. *J. Am. Chem. Soc.* **2006**, *128*, 10020–10021. DOI: 10.1021/ja0636035.
3. Bogle, X. S.; Leber, P. A.\*; McCullough, L. A.; **Powers, D. C.** Thermal Reactions of 8-Methylbicyclo[4.2.0]oct-2-enes: Competitive Diradical-Mediated [1,3] Sigmatropic, Stereomutation, and Fragmentation Processes. *J. Org. Chem.* **2005**, *70*, 8913–8918. DOI: 10.1021/jo051505g.
2. Baldwin, J. E.; Bogdan, A. R.; Leber, P. A.\*; **Powers, D. C.** Thermal Isomerization of *cis,anti,cis*-Tricyclo[6.3.0.0<sup>2,7</sup>]undec-3-ene to *endo*-Tricyclo[5.2.2.0<sup>2,6</sup>]undec-8-ene. *Org. Lett.* **2005**, *7*, 5195–5197. DOI: 10.1021/ol052004k.
1. **Powers, D. C.**; Higgs, A. T.; Obley, M. L.; Leber, P. A.\*; Hess, K. R.; Yoder, C. H. Analysis of Natural Buffer Systems and the Impact of Acid Rain. An Environmental Project for First-Year Chemistry Students. *J. Chem. Educ.* **2005**, *82*, 274–277. DOI: 10.1021/ed082p274.

## PATENTS

3. Maity, A.; Hyun, S.-M.; **Powers, D. C.** Synthesis of Hypervalent Iodine Reagents with Dioxygen. US Patent, Filing 62527662, June 30, 2018.
2. Ritter, T.; Furuya, T.; **Powers, D. C.** High-Valent Palladium Fluoride Complexes and Uses Thereof. Patent WO/2009/149347, October 9, 2009.
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.

**AWARDS****Independent Work**

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. Snavely 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

**RESEARCH PRESENTATIONS****Independent Work (postponed or canceled due to COVID-19)****Invited Talks**

TexSyn V, Houston, TX	May 2021
<u>International Conference on Hypervalent Iodine Chemistry, Moscow, Russia</u>	<u>June 2020</u>
<u>103<sup>rd</sup> Canadian Chemistry Conference and Exhibition, Winnipeg, Canada</u>	<u>May 2020</u>
<u>Cornell University</u>	<u>Apr 2020</u>
<u>University of California – Berkeley</u>	<u>Apr 2020</u>
<u>University of Illinois – Urbana-Champaign</u>	<u>Mar 2020</u>
<u>259<sup>th</sup> American Chemical Society Meeting, Philadelphia, PA</u>	<u>Mar 2020</u>
University of Rochester	Mar 2020
University of Delaware	Feb 2020
University of Memphis	Feb 2020
3 <sup>rd</sup> 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 <sup>th</sup> 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

<u>44<sup>th</sup> International Conference on Coordination Chemistry, Rimini, Italy</u>	<u>July 2020</u>
258 <sup>th</sup> American Chemical Society Meeting, San Diego, CA	Aug 2019
258 <sup>th</sup> American Chemical Society Meeting, San Diego, CA	Aug 2019
Inorganic Reaction Mechanisms Gordon Research Conference, Galveston, TX	Mar 2019
6 <sup>th</sup> International Conference on Metal-Organic Frameworks and Open Framework Compounds, Auckland, New Zealand	Dec 2018
Emerging Investigator Symposium, Rotorua, New Zealand	Dec 2018
256 <sup>th</sup> American Chemical Society National Meeting, Boston, MA	Aug 2018
Organometallic Chemistry Gordon Research Conference, Newport, RI	July 2018
6 <sup>th</sup> International Conference on Hypervalent Iodine, Cardiff, Wales	July 2018
Inorganic Chemistry Gordon Research Conference, Biddeford, ME	June 2018
255 <sup>th</sup> 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 <sup>th</sup> 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 <sup>th</sup> Boston Regional Inorganic Colloquium, Northeastern University, Boston, MA	Oct 2012
Inorganic Reaction Mechanisms Gordon Research Conference, Galveston, TX	Mar 2011
33 <sup>rd</sup> Reaction Mechanisms Conference, Amherst, MA	June 2010
31 <sup>st</sup> Reaction Mechanisms Conference, College Park, MD	June 2006

May 18, 2020

Powers – *Curriculum Vitae* – 7

231<sup>st</sup> American Chemical Society Meeting, Atlanta, GA

Mar 2006

Intercollegiate Student Chemists Convention, Collegeville, PA

Mar 2006

229<sup>th</sup> American Chemical Society National Meeting, San Diego, CA

Mar 2005