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April 18th, 2023

Dear Arts and Sciences Search Committee:

I am writing to apply for a position of Associate Dean for Academic Programs within the College of Arts and Sciences. I believe that my high level of scholarship and service, as evidenced by my research at the University of Tennessee, and my passion for teaching and administrative service will make me a highly valuable asset to the college administration.

I am a current Ziegler full professor in Chemistry at the University of Tennessee. The Ziegler professorship is given to top researchers within the department, particularly for demonstration of high impact science. I was selected upon my promotion to full professor in Fall 2020, having published papers in high impact journals such as *Journal of the American Chemistry Society*, *Angewandte Chemie, International Edition*, and *Chemical Science* for all three of my core synthetic research areas in the last five years. All of these journals are the top multi-disciplinary chemistry journals for the USA, Germany, and the UK, respectively. All three of these core research areas are currently funded by the NSF (three grants) and NIH (one grant). I am the lead PI on three of these grants.

I am a successful educator at the University of Tennessee and have taught at all levels from General Chemistry to Special Topics in Inorganic Chemistry for PhD students. I have co-authored an undergraduate lab manual where I wrote two new laboratories used in General Chemistry. In addition, during a multi-year process completed in 2018, *I co-chaired the revision of our undergraduate curriculum to incorporate the ACS 2015 guidelines – the first significant revision to the chemistry curriculum at UT in over 25 years.* This process included the development of new lab courses, elimination of some legacy lecture courses, and the introduction of rotating electives. I have been the chair for the undergraduate curriculum committee since this was completed. In particular, I have led the process of updating our curriculum to match the VolCore initiatives. These efforts mean that I am highly fluent in course catalog design and implementation.

I am a successful administrator, with two current administrative roles: first as Director of the X-ray Facility at UT and, second, as Associate Head for Undergraduate Education for the UT

Department of Chemistry. As director of the X-ray Facility I led the charge to buy two new instruments, a powder X-ray diffractometer and a single crystal X-ray diffractometer, over the last ten years. I am also responsible for hiring and training the postdoctoral staff and graduate students who run the facility, as well as keeping its budget balanced for this recharge center.

I became Associate Head for Undergraduate Education in Chemistry five years ago, when this position was first created. The novelty of the position allowed me significant input in developing many aspects of the position, but also presented challenges. In this position, I develop curriculum for the entire UT Chemistry Department, serve as liaison to undergraduate advising, and serve as arbitrator for student complaints and petitions, ranging from complaints of poor grades to alleged faculty misconduct. I also write the chemistry course timetable each semester and assist the Head in assigning tenure-line faculty and lecturers to classes. More broadly, my role as Associate Head has involved leading directives to increase the number of undergraduate researchers in faculty labs and the total number of chemistry majors. In this aspect, I have been highly successful as we have *increased the number of undergraduate researchers in chemistry by over 50%* in the last two years. To showcase our undergraduate researchers, I have co-developed our annual Chemistry undergraduate research symposium which highlights the accomplishment for these young scientists.

Finally, I am currently finishing a provost-organized leadership training class, LADRS, which has been instrumental in developing my thinking about both strategy and people management in a university setting. In particular, I have realized that we need to focus on our strategical thinking within the BAM model towards recruiting more students *to* Arts and Sciences, not reallocating the students within departments. With regards to personnel management, I would sum up the key findings as improving communication with greater transparency to all levels of staff and treating all people with dignity in personal interactions.

In summary, I believe that I can transfer my experience as an effective administrator in the chemistry department to serve the entire college. My goal in this new role is to build and update our educational programs so that we can serve students more effectively across all disciplines in the same manner that I have updated the chemistry program.

Sincerely,



David Jenkins

Associate Head for Chemistry

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Professional Experience

ZEIGLER PROFESSOR, University of Tennessee, Knoxville, TN	2020 – present
ASSOCIATE HEAD, CHEMISTRY, University of Tennessee, Knoxville, TN	2018 – present
ASSOCIATE PROFESSOR, University of Tennessee, Knoxville, TN	2014 – 2020
ASSISTANT PROFESSOR, University of Tennessee, Knoxville, TN	2008 – 2014
MILLER RESEARCH FELLOW, University of California, Berkeley, CA	2005 – 2008

Education

Ph.D.	California Institute of Technology, Pasadena, CA Inorganic Chemistry	2005
B.A.	Cornell University, Ithaca, NY Chemistry, <i>Summa cum laude</i>	2000

Awards and Fellowships

Zeigler Professorship, University of Tennessee Chemistry	2020 – 2025
Visiting Professor at University of Edinburgh (UK)	2017
University of Tennessee, Chancellor's Mid-career Research Award	2017
University of Tennessee, Dean's Excellence in Research Award	2014
Mamantov Associate Professorship	2014 – 2019
Chemical Communications Young Investigator Award	2014
National Science Foundation CAREER Award	2013
University of Tennessee, QUEST Scholar of the Week	2013
Thieme Chemistry Journal Award	2012
Miller Institute for Basic Research in Science Fellowship	2005 – 2008
National Science Foundation – Graduate Research Fellowship	2000 – 2003
Merrill Presidential Scholar	2000

Publication Index (via Web of Science)

Total peer-reviewed publications: 60
Total citations: 2304 (Updated April 2023)
h-index: 25

Job Description for Associate Head for Undergraduate Education in Chemistry

1. Prepare Chemistry timetable for each academic term including providing enrollment estimates for future terms.
2. Assign classes for all faculty onto timetable under direction of the Head with recommendations from tenure-line faculty.
3. Determine the number of TAs required for each term.
4. Chair departmental Undergrad Curriculum Committee and update undergraduate curriculum as needed.
5. Represent department for college and campus meetings involving curriculum at all levels.
6. Represent department towards A&S Advising Center and approve all petitions for Chemistry classes that are not General Chemistry.
7. Administer the department's undergraduate research courses including recruiting faculty and students to participate (Chem. 200/300/400).
8. co-Chair annual Undergraduate Research Symposium in Chemistry.
9. Recommend and nominate undergraduate students for departmental and college-level scholarships and awards.
10. Serve as direct supervisor for one administrative support staff who assists the department's undergraduate educational mission.

Job Description for Ziegler Professor in Chemistry

1. Maintain federally-funded research group. PI for three grants and co-PI for one grant. Nine full time equivalent researchers currently (8 PhD students and one postdoc).
2. Provide undergraduates opportunities to work in research lab. Six current UT undergraduates participate.
3. Publish multiple peer-reviewed articles per year in Chemistry or related journals. Average of over four per year over last three years.
4. Present research findings at invited university seminars and conferences. Over three invited talks per year for last three years.
5. Teach a variety of classes at undergraduate and graduate level. Teaching is reduced due to serving as Associate Head. In-depth Inorganic Chemistry (Chem. 430) has been assigned last three years.
6. Review proposals from agencies such as NSF and DOE and articles from a wide variety of Chemistry or related journals.
7. Serve on hiring committees for department, including tenure and non-tenure line faculty and exempt staff (business manager).
8. Serve as Director for X-ray core facility for UT that resides in Chemistry department. Core facility has two instruments: powder X-ray diffractometer and single crystal X-ray diffractometer.

Publications

Books

2. *Chemistry 130 Laboratory Manual, The University of Tennessee.* Craig Barnes, Jon Camden, David Jenkins, Jeffrey Kovac, Christiane Barnes, Al Hazari, Belinda Lady, and Heather Bass. Van-Griner Publishing, Cincinnati, OH 2013. ISBN: 978-1-61740-062-9
1. *Chemistry 120 Laboratory Manual, The University of Tennessee.* Craig Barnes, Jon Camden, David Jenkins, Jeffrey Kovac, Christiane Barnes, Al Hazari, Belinda Lady, and Heather Bass. Van-Griner Publishing, Cincinnati, OH 2013. ISBN: 978-1-61740-051-3

Patents

2. *NHCs for LDI applications including biomolecule screening.* Camden, Jon P.; Dominique, Nathaniel L.; Jenkins, David M. Provisional patent submitted 12/19/2023.
1. *Alkene Aziridination.* Jenkins, David M.; Cramer, S. Alan; Lu, Zheng. U.S Serial No.: 61/663,882. Provisional patent submitted 6/25/2012. Final patent filed 6/25/2013. Patent granted 6/2015.

Peer-reviewed publications from University of Tennessee

(* designates corresponding author, my students are in **bold**, my postdocs are in *italics*)

63. Analysis of Fatty Acid Residues in Cooking Pottery from Late Bronze Age Mitrou, Greece, **Stafford III, Vernon H.**; Van de Moortel, Aleydis; Jenkins, David M.* *J. Archaeolog. Sci.: Reports* **2023**, Submitted.
62. Stability of N-heterocyclic Carbene Monolayers Under Continuous Voltammetric Cycling, Pellitero, Miguel Aller; **Jensen, Isabel M.**; Dominique, Nathaniel L.; Ekowo, Lilian Chineye; Camden, Jon P.*; Jenkins, David M.*; Arroyo-Currás, Netzahualcóyotl* *J. Appl. Matter.* **2023**, Under Revision.
61. Using Surface-Enhanced Raman Spectroscopy to Unravel the Wingtip-Dependent Orientation of N-Heterocyclic Carbenes on Gold Nanoparticles, Thimes, Rebekah L.; Santos, Alyssa V. B.; Chen, Ran; **Kaur, Gurkiran**; Jensen, Lasse;* Jenkins, David M.*; Camden, Jon P. * *J. Phys. Chem. Lett.* **2023**, Under Revision.
60. Giving Gold Wings: Ultrabright and Fragmentation Free Mass Spectrometry Reporters for Barcoding, Bioconjugation Monitoring, and Data Storage, Dominique, Nathaniel L.; **Jensen, Isabel M.**; **Kaur, Gurkiran**; Kotseos, Chandler Q.; Boggess, William C.; Jenkins, David M.*; Camden, Jon P.* *Angew. Chem. Int. Ed.* **2023**, ASAP. [10.1002/anie.202219182](https://doi.org/10.1002/anie.202219182) (Selected for Cover)
59. Statistical copolymer metal organic nanotubes, **Barrett, Jacob A.**; Rosenmann, Nathan D.; Gnanasekaran, Karthikeyan; *Carroll, Xian B.*; Gianneschi, Nathan C.*; Jenkins, David M.* *Chem. Sci.* **2023**, 14, 1003-1009. [10.1039/D2SC06084A](https://doi.org/10.1039/D2SC06084A)
58. Fundamentals and applications of N-heterocyclic carbene functionalized gold surfaces and nanoparticles, **Kaur, Gurkiran**; Thimes, Rebekah L.; Camden, Jon P.*; Jenkins, David M.* *Chem. Commun.* **2022**, 58, 13188-13197. [10.1039/D2CC05183D](https://doi.org/10.1039/D2CC05183D) (Selected for Cover)
57. Ad aurum: tunable transfer of N-heterocyclic carbene complexes to gold surfaces. Dominique, Nathaniel L.; Chen, Ran; Santos, Alyssa V. B.; **Strausser, Shelby L.**; Rauch, Theodore; Kotseos, Chandler Q.; Boggess, William C.; Jensen, Lasse; Jenkins, David M.*; Camden, Jon P.* *Inorg. Chem. Front.* **2022**, 9, 6279-6287. [10.1039/D2QI01941H](https://doi.org/10.1039/D2QI01941H)
56. Toward asymmetric aziridination with an iron complex supported by a D_2 -symmetric tetra-NHC, **Blatchford, Kevin M.**; Mize, Carson J.; Roy, Sharani; Jenkins, David M.* *Dalton Trans.*, **2022**, 51, 6153-6156. [10.1039/D2DT00772J](https://doi.org/10.1039/D2DT00772J)
55. Late Lanthanide Macrocyclic Tetra-NHC Complexes, *Carroll, Xian B.*; Errulat, Dylan; Murugesu, Muralee; Jenkins, David M.* *Inorg. Chem.* **2022**, 61, 1611-1619. [10.1021/acs.inorgchem.1c03416](https://doi.org/10.1021/acs.inorgchem.1c03416)

54. N-Heterocyclic Carbene Ligand Stability on Gold Nanoparticles in Biological Media, Sherman, Lindy M.; Finley, Matthew D.; **Borsari, Rowan K.**; Schuster-Little, Naviya; **Strausser, Shelby L.**; Whelan, Rebecca J.;* Jenkins, David M.;* Camden, Jon P.* *ACS Omega*. **2022**, *7*, 1444-1451. [10.1021/acsomega.1c06168](https://doi.org/10.1021/acsomega.1c06168)
53. Probing N-Heterocyclic Carbene Surfaces with Laser Desorption Ionization Mass Spectrometry, Dominique, Nathaniel L.; **Strausser, Shelby L.**; Olson, Jacob E.; Boggess, William C.; Jenkins, David M.;* Camden, Jon P.* *Anal. Chem.* **2021**, *93*, 13534-13538. [10.1021/acs.analchem.1c02401](https://doi.org/10.1021/acs.analchem.1c02401)
52. Synthesis of d¹⁰ N-Heterocyclic Carbene Complexes with a Perimidine Scaffold, **Strausser, Shelby L.**; Jenkins, David M.* *Organometallics* **2021**, *40*, 1706-1712. [10.1021/acs.organomet.1c00189](https://doi.org/10.1021/acs.organomet.1c00189)
51. Actinide Tetra-N-heterocyclic Carbene ‘Sandwiches,’ **DeJesus, Joseph F.**; Kerr, Ryan W. F.; Penchoff, Deborah A.; *Carroll, Xian B.*; Peterson, Charles C.; Arnold, Polly L.;* Jenkins, David, M.* *Chem. Sci.* **2021**, *12*, 7882-7887. [10.1039/D1SC01007G](https://doi.org/10.1039/D1SC01007G)
50. Imidazolium N-Heterocyclic Carbene Ligands for Enhanced Stability on Gold Surfaces, Sherman Lindy M.; **Strausser, Shelby L.**; **Borsari, Rowan K.**; Jenkins, David M.;* Camden, Jon P.* *Langmuir* **2021**, *37*, 5864–5871. [10.1021/acs.langmuir.1c00314](https://doi.org/10.1021/acs.langmuir.1c00314)
49. In Situ Monitoring of the Seeding and Growth of Silver Metal-Organic Nanotubes by Liquid-Cell Transmission Electron Microscopy, Gnanasekaran, Karthikeyan.; **Vailonis, Kristina M.**; Jenkins, David M.;* Gianneschi, Nathan C.* *ACS Nano*, **2020**, *14*, 8735-8743. [10.1021/acsnano.0c03209](https://doi.org/10.1021/acsnano.0c03209)
48. Investigating the Copolymerization of Ligands into Metal-Organic Nanotubes Using Small-Angle Neutron Scattering: Implications for Nanostraws, Shrestha, Umesh M.; **Vailonis, Kristina M.**; Jenkins, David M.;* Dadmun, Mark D.* *ACS Appl. Nano. Mater.* **2020**, *3*, 5605-5611. [10.1021/acsanm.0c00857](https://doi.org/10.1021/acsanm.0c00857)
47. A Benchtop Method for Appending Protic Functional Groups to N-Heterocyclic Carbene Protected Gold Nanoparticles. **DeJesus, Joseph F.**; Sherman, Lindy M.; Yohannan, Darius J.; **Strausser, Shelby L.**; Karger, Leonhard F. P.; Becca, Jeffrey C.; Jensen, Lasse; Jenkins, David M.*; Camden, Jon P.* *Angew. Chem. Int. Ed.* **2020**, *59*, 7585-7590. [10.1002/anie.202001440](https://doi.org/10.1002/anie.202001440)
46. A Chiral Macrocyclic Tetra-N-heterocyclic Carbene Yields an “All Carbene” Fe(IV) Complex. **DeJesus, Joseph F.**; Jenkins, David M.* *Chem. Eur. J.*, **2020**, *26*, 1429-1435. [10.1002/chem.201905360](https://doi.org/10.1002/chem.201905360)
45. One Macrocyclic Ligand, Four Oxidation States: A 16-Atom Ringed Dianionic Tetra-NHC Macrocycle and Its Cr(II) through Cr(V) Complexes. *Anneser, Markus R.*; *Powers, Xian B.*; **Peck, KatieAnn M.**; **Jensen, Isabel M.**; Jenkins, David M.* *Organometallics*, **2019**, *38*, 3369-3376. [10.1021/acs.organomet.9b00476](https://doi.org/10.1021/acs.organomet.9b00476).
44. Elucidating the Growth of Metal-Organic Nanotubes Combining Isoreticular Synthesis with Liquid-Cell Transmission Electron Microscopy, **Vailonis, Kristina M.**; Gnanasekaran, Karthikeyan; *Powers, Xian B.*; Gianneschi, Nathan C.;* Jenkins, David M.* *J. Am. Chem. Soc.* **2019**, *141*, 10177-10182. [10.1021/jacs.9b04586](https://doi.org/10.1021/jacs.9b04586) (Featured in *Science* as highlight article, July 19th, 2019)
43. Elucidation of the Reaction Mechanism of C₂+ N₁ Aziridination from Tetracarbene Iron Catalysts. Isbill, Sara B.; **Chandrachud, Preeti P.**; Kern, Jesse L.; Jenkins, David M.;* Roy, Sharani.* *ACS Catal.* **2019**, *9*, 6223-6233. [10.1021/acscatal.9b01306](https://doi.org/10.1021/acscatal.9b01306)
42. Unprecedented Five-Coordinate Iron(IV) Imides Generate Divergent Spin States Based on the Imide R-Groups. *Anneser, Markus R.*; *Elpitya, Gaya R.*; Townsend, Jacob; Johnson, Elizabeth J.; *Powers, Xian B.*; **DeJesus, Joseph D.**; Vogiatzis, Konstantinos D.; Jenkins, David M.* *Angew. Chem. Int. Ed.* **2019**, *58*, 8115-8118. [10.1002/anie.201903132](https://doi.org/10.1002/anie.201903132)
41. Toward a Porphyrin-Style NHC: A 16-Atom Ringed Dianionic Tetra-NHC Macrocycle and Its Fe(II) and Fe(III) Complexes. *Anneser, Markus R.*; *Elpitya, Gaya R.*; *Powers, Xian B.*; Jenkins, David M.* *Organometallics*. **2019**, *38*, 981-987. [10.1021/acs.organomet.8b00923](https://doi.org/10.1021/acs.organomet.8b00923)
40. Using SERS to Understand the Binding of N-Heterocyclic Carbenes to Gold Surfaces. Trujillo, Michael J.; **Strausser, Shelby L.**; Becca, Jeffrey C.; **DeJesus, Joseph F.**; Jensen, Lasse*; Jenkins, David M.* Camden, Jon P.* *J. Phys. Chem. Lett.* **2018**, *9*, 6779-6785. [10.1021/acs.jpcclett.8b02764](https://doi.org/10.1021/acs.jpcclett.8b02764)

39. Structural Analysis of the Complexation of Uranyl, Neptunyl, Plutonyl, and Americyl with Cyclic Imide Dioximes. Penchoff, Deborah A.*; Peterson, Charles C.; Camden, Jon C.; Bradshaw, James A.; Auxier II, John D.; Schweitzer, George K.; Jenkins, David M.; Harrison, Robert J.; Hall, Howard L.* *ACS Omega* **2018**, *3*, 13984-13993. [10.1021/acsomega.8b02068](https://doi.org/10.1021/acsomega.8b02068)
38. Structural Characteristics, Population Analysis, and Binding Energies of $[\text{An}(\text{NO}_3)]^{2+}$ [with An = Ac - Lr]. Penchoff, Deborah A.*; Peterson, Charles C.; Quint, Mark S.; Auxier II, John D.; Schweitzer, George K.; Jenkins, David M.; Harrison, Robert J.*; Hall, Howard L.* *ACS Omega* **2018**, *3*, 14127-14143. [10.1021/acsomega.8b01800](https://doi.org/10.1021/acsomega.8b01800)
37. N-heterocyclic Carbenes as a Robust Platform for Surface-Enhanced Raman Spectroscopy. **DeJesus, Joseph F.**; Trujillo, Michael J.; Camden, Jon P.*; Jenkins, David M.* *J. Am. Chem. Soc.*, **2018**, *140*, 1247-1250. [10.1021/jacs.7b12779](https://doi.org/10.1021/jacs.7b12779)
36. Catalytic aziridination with alcoholic substrates via a chromium tetracarbene catalyst. **Keller, C. Luke**; Kern, Jesse L.; Terry, Bradley D.; Roy, Sharani; Jenkins, David M.* *Chem. Commun.*, **2018**, 54, 1429-1432. [10.1039/C7CC08928G](https://doi.org/10.1039/C7CC08928G)
35. Transition Metal Aziridination Catalysts. **Chandrachud, Preeti P.**; Jenkins, David M.* *Encyclopedia of Inorganic and Bioinorganic Chemistry*, **2017**, 1-11. doi.org/10.1002/9781119951438.eibc2516
34. A Chromium(II) Tetracarbene Complex Allows Unprecedented Oxidative Group Transfer. *Elpitiya, Gaya R.*; Malbrecht, Brian J.; Jenkins, David M.* *Inorg. Chem.*, **2017**, *56*, 14101-14110. [10.1021/acs.inorgchem.7b02253](https://doi.org/10.1021/acs.inorgchem.7b02253)
33. Surface-enhanced Raman Scattering of Uranyl in Aqueous Samples: Implications for Nuclear Forensics and Groundwater Testing. Trujillo, M. J.; Jenkins, D. M.; Bradshaw, J. A.; Camden, J. P. *Anal. Methods*, **2017**, *9*, 1575-1579 (Cover Article). [10.1039/C7AY00183E](https://doi.org/10.1039/C7AY00183E)
32. Synthesis of Fully Aliphatic Aziridines with a Macrocyclic Tetracarbene Iron Catalyst. **Chandrachud, Preeti P.**; **Bass, Heather M.**; Jenkins, David M.* *Organometallics*, **2016**, *35*, 1652-1657 (Cover Article). [10.1021/acs.organomet.6b00066](https://doi.org/10.1021/acs.organomet.6b00066)
31. Insights into the Morphology and Kinetics of Growth of Silver Metal–Organic Nanotubes. Etampawala, Thusitha; **Mull, Derek L.**; Keum, Jong K.; Jenkins, David M.*; Dadmun, Mark,* *Cryst. Growth Des.*, **2016**, *16*, 1395-1403. [10.1021/acs.cgd.5b01509](https://doi.org/10.1021/acs.cgd.5b01509)
30. Isorecticular synthesis of 2D MOFs with rotating aryl rings. **Hughes, Brianna C.**; **Murdock, Christopher R.**; Jenkins, David M.* *Inorg. Chem. Front.*, **2015**, *2*, 1001-1005. [10.1039/C5QI00135H](https://doi.org/10.1039/C5QI00135H)
29. High valent Fe^{IV} chemistry in sustainable oxidation catalysis. **Chandrachud, Preeti P.**; Jenkins, David M.* *Tetrahedron Lett.*, **2015**, *56*, 2369-2376. [10.1016/j.tetlet.2015.03.110](https://doi.org/10.1016/j.tetlet.2015.03.110)
28. Probing the role of an Fe^{IV} tetrazene in catalytic aziridination. **Cramer, S. Alan**; Hernández Sánchez, Raúl; **Brakhage, Desirae F.**; Jenkins, David M.* *Chem. Commun.*, **2014**, *50*, 13967-13970. [10.1039/c4cc05124f](https://doi.org/10.1039/c4cc05124f)
27. Isostructural Synthesis of Porous Metal–Organic Nanotubes. **Murdock, Christopher R.**; Jenkins, David M.* *J. Am. Chem. Soc.*, **2014**, *136*, 10983-10988. [10.1021/ja5042226](https://doi.org/10.1021/ja5042226)
26. The synthesis and spectroscopic characterization of an aromatic uranium amidoxime complex. Bernstein, Karl J.; *Do-Thanh, Chi-Linh*; Penchoff, Deborah A.; **Cramer, S. Alan**; **Murdock, Christopher R.**; Lu, Zheng; Harrison, Robert J.; Camden, Jon P.*; Jenkins, David M.* *Inorg. Chim. Acta*, **2014**, *421*, 374-379. [10.1016/j.ica.2014.06.023](https://doi.org/10.1016/j.ica.2014.06.023)
25. Overcoming NHCs neutrality: installing tetracarbenes on group 13 and 14 metals. **Cramer, S. Alan**; **Sturgill, Forrest L.**; **Chandrachud, Preeti P.**; and Jenkins, David M.* *Dalton Trans.*, **2014**, *43*, 7687-7690. [10.1039/C4DT00990H](https://doi.org/10.1039/C4DT00990H)
24. Rotating Phenyl Rings as a Guest-Dependent Switch in Two-Dimensional Metal–Organic Frameworks. **Murdock, Christopher R.**; McNutt, Nicholas W.; Keffer, David J.; Jenkins, David M.* *J. Am. Chem. Soc.*, **2014**, *136*, 671-678. [10.1021/ja4088709](https://doi.org/10.1021/ja4088709)
23. The Final Unadorned Tris(azolyl)borate: Finishing What Trofimenko Started in 1966. **Hughes, Brianna C.**; *Lu, Zheng*; Jenkins, David M.* *Chem. Commun.*, **2014**, *50*, 5273-5275. [10.1039/C3CC47151A](https://doi.org/10.1039/C3CC47151A)
22. Approaches for synthesizing breathing MOFs by exploiting dimensional rigidity. **Murdock, Christopher R.**; **Hughes, Brianna C.**; *Lu, Zheng*; Jenkins, David M.* *Coord. Chem. Rev.* **2014**, *258-259*, 119-136. [10.1016/j.ccr.2013.09.006](https://doi.org/10.1016/j.ccr.2013.09.006)

21. Efficient CO₂ Capture by a 3D Porous Polymer Derived from Tröger's Base. Zhu, Xiang; Do-Thanh, Chi-Linh; **Murdock, Christopher R.**; Nelson, Kimberly M.; Tain, Chengcheng; Brown, Suree; Mahurin, Shannon M.; Jenkins, David M.; Hu, Jun; Zhao, Bin; Liu, Honglai; * Dai, Sheng* *ACS Macro Letters* **2013**, 2, 660-663. [10.1021/mz4003485](https://doi.org/10.1021/mz4003485)
20. Employing Dianionic Macrocyclic Tetracarbenes to Synthesize Neutral Divalent Metal Complexes. **Bass, Heather M.**; **Cramer, S. Alan**; **McCullough, Alexander S.**; Bernstein, Karl J.; **Murdock, Christopher R.**; Jenkins, David M.* *Organometallics* **2013**, 32, 2160-2167. [10.1021/om400043z](https://doi.org/10.1021/om400043z)
19. Effects of Solvation on the Framework of a Breathing Copper MOF Employing a Semirigid Linker. **Murdock, Christopher R.**; Lu, Zheng; Jenkins, David M.* *Inorg. Chem.* **2013**, 52, 2182-2187. [10.1021/ic3026304](https://doi.org/10.1021/ic3026304)
18. Exploiting a Dimeric Silver Transmetallating Reagent to Synthesize Macrocyclic Tetracarbene Complexes. Lu, Zheng; **Cramer, S. Alan**; Jenkins, David M.* *Chem. Sci.* **2012**, 3, 3081-3087. [10.1039/C2SC20628E](https://doi.org/10.1039/C2SC20628E)
17. Atom-Economical C₂ + N₁ Aziridination: Progress towards Catalytic Intermolecular Reactions Using Alkenes and Aryl Azides. Jenkins, David M.* *Synlett* **2012**, 23, 1267-1270. [10.1055/s-0031-1290977](https://doi.org/10.1055/s-0031-1290977)
16. Utilizing a Copper MOF as a Reagent in a Solvent Mediated Reaction to Form a Topologically Distinct MOF. **Murdock, Christopher R.**; Lu, Zheng; Jenkins, David M.* *Dalton Trans.* **2012**, 41, 7839-7841. [10.1039/C2DT30078H](https://doi.org/10.1039/C2DT30078H)
15. Chloride Binding by a Polyimidazolium Macrocyclic Detected via Fluorescence, NMR, and X-ray Crystallography. Do-Thanh, Chi-Linh; Khanal, Neelam; Lu, Zheng; **Cramer, S. Alan**; Jenkins, David M.*; Best, Michael D.* *Tetrahedron* **2012**, 68, 1669-1673. [10.1016/j.tet.2011.12.039](https://doi.org/10.1016/j.tet.2011.12.039)
14. Synthesis of Aziridines from Alkenes and Aryl Azides with a Reusable Macrocyclic Tetracarbene Iron Catalyst. **Cramer, S. Alan**; Jenkins, David M.* *J. Am. Chem. Soc.* **2011**, 133, 19324-19345. [10.1021/ja2090965](https://doi.org/10.1021/ja2090965)
13. 18-Atom-Ringed Macrocyclic Tetra-imidazoliums for Preparation of Monomeric Tetra-carbene Complexes. **Bass, Heather M.**; **Cramer, S. Alan**; **Price, Julia L.**; Jenkins, David M.* *Organometallics* **2010**, 29, 3235-3238. [10.1021/om100625g](https://doi.org/10.1021/om100625g)

Peer-reviewed publications from previous appointments

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5. Synthesis of 1,2-bis(di-tert-butylphosphino)ethane (dtbpe) Complexes of Nickel: Radical Coupling and Reduction Reactions Promoted by the Nickel(I) Dimer $[(\text{dtbpe})\text{NiCl}]_2$. Mindiola, Daniel J.; Waterman, Rory; Jenkins, David M.; Hillhouse, Gregory L. *Inorg. Chim. Acta* **2003**, *345*, 299-308.
4. Elucidation of a Low Spin Cobalt(II) System in a Distorted Tetrahedral Geometry. Jenkins, David M.; Di Bilio, Angel J.; Allen, Matthew J.; Betley, Theodore A.; Peters, Jonas C. *J. Am. Chem. Soc.* **2002**, *124*, 15336-15350.
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2. Redox Induced Reversible Structural Transformations of Dimeric and Polymeric Phenanthroline-Based Copper Chelates. Bernhard, Stefan; Takada, Kazutake; Jenkins, David; Abruña, Héctor D. *Inorg. Chem.* **2002**, *41*, 765-772.
1. A Homoleptic Phosphine Adduct of Tl(I). Shapiro, Ian R.; Jenkins, David M.; Thomas, J. Christopher; Day, Michael W.; Peters, Jonas C. *Chem. Commun.* **2001**, 2152-2153.

Funding

Total Funding (UTK): \$ 2,770,994

Completed

1. co-PI David M. Jenkins, University of Tennessee Office of Research, "Acquisition of a High Resolution Microscope and Camera for Complex Materials Research and Education," Award period: 4/2009, Award amount: \$15,000
2. PI David M. Jenkins, Science Alliance Joint Directed Research and Development (JDRD) program, "Well-defined Tetra-carbene Complexes for Metal Deposition in Zeolites for Catalytic Alcohol Production," Award period: 1/2011 – 12/2011, Award amount: \$47,961
3. PI David M. Jenkins, Department of Energy subcontract through Oak Ridge National Laboratory, "Synthesis of Novel Ligands for the Extraction of Uranyl from Seawater," Award period: 10/2011 – 9/2012, Award amount: \$88,000
4. PI David M. Jenkins, Science Alliance Joint Directed Research and Development (JDRD) program, "Triazole and Tetrazole Linkers for Covalent Organic Frameworks for Carbon Dioxide Capture," Award period: 1/2012 – 12/2013, Award amount: \$88,000
5. co-PI David M. Jenkins, Department of Energy subcontract through Y-12 PDRD, "All Optical Determination of Isotopic Enrichment of Actinides," Award Period: 12/2014 – 10/2017, Award amount: \$146,699
6. PI David M. Jenkins, National Science Foundation, "CAREER: Synthesis of Macrocyclic Carbene Complexes for Catalytic Aziridination," Award period: 5/2013 – 4/2019, Award amount: \$650,000
7. PI David M. Jenkins, National Institute of Health, "Catalytic C₂+N₁ Aziridination from Organic and Carbamate Azides," Award period: 10/2016 – 10/2020, Award amount: \$258,205
8. PI David M. Jenkins, National Science Foundation, "Collaborative Research: N-Heterocyclic Carbene Functionalized Metal Films and Nanoparticles for Next-Generation Surface-Enhanced Spectroscopy and Sensing," Award period: 8/2017 – 7/2021, Award amount: \$310,000.

In-progress

9. PI David M. Jenkins, National Institute of Health, "Catalytic Chiral Aziridination with Earth Abundant Metals," Award period: 10/2020 – 10/2023, Award amount: \$286,739
10. co-PI David M. Jenkins, National Science Foundation, "Collaborative Research: Characterization and Optimization of N-Heterocyclic Carbene Functionalized Nanoparticle Systems," Award period: 7/2021 – 7/2024, Award amount: \$365,910.
11. PI David M. Jenkins, National Science Foundation, "Chiral epoxidation and oxaziridination catalysis with first-row transition metals," Award period: 6/2022 – 5/2025, Award amount: \$514,480
12. PI David M. Jenkins, National Science Foundation, "Collaborative Research: Metal-Organic Nanotubes as Tunable Porous Fibers," Award Period: 8/2022 – 7/2025, Award amount: \$455,850

Invited Talks

1. Oak Ridge National Laboratory, Oak Ridge, TN, August 12, 2010.
2. Vanderbilt University, Nashville, TN, January 30th, 2012.
3. University of Kentucky, Lexington, KY, March, 30th, 2012.
4. American Chemical Society National Meeting, Philadelphia, PA, August 19th, 2012.
5. University of California – Berkeley, Berkeley, CA September 28th, 2012.
6. University of Georgia, Athens, GA October 8th, 2012.
7. Emory University, Atlanta, GA October 9th, 2012.
8. University of Vermont, Burlington, VT October 25th, 2012.
9. Purdue University, West Lafayette, IN November 13th, 2012.
10. Indiana University, Bloomington, IN November 15th, 2012.
11. University of Florida, Gainesville, FL November 19th, 2012.

12. Cornell University, Ithaca, NY February 18th, 2013.
13. Syracuse University, Syracuse, NY February 19th, 2013.
14. Brandeis University, Waltham, MA March 11, 2013.
15. Harvard University, Cambridge, MA March 12th, 2013.
16. Massachusetts Institute of Technology, Cambridge, MA March 13th, 2013.
17. University of California – Riverside, Riverside, CA March 22nd, 2013.
18. California Institute of Technology, Pasadena, CA March 25th, 2013.
19. University of California – Santa Barbara, Santa Barbara, CA March 27th, 2013.
20. American Chemical Society National Meeting, New Orleans, LA, April 8th, 2013.
21. American Chemical Society National Meeting, New Orleans, LA, April 9th, 2013.
22. University of Chicago, Chicago, IL April 19th, 2013.
23. University of California – Los Angeles, Los Angeles, CA May 22nd, 2013.
24. University of California – Irvine, Irvine, CA May 23rd, 2013.
25. University of North Carolina – Charlotte, Charlotte, NC March 29th, 2014
26. University of Mississippi, Oxford, MS September 25th, 2014
27. American Chemical Society National Meeting, Denver, CO March 23rd, 2015.
28. ECM4, Aberdeen, UK August 13th, 2015.
29. University of Strathclyde, Glasgow, UK August 14th, 2015
30. University of Saint Andrews, Saint Andrews, UK August 17th, 2015
31. University of Edinburgh, Edinburgh, UK August 19th, 2015
32. University of Notre Dame, South Bend, IN September 25th, 2015
33. Pacifichem International Meeting, Honolulu, HI December 19th, 2015
34. University of South Carolina, Columbia, SC October 21st, 2016
35. SERMACS, Columbia, SC October 23rd, 2016
36. UCSD, San Diego, CA January 22nd, 2017
37. University of Milan, Italy September 22nd, 2017
38. National University of Ireland, Galway, Ireland October 9th, 2017
39. University College Dublin, Dublin, Ireland October 11th, 2017
40. Trinity College, Dublin, Ireland October 12th, 2017
41. University of Belfast, Belfast, UK October 13th, 2017
42. University of Münster, Münster, Germany, November 10th, 2017
43. University of Erlangen, Erlangen, Germany, November 13th, 2017
44. Technical University of Munich, Munich, Germany, November 15th, 2017
45. University of Karlsruhe, Karlsruhe, Germany, December 4th, 2017
46. GSK/Strathclyde, Stevenage, UK, December 11th, 2017
47. University of Saint Louis, Saint Louis, MO, October 15th, 2021
48. SERMACS, Birmingham, AL November 10th, 2021
49. SERMACS, Birmingham, AL November 12th, 2021
50. Mississippi State University, Mississippi State, MS September 29th, 2022
51. SERMACS, San Juan, PR October 17th, 2022
52. Southern Methodist University, Dallas, TX November 11th, 2022
53. VISTEC University, Rayong, Thailand January 18th, 2023
54. PACCON, Chiang Rai, Thailand January 21st, 2023
55. Georgia State University, Atlanta, GA March 3rd, 2023

Students and Postdoctoral Scholars Mentored

G = Graduate Student, U = Undergraduate Student, P = Postdoctoral Scholar

Heather Bass (G, 2008-2013)	Chemistry lecturer at University of Tennessee
Elizabeth Jacobs (U, 2009-2010)	Postdoc at Scripps Research Inst.
Julia Price (U, 2009-2010)	High school chemistry teacher
Benjamin Sundell (U, 2009-2010)	Chemist at Aramco Services Company
S. Alan Cramer (G, 2009-2014)	Chemist at Albemarle
Christopher Murdock (G, 2009-2014)	Chemist at NuMat Technologies
Jaron Densky (U, 2010)	Medical doctor

Brianna Hughes (G, 2010-2015)	Chemist at nuclear power plant
Scott McCullough (U, 2011-2012)	Chemical engineer at Proctor and Gamble
Zheng Lu (P, 2011-2013)	Chemist at Halliburton
Preeti Chandrachud (G, 2011-2016)	Postdoc at Moffitt Cancer Center
Desirae Brakhage (U, 2012)	Clinical research associate at ICON PLC
Chi-Linh Do-Thanh (P, 2012)	Postdoc at ORNL
Forrest Sturgill (U, 2012-2013)	Medical doctor
Derek Mull (G, 2013-2016)	Sales representative for Shimadzu Scientific
C. Luke Keller (G, 2013-2019)	Postdoc for US Naval Laboratory
Khanh Pham (U, 2014-2015)	Dentist
Kristina Vailonis (G, 2014-2020)	Research scientist for NASA
Joseph DeJesus (G, 2014-2019)	Postdoc at Queen's University (Canada)
Lucas Wilkins (U, 2015-2016)	Medical student at University of Tennessee
Matt Stevens (U, 2015-2016)	Chemistry tech at Solvay
Gaya Elpitiya (P, 2015-2018)	Chemist at Albemarle
Carolyn Barnes (U, 2016)	Fulbright Fellow in Prague
Nicholas Ross (U, 2016)	Unknown
Isadora Beach (U, 2016-2017)	Medical student at University of Tennessee
Shelby Furman (G, 2016-2021)	Postdoc at Queen's University (Canada)
J. Bryson White (U, 2016-2018)	Unknown
Vernon Stafford (G, 2017-present)	Current student
Kevin Blatchford (G, 2017-present)	Current student
KatieAnn Peck (U, 2018-2019)	Chemistry tech DuPont and Tate and Lyle
Rowen Borsari (U, 2018-2022)	PhD chemistry student at UCSB
Markus Anneser (P, 2018-2019)	Chemistry lecturer at University of Munich
Xian Powers (P, 2018-2021)	Chemistry lecturer at University of Tennessee
Isabel Jensen (G, 2019-present)	Current student
Robert Ozburn (U, 2019-2020)	Formulation specialist at Pfizer
Alec Vest (U, 2019-2020)	Biopharmaceutical technician at Aegis
Sean Weiland (U, 2019-2020)	Unknown
Jerred Russell (G, 2020-present)	Current student
Jacob Barrett (G, 2020-present)	Current student
Ben Moder (U, 2021)	Student at University of Tennessee
Gurkiran Kaur (G, 2021-present)	Current student
Henry Brothers (U, 2021-2022)	PhD chemistry student at UT
Rachel Sparks (U, 2021-2022)	Chemist at UT stockroom
Logan Whaley (U, 2021-2022)	Unknown
Bryce Lane (U, 2021-2022)	Medical student at ETSU
Connor Belcher (U, 2021-present)	Current student
Harper Kirby (U, 2022-present)	Current student
Maddie Larson (U, 2022-present)	Current student
Phattananawee Nalach (P, 2022-present)	Current postdoc
Joey Tepper (U, 2022-present)	Current student
Matthew Flagg (U, 2022-present)	Current student
Grace Miller (U, 2022-present)	Current student
Henry Brothers (G, 2022-present)	Current student
Patrick Luciani (G, 2022-present)	Current student

Contact list for Associate Dean Position for David Jenkins

1. Prof. Victor Nemykin
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Relation: Current Department Head
2. Prof. Aleydis Van de Moortel
Department Head of Classics, University of Tennessee
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Relation: Research collaborator on archeochemistry
3. Prof. Jon Camden
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Relation: Research collaborator on NSF-funded project on N-heterocyclic carbenes

Diversity Statement – David Jenkins

“People, not research discoveries, are our product.” My undergraduate research advisor, Hector Abruña at Cornell, taught me this lesson (which I admit to paraphrasing) twenty-five years ago. Diversity is at the core of the mission of any university because, fundamentally, a university is in the business of training and teaching people. If a university is to succeed today and fulfill its mission of educating all people in our heterogenous society, then it must be open to everyone, and not just for those protected under Title IX. It should also be open to less obvious areas of diversity, like single parents. This concept should manifest itself in the students that we train in our department, in the staff that we hire, and in the service activities that we conduct.

I have worked with and educated an exceptionally diverse group of graduate students during my tenure at the University of Tennessee. I have had eighteen graduate students (eight of whom are currently in my lab). My students have been nearly balanced between genders. I have had two Black students, two Hispanic students, three foreign students, one gay student, two students with kids, and one disabled student. This diversity has created a wonderful learning environment in which I and my students have been able to learn with and from individuals possessing different backgrounds from us. I, in particular, have had to learn and adapt to educating multiple backgrounds and ethnicities. I can recount multiple instances where I have had to adjust my mentoring approach (and broaden my own personal perspective), to connect with each student because my background is different than theirs. For example, I have worked with my department, college, and student disabilities services to retrofit portions of my lab so that my disabled graduate student can work in the fume hood (with Schlenk line) and glove box, a process that has taken over a year and a fair amount of trial and error. No one at our university had dealt with a disabled PhD student in chemistry before (or really any experimental science as far as I could tell). Similarly, mentoring students who have a family with small children required considerations that I never thought of while I was in graduate school.

My undergraduate research students have also benefited from the diversity in my group. It has exposed them to people that they may not have grown up next to, socialized with, or otherwise interacted much with. It has helped to normalize those differences in a way that teaches them that you can work with, become friends with, and accept individuals with different backgrounds – a skill that is so critical in many workplaces, and in fact society, today. My experience in my lab has proven to me that research groups within a department are excellent incubators for diversity because we are striving for a common goal, successful research outcomes, as a team. As such, I believe that we must pursue an applicant pool for graduate students that is going to look like our society.

Outside of my lab, I have also been heavily involved in promoting diversity in the department. For example, In 2018, I co-chaired with Dr. Bhavya Sharma a three day “Women in STEM” symposium at the University of Tennessee. This event, aimed at postdocs and assistant professors, was the first of its kind at the university. We invited plenary speakers, hosted workshops, and scheduled a viewing and discussion with Prof. Polly Arnold (then of the University of Edinburgh) of her film “A Chemical Imbalance,” which addresses the lack of female faculty in chemistry. I believe events like this both showcase inequalities that exist as well as provide a start to addressing them.

One of my goals as Associate Dean would be for us to embrace diversity – student, faculty, and staff – for the benefits that it can bring to our college. I believe that it is critical for our society to function effectively and, to do so, we must have people of all backgrounds who can work together.

Application Forms

Source of Applicants

Where did you learn of this opportunity?

Internal Email
