

Department of Chemistry
University of South Dakota
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EDUCATION

<i>Postdoc, Inorganic Chemistry</i> University of California, San Diego Advisor: Professor Seth M. Cohen	2007.02-2010.07
<i>Ph.D., Inorganic Chemistry</i> University of South Florida Advisor: Professor Michael J. Zaworotko	2002.08-2006.12
<i>B.S., Chemistry</i> Peking University, Beijing, China	1996.09-2000.06

EMPLOYMENT

<i>University of South Dakota</i> Associate Professor (Tenured), Department of Chemistry	2016.08 – present
<i>University of South Dakota</i> Assistant Professor, Department of Chemistry	2010.08 – 2016.07

TEACHING EXPERIENCE

University of South Dakota
Inorganic Chemistry
Advanced Inorganic Chemistry
Chemical Literature
Graduate Seminar
Supramolecular Chemistry
Environmental Chemistry
General Chemistry Laboratory
Organic Chemistry Laboratory
Inorganic Chemistry Laboratory

University of South Florida
General Chemistry Laboratory
Organic Chemistry Laboratory

PROFESSIONAL AFFILIATIONS

American Chemical Society, Member (since 2003)

GRANTS, AWARDS, AND RECOGNITIONS

Current Grants

- [1] "Electrostatic Regulation of Cavity-Mediated Catalysis", **National Science Foundation**, \$420,000 (PI), 8/1/2018-7/31/2021
- [2] "Size-Selective Electrochemical Sensing via Metal-Organic Supercontainers", **National Science Foundation**, \$150,000 (PI), 7/1/2017-6/30/2019
- [3] "Center for Fluorinated Functional Materials: from Discovery to Commercialization", **South Dakota Governor's Office of Economic Development**, \$2,710,969 (co-PI; PI: Haoran Sun, USD Chemistry), 7/1/2017-6/30/2022
- [4] 'CAREER: Biomimetic Metal-Organic Super-Containers', **National Science Foundation**, \$650,000 (PI), 7/1/2014-6/30/2019
- [5] "CAREER: Biomimetic Metal-Organic Super-Containers" (NSF-ERC International Collaboration Travel Supplement), **National Science Foundation**, \$8,543 (PI), 7/1/2016-6/30/2019

Previously Received Grants

- [1] "NASA EPSCoR Preproposal: Rapid response on-chip sensors for food production and ECLSS monitoring for International Space Station", **South Dakota NASA EPSCoR Office**, \$8,500 (co-PI), 1/1/2018-9/30/2018
- [2] "Proof of Concept Proposal for Patent Funding: Devices, Systems and Methods for Use of Electrical Ion Sensors Based on Metal-Organic Supercontainers (MOSCs)", **South Dakota Governor's Office of Economic Development**, \$15,000 (PI), 7/1/2017-6/30/2018
- [3] "Manipulation of Neurotransmitter Signaling using Nano-Scale 'Supercontainers'", **USD Center for Brain and Behavior Research (CBBRe)** Research Enhancement Pilot Grant Program, \$20,000 (co-PI; co-PI: Brian Burrell, USD School of Medicine), 6/1/2015-11/30/2016
- [4] "Mimicking Protein-Ligand Binding in Synthetic Supercontainers", **South Dakota Board of Regents**, \$66,599 (PI), 8/22/2014-8/21/2015
- [5] "Structural Thermal Insulation Composites", **National Aeronautics & Space Administration EPSCoR**, \$750,000 (co-PI; Science PI: David Salem, South Dakota School of Mines and Technology), 10/20/2011-10/19/2014

Other Recognitions

- [1] South Dakota Young Investigator of the Coalition of EPSCoR/IDeA (2013)
- [2] *ChemComm* Emerging Investigator (2014)
- [3] *Inorganic Chemistry Frontiers* Emerging Investigator (2016)

- [4] USD President's Award for Research Excellence: New-Mid Career Faculty (2015)

Funded Collaborative Grants (Served as a Senior Personnel)

- [1] "REU Site: Weak chemical bonds yield strong research experiences in Materials Chemistry at the University of South Dakota", National Science Foundation, 06/01/2015-5/31/2018, \$265,022, (Senior Personnel).

PI: Andrew Sykes (USD); I contributed to the writing of the proposal, including a one-page research description entitled "Designing Artificial Monoamine Receptors based on Synthetic Supercontainers".

- [2] "Acquisition of a 400 MHz NMR Spectrometer including PFG/HRMAS for Materials Chemistry Research: The Missing Instrument", National Science Foundation, 9/1/2012 - 8/31/2015, \$270,091 (Senior Personnel).

PI: Andrew Sykes (USD); I contributed to the writing of the proposal, including a one-page research description entitled "Thiacalixarene Based Metal-Organic Cages as Artificial Receptors".

- [3] "Acquisition of a UV-Vis-NIR Microspectrophotometer for High-Resolution Visualization and Characterization of Advanced Materials", South Dakota Board of Regents R&D Innovation Grant, 2013, \$200,000 (Senior Personnel).

PI: P. Stanley May (USD); I contributed to the writing of the proposal, including a one-page research description entitled "Mimicking Protein-Ligand Binding in Synthetic Supercontainers".

- [4] "REU Site: The Northern Plains REU Site - Serving the Needs of Regional Tribal Colleges and Local Primarily Undergraduate Institutions", National Science Foundation, 6/1/2011 - 5/31/2014, \$360,000 (Senior Personnel).

PI: David Hawkinson (USD); I contributed to the writing of the proposal, including a one-page research description entitled "Fluorinated Metal-Organic Frameworks for Selective Adsorption of Oxygen".

Travel Grants

- [1] USD College of Arts & Sciences Travel Grant, 10/2/2018, \$475; will support the trip to attend the 6th International Conference on Metal-Organic Frameworks & Open Framework Compounds, to be held on December 9-13, 2018 in Auckland, New Zealand.
- [2] USD College of Arts & Sciences Travel Grant, 2/18/2015, \$900; supported the trip to visit the Center for Advanced Nanomaterials at University of Adelaide, Australia as an invited guest researcher, May 21-28, 2015.
- [3] USD College of Arts & Sciences Travel Grant, 10/18/2013, \$900; retrospectively supported the trip to attend the 246th American Chemical Society national meeting held September 8-12, 2013 in Indianapolis, Indiana.
- [4] USD College of Arts & Sciences Travel Grant, 6/4/2013, \$900; retrospectively supported the trip to attend the 2013 MOF Young Investigators' Symposium held May 12-14, 2013 at Fudan University in Shanghai, China.

[5] USD College of Arts & Sciences Travel Grant, 10/3/2012, \$900; retrospectively supported the trip to attend the 244th American Chemical Society national meeting, held August 19-23, 2012 in Philadelphia, PA.

[6] USD College of Arts & Sciences Travel Grant, 2/15/2012, \$900; supported the trip to attend the 243rd American Chemical Society national meeting, held March 25-29, 2012 in San Diego, CA.

PATENTS

[1] Netzer, Nathan L.; Must, Indrek; Qiao, Yupu; Zhang, Shi-Li; Wang, Zhenqiang; Zhen Zhang, "Devices, Systems and Methods for Use of Electrical Ion Sensors Based on Metal-Organic Supercontainers", *Provisional Patent Application* **2016**, Application Number: US62/368,821.

[2] Wang, Zhenqiang; Dai, Feng-Rong, "Modular assembly of metal-organic super-containers incorporating calixarenes", *PCT Int. Appl.* **2013**, WO 2013/155510 A1.

SYNERGISTIC ACTIVITIES

1. Review Panels

[1] Panelist for National Science Foundation Division of Materials Research (2014, 2016, 2017, & 2018).

[2] Panelist for National Science Foundation Division of Chemistry (2013, 2015, & 2017).

[3] Panelist for Department of Energy ARPA-E (2010).

[4] *Ad hoc* panelist for National Institutes of Health (2018)

2. Mail-in Reviews

[1] American Chemical Society Petroleum Research Fund (2011, 2017)

[2] Research Corporation for Science Advancement (2011, 2018)

[3] Department of Energy (ARPA-E, 2012)

[4] Department of Energy (Catalysis Science Program, 2015 & 2018).

[5] U.S. Army Research Office (2013, 2015)

[6] National Science Foundation Division of Chemistry (2013-2018)

[7] National Science Foundation Division of Materials Research (2018)

3. Journal Reviews

Reviewer for *Accounts of Chemical Research*, *ACS Catalysis*, *Advanced Synthesis & Catalysis*, *Angewandte Chemie*, *ChemCatChem*, *Chemical Communications*, *Chemical Science*, *Chemical Society Reviews*, *Chemistry – A European Journal*, *Chemistry of Materials*, *Coordination Chemistry Reviews*, *Crystal Growth & Design*, *CrystEngComm*, *Dalton Transactions*, *Inorganic Chemistry*, *Inorganic Chemistry Communications*, *Inorganic Chemistry Frontiers*, *IUCrJ*, *Journal of Coordination Chemistry*, *Journal of the American Chemical Society*, *Journal of Materials Chemistry*, *Nature Communications*, *Nature Materials*, *New Journal of Chemistry*, *Polymer Chemistry*, *Scientific Reports*, and *The Journal of Physical Chemistry*.

4. State Service

- [1] Serve as a judge for South Dakota Science Olympiad, 2013 – present
Co-organized, prepared, and judged the Materials Science (2013, 2014, and 2017) and Crime Buster (2015) competition activities.
- [2] Serve as a panelist for the South Dakota EPSCoR CAREER Proposal Workshop
Sioux Falls, SD; 2014-2017.
- [3] Served as a judge for the State Undergraduate Poster Symposium
Pierre, SD; July 25, 2014; August 3, 2017; July 26, 2018.
- [4] Represented the state of South Dakota as a Young Investigator at the Coalition of EPSCoR/IDeA States Annual Meeting
Washington DC, March 11-12, 2013; Met with and showcased our research program to South Dakota congressional delegations.
- [5] Served as a member on the South Dakota EPSCoR Diversity Task Force, 2012-2013.

5. Other External Activities

- [1] Organized 2016 MOF Young Investigator Symposium, University of California San Diego, La Jolla, CA, September 10, 2016.
- [2] Chaired a session at the Molecular Containers Symposium, International Chemical Congress of Pacific Basin Societies 2015, Honolulu, HI, December 15-20, 2015.
- [3] Served as the Chair for the American Chemical Society Sioux Valley Local Section, 2015.
- [4] Served on the American Chemical Society Sioux Valley Local Section executive committee, 2014 – 2016.
- [5] Organized the 2015 American Chemical Society Sioux Valley Local Section Undergraduate Poster Competition, Sioux Falls, SD, September 26, 2015.
- [6] Organized the 2015 American Chemical Society Sioux Valley Local Section Outstanding Chemistry Senior Award Reception, Sioux Falls, SD, May 1, 2015.
- [7] Organized and ran a one-day chemistry workshop at Nebraska Indian Community College, South Sioux City, IA, April 10, 2015.
- [8] Served as a judge for the ACS Sioux Valley Local Section Undergraduate Poster Competition, Sioux Falls, SD, September 20, 2014.
- [9] Co-organized and ran a one-day chemistry workshop at Sinte Gleska University, Mission, SD, March 28, 2013.
- [10] Co-organized and ran a one-day chemistry workshop at Nebraska Indian Community College, South Sioux City, IA, March 1, 2013.
- [11] Chaired a session at the 2013 MOF Young Investigator Symposium, Fudan University, Shanghai, China, May 12-14, 2013.

6. University Service

- [1] Assisted student interviews for the University Scholarship Committee, 2015 – present.
- [2] Serving on the University Committee on Financial Conflicts of Interest, 2014 – present.
- [3] Review graduate students applications and assist in enrollment selection, 2011 – present.
- [4] Author and grade graduate student cumulative exams, 2010 – present.
- [5] Represented the Department of Chemistry at the University Fall Open Houses.
November 7, 2015; September 29, 2012; October 22, 2011; October 16, 2010.

PUBLICATIONS***Publications since joining USD (* corresponding author(s))***

- [1] Qiao, Yupu; Lin, Wei;* **Wang, Zhenqiang*** “Metal-Bound μ_4 -H₂O in a Synthetic Supercontainer Mediates Friedel–Crafts Alkylation of Indoles”, **2018**, *manuscript in preparation*.
- [2] Sun, Chen-Zhe; Cheng, Li-Ji; Wang, Jin-Yun; Yang, Ming; **Wang, Zhenqiang*** Chen, Zhong-Ning;* Dai, Feng-Rong;* “A Halogen-Directing Approach to Manipulating Structural and Functional Characteristics of Coordination Containers”, **2018**, *manuscript in preparation*
- [3] Sun, Chen-Zhe; Cheng, Li-Ji; Qiao, Yupu; Zhang, Li-Yi; Chen, Zhong-Ning;* Dai, Feng-Rong;* Lin, Wei;* **Wang, Zhenqiang*** “Stimuli-responsive metal-organic supercontainers as synthetic proton receptors”, *Dalton Trans.* **2018**, 47, 10256-10263.
- [4] Chen, Xi; Hu, Qitao; Chen, Si; Netzer, Nathan L.; **Wang, Zhenqiang**; Shi-Li Zhang; Zhang, Zhen* “Multiplexed Analysis of Molecular and Elemental Ions Using a Nanowire Transistor Sensor Array”, *Sensor Actuat. B-Chem.* **2018**, 270, 89-96.
- [5] Netzer, Nathan L.; Must, Indrek; Qiao, Yupu; Zhang, Shi-Li; **Wang, Zhenqiang*** Zhang, Zhen* “Biomimetic supercontainers for size-selective electrochemical sensing of molecular ions”, *Sci. Rep.* **2017**, 7, 45786.
- [6] Cheng, Li-Ji; Fan, Xin-Xia; Li, Yi-Peng; Wei, Qiao-Hua;* Dai, Feng-Rong;* Chen, Zhong-Ning; Wang, Zhenqiang “Engineering solid-state porosity of synthetic supercontainers via modification of exo-cavities”, *Inorg. Chem. Commun.* **2017**, 78, 61-64.
- [7] Sapp, Wendi; Gifford, Brendan; Wang, Zhenqiang; Kilin, Dmitri S. “Mathematical modeling of gas desorption from a metal-organic supercontainer cavity filled with stored N₂ gas at critical limits”, *RSC. Adv.* **2017**, 7, 11180-11190.
- [8] Qiao, Yupu; Zhang, Long;* Li, Jia; Lin, Wei;* **Wang, Zhenqiang*** “Switching on Supramolecular Catalysis via Cavity Mediation and Electrostatic Regulation”, *Angew. Chem. Int. Ed.* **2016**, 55, 12778-12782; DOI: 10.1002/anie.201606847.
- [9] Dai, Feng-Rong; Qiao, Yupu; **Wang, Zhenqiang*** “Designing Structurally Tunable and Functionally Versatile Synthetic Supercontainers”, *Inorganic Chemistry Frontiers*, **2016**, 3, 243-249 (*invited contribution to the inaugural Emerging Investigators issue*).
- [10] Sapp, Wendi; Erck, Adam; **Wang, Zhenqiang**; Dmitri Kilin* “Electronic and spectral properties of a metal-organic supercontainer molecule by single point DFT”, *Molecular Physics* **2016**, 114, 394-399 (*invited contribution*).
- [11] Jia, Li; Sun, Hao-Ling;* **Wang, Zhenqiang*** “Crystal structures and luminescent properties of new lanthanide(III) complexes derived from 2-phenyl-4-pyrimidinecarboxylate”, *RSC Adv.* **2015**, 5, 96855-96861.
- [12] Netzer, Nathan L.; Dai, Feng-Rong; **Wang, Zhenqiang*** Jiang, Chaoyang* “pH-Modulated Molecular Assemblies and Surface Properties of Metal-Organic Supercontainers at the Air-Water Interface”, *Angew. Chem. Int. Ed.* **2014**, 53, 10965-10969.
- [13] Dai, Feng-Rong; Sambasivam, Uma; Hammerstrom, Alex J.; **Wang, Zhenqiang*** “Synthetic Supercontainers Exhibit Distinct Solution versus Solid State Guest-Binding Behavior”, *J. Am. Chem. Soc.* **2014**, 136, 7480-7491.
- [14] Dai, Feng-Rong; Becht, Dustin C.; **Wang, Zhenqiang*** “Modulating Guest Binding in Sulfonycalixarene-Based Metal-Organic Supercontainers”, *Chem. Commun.* **2014**, 50, 5385-5387 (*invited contribution to the 2014 Emerging Investigators issue*).

- [15] Jia, Li; Hui, Yan-Chun, Li, Zongsheng; Sun, Hao-Ling*; **Wang, Zhenqiang*** “Luminescent Lanthanide-2-phenylpyrimidine-carboxylate Frameworks: Structure and Luminescence Tuning”, *CrystEngComm*. **2014**, *16*, 6483-6490.
- [16] Sun, Hao-Ling*; Yin, Dan-Dan; Chen, Qi; **Wang, Zhenqiang*** “Europium-Pyrimidine-4,6-dicarboxylate Framework with Single-Crystal-to-Single-Crystal Transition and Reversible Dehydration/Rehydration Process”, *Inorg. Chem.* **2013**, *52*, 3582-3584.
- [17] Wu, Chia-Ming; Rathi, Monika; Ahrenkiel, S. Phil; Koodali, Ranjit T.*; **Wang, Zhenqiang*** “Facile synthesis of MOF-5 confined in SBA-15 hybrid material with enhanced hydrostability”, *Chem. Commun.* **2013**, *49*, 1223-1225.
- [18] Dai, Feng-Rong; **Wang, Zhenqiang*** “Modular Assembly of Metal-Organic Supercontainers Incorporating Sulfonylcalixarenes”, *J. Am. Chem. Soc.* **2012**, *134*, 8002-8005.

Publications prior to joining USD

- [1] **Wang, Zhenqiang**; Tanabe, Kristine K.; Cohen, Seth M. “Tuning Hydrogen Sorption Properties of Metal-Organic Frameworks by Postsynthetic Covalent Modification”, *Chem. Eur. J.* **2010**, *16*, 212-217.
- [2] Garibay, Sergio J.; **Wang, Zhenqiang**; Cohen, Seth M. “Evaluation of Heterogeneous Metal-Organic Framework Organocatalysts Prepared by Postsynthetic Modification”, *Inorg. Chem.* **2010**, *49*, 8086-8091.
- [3] **Wang, Zhenqiang**; Cohen, Seth M. “Modulating Metal-Organic Frameworks to Breathe: A Postsynthetic Covalent Modification Approach”, *J. Am. Chem. Soc.* **2009**, *131*, 16675-16677.
- [4] **Wang, Zhenqiang**; Cohen, Seth M. “Postsynthetic Modification of Metal-Organic Frameworks”, *Chem. Soc. Rev.* **2009**, *38*, 1315-1329.
- [5] **Wang, Zhenqiang**; Tanabe, Kristine K.; Cohen, Seth M. “Accessing Postsynthetic Modification in a Series of Metal-Organic Frameworks and the Influence of Framework Topology on Reactivity”, *Inorg. Chem.* **2009**, *48*, 296-306.
- [6] Garibay, Sergio J.; **Wang, Zhenqiang**; Tanabe, Kristine K.; Cohen, Seth M. “Postsynthetic Modification: A Versatile Approach Toward Multifunctional Metal-Organic Frameworks”, *Inorg. Chem.* **2009**, *48*, 7341-7349.
- [7] **Wang, Zhenqiang**; Cohen, Seth M. “Tandem Modification of Metal-Organic Frameworks by a Postsynthetic Approach”, *Angew. Chem., Int. Ed.* **2008**, *47*, 4699-4702.
- [8] Tanabe, Kristine K.; **Wang, Zhenqiang**; Cohen, Seth M. “Systematic Functionalization of a Metal-Organic Framework via a Postsynthetic Modification Approach”, *J. Am. Chem. Soc.* **2008**, *130*, 8508-8517.
- [9] Dugan, Emily; **Wang, Zhenqiang**; Okamura, Marilyn; Medina, Annette; Cohen, Seth M. “Covalent Modification of a Metal-Organic Framework with Isocyanates: Probing Substrate Scope and Reactivity”, *Chem. Commun.* **2008**, 3366-3368.
- [10] **Wang, Zhenqiang**; Cohen, Seth M. “Postsynthetic Covalent Modification of a Neutral Metal-Organic Framework”, *J. Am. Chem. Soc.* **2007**, *129*, 12368-12369.
- [11] Garibay, Sergio J.; Stork, Jay R.; **Wang, Zhenqiang**; Cohen, Seth M.; Telfer, Shane G. “Enantiopure vs. Racemic Metalloligands: Impact on Metal-Organic Framework Structure and Synthesis”, *Chem. Comm.* **2007**, 4881-4883.

- [12] **Wang, Zhenqiang**; Kravtsov, Victor Ch.; Walsh, Rosa B.; Zaworotko, Michael J. "Guest-Dependent Cavities in Two-Dimensional Metal-Organic Frameworks Sustained by Tetrafluoro-1,3-benzenedicarboxylate", *Crystal Growth & Design* **2007**, 7, 1154-1162.
- [13] McManus, Gregory J.; **Wang, Zhenqiang**; Beauchamp, Derek A.; Zaworotko, Michael J. "A Novel Metal-Organic Ternary Topology Constructed from Triangular, Square and Tetrahedral Molecular Building Blocks", *Chem. Comm.* **2007**, 5212-5213.
- [14] Cheney, Miranda; McManus, Gregory J.; Perman, Jason A. **Wang, Zhenqiang**; Zaworotko, M. J. "The Role of Cocrystals in Solid-State Synthesis: Cocrystal-Controlled Solid-State Synthesis of Imides", *Crystal Growth & Design* **2007**, 7, 616-617.
- [15] **Wang, Zhenqiang**; Kravtsov, Victor Ch.; Zaworotko, Michael J. "Ternary nets formed by self-assembly of triangles, squares, and tetrahedra", *Angew. Chem., Int. Ed.* **2005**, 44, 2877-2880.
- [16] Shattock, Tanise R.; Vishweshwar, Peddy; **Wang, Zhenqiang**; Zaworotko, Michael J. "18-fold Interpenetration and Concomitant Polymorphism in the 2:3 Co-Crystal of Trimesic Acid and 1,2-bis(4-pyridyl)ethane", *Crystal Growth & Design* **2005**, 5, 2046-2049.
- [17] McManus, Gregory J.; **Wang, Zhenqiang**; Zaworotko, Michael J. "Suprasupramolecular Chemistry: Infinite Networks from Nanoscale Metal-Organic Building Blocks", *Crystal Growth & Design* **2004**, 4, 11-13.

INVITED LECTURES

- [1] **Wang, Zhenqiang** "Ion-Regulated, Cavity-Mediated Supramolecular Catalysis", Invited Lecture, Department of Chemistry & Biomolecular Science, Clarkson University, Potsdam, NY, Sept 28, 2018.
- [2] **Wang, Zhenqiang** "Ion-Regulated, Cavity-Mediated Supramolecular Catalysis", Invited Lecture, Department of Chemistry, Washington State University, Pullman, WA, Feb 12, 2018.
- [3] **Wang, Zhenqiang** "Chemistry of Metal-Organic Supercontainers Inspired by Biology", Invited Lecture, Department of Chemistry, University of Nebraska, Omaha, Oct 9, 2017.
- [4] **Wang, Zhenqiang** "Metal-Organic Supercontainers and Their Applications", Invited Lecture, The Ångström Laboratory, Department of Engineering Sciences, Uppsala University, Uppsala, Sweden, May 22, 2017.
- [5] **Wang, Zhenqiang** "Cavity-Mediated Catalysis via Synthetic Supercontainers", Invited Lecture, Department of Organic Chemistry, Universidad Autónoma de Madrid, Madrid, Spain, May 17, 2017.
- [6] **Wang, Zhenqiang** "Chemistry of Metal-Organic Supercontainers Inspired by Biology", Invited Lecture, Science Department, Southwest Minnesota State University, Marshall, MN, February 23, 2017.
- [7] **Wang, Zhenqiang** "Nanoscale Supercontainers as Artificial Neurotransmitter Receptors", Invited Lecture, Basic Biomedical Sciences, University of South Dakota, Vermillion, SD, February 16, 2017.
- [8] **Wang, Zhenqiang** "Cavity-Mediated Catalysis via Synthetic Supercontainers", Invited Lecture, Department of Chemistry & Chemical Biology, University of New Mexico, Albuquerque, NM, October 28, 2016.
- [9] **Wang, Zhenqiang** "Cavity-Mediated Catalysis via Synthetic Supercontainers", Invited Lecture, Department of Chemistry, Tulane University, New Orleans, LA, October 10, 2016.
- [10] **Wang, Zhenqiang** "Rational Design of Metal-Organic Supercontainers as Enzyme Mimics", Invited Lecture, Advances in Supramolecular Chemistry Symposium, 66th American Crystallographic Association Annual Meeting, Denver, CO, July 22-26, 2016.

- [11] **Wang, Zhenqiang** “Designing Nanoscale Supercontainers for Biomedical Applications”, Invited Lecture, Department of Biomedical Engineering, University of South Dakota, Sioux Falls, SD, May 18, 2016.
- [12] **Wang, Zhenqiang** “Cavity-Mediated Catalysis via Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of Maryland, College Park, MD, April 21, 2016.
- [13] **Wang, Zhenqiang** “Cavity-Mediated Catalysis via Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, Johns Hopkins University, Baltimore, MD, April 19, 2016.
- [14] **Wang, Zhenqiang** “Allosteric Modulation of Supramolecular Catalysis in Synthetic Supercontainers”, Invited Lecture, Pacifichem 2015 Molecular Containers Symposium, Honolulu, Hawaii, December 15-20, 2015.
- [15] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences, Fuzhou, China, June 19, 2015.
- [16] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, College of Chemistry and Molecular Engineering, Peking University, Beijing, China, June 9, 2015.
- [17] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, June 8, 2015.
- [18] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, Chungbuk National University, Chungbuk, Korea, June 4, 2015.
- [19] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, the Centre for Advanced Nanomaterials, University of Adelaide, Adelaide, Australia, May 21-28, 2015.
- [20] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Commonwealth Scientific and Industrial Research Organization (CSIRO), Clayton South, Australia, May 20, 2015.
- [21] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, School of Chemistry, University of Wollongong, Wollongong, Australia, May 19, 2015.
- [22] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, School of Chemistry, University of Sydney, Sydney, Australia, May 18, 2015.
- [23] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of California Riverside, Riverside, CA, April 20, 2015.
- [24] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of California San Diego, La Jolla, CA, April 17, 2015.
- [25] **Wang, Zhenqiang** “Regulating Molecular Recognition and Chemical Reactivity in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of California Irvine, Irvine, CA, April 16, 2015.
- [26] **Wang, Zhenqiang** “Regulating Molecular Recognition in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of South Florida, Tampa, FL, March 12, 2015.
- [27] **Wang, Zhenqiang** “‘Molecular’ MOFs: Chemistry of Metal-Organic Supercontainers Inspired by Biology”, Invited Lecture, Department of Chemistry and Physics, Florida Gulf Coast University, Fort Myers, FL, March 10, 2015.
- [28] **Wang, Zhenqiang** “Modulating Molecular Recognition in Synthetic Supercontainers”, Invited Lecture, Department of Chemistry, University of Texas, Dallas, TX, November 14, 2014.

- [29] **Wang, Zhenqiang** "Tuning Solid-State Porosity of Molecular Solids for Selective Gas Adsorption", Invited Lecture, 2nd MOF Young Investigators Symposium, Kyoto University, Kyoto, Japan, September 26, 2014.
- [30] **Wang, Zhenqiang** "Metal-Organic Super-Containers: 'Molecular' MOFs for Selective Adsorption of Small Molecules", Invited Lecture, ACS Symposium on Porous Materials for Energy Conversion and Storage, 246th American Chemical Society National Meeting, Indianapolis, IN, September 8-12, 2013.
- [31] **Wang, Zhenqiang** "Molecular MOFs: Modular Assembly of Metal-Organic Super-Containers (MOSCs)", Invited Lecture, College of Chemistry, Beijing Normal University, Beijing, China, May 20, 2013.
- [32] **Wang, Zhenqiang** "Molecular MOFs: Modular Assembly of Metal-Organic Super-Containers (MOSCs)", Invited Lecture, Department of Chemistry, Zhejiang University, Hangzhou, China, May 17, 2013.
- [33] **Wang, Zhenqiang** "Modular Assembly of Metal-Organic Super-Containers (MOSCs)", Invited Lecture, Shanghai Advanced Research Institute, Chinese Academy of Sciences, Shanghai, China, May 15, 2013.
- [34] **Wang, Zhenqiang** "Molecular MOFs: Modular Assembly of Metal-Organic Super-Containers (MOSCs)", Invited Lecture, 2013 MOF Young Investigators Symposium, Fudan University, Shanghai, China, May 12-14, 2013.
- [35] **Wang, Zhenqiang** "Metal-Organic Super-Containers (MOSCs): A New Family of Microporous Materials", Invited Lecture, ACS Symposium on Metal Organic Frameworks for Energy Applications, 244th American Chemical Society National Meeting, Philadelphia, PA, Aug 19-23, 2012.
- [36] **Wang, Zhenqiang** "Azo-Containing, Stimuli-Responsive Porous Coordination Solids for Selective Gas Adsorption", Invited Lecture, ACS Symposium on CO₂ Capture, Conversion and Utilization, 243rd American Chemical Society National Meeting, San Diego, CA, March 25-29, 2012.
- [37] **Wang, Zhenqiang** "Performing Organic Reactions on Crystalline Solids: A Post-Synthetic Modification Approach to Functionalization of MOFs", Invited Lecture, Syracuse University, February 11, 2010.
- [38] **Wang, Zhenqiang** "Performing Organic Reactions on Crystalline Solids: A Post-Synthetic Modification Approach to Functionalization of MOFs", Invited Lecture, University of South Dakota, December 2, 2009.
- [39] **Wang, Zhenqiang** "Postsynthetic Modification of Microporous Metal-Organic Framework Materials", Invited Lecture, University of Kentucky, February 9, 2009.
- [40] **Wang, Zhenqiang** "Postsynthetic Modification of Microporous Metal-Organic Framework Materials", Invited Lecture, Southern Illinois University Carbondale, January 27, 2009.

STUDENT MENTORING

Doctoral Students

- [1] Parvathi Jampani: currently in her fifth year; expected to graduate with a PhD degree in August 2019
- [2] Uma Sambasivam: graduated in May 2015; currently a postdoctoral associate at National University of Singapore
- [3] Riley Paulsen: advised in her first year; currently advised by Prof. Brian Burrell
- [4] Sem Tamang: advised in his first year; subsequently advised by Prof. James Hoefelmeyer
- [5] Chi-Ming Wu: co-advised with Prof. Ranjit Koodali in his first year; subsequently advised by

Prof. Koodali and graduated in August 2015

Master Students

- [1] Hanying Li: currently in her first year; expected to graduate with a MS degree in May 2020
 [2] Shrijana, Dc: currently in her first year; expected to graduate with a MS degree in December 2019
 [3] Bing Gao: currently in his second year; expected to graduate with a MS degree in May 2019
 [4] Adam Erck: co-advised with Prof. Dmitri Kilin; graduated with an MS degree in June 2017
 [5] Parvathi Jampani: graduated with an MS degree in September 2016 and is currently continuing on to pursue her PhD degree
 [6] Ashley Corbett: graduated with an MS degree in May 2016; currently Senior Chemical Engineer at Sipp Technology (Kansas City, MO)
 [7] Bin Yao: co-advised with Prof. Andrew Sykes; graduated with a MS in May 2013; currently pursuing a PhD degree in biomedical engineering at South Dakota School of Mines & Technology

Graduate Student Committees

Student Name	Role on the Committee
[1] Parvathi Jampani	Doctoral Dissertation Committee Chair
[2] Uma Sambasivam	Doctoral Dissertation Committee Chair
[3] Vinothini Balasubramanian	Doctoral Dissertation Committee Member
[4] Nathan Netzer	Doctoral Dissertation Committee Member
[5] Shivatharsiny Rasalingam	Doctoral Dissertation Committee Member
[6] Chi-Ming Wu	Doctoral Dissertation Committee Member
[7] Mohammad BaniKhaled	Doctoral Dissertation Committee Member
[8] Wendi Sapp	Doctoral Dissertation Committee Member
[9] Hanying Li	Master's Thesis Committee Chair
[10] Shrijana Dc	Master's Thesis Committee Chair
[11] Bing Gao	Master's Thesis Committee Chair
[12] Adam Erck	Master's Thesis Committee Co-Chair
[13] Parvathi Jampani	Master's Thesis Committee Chair
[14] Ashley Corbett	Master's Thesis Committee Chair
[15] Uma Sambasivam	Master's Thesis Committee Chair
[16] Bin Yao	Master's Thesis Committee Chair
[17] Mamon Sarkar	Master's Thesis Committee Member
[18] S M Gulam Rabbani	Master's Thesis Committee Member
[19] Benard Onserio	Master's Thesis Committee Member
[20] Eagappanath Thiruppathi	Master's Thesis Committee Member
[21] Choumini Balasanthiran	Master's Thesis Committee Member
[22] Vinothini Balasubramanian	Master's Thesis Committee Member
[23] Angela Chiller	Master's Thesis Committee Member
[24] Christopher Chiller	Master's Thesis Committee Member

Postdoctoral Associates

- [1] Dr. Feng-Rong Dai: former postdoctoral researcher (1/2011 – 12/2014); currently holding a professor position at Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences
- [2] Dr. Gargi Mukherjee: former postdoctoral researcher (1/2015 – 6/2015)
- [3] Dr. Jia Li: former postdoctoral researcher (5/2016 – 5/2017)
- [4] Dr. Yupu Qiao: former postdoctoral researcher (8/2014 – 12/2017); currently a senior scientist in pharmaceutical industry
- [5] Dr. Han Zhou: current postdoctoral researcher (7/2018 – present);

Undergraduate Researchers

- [1] Ashley Corbett[‡]: Buena Vista University; REU student, summer 2011; enrolled in the graduate program at USD in 2014 and received her MS degree in 2016
- [2] Austin Zeller[‡]: Dordt College; REU student, summer 2011; currently an analytical chemist in Greater St. Paul-Minneapolis area
- [3] Elizabeth Day: University of South Dakota; undergraduate researcher, fall 2011; currently a graduate student in physical/inorganic chemistry at University of Georgia
- [4] Ahmed Seyam[‡]: Illinois Valley Community College; REU student, summer 2012; graduated in May 2015 with a B.S. degree in chemistry from Illinois State University
- [5] Shane Spurlock[†]: University of South Dakota; REU student, summer 2013
- [6] Leah John[†]: Nebraska Indian Community College; REU student, summer 2013
- [7] Dustin Becht: University of South Dakota; undergraduate researcher, 2011-2013; currently a graduate student in biochemistry/biophysics at the University of Montana
- [8] Wendi Sapp: University of South Dakota; undergraduate researcher, spring 2014; currently a PhD student in chemistry at USD
- [9] Adam Erck: University of South Dakota; undergraduate researcher, spring 2014; currently a PhD student at Dakota State University
- [10] Yiran Chen[‡]: City University of New York, Queensborough Community College; REU student, summer 2014; currently pursuing his graduate degree in chemical engineering at the State University of New York at Buffalo
- [11] Alex Hammerstrom: University of South Dakota; undergraduate researcher, 2013-2014
- [12] Nevada Hughes: University of South Dakota; undergraduate researcher, fall 2014; currently in the MD program at the USD School of Medicine
- [13] Weijing Gu[‡]: City University of New York, Queensborough Community College; REU student, summer 2015; currently pursuing his graduate degree in biochemistry at the State University of New York at Stony Brook
- [14] LaTara Tyndall[†]: Nebraska Indian Community College; REU student, summer 2015
- [15] Jasmine Gonzalez[†]: Nebraska Indian Community College; REU student, summer 2015
- [16] Andrew Kost: University of South Dakota; undergraduate researcher, 2014-2016
- [17] Eli Watson: University of South Dakota; undergraduate researcher, fall 2015; currently in the chemistry graduate program at Colorado State University
- [18] Megan Jorgensen: University of South Dakota; undergraduate researcher, spring 2016
- [19] Falon Torrez[†]: Nebraska Indian Community College; REU student, summer 2016
- [20] Mykal Grant[†]: Nebraska Indian Community College; REU student, summer 2016

- [21] William Lawrence[‡]: Mount Marty College; REU student, summer 2016
 [22] Jordan Kimball: University of South Dakota; undergraduate researcher, 2015-2016
 [23] John Fanta: University of South Dakota; undergraduate researcher, 2016
 [24] Manuel Guillen[‡]: Mount Marty College; REU student, summer 2017
 [25] Alexis Redowl[†]: Nebraska Indian Community College; REU student, summer 2017 – summer 2018
 [26] Carlene Riley[‡]: Peru State College; undergraduate researcher, fall 2017 (supervised by Dr. Nathan Netzer at Peru State College)
 [27] Dylan George[‡]: Peru State College; undergraduate researcher, fall 2017 (supervised by Dr. Nathan Netzer at Peru State College and REU student at USD, summer 2018
 [28] Rebecca Cordie: University of South Dakota; REU student, summer 2018
[†]Native American students; [‡]PUI (primarily undergraduate institution) students

Undergraduate Honors Thesis Committees

Student Name	Role on the Committee
[1] Andrew Kost	Honors Thesis Committee Chair
[2] Eric Fogarty	Honors Thesis Committee Chair
[3] Nicholas Pekas	Honors Thesis Committee Member
[4] Riley Paulsen	Honors Thesis Committee Member