DI WU
Alexandra Navrotsky Institute for Experimental Thermodynamics
The Gene and Linda Voiland School of Chemical Engineering and Bioengineering
Voiland College of Engineering and Architecture
Washington State University
PO Box 646515, Pullman WA 99164-6515
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CURRENT RESEARCH INTERESTS

Physics and Chemistry of Materials, Catalysis, Porous Materials, Surface Science, Thermodynamics, Radiochemistry and Nuclear Materials, Nanogeoscience and Nanotechnology

EDUCATION

University of California, Davis, Davis, CA, United States
Ph.D. in Chemical Engineering, December 2012
Thesis title: "*Thermodynamics of Guest – Host Interactions in Nanoporous Silica Matrices and Carbohydrate Metal – Organic Frameworks*"
Advisor: *Dr. Alexandra Navrotsky*
Thesis committees: *Drs. William H. Casey and Bruce C. Gates*

University of Akron, Akron, OH, United States
M.S. in Chemical Engineering, June, 2008

Zhejiang University, Hangzhou, Zhejiang, China
B.S. in Chemical Engineering, June, 2006

PROFESSIONAL EXPERIENCE

Assistant Professor
(July 2016 to present)
The Gene and Linda Voiland School Chemical Engineering and Bioengineering
Washington State University, Pullman, WA, United States

Affiliate Assistant Professor
(December 2016 to present)
Department of Chemistry
Washington State University, Pullman, WA, United States

Affiliate Assistant Professor
(October 2016 to present)
Materials Science and Engineering Program
Washington State University, Pullman, WA, United States

Faculty Member
(October 2016 to present)
Institute for Nuclear Science and Technology

Washington State University, Pullman, WA, United States

Co-lecturer
"EMS 289C *Physics and Chemistry of Materials"* (Winter 2016) with *Dr. Alexandra Navrotsky*
Department of Chemical Engineering and Material Science
University of California, Davis, Davis, CA, United States

Postdoctoral Fellow
(January 2013 to July 2016)
Peter A. Rock Thermochemistry Laboratory and NEAT ORU,
Department of Chemical Engineering and Material Science
University of California, Davis, Davis, CA, United States
Advisor: *Dr. Alexandra Navrotsky*

COURSES TAUGHT

Washington State University

Graduate Course Taught

CHE 581 Advanced Topics in Chemical Engineering: Nanostructured Materials in Chemical Engineering – Fall 2017

Undergraduate Course Taught

CHE 332 Fluid Mechanics & Heat Transfer – Spring 2018

CHE 332 Fluid Mechanics & Heat Transfer – Spring 2017

CHE 432 Chemical Engineering Lab I – Fall 2016

University of California, Davis

Graduate Course Taught

EMS 289C Physics & Chemistry of Materials – Winter 2016, co-lecturer with Prof. Alexandra Navrotsky

GRADUATE STUDENTS SUPERVISED

Cody B. Cockreham (Ph.D. student, Chemical Engineering, Fall 2017)

Megan R. Hawkins (Ph.D. student, Chemistry, Fall 2017)

Zhiyang Huang (Ph.D. student, Chemical Engineering, Fall 2016)

Dantong Qiu (Ph.D. student, Materials Science and Engineering, Fall 2017)

Andika Rosul (M.S. student, Chemical Engineering, Spring 2017)

Chen Yang (Ph.D. student, Chemical Engineering, Fall 2017)

Xianghui Zhang (Ph.D. student co-advised with Su Ha, Chemical Engineering, Spring 2017)

POSTDOCTORAL FELLOWS SUPERVISED

Gengnan Li – March 2017 to February 2018

GRADUATE COMMITTEES SERVED ON

Qusay Y. Bkour (Ph.D. student in Su Ha's group – Chemical Engineering)

Emily T. Nienhuis (Ph.D. student in John S. McCloy's group – Materials Science & Engineering)

Wei-Jyun Wang (Ph.D. student in Su Ha's group – Chemical Engineering)

GRANT AND SUPPORT

Current Grant

"Wu Research Lab Startup Package"
Washington State University, Gene and Linda Voiland School of Chemical Engineering and Bioengineering
PI: Di Wu
Total Award Amount: $584,000
Dates: July 15, 2016 – July 14, 2021
Status: *Current*

Pending Grant Applications

"*Probing the Energetics of Adsorptive Separation of Acetylene over Ethylene in Metal-Organic Frameworks Using In situ Adsorption Calorimetry*"
American Chemical Society Petroleum Research Fund
PI: Di Wu
Total Award Amount: $110,000
Dates: September 1, 2018 – August 31, 2020
Status: *Submitted, Pending*

"*In situ Thermodynamic, Kinetic, and Structural Study of Zeolite Formation during Borosilicate Waste Glasses Degradation*"
Department of Energy, Nuclear Energy University Program
PI: Di Wu
Co-PIs: Xiaofeng Guo, John McCloy and Hongwu Xu
Total Award Amount: $800,000
Dates: October 1, 2018 – September 30, 2021
Status: *Submitted, Pending*

"*Iodine Species Capture using Silver-Containing Halloysite Nanotubes*"
Department of Energy, Nuclear Energy University Program
PI: Di Wu
Co-PIs: Xiaofeng Guo and Hongwu Xu
Total Award Amount: $800,000
Dates: October 1, 2018 – September 30, 2021
Status: *Submitted, Pending*

"*Thermodynamics and Energy Landscapes of Materials (THELMA)*"
Department of Energy, Energy Frontier Research Center
Lead PI: Alexandra Navrotsky
Thrust PI: Di Wu
Total Award Amount: TBD
Dates: October 1, 2018 – September 30, 2022
Status: *Pre-proposal Submitted, Pending*

"*Collaborative Research: In Situ Growth/Welding of Carbon Nanotubes on Carbon Surfaces Using Facile Microwave Approach*"
National Science Foundation
PI: Di Wu
Total Award Amount: $248,096
Dates: May 16, 2018 – June 30, 2021
Status: *Submitted, Pending*

"Probing the Energetics of C2 Hydrocarbon Mixture Separation in Metal-Organic Frameworks Using In Situ Adsorption Calorimetry"
Washington State University, Office of Research – New Faculty Seed Grant
PI: Di Wu
Total Award Amount: $25,000
Dates: July 15, 2016 – August 15, 2019
Status: *Submitted, Pending*

"*Functionalized Yolk-Shell Nanocomposites to Bridge Homogeneous and Heterogeneous Catalysis*"
National Science Foundation
PI: Steven R. Saunders
Co-PI: Di Wu
Total Award Amount: $353,150
Dates: August 16, 2018 – August 15, 2021
Status: *Submitted, Pending*

"*Developing Multi-Scale Models for the Effective Design of Bimetallic Catalysts for the Targeted Refinement of Biofuels to Usable Biofuels*"
Department of Energy, Basic Energy Sciences
PI: Jean-Sabin McEwen
Co-PI: Di Wu
Total Award Amount: $657,348
Dates: August 15, 2018 – August 14, 2021
Status: *Submitted, Pending*

Unfunded Grant Applications

"*Probing the Energetics of Adsorptive Separation of Acetylene over Ethylene in Metal-Organic Frameworks Using In situ Adsorption Calorimetry*"
American Chemical Society Petroleum Research Fund
PI: Di Wu

Total Award Amount: $110,000
Dates: September 1, 2017 – August 31, 2019
Status: *Denied*

"*Thermodynamics and Structure of Nuclear Waste Glasses and Melts*" – *Preproposal*
Department of Energy, Nuclear Energy University Program
PI: Di Wu
Co-PIs: Alexandra Navrotsky and Hongwu Xu
Total Award Amount: $800,000
Status: *Denied*

"*Developing Multi-Scale Models for the Effective Design of Bimetallic Catalysts for the Targeted Refinement of Biofuels to Usable Biofuels*" – *Preproposal*
Department of Energy, Basic Energy Sciences
PI: Yong Wang
Co-PI: Di Wu
Total Award Amount: N/A
Status: *Denied*

PROFESSIONAL ORGANIZATIONS

American Chemical Society (ACS)
American Geophysical Union (AGU)
American Institute of Chemical Engineers (AIChE)
American Society for Engineering Education (ASEE)
Geological Society of America (GSA)
Mineralogical Society of America (MSA)

SERVICE ACTIVITIES

Organizer: 2nd Thermodynamic Consortium Workshop, Washington State University, Pullman, Washington (2018)

Reactor Safeguards Committee, Washington State University (October 2017 to October 2021)

Editorial Board, *Advanced Composites and Hybrid Materials* (April 2017 to present)

Co-Organizer of 252nd American Chemical Society National Meeting & Exposition - Division of Colloid and Surface Chemistry, "Characterization, Reactivity, Sorption & Thermochemical Properties of Mixed Oxides" with Drs. Nancy Birkner and Kristina Lilova (August 2016)

Peer Reviewer for: The Journal of Physical Chemistry, ACS Applied Materials & Interfaces, Crystal Growth & Design, Nanoscale, RSC Advances, Microporous and Mesoporous Materials, The Journal of Chemical Thermodynamics, Journal of Energy Chemistry, Journal of Nanomaterials

Call-a-Thon, Voiland College of Engineering and Architecture, Washington State University (January 2018)

PUBLICATIONS

"" suggests corresponding authorship*

Washington State University Publications

2018

(40) G. Li, L. Fu, D. Qiu, X. Guo, B. Wang, and D. Wu*, "From 2D to 3D – Architecting Layered Double Hydroxide Nano-Sandwiches for Stable Supercapacitor", **2018**, *in preparation* for submission to *Nat. Mater.*

(39) D. Qiu, L. Fu, J. Lu, and Di Wu*, "Planting Iron Trifluoride Nanospheres on Reduced Graphite Oxide for Oxygen-Free Lithium-Ion Batteries with Enhanced Stability", **2018**, *in preparation* for submission to *Nano Lett*.

(38) G. Li, L. Fu, Z. Liu, J. Zhang, B. Sudduth, Z. Huang, X. Zhang, J. Sun, Y. Wang, X. Guo, B. Wang, and D. Wu*, "Tuning the Ni/Al Ratio for Layered Double Hydroxide Based Supercapacitor with Enhanced Performance and Stability", **2018**, *in preparation* for submission to *Adv. Mater*.

(37) X. Guo, D. Wu, S. V. Ushakov, T. Shvareva, H. Xu, A Navrotsky, "Energetics of Surface Hydration of Uranium Oxides", **2018**, *in preparation* for submission to *J. Nucl. Mater*.

(36) H. Sun, X. Lei, J. Tan, Z. Sun, X. Han, J. Liu, B. Shen, X. Zhang, X. Guo, D. Wu*, "1-Decene Oligomerization Using Al-Ti Bimetallic Catalysts Immobilized by MgO-Al_2O_3-SiO_2 Ternary Oxides: Activity and Stability Enhancement", *ACS Catal*., **2018**, *under review*.

(35) M. Zhou, Z. Huang, N. Ma, J. Qi, H. Zhang, X. Guo, D. Wu, Y. Zhang, and T. Lu, "Rapid Densification of $Gd_2Zr_2O_7$ Nano-grain Ceramics by Microwave Sintering Method at Air Atmosphere", *J. Eur. Ceram. Soc.* **2018**, *under review*.

(34) H. Sun, Z. Sun, B. Shen, J. Liu, G. Li, D. Wu, Y. Zhang, "One-Pot Synthesis of Binderless Zeolite A Spheres via In-Situ Hydrothermal Conversion of Silica Gel Precursors", *AIChE J.* **2018**, *under review*.

2017

(33) H. Sun, X. Lei, B. Shen, H. Zhang, J. Liu, G. Li, D. Wu*, "Rheological Properties and Viscosity Reduction of South China Sea Crude Oil", *J. Energy Chem.* **2017**, *in press*. https://doi.org/10.1016/j.jechem.2017.07.023

(32) G. Li, H. Sun, H. Xu, X. Guo, and D. Wu*, "Probing the Energetics of Molecule – Material Interactions at Interfaces and in Nanopores", *J. Phys. Chem. C,* **2017**, 121 (47), 26141-26154. (*Invited Review Featured as Journal Front Cover*)

(31) C. Shan, H. Yen, K. Wu, Q. Lin, M. Zhou, X. Guo, D. Wu, H. Zhang, G. Wu, and H. Wang, "Functionalized Fullerenes for Highly Efficient Lithium Ion Storage: Structure-Property-Performance Correlation with Energy Implications", *Nano Energy* **2017**, 40, 327-335.

(30) H. Sun, X. Hao, K. Liu, B. Shen, J. Liu, D. Wu, and X. Shi, "Metal-Modified Cu-BTC for Highly-Enhanced Adsorption of Organosulfur Species", *Ind. Eng. Chem. Res.* **2017**, 56 (34), 9541-9550.

(29) G. Sharma, E. Muthuswamy, M. Naguib, Y. Gogotsi, A. Navrotsky, D. Wu, "Calorimetric Study of Alkali Metal Ion (K^+, Na^+, Li^+) Exchange in a Clay-like MXene", *J. Phys. Chem. C* **2017**, *121* (28), 15145-15153.

(28) M. Niu, H. Wang, J. Chen, L. Su, D. Wu, and A. Navrotsky, "Structure and Energetics of SiOC and SiOC Modified Carbon-bonded Carbon Fiber Composites", *J. Am. Ceram. Soc.* **2017**, *100* (8), 3693-3702.

(27) L. Fu, H. Yang, Y. Hu, D. Wu*, and A. Navrotsky, "Tailoring Mesoporous γ-Al_2O_3 Properties by Transition Metal Doping: A Combined Experimental and Computational Study", *Chem. Mater.* **2017**, *29*, 1338-1349.

(26) M. Zhou, Z. Huang, N. Wei, D. Wu, Q. Zhang, S. Wang, Z. Feng, and T. Lu, "Densification and Grain Growth of $Gd_2Zr_2O_7$ Nanoceramics during Pressureless Sintering", *J. Eur. Ceram. Soc.* **2017**, *37 (*3), 1059-1065.

2016

(25) X. Guo, C. Lipp, E. Tiferet, A. Lanzirotti, M. Newville, M. H. Engelhard, D. Wu, E. S. Ilton, S. Sutton, H. Xu, P. C. Burns, and A. Navrotsky, "Structure and Thermodynamic Stability of UTa_3O_{10}, a U(V) - Bearing Compound", *Dalton Trans.* **2016**, 45, 18892-18899.

(24) X. Guo, S. Szenknect, A. Mesbah, N. Clavier, C. Poinssot, D. Wu, H. Xu, N. Dacheux, R. C. Ewing, A. Navrotsky, "Energetics of Uranothorite ($Th_{1-x}U_xSiO_4$) Solid Solution", *Chem. Mater.* **2016**, *28* (19), 7117-7124.

(23) N. Liu, X. Guo, A. Navrotsky, Li Shi, and D. Wu*, "Thermodynamic Complexity of Sulfated Zirconia Catalysts", *J. Catal.* **2016**, *342*, 158-163.

University of California, Davis Publications

(22) J. Chen, S. W. King, E. Muthuswamy, A. Koryttseva, D. Wu, and A. Navrotsky, "Thermodynamic Stability of low-*k* amorphous SiOCH Dielectric Films", *J. Am. Ceram. Soc.* **2016**, *99* (8), 2752-2759.

(21) H. Sun, D. Wu*, K. Liu, X. Guo, and A. Navrotsky, "Energetics of Alkali and Alkaline Earth Ion-exchanged Zeolite A", *J. Phys. Chem. C* **2016**, *120* (28), 15251-15256.

(20) X. Guo, D. Wu, H. Xu, P. C. Burns, and A. Navrotsky, "Thermodynamic Studies of Studtite Thermal Decomposition Pathways via Amorphous Intermediates UO_3, U_2O_7, and UO_4", *J. Nucl. Mater.* **2016**, *478*, 158-163.

(19) H. Sun, B. Shen, D. Wu, X. Guo, and D. Li, "Supported Al-Ti Bimetallic Catalysts for 1-decene Oligomerization: Activity, Stability and Deactivation Mechanism", *J. Catal.* **2016***, 339*, 84-92.

(18) D. Wu, X. Guo, H. Sun, and A. Navrotsky, "Interplay of Confinement and Surface Energetics in the Interaction of Water with a Metal – Organic Framework", *J. Phys. Chem. C* **2016**, *120* (14), 7562-7567.

(17) X. Guo, E. Tiferet, L. Qi, A. Lanzirotti, M. Newville, M. H. Engelhard, R. K. Kukkadapu, D. Wu, E. S. Ilton, M. Asta, S. R. Sutton, H. Xu and A. Navrotsky, "U(V) in Metal Uranates: A Combined Experimental and Theoretical Study of $MgUO_4$, $CrUO_4$ and $FeUO_4$", *Dalton Trans.* **2016**, *45*, 4622-4632.

(16) Z. Akimbekov, D. Wu, C. Brozek, M. Dinca, and A. Navrotsky, "Thermodynamics of Solvent Interaction with the Metal – Organic Framework MOF-5", *Phys. Chem. Chem. Phys.* 2016, *18*, 1158-1162.

2015

(15) D. Wu, X. Guo, H. Sun, and A. Navrotsky, "Energy Landscape of Water and Ethanol on Silica Surfaces", *J. Phys. Chem. C* **2015**, *119* (27), 15428-15433.

(14) D. Wu, X. Guo, H. Sun, and A. Navrotsky, "Thermodynamics of Methane Adsorption on Copper HKUST-1 at Low Pressure", *J. Phys. Chem. Lett.* **2015**, *6* (13), 2439-2443.

(13) D. Wu, and A. Navrotsky, "Probing the Energetics of Organic – Nanoparticle Interactions: Ethanol on Calcite", *Proc. Natl. Acad. Sci. USA* **2015**, *112*, 5314-5318.

(12) D. Wu, and A. Navrotsky, "Thermodynamics of Metal – Organic Frameworks", *J. Solid State Chem.* **2015**, *223*, 53-58.

(11) H. Sun, D. Wu, X. Guo, B. Shen, and A. Navrotsky, "Energetics of Sodium – Calcium Exchanged Zeolite A", *Phys. Chem. Chem. Phys.* **2015**, *17*, 11198-11203.

(10) H. Sun, D. Wu, X. Guo, B. Shen, and A. Navrotsky, "Energetics and Structural Evolution of Na – Ca Exchanged Zeolite A during Heating", *Phys. Chem. Chem. Phys.* **2015**, *17*, 9241-9247.

(9) D. Wu, T. M. McDonald, Z. Quan, S. V. Ushakov, P. Zhang, J. R. Long, and A. Navrotsky, "Thermodynamic Complexity of Carbon Capture in Alkylamine-Functionalized Metal – Organic Frameworks", *J. Mater. Chem. A* **2015**, *3*, 4248-4254.

(8) Q. Qi, X. M. Xie, Y. Wang, J. Wang, L. Xiao, N. Wei, D. Wu, and T. C. Lu, "Non-isothermal and Isothermal Oxidation Behaviors of AlON Translucent Ceramic in Air", *Mater. Corros.* **2015**, *66* (4), 328-333.

2014

(7) H. Sun[&], D. Wu[&], X. Guo, B. Shen, J. Liu, and A. Navrotsky, "Energetics of Confinement of Hexane in Ca – Na Ion Exchanged Zeolite A", *J. Phys. Chem. C* **2014**, *118* (44), 25590-25596. ([&]*H.S. and D.W. contributed equally,* Citation#: 12)

(6) Y. Wang, X. M. Xie, J. Q. Qi, J. Wang, D. Wu, X. Guo, N. Wei, and T. C. Lu, "Two-step Preparation of AlON Transparent Ceramics with Powder Synthesized by Novel Aluminothermic Reduction and Nitridation Method", *J. Mater. Res.* **2014**, *29* (19) 2325-2331.

(5) Z. Quan, D. Wu, J. Zhu, W. H. Evers, J. M. Boncella, L. A. Siebbeles, Z. Wang, A. Navrotsky, and H. Xu, "Energy Landscape of Self-Assembled Superlattices of PbSe Nanocrystals", *Proc. Natl. Acad. Sci. USA* **2014**, *111*, 9054-9057.

(4) J. Q. Qi, Y. Wang, X. M. Xie, Y. Wang, J. Zhou, N. Wei, J. Wang, D. Wu, and T. C. Lu, "Effects of Al_2O_3 Phase Composition on AlON Powder Synthesis via Aluminothermic Reduction and Nitridation", *Int. J. Mater. Res.* **2014**, *105* (4), 409-412.

(3) D. Wu, S. Hwang, S. I. Zones, and A. Navrotsky, "Guest – Host Interactions of a Rigid Organic Molecule in Porous Silica Frameworks", *Proc. Natl. Acad. Sci. USA* **2014**, *111*, 1720-1725.

2013

(2) D. Wu, and A. Navrotsky, "Small Molecule – Silica Interactions in Porous Silica Structures", *Geochim. Cosmochim. Acta* **2013**, *109*, 38-50.

(1) D. Wu, J. J. Gassensmith, D. Gouvêa, S. Ushakov, J. F. Stoddart, and A. Navrotsky, "Direct Calorimetric Measurement of Enthalpy of Adsorption of Carbon Dioxide on CD-MOF-2, a Green Metal – Organic Framework", *J. Am. Chem. Soc.* **2013**, *135* (18), 6790-6793.

INVITED PRESENTATIONS

Division of Nuclear Chemistry and Technology (NUCL) Symposium on Actinide Complexes and Nanoclusters, *255th ACS National Meeting & Exposition*, New Orleans, Louisiana, United States, March **2018**.

Micron School of Materials Science and Engineering, *Boise State University,* Boise, Idaho, United States, February **2018**.

School of Chemical Engineering and Technology, *Xi'an Jiaotong University,* Xi'an, Shaanxi, China, December **2017**.

College of Chemical Engineering, *Sichuan University,* Chengdu, Sichuan, China, December **2017**.

Department of Chemistry, *Tsinghua University,* Beijing, China, October **2017**.

National Institute of Clean and Low-Carbon Energy (NICE), Beijing, China, October **2017**.

Annual Symposium of the PNWAVS Science and Technology Society, *Oregon State University,* Corvallis, Oregon, United States, September **2017**.

School of Mechanical and Materials Engineering, *Washington State University,* Pullman, Washington, United States, November **2016**.

Department of Chemistry, *Washington State University,* Pullman, Washington, United States, September **2016**.

The Gene and Linda Voiland School of Chemical Engineering and Bioengineering, *Washington State University,* Pullman, Washington, United States, March **2016**.

Gordon A. and Mary Cain Department of Chemical Engineering, *Louisiana State University*, Baton Rouge, Louisiana, United States, February **2016**.

School of Materials Science and Engineering, *Harbin Institute of Technology*, Harbin, Heilongjiang, China, June **2015**.

Frontier Institute of Science and Technology, *Xi'an Jiaotong University*, Xi'an, Shaanxi, China, June **2015**.

East China University of Science and Technology, Shanghai, China, July **2015**.

CONTRIBUTED PRESENTATIONS AND POSTERS

D. Wu, "Thermodynamics of Actinide Material Surface", *255th ACS National Meeting & Exposition*, New Orleans, LA, **2018**

G. Li, and D. Wu, " The Role of Water in Low-Temperature CO Conversion Using Transition Metal Oxide Supported Nobel Metal Nanoclusters: Structure, Surface Bonding and Energetics", *2017 AIChE Annual Meeting*, Minneapolis, MN, **2017**

G. Li, and D. Wu, "Energetics of Molecule – Material Interactions at Interfaces and in Nanopores" *Gordon Research Conference – Nanoporous Materials and Their Applications*, Andover, NH, **2017**

G. Li, and D. Wu, "Hydration Energetics of Metal-Organic Frameworks", *North American Catalysis Society Meeting*, Denver, CO, **2017**

G. Li, L. Li, and D. Wu, " Highly Active Mesoporous $PdCeO_x$ Solid Solution for Low Temperature CO Oxidation: Synthesis, Structure, Surface Energetics, and Catalytic Performance", *North American Catalysis Society Meeting*, Denver, CO, **2017**

D. Wu, J. J. Gassensmith, T. M. McDonald, X. Guo, Z. Quan, S. V. Ushakov, P. Zhang, J. R. Long, and A. Navrotsky, "Thermodynamic Complexity of CO_2 Capture in Metal-Organic Framework Sorbents", *252nd ACS National Meeting & Exposition*, Philadelphia, PA, **2016**.

Z. Quan, D. Wu, J. Zhu, W. H. Evers, J. M. Boncella, L. A. Siebbeles, Z. Wang, A. Navrotsky, and H. Xu, "Energy Landscape of Self-Assembled Superlattices of PbSe Nanocrystals", *MRS Fall Meeting & Exhibit*, Boston, MA, **2014**.

D. Wu, H. Sun, X. Guo, and A. Navrotsky, " Confinement of Organic Molecules in Nanoporous Minerals", *Goldschmidt Conference,* Sacramento, CA, **2014**.

D. Wu, J. T. Hughes, J. J. Gassensmith, D. Gouvêa, S. Ushakov, J. F. Stoddart, and A. Navrotsky, "Direct Enthalpy of Adsorption Measurement of Carbon Dioxide on an Environmental Friendly Metal – Organic Framework, CD-MOF-2", *Gordon Research*

Conferences, *Nanoporous Materials & Their Applications*, Holderness School, Holderness, NH, **2013**.

J. T. Hughes, D. Wu, Manas K. Bhunia, and A. Navrotsky, "Thermodynamics of Metal – Organic Frameworks", *Gordon Research Conferences*, *Nanoporous Materials & Their Applications*, Holderness School, Holderness, NH, **2013**.

D. Wu, S. Hwang, S. I. Zones, and A. Navrotsky, "Thermodynamics of Guest – Host Interaction in TMAAI-ordered Porous Silica System", *245th ACS National Meeting & Exposition*, New Orleans, LA, **2013**.

J. T. Hughes, D. Wu, and A. Navrotsky, "Thermodynamics of Metal – Organic Frameworks", *245th ACS National Meeting & Exposition*, New Orleans, LA, 2013.

D. Wu, S. Hwang, S. I. Zones, and A. Navrotsky, "Organic – Inorganic Interactions in Mesoporous Silica", *MRS Fall Meeting & Exhibit*, Boston, MA, 2012.

D. Wu, J. J. Gassensmith, D. Gouvêa, S. Ushakov, J. F. Stoddart, and A. Navrotsky, "Direct Calorimetric Measurement of Enthalpy of Adsorption of Carbon Dioxide on CD-MOF-2, a Green Metal – Organic Framework", *Center for Nanoscale Control of Geologic CO_2 Fall 2011 Symposium*, Berkeley, CA, 2011.

O. Trofymluk, D. Wu, Y. Zhang, and A. Navrotsky "The Reactions of Carbon Dioxide in the Sequestration Environment: in Pores and at Interfaces", *Center for Nanoscale Control of Geologic CO_2 Fall 2011 Symposium*, Berkeley, CA, 2011.

D. Wu, O. Trofymluk, and A. Navrotsky, "Calorimetric Measurement of Energetics of Confinement of Water and Organics in Pores in Zeolites and Mesoporous Materials", *121st Annual Meeting and Exposition of the Geological Society of America*, Portland, Oregon, United States, 2009.

INTERNATIONAL COLLABORATIONS

Nektarios K. Nasikas – *Hellenic Foundation for Research and Innovation*, Athen, Greece

Jianqi Qi – *Sichuan University*, Chengdu, Sichuan, China

Xinping Qiu – *Department of Chemistry*, *Tsinghua University*, Beijing, China

Yongquan Qu – *Frontier Institute of Science and Technology*, *Xi'an Jiaotong University*, Xi'an, Shaanxi, China

Hui Sun – *East China University of Science and Technology*, Shanghai, China

Baodong Wang – *National Institute of Clean and Low-Carbon Energy*, Beijing, China

Last updated: February 7th, 2018