CURRICULUM VITAE

JOSEPH W. BENNETT
Assistant Professor
Department of Chemistry & Biochemistry
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250

EDUCATION

Ph.D.	2009	University of Pennsylvania (Philadelphia, PA), Chemistry
B.S.	2003	Drexel University (Philadelphia, PA), Chemistry

Experience in Higher Education

August 2021 – present	**University of Maryland Baltimore County**, Baltimore, MD Assistant Professor of Chemistry
July 2019 – August 2021	**University of Maryland Baltimore County,** Baltimore**,** MD Research Assistant Professor of Chemistry, Pre-Faculty Fellowship
April 2016 – June 2019	**University of Iowa**, Iowa City, IA Research Specialist in the Department of Chemistry
April 2015 – April 2016	**Rutgers University,** New Brunswick, NJ Staff Scientist in the Department of Physics and Astronomy
Jan. 2010- October 2012	**Rutgers University**, New Brunswick, NJ Postdoctoral research associate in the Department of Physics and Astronomy
June- December 2009	**University of Pennsylvania**, Philadelphia, PA Post-doctoral training in the Department of Chemistry
August 2003-May 2009	**University of Pennsylvania,** Philadelphia, PA Graduate student research and teaching associate in the Department of Chemistry
Sept. 1998- May 2003	**Drexel University,** Philadelphia, PA Undergraduate student and researcher in the Department of Chemistry

Experience Not in Higher Education

July 2014 - present	**Aqua Vectors, Inc.,** Northport, NY Scientific consultant and grant writer
Oct. 2012 – July 2014	**Eos Energy Storage**, Edison, NJ Research Manager

Honors and Awards

2021	UMBC START grant FY21
2019-2021	UMBC Pre-Faculty Fellowship in the Department of Chemistry and Biochemistry
2009	John G. Miller Award for Most Outstanding Doctoral Thesis in Chemistry, University of Pennsylvania
2004	GAANN Fellowship, University of Pennsylvania
2003	Robert O. Hutchins BIOMOL Prize for Research, Drexel University
2003	American Institute of Chemists Award, Drexel University
2003	Chemists Club of Philadelphia Scholarship, Drexel University
2002	Bruce and Cynthia Maryanoff Research Prize, Drexel University

Research Support

2019 – present	"Atomistic Insights into Safer Water and Cleaner Energy from Density Functional Theory", *source:* NSF-XSEDE, *role:* PI, *amount:* 400,000+ SU
2022	"DFT Methods as a Noninvasive Probe for Art Conservation Science in the Baltimore SCIART Summer Program", *source:* NSF-XSEDE, *role:* PI, *amount:* 50,000 SU
2020 – 2021	Recipient of FY21 START grant, *source:* UMBC, *role:* PI, *amount:* $24,000
2020 – 2021	Recipient of Funds to Continue Work on Environmental Chemistry, *source:* Middendorf Foundation, *role:* PI, *amount:* $10,000

Ph.D. Students

- Mona Layegh, degree expected in 2024, Role: PhD advisor/committee Chair
- Anthony Casale, degree expected in 2025, Role: PhD advisor/committee Chair
- Peng Yan, degree expected in 2026, Role: PhD advisor/committee Chair

Undergraduate Students

- Eunice Costanzo, Merck Undergraduate Fellow & UMBC undergraduate research (May 2022-present), degree expected in 2023, Role: research mentor
- Lila Marino, Merck Undergraduate Fellow & UMBC undergraduate research (May 2022-present), degree expected in 2023, Role: research mentor
- Jasper Tucker, UMBC undergraduate research (August 2021-June 2022), degree awarded in 2022, Role: research mentor
- Aaliyah Khan, UMBC undergraduate research (August 2020-June 2022), degree awarded

in 2022, Role: research mentor
- Autumn Cook, UMBC undergraduate research (August 2020-June 2021), degree awarded in 2021, Role: research mentor
- Ryan Grimes, UMBC undergraduate research (March 2020-present), degree awarded in 2021, Role: research mentor
- Joshua Leginze, UMBC undergraduate research (March 2020-July 2021), degree awarded in 2021, Role: research mentor
- Robert Zochowski, UMBC undergraduate research (March 2020-August 2020), graduated August 2020, Role: research mentor

High School Students

- Paul Eliot, Blair Montgomery High School 2022, Role: research mentor
- Stanley Ou, Blair Montgomery High School 2021, Role: research mentor

PUBLICATIONS

Peer-refereed Works

Articles

1. R. T. Grimes and J. W. Bennett, "Surface Transformation Thermodynamics of Alkaline Earth Carbonates Using First-Principles Calculations", *Surface Science*, 2022 (726) 122165 ***Cover Article for Surface Science***
2. S. Ou, J. E. Heimann, and J. W. Bennett, "A Density Functional Theory (DFT) Investigation of Sulfur-Based Adsorbate Interactions on Alumina and Calcite Surfaces", *Clays and Clay Minerals*, 2022 (70) 370-385
3. J. E. Heimann, J. Tucker, L. Huff, Y.-R. Kim, J. Ali, M. K. Stroot, X. Welch, H. White, M. Wilson, C. Wood, G. Gates, Z. Rosenzweig, and J. W. Bennett, "Density Functional Theory (DFT) as a Non-Destructive Probe in the Field of Art Conservation: Small Molecule Adsorption on Aragonite Surfaces", *ACS Appl. Mater. Inter.* 2022 (14) 13858-13871
4. Y. Zhou, Y. Li, J. Dong, A. Schwartzmann, H. Xu, B. Azhar, J. W. Bennett, J. Li, R. Jaramillo, "Giant and Controllable Photo-Plasticity and Photo-Elasticity in Compound Semiconductors", *Phys. Rev. Lett*. 2022 (129) 065501 ***Spotlighted in Physics***
5. A. C. Khan, A. S. Cook, J. A. Leginze, and J. W. Bennett, "Developing New Antiferroelectric and Ferroelectric Oxides and Chalcogenides Within the A_2BX_3 Family" *J. Mater Res.* 2022 (37) 346-359 ***Early Career Materials Scientist 2022 Issue***
6. I. K. Metz, J. W. Bennett, and S. E. Mason "Examining the Aufbau Principle and Ionization Energies: A Computational Chemistry Exercise for the Introductory Level", *J. Chem. Ed.* 2021 (98) 4017-4025 ***Featured in "Out in Inorganic Chemistry" Virtual Issue, April 2022***
7. J. E. Heimann, T. H. Williams, J. W. Bennett, and Z. Rosenzweig, "Baltimore SCIART: A Fully Virtual Undergraduate Research Experience at the Interface of Computational Chemistry and Art", *J. Chem. Ed*. 2021 (98) 3172-3179

8. J. E. Heimann, R. T. Grimes, Z. Rosenzweig, and J. W. Bennett, "A Density Functional Theory (DFT) Investigation of How Small Molecules and Atmospheric Pollutants Relevant to Art Conservation Adsorb on Kaolinite", *Appl. Clay Science* 2021 (206) 106075
9. J. L. Bjorklund, M. Shohel, J. W. Bennett, J. A. Smith, M. E. Carolan, E. Hollar, T. Z. Forbes and S. E. Mason, "Density Functional Theory and Thermodynamic Analysis of MAl$_{12}$ Keggin Substitution Reactions: Insights Into Ion Incorporation and Experimental Confirmation", *J. Chem. Phys.* 2021 (154) 064303
10. Ryan T. Grimes, Joshua A. Leginze, Robert Zochowski, and Joseph W. Bennett, "Surface Transformation Thermodynamics of Lead Oxides and Carbonates using First-Principles Calculations", *Inorganic Chemistry*, 2021 (60) 1228-1240 ***Featured in "Out in Inorganic Chemistry" Virtual Issue, April 2022***
11. J. W. Bennett, "Exploring the A_2BX_3 Family for New Functional Materials using Crystallographic Database Mining and First-Principles Calculations", *J. Phys. Chem. C*., 2020 (124) 19413-19425
12. J. W. Bennett, "Surveying Polar Materials in the Inorganic Crystal Structure Database to Identify Emerging Polar Structure Types", *J. Solid State Chem.*, 2020 (281) 121045
13. A. Abbaspour-Tamijani, J. W. Bennett, D. T. Jones, N. Cartagena-Gonzalez, Z. R. Jones, E. D. Laudadio, R. J. Hamers, J. A. Santana, S. E. Mason, "DFT and Thermodynamics Calculations of Surface Cation Release in $LiCoO_2$", *Appl. Surface Science*, 2020 (515) 145865
14. J. W. Bennett, D. T. Jones, B. G. Hudson, J. Melendez-Rivera, R. J. Hamers, S. E. Mason, "First-Principles and Thermodynamics Comparison of Compositionally-Tuned Delafossites: Cation Release from the (001) Surface of Complex Metal Oxides", *Environ. Sci.: Nano*, 2020 (7) 1642-1651
15. J. T. Buchman, E. A. Bennett, C. Wang, A. Abbaspour-Tamijani, J. W. Bennett, B. G. Hudson, C. M. Green, P. L. Clement, B. Zhi, A. H. Henke, E. D. Laudadio, S. E. Mason, R. J. Hamers, R. D. Klaper, C. L. Haynes, "Nickel Enrichment of Next-Generation NMC Nanomaterials Alters Material Stability, Causing Unexpected Dissolution Behavior and Observed Toxicity to *S. Oneidensis* MR-1 and *D. magna*", *Environ. Sci.: Nano*, 2020 (7) 571-587
16. J. W. Bennett, B. G. Hudson, I. Metz, D. Liang, S. Spurgeon, Q. Cui and S.E. Mason, "A Systematic Determination of Hubbard U using the GBRV Ultrasoft Pseudopotential Set", *Computational Materials Science,* 2019 (170) 109137
17. J. L. Bjorklund, J. W. Bennett, T. Z. Forbes and S. E. Mason, "Modeling of MAl$_{12}$ Keggin Heteroatom Reactivity by Anion Adsorption", *Crystal Growth & Design*, 2019 (19) 2820-2829
18. J. Bonini, J. W. Bennett, P. Chandra and K. M. Rabe, "First-Principles Bulk-Layer Model for Dielectric and Piezoelectric Responses in Superlattices", *Phys. Rev. B*., 2019 (99) 104107
19. J. W. Bennett, M. E. Raglione, S. M. Oburn, L. M. MacGillivray, M. A. Arnold and S. E. Mason, "DFT Computed Dielectric Response and THz Spectra of Organic Co-Crystals and Their Constituent Components", *Molecules*, 2019 (24) 959

20. J. W. Bennett, X. Huang, Y. Fang, D. M. Cwiertny, V. H. Grassian and S. E. Mason, "Methane Dissociation on alpha-Fe_2O_3(0001) and Fe_3O_4(111) Surfaces: First-Principles Insights into Chemical Looping Combustion", *J. Phys. Chem. C*., 2019 (123) 6450-6463
21. J. W. Bennett, D. Jones, R. J. Hamers, and S. E. Mason, "Dissolution of Compositionally-Tuned Complex Metal Oxides: A First-Principles and Thermodynamics Study of Cation Removal From the (001) Surface of Mn-rich Lithium Nickel Manganese Cobalt Oxide", *Inorg. Chem*., 2018 (57) 13300-13311
22. E. D. Laudadio, J. W. Bennett, C. M. Greene, S. E. Mason and R. J. Hamers, "Impact of Phosphate Adsorption on Complex Lithium Cobalt Oxide Nanoparticle Dispersibility in Aqueous Media", *Environ. Sci. Technol*., 2018 (52) 10186-10195
23. J. W. Bennett, D. Jones, X. Huang, R. J. Hamers and S. E. Mason, "The Dissolution of Complex Metal Oxides from First-Principles and Thermodynamics: Cation Removal from the (001) Surface of $Li(Ni_{1/3}Mn_{1/3}Co_{1/3})O_2$", *Environ. Sci. Technol*., 2018 (52) 5792-5802
24. D. Liang, J. Hong, D. Fang, J. W. Bennett, S. E. Mason, R. J. Hamers and Q. Cui, "Analysis of Conformational Properties of Amine Ligands at the Gold/Water Interface with QM, MM, and QM/MM simulations", *Phys. Chem. Chem. Phys*., 2018 (20) 3349-3362
25. J. W. Bennett, J. L. Bjorklund, T. Z. Forbes and S. E. Mason, "A Survey of the Reactivity Relationships of Anionic Adsorbates on Aluminum Nanoclusters", *Inorg. Chem*., 2017 (56) 13014-13028
26. X. Huang, J.W. Bennett, M. N. Hang, E. D. Laudadio, R. J. Hamers, and S. E. Mason, "*Ab initio* Atomistic Thermodynamics Study of the (001) Surface of $LiCoO_2$in a Water Environment and Implications for Reactivity under Ambient Conditions", *J. Phys. Chem. C*., 2017 (121) 5069-5080
27. B. Monserrat, J. W. Bennett, K. M. Rabe, and D. Vanderbilt, "Antiferroelectric topological insulators in *ABC* compounds", *Phys. Rev. Lett*., 2017 (119) 036802
28. I. L. Gunsolus, M. N. Hang, N. V. Hudson-Smith, J. Buchman, J. W. Bennett, D. Conroy, S. E. Mason, C. Haynes and R. Hamers, "Influence of Nickel Manganese Cobalt Nanoparticle Composition on Toxicity Toward *Shewanella Oneidensis* MR-1: Redesigning for Reduced Biological Impact", *Environ. Sci.: Nano*, 2017 (4) 636-646
29. K. W. Corum, X. Huang, J. W. Bennett and S. E. Mason, "Systematic Density Functional Theory Study of the Structural and Electronic Properties of Constrained and Fully Relaxed (001) Surfaces of Alumina and Hematite", *Molec. Simul.* 2017 (43) 406-419
30. K. F. Garrity, J. W. Bennett, K. M. Rabe and D. Vanderbilt, "Pseudopotentials for high-throughput DFT calculations", *Comp. Mater. Sci*., 2014, (81), 446
31. J. Brehm, J. W. Bennett, M. R. Schoenberg, I. Grinberg, and A. M. Rappe, "The structural diversity of ABS_3 compounds with d^0 electronic configuration for the *B*-cation", *J. Chem. Phys*., 2014 (140) 224703-1-8
32. J. A. Brehm, H. Takenaka, C.-W. Lee, I. Grinberg, J.W. Bennett, M. R. Schoenberg, and A. M. Rappe, "Density functional theory study of $PbTiO_3$-based oxysulfides", *Phys. Rev. B*., 2014 (89) 195202-1-8

33. J. W. Bennett, K. F. Garrity, K. M. Rabe, D. Vanderbilt, "Orthorhombic *ABC* semiconductors as antiferroelectrics", *Phys. Rev. Lett*., 2013, (110), 017603
34. J. W. Bennett and K.M. Rabe, "Integration of first-principles methods and crystallographic database searches for new ferroelectrics: Strategies and explorations", *J. Solid State Chem*., 2012, (195) 21-31
35. J. W. Bennett, K. F. Garrity, K. M. Rabe and D. Vanderbilt, "Hexagonal *ABC* semiconductors as ferroelectrics", *Phys. Rev. Lett*., 2012, (109) 167602
36. A. Roy, J. W. Bennett, K. M. Rabe and D. Vanderbilt, "Half-Heusler semiconductors as piezoelectrics", *Phys. Rev. Lett*. 2012, (109) 037602
37. T. Qi, M. T. Curnan, S. Kim, J. W. Bennett, I. Grinberg and A. M. Rappe, "A first-principles study of band gap engineering via oxygen vacancy doping in *ABB*'O_3 perovskite solid solutions", *Phys. Rev. B*., 2011, (84), 245206
38. G. Y. Gou, J. W. Bennett, H. Takenaka and A. M. Rappe, "Post density functional theory studies of highly polar semiconductor $PbTi_{1-x}Ni_xO_{3-z}$ solutions", *Phys. Rev. B*., 2011, (83) 205115-1-7
39. J. W. Bennett, I. Grinberg, P. K. Davies and A. M. Rappe, "Pb-free ferroelectrics investigated with density-functional theory: $Sn(Al_{1/2}Nb_{1/2})O_3$ perovskites", *Phys. Rev. B*., 2011, (83) 144122-1-6
40. J. W. Bennett, I. Grinberg, P. K. Davies and A. M. Rappe, "Pb-free semiconductor ferroelectrics: A theoretical study of Pd-substituted $Ba(Ti_{1-x}Ce_x)O_3$ solid solutions", *Phys. Rev. B*, 2010, (82) 184106-1-5
41. J. W. Bennett, I. Grinberg and A. M. Rappe, "The effect of substituting S for O: The sulfide perovskite $BaZrS_3$", *Phys. Rev. B*., 2009, (79) 235115-1-6
42. J. W. Bennett, I. Grinberg and A. M. Rappe, "New highly polar semi-conductor ferroelectrics through d^8-cation O-vacancy doping of $PbTiO_3$", *J. Amer. Chem. Soc*., 2008, (130), 17409-17412
43. J. W. Bennett, I. Grinberg and A. M. Rappe, "Non-monotonic composition dependence of the dielectric response of $Ba_{1-x}Ca_xZrO_3$", *Chem. Mater.*, 2008, (20), 5134-5138
44. J. Li, U. G. Singh, J. W. Bennett, K. Page, J. Weaver, J. P. Zhang, T. Proffen, A. M. Rappe, S. L. Scott and R. Seshadri, "$BaCe_{1-x}Pd_xO_3$: Redox controlled ingress and egress of palladium in a perovskite", *Chem. Mater*., 2007, (19), 1418-1426
45. U. G. Singh, J. Li, J. W. Bennett, A. M. Rappe, R. Seshadri and S. L. Scott, "A Pd-doped perovskite catalyst, $BaCe_{1-x}Pd_xO_{3-z}$, for CO oxidation", *J. Catalysis*, 2007, (249), 349-358
46. J. W. Bennett, I. Grinberg and A.M. Rappe, "Effect of symmetry-lowering on the dielectric response of $BaZrO_3$", *Phys. Rev. B*., 2006, (73), 180102(R)
47. S. Solomon, B. Brook, S, Rutkowsky and J. Bennett, "Using ice-cooled condensers in chemistry laboratory", *J. Chem. Ed*., 2003, (80), 299-301

Non-Peer-refereed Works

Articles

1. J. W. Bennett, C. Allen, S. Pramanik, M. J. Gallagher, N. V. Hudson-Smith, D. Jones, M. O. P. Krause and S. E. Mason, "Research highlights: comparing the biological response of nanoparticle solid solutions", *Environ. Sci.: Nano*, 2017 (4) 1428-1432

Proceedings

2. J. W. Bennett, "Discovery and design of functional materials: Integration of database searching and first-principles calculations", *Physics Procedia*, 2012, (34) 14-23
3. T. Qi, J. W. Bennett, W. Al-Saidi, I. Grinberg and A. M. Rappe, "Studies of perovskite materials for high performance piezoelectrics and non-volatile memory", *IEEE Proceedings*, 2011, DoD HPCMP UGC 459-469
4. T. Qi, I. Grinberg, J. W. Bennett, Y. H. Shin, A. M. Rappe, K. L. Yeh and K. A. Nelson, "Studies of perovskite materials for high-performance storage media, piezoelectric, and solar energy conversion devices", *IEEE Proceedings*, 2010, DoD HPCMP UGC 249-258
5. T.Qi, S. V. Levchenko, J. W. Bennett, I. Grinberg and A. M. Rappe, "New Prospects for High-Performance SONAR, Chemical Sensor and Communication Device Materials", *IEEE Proceedings*, 2009, DoD HPCMP UGC, 197-204
6. J. W. Bennett, I. Grinberg, Y. H. Shin and A. M. Rappe, "Modeling of materials for naval SONAR, pollution control and non-volatile memory application", *IEEE Proceedings*, 2008, DoD HPCMP UGC, 214-220

PRESENTATIONS

Invited Seminars

1. J. W. Bennett, "Density Functional Theory (DFT) as a Noninvasive Probe in the Field of Art Conservation Science", Millersville University, Millersville PA, September 2022
2. J. W. Bennett, "Density Functional Theory (DFT) as a Noninvasive Probe in the Field of Art Conservation Science", Lehigh Valley ACS Meeting, April 2022
3. J. W. Bennett, "Search for New Piezoelectrics, Ferroelectrics, and Antiferroelectrics", UMBC Department of Physics Colloquium, Baltimore, MD, December 2020
4. J. W. Bennett, "Atomistic Insights into Safer Water and Cleaner Energy", UMBC Department of Chemistry and Biochemistry, Baltimore, MD, November 2020
5. J. W. Bennett, "Thermodynamics of Complex Metal Oxide Surface Transformations", UMBC Department of Chemistry and Biochemistry, Baltimore, MD, USA, January 2019
6. J. W. Bennett, "DFT Methods for Modeling Nanomaterials", Tuskegee University Department of Chemistry, Tuskegee, AL, USA, September 2017
7. J. W. Bennett, "The Search for New Functional Materials: New Classes of Piezoelectrics, Ferroelectrics, and Antiferroelectrics", University of Iowa Department of Chemistry, Iowa City, IA, USA, March 2016
8. J. W. Bennett, "The Search for New Functional Semiconductors", Naval Research Laboratory Electronics Science and Technology Division, Washington, D.C., USA, October 2015
9. J. W. Bennett, "Discovery and Design of Multifunctional Materials", Laboratory for Surface Modification Seminar, Rutgers University, Piscataway, NJ, USA, April 2012
10. J. W. Bennett, "Discovery and Design of Multifunctional Materials", Argonne National Lab Materials Science Division, Argonne, IL, USA March 2012
11. J. W. Bennett, "Identifying Pb-free Multifunctional Materials", University of Iowa Department of Chemistry, Iowa City, IA, USA, July 2011

Invited Oral Presentations at National/International Conferences (Juried/Refereed)

12. J. W. Bennett, "The Rational Design of New Antiferroelectrics and Ferroelectrics for Energy Applications" American Chemical Society Mid-Atlantic Regional Meeting, TCNJ, Trenton, NJ, June 2022

13. J. W. Bennett, “Designing New Functional Semiconductors from First-Principles”, Materials Research Society Spring Meeting, online, April 2021
14. J. W. Bennett, S. E. Mason, “DFT Methods for Solid-Liquid Interfaces”, CECAM Workshop on Tackling Complexity of the Nano-Bio Interface, Bremen University, Bremen, Germany, June 2017
15. J. W. Bennett, K. M. Rabe, “New Ferroelectrics and Antiferroelectrics by Design”, 7th International Conference on Electroceramics, Penn State University, State College, PA, USA, May 2015
16. J. W. Bennett, “New Classes of Piezoelectrics, Ferroelectrics, and Antiferroelectrics by First-Principles High-Throughput Materials Design”, March Meeting of the American Physical Society, Baltimore, MD, USA, March 2013
17. J. W. Bennett, “New Classes of Piezoelectrics, Ferroelectrics, and Antiferroelectrics by First-Principles High-Throughput Materials Design”, 16th Workshop on Computational Physics and Materials Science: Total Energy and Force Methods, Abdus Salam International Center for Theoretical Physics, Trieste, Italy, January 2013
18. J. W. Bennett, “Integration of Database Mining and First-Principles Calculations: Discovery and Design of Multifunctional Materials”, 24th Annual Electronic Structure Workshop, Wake Forest University, Winston-Salem, NC, USA, June 2012
19. J. W. Bennett, “Discovery and Design of Functional Materials: Integration of Database Searching and First-Principles Calculations”, Center for Simulational Physics Workshop at the University of Georgia, Athens, GA, USA, February 2012

Oral Presentations at National/International Conferences (Juried/Refereed)

1. J. W. Bennett, “First-Principles Density Functional Theory as a Noninvasive Probe to Understand the Surface Transformations of Minerals Important to Cultural Heritage”, Gordon Research Conference on Scientific Methods in Cultural Heritage Research, Les Diablerets, July 2022
2. J. W. Bennett, “Delineating the Thermodynamics of Carbonate Dissolution in Aqueous Media by Combining First-Principles and Experiments”, American Chemical Society Spring Meeting, held online, April 2022
3. J. W. Bennett, “The Rational Design of New Antiferroelectrics and Ferroelectrics”, Materials Research Society, held online, May 2022
4. J. W. Bennett, “Designing New Functional Semiconductors from First-Principles”, American Chemical Society Spring Meeting, held online, April 2021
5. J. Heimann, J. W. Bennett, Z. Rosenzweig, “Adsorption on Kaolinite Surfaces: A Density Functional Theory (DFT) Approach to Quantifying Interactions Between a Clay Mineral and Small Molecules,” Eastern Analytical Symposium & Exposition, Virtual, USA, November 2020
6. J. Heimann, J. W. Bennett, Z. Rosenzweig, “Adsorption on Kaolinite Surfaces: A Density Functional Theory (DFT) Approach to Quantifying Interactions Between a Clay Mineral and Small Molecules,” Materials Science and Technology, Virtual, USA, November 2020
7. J. W. Bennett, “Combining Database Mining and DFT to Create New Materials”, American Chemical Society Meeting, Philadelphia, PA, USA, March 2020 (*posted online)
8. J. W. Bennett, S. E. Mason, “Thermodynamics of Cation Dissolution from Complex Metal Oxides”, American Chemical Society Meeting, New Orleans, LA, USA, March 2018

9. J. W. Bennett, “Polar Compounds with Desirable Properties: Identifying New Functional Materials”, American Chemical Society Meeting, Philadelphia, PA, USA, August 2016
10. J. W. Bennett, K. M. Rabe, “Semiconductive Hexagonal ABC as Ferroelectrics”, Materials Research Society Spring Meeting, San Francisco, CA, USA, April 2012
11. J. W. Bennett, K. M. Rabe, “The Search for Multifunctional Polar Materials”, American Physical Society Meeting, Dallas, TX, USA, March 2011
12. J. W. Bennett, K. M. Rabe, “The Search for Multifunctional Polar Materials”, Ferroelectrics Workshop, Gaithersburg, MD, USA February 2011
13. J. W. Bennett, K. M. Rabe, “The Search for Multifunctional Polar Materials”, Materials Research Society Fall Meeting, Boston, MA, USA, November 2010
14. J. W. Bennett, A. M. Rappe, “New Highly Polar Semiconductor Ferroelectrics for Solar Conversion”, American Physical Society Meeting, Pittsburgh, PA, USA, March 2009
15. J. W. Bennett, A. M. Rappe, “First-Principles Modeling of Ba(Ce, Pd)O_3: Redox, Structure, and Chemistry”, American Chemical Society Meeting, New Orleans, LA, USA, April 2008
16. J. W. Bennett, A. M. Rappe, “First-Principles Modeling of $BaCeO_3$: Stabilization of O-vacancies”, American Physical Society Meeting, New Orleans, LA, USA, March 2008
17. J. W. Bennett, A. M. Rappe, “DFT Models as a Way to Study Pd-doped $BaCeO_3$”, Ferroelectrics Workshop, Williamsburg, VA, USA, February 2007
18. J. W. Bennett, A. M. Rappe, “A First-Principles Approach to Modeling (Ba,Ca)ZrO_3”, American Physical Society Meeting, Baltimore, MD, USA, March 2006

Oral Presentations at Regional Conferences/Symposia (Juried/Refereed)

19. J. W. Bennett, S. E. Mason, “Thermodynamics of Complex Metal Oxide Transformations”, Midwest Theoretical Chemistry Conference”, University of Chicago, Chicago, IL, USA, June 2018
20. J. W. Bennett, S. E. Mason, “Modeling the Dissolution of Complex Metal Oxide Cathode Materials”, ACS-MWRM, Kansas State University, Manhattan, KS, USA, October 2016