Michelle Louise Personick

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APPOINTMENTS

Associate Professor 2021-present
Assistant Professor 2015-2021
Wesleyan University, Department of Chemistry Middletown, CT
Wesleyan University, College of Integrative Sciences

Postdoctoral Associate 2013-2015
Harvard University, Department of Chemistry and Chemical Biology Cambridge, MA
Advisor: Professor Cynthia M. Friend, Co-Advisor: Professor Robert J. Madix

EDUCATION

Ph.D. in Inorganic Chemistry June 2013
Northwestern University, Department of Chemistry Evanston, IL
Advisor: Professor Chad A. Mirkin

B.A. in Chemistry with High Honors May 2009
Middlebury College, Department of Chemistry Middlebury, VT
Advisor: Professor Sunhee Choi

AWARDS AND HONORS

Honorable Mention, ACS DIC Award for Undergraduate Research, R1 Category (Preceptor) 2018

Young Investigator Program Award, Army Research Office 2018

Victor K. LaMer Award, ACS Division of Colloid and Surface Chemistry 2016

CIBA/YCC Young Scientist Travel Award, ACS Younger Chemists' Committee 2015

Johnson Matthey Student Award, International Precious Metals Institute 2012

Joseph Lambert Award for Excellence in Junior Graduate Research, Northwestern University 2011

National Defense Science and Engineering Graduate Fellowship, Department of Defense 2010

Graduate Research Fellowship, National Science Foundation 2010

PEER-REVIEWED PUBLICATIONS

(undergraduate co-authors underlined, high school co-authors double underlined)

Independent Research at Wesleyan

34. McDarby, S. P.; **Personick, M. L.** "Potential-Controlled (R)Evolution: Electrochemical Synthesis of Nanoparticles with Well-Defined Shapes" *ChemNanoMat* **2022**, *8,* e202100472.

33. McDarby, S. P.; Wang, C. J.; King, M. E.; **Personick, M. L.** "An Integrated Electrochemistry Approach to the Design and Synthesis of Polyhedral Noble Metal Nanoparticles." *J. Am. Chem. Soc.* **2020**, *142*, 21322-21335.

32. Habib, A.†; King, M. E.†; Etemad, L. L.; Distler, M. E.; Morrissey, K.; **Personick, M. L.** "Plasmon-Mediated Synthesis of Hybrid Silver-Platinum Nanostructures." *J. Phys. Chem. C* **2020**, *124,* 6853-6860. †Authors contributed equally.

31. King, M. E.; Kent, I. A.; **Personick, M. L.** "Halide-Assisted Metal Ion Reduction: Emergent Effects of Dilute Chloride, Bromide, and Iodide in Nanoparticle Synthesis." *Nanoscale* **2019**, *11*, 15612-15621.

30. Jung, H.†; King, M. E.†; **Personick, M. L.** "Strategic Synergy: Advances in the Shape Control of Bimetallic Nanoparticles with Dilute Alloyed Surfaces." *Curr. Opin. Colloid Interface Sci.* **2019**, *40*, 104-117. Invited review article. †Authors contributed equally.

29. Robertson, D. D.; **Personick, M. L.** "Growing Nanoscale Model Surfaces to Enable Correlation of Catalytic Behavior Across Dissimilar Reaction Environments." *Chem. Mater.* **2019**, *31*, 1121-1141. Invited perspective article for "Up and Coming" Perspective Series. Cover article.

28. King, M. E.; **Personick, M. L.** "Iodide-Induced Differential Control of Metal Ion Reduction Rates: Synthesis of Terraced Palladium-Copper Nanoparticles with Dilute Bimetallic Surfaces." *J. Mater. Chem. A* **2018**, *6,* 22179-22188. Invited article for 2018 Emerging Investigators themed issue.

27. Stone, A. L.; King, M. E.; McDarby, S. P.; Robertson, D. D.; **Personick, M. L.** "Synthetic Routes to Shaped AuPt Core-Shell Particles with Smooth Surfaces Based on Design Rules for Au Nanoparticle Growth." *Part. Part. Syst. Charact.* **2018***, 35*, 1700401. Invited article.

26. Robertson, D. D.; King, M. E.; **Personick, M. L.** "Concave Cubes as Experimental Models of Catalytic Active Sites for the Oxygen-Assisted Coupling of Alcohols by Dilute (Ag)Au Alloys." *Top. Catal.* **2018**, *61*, 348-356. Invited article.

25. King, M. E.; **Personick, M. L.** "Defects by Design: Synthesis of Palladium Nanoparticles with Extended Twin Defects and Corrugated Surfaces." *Nanoscale* **2017**, *9*, 17914-17921.

24. King, M. E.; **Personick, M. L.** "Bimetallic Nanoparticles with Exotic Facet Structures via Iodide-Assisted Reduction of Palladium." *Part. Part. Syst. Charact.* **2017**, *34*, 1600422. Inside cover article.

Review Articles Written at Wesleyan on Topics Relating to Postdoctoral Research

23. **Personick, M. L.**; Madix, R. J.; Friend, C. M. "Selective Oxygen-Assisted Reactions of Alcohols and Amines Catalyzed by Metallic Gold: Paradigms for the Design of Catalytic Processes." *ACS Catal.* **2017**, *7*, 965-985. Cover article.

22. **Personick, M. L.**; Montemore, M. M.; Kaxiras, E.; Madix, R. J.; Biener, J.; Friend, C. M. "Catalyst Design for Enhanced Sustainability Through Fundamental Surface Chemistry." *Phil. Trans. R. Soc. A* **2016**, *374*, 20150077. Cover article.

Research Conducted Prior to Wesleyan

21. Wang, L.-C.; **Personick, M. L.**; Karakalos, S.; Fushimi, R.; Friend, C. M.; Madix, R. J. "Active Sites for Methanol Partial Oxidation on Nanoporous Gold Catalysts." *J. Catal.* **2016**, *344*, 778-783.

20. Padmos, J. D.; **Personick, M. L.**; Tang, Q.; Duchesne, P. N.; Jiang, D.; Mirkin, C. A.; Zhang, P. "The Surface Structure of Silver-Coated Gold Nanocrystals and Its Influence on Shape Control." *Nat. Commun.* **2015**, *6*, 7664.

19. Wang, L.-C.; Stowers, K. J.; Zugic, B.; **Personick, M. L.**; Biener, M. M.; Biener, J.; Friend, C. M.; Madix, R. J. "Exploiting Basic Principles to Control the Selectivity of the Vapor Phase Catalytic Oxidative Cross-Coupling of Primary Alcohols over Nanoporous Gold Catalysts." *J. Catal.* **2015**, *329*, 78-86.

18. **Personick, M. L.**; Zugic, B.; Biener, M. M.; Biener, J.; Madix, R. J.; Friend, C. M. "Ozone-Activated Nanoporous Gold: A Stable and Storable Material for Catalytic Oxidation." *ACS Catal.* **2015**, *5*, 4237-4241.

17. **Personick, M. L.**; Mirkin, C. A. "Making Sense of the Mayhem Behind Shape Control in the Synthesis of Gold Nanoparticles." *J. Am. Chem. Soc.* **2013**, *135*, 18238-18247.

16. Young, K. L.; **Personick, M. L.**; Engel, M.; Damasceno, P. F.; Barnaby, S. N.; Bleher, R.; Li, T.; Glotzer, S. C.; Lee, B.; Mirkin, C. A. "A Directional Entropic Force Approach to Assemble Anisotropic Nanoparticles into Superlattices." *Angew. Chem., Int. Ed.* **2013**, *52*, 13980-13984.

15. Liu, G.; Young, K. L.; Liao, X.; **Personick, M. L.**; Mirkin, C. A. "Anisotropic Nanoparticles as Shape-Directing Catalysts for the Chemical Etching of Silicon." *J. Am. Chem. Soc.* **2013**, *135*, 12196-12199.

14. Langille, M. R.; **Personick, M. L.**; Mirkin, C. A. "Plasmon-Mediated Syntheses of Metallic Nanostructures." *Angew. Chem., Int. Ed.* **2013**, *52*, 13910-13940.

13. Shin, Y. J.; Ringe, E.; **Personick, M. L.**; Cardinal, M. F.; Mirkin, C. A.; Marks, L. D.; Van Duyne, R. P.; Hersam, M. C. "Centrifugal Shape Sorting and Optical Response of Polyhedral Gold Nanoparticles." *Adv. Mater.* **2013**, *25*, 4023-4027.

12. **Personick, M. L.**; Langille, M. R.; Wu, J.; Mirkin, C. A. "Synthesis of Gold Hexagonal Bipyramids Directed by Planar-Twinned Silver Triangular Nanoprisms." *J. Am. Chem. Soc.* **2013**, *135,* 3800-3803.

11. **Personick, M. L.**; Langille, M. R.; Zhang, J.; Wu, J.; Li, S.; Mirkin, C. A. "Plasmon-Mediated Synthesis of Silver Cubes with Unusual Twinning Structures Using Short Wavelength Excitation." *Small* **2013**, *9*, 1947-1953.

10. Rycenga, M.; Langille, M. R.; **Personick, M. L.**; Ozel, T.; Mirkin, C. A. "Chemically Isolating Hotspots on Concave Nanocubes." *Nano. Lett.* **2012**, *12*, 6218-6222.

9. Langille, M. R.†; **Personick, M. L.**†; Zhang, J.; Mirkin, C. A. "Defining Rules for the Shape Evolution of Gold Nanoparticles." *J. Am. Chem. Soc.* **2012**, *134*, 14542-14554. †Authors contributed equally.

8. Langille, M. R.; Zhang J.; **Personick, M. L.**; Li, S.; Mirkin, C. A. "Stepwise Evolution of Spherical Seeds into 20-Fold Twinned Icosahedra." *Science* **2012**, *337*, 954-957.

7. **Personick, M. L.**; Langille, M. R.; Zhang, J.; Mirkin, C. A. "Shape Control of Gold Nanoparticles by Silver Underpotential Deposition." *Nano Lett.* **2011**, *11*, 3394-3398.

6. Langille, M. R.; **Personick, M. L.**; Zhang, J.; Mirkin, C. A. "Bottom-Up Synthesis of Gold Octahedra with Tailorable Hollow Features." *J. Am. Chem. Soc.* **2011**, *133*, 10414-10417.

5. **Personick, M. L.**; Langille, M. R.; Zhang, J.; Harris, N.; Schatz, G. C.; Mirkin, C. A. "Synthesis and Isolation of {110}-Faceted Gold Bipyramids and Rhombic Dodecahedra." *J. Am. Chem. Soc.* **2011**, *133*, 6170-6173.

4. Zhang, J.†; Langille, M. R.†; **Personick, M. L.**; Zhang, K.; Li, S.; Mirkin, C. A. "Concave Cubic Gold Nanocrystals with High-Index Facets." *J. Am. Chem. Soc.* **2010**, *132*, 14012-14014.

3. Choi, S.; **Personick, M. L.**; Bogart, J. A.; Ryu, D.; Redman, R. M.; Laryea-Walker, E. "Oxidation of a Guanine Derivative Coordinated to a Pt(IV) Complex Initiated by Intermolecular Nucleophilic Attacks." *Dalton Trans.* **2011**, *40*, 2888-2897.

2. Pirzada, Z.; **Personick, M.**; Biba, M.; Gong, X.; Zhou, L.; Schafer, W.; Roussel, C.; Welch, C. J. "Systematic Evaluation of New Chiral Stationary Phases for Supercritical Fluid Chromatography using a Standard Racemate Library." *J. Chromatogr. A* **2010**, *1217*, 1134-1138.

1. Choi, S.; Vastag, L.; Larrabee, Y.C.; **Personick, M. L.**; Schaberg, K. B.; Fowler, B. J.; Sandwick, R. K.; Rawji, G. "Importance of Pt(II) Catalyzed Pt(IV) Substitution for the Oxidation of Guanosine Derivatives by Pt(IV) Complexes." *Inorg. Chem.* **2008**, *47*, 1352-1360.

BOOK CHAPTERS

2. Wang, C. J; Shapiro, E. F.; **Personick, M. L.** Halide Ions on Metal Nanoparticles for Shape- and Composition-Controlled Synthesis. In *Surface Functionalization of Nanomaterials*; Chen, J., Ed.; Vol. TBD of *The Encyclopedia of Nanomaterials*; Xia, Y. and Yin, Y. Eds.; Elsevier. 2022, https://doi.org/10.1016/B978-0-12-822425-0.00003-8. Invited book chapter.

1. **Personick, M. L.** Plasmon-Mediated Syntheses of Polyhedral Noble Metal Nanoparticles. In *Plasmonic Nanoparticles: Synthesis and (Bio)functionalization*; Wang, J., Ed.; Vol. 2 of *Plasmonic Nanomaterials: Principles, Design and Bio-Applications*; Liz-Marzán, L. M., Ed.; World Scientific Publishing Company. 2022, https://doi.org/10.1142/9789811235221_0002. Invited book chapter.

PATENTS

1. Friend, C. M.; Madix, R. J.; Zugic, B.; Wang, L.; **Personick, M. L.**; Biener, J.; Biener, M. M. "Ozone-Activated Nanoporous Gold and Methods of its Use." U.S. patent number 10,744,488, granted Aug. 18, 2020.

GRANTS AND FUNDING

Active Grants

- "An Integrated Electrochemical Approach to the Precision Synthesis of Sustainable Catalyst Materials." Source of support: Department of Energy. Role: PI. Total award amount: $845,394. Period covered: 09/01/22 – 08/31/25.
- "Electrochemistry as a Design Tool for Colloidal Syntheses of Polyhedral Metal Nanoparticles." Source of support: National Science Foundation. Role: PI. Total award amount: $458,958. Period covered: 06/15/22 – 06/14/25.
- "Materials with Dynamic and Reconfigurable Interfaces for Engineering Non-Equilibrium Reactions." Source of support: Wesleyan GISOS Distinctive/Collaborative Project. Role: PI. Total award amount: $8,000. Period covered: 07/01/22 – 06/31/23.
- "Research Area 11.2, Young Investigator Program: An Integrated Plasmonic Approach to the Design of Multifunctional Catalytic Materials." Source of support: Army Research Office. Role: PI. Total award amount: $342,000. Period covered: 06/15/18 – 12/14/22. (In no-cost extension; total includes $3K High School Apprenticeship Program supplement.)

Completed Projects

- "Spectroscopic Characterization of the Surface of Multifunctional Bimetallic and Plasmonic Catalysts." Source of support: Army Research Office (Defense University Research Instrumentation Program). Role: PI. Total award amount: $78,667. Period covered: 07/05/21 – 07/04/22.
- "Building Scientific Literacy Across Campus by Engaging Non-Science Majors with the Materials Chemistry of Food and Cooking." Source of support: Wesleyan University (Andersen/Rosenbaum Teaching Endowment). Role: PI. Total award amount: $2,400. Period covered: 07/01/21 – 5/31/22.
- "Tailored Bimetallic Catalysts with Highly Stepped Facets for Selective and Energy-Efficient Epoxidation and Hydrogenation Reactions." Source of support: American Chemical Society Petroleum Research Fund (Doctoral New Investigator). Role: PI. Total award amount: $110,000. Period covered: 07/01/17 – 08/31/21.
- "MRI: Acquisition of a Field-Emission Scanning Electron Microscope to Enhance Multidisciplinary Research and Education." Source of support: National Science Foundation (Major Research Instrumentation). Role: PI. Total award amount: $202,300. Period covered: 08/01/17 – 07/31/20.

- "Energy Frontier Research Center: Integrated Mesoscale Architectures for Sustainable Catalysis (IMASC)." Source of support: Department of Energy. Role: co-PI (multi-PI center grant). Total award amount: $29,935 to Wesleyan (subcontract to Harvard lead institution). Period covered: 06/01/17 – 07/31/18.
- "New Experiments for CHEM 379: Nanomaterials Lab." Source of support: Wesleyan University (Andersen/Rosenbaum Teaching Endowment). Role: PI. Total award amount: $1,756. Period covered: 07/01/17 – 12/31/17.

PRESENTATIONS

(* indicates presenter, undergraduate co-authors underlined)

44. *2022 Noble Metal Nanoparticles Gordon Research Conference*, Hadley, MA, USA June 2022
Personick, M. L.* "Precision Synthesis of Nanoscale Materials as Model Catalyst Surfaces." (invited oral presentation)

43. *Department of Chemistry, Texas A&M University*, College Station, TX, USA April 2022
Personick, M. L.* "Precision Engineering of Metal Nanoparticle Surfaces for Fundamental Studies of Catalytic Reactivity." (invited seminar, F.A. Cotton Medal Symposium for Cynthia Friend)

42. *American Chemical Society Spring 2022 National Meeting* San Diego, CA, USA March 2022
Personick, M. L.* "Differential Control of Metal Ion Reduction kinetics: Building a Toolbox for the Tailorable Synthesis of Dilute Bimetallic Nanoparticles." (invited oral presentation)

41. *Department of Chemistry*, *Ursinus College*, Collegeville, PA, USA February 2022
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited virtual seminar)

40. *Department of Chemistry*, *University of Connecticut*, Storrs, CT, USA February 2022
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

39. *2021 Virtual MRS Spring Meeting & Exhibit* April 2021
Personick, M. L.* "Plasmon-Mediated Chemistry of Plasmonic/Poorly Plasmonic Hybrid Nanoparticles." (invited oral presentation)

38. *Department of Chemistry*, *Rice University*, Houston, TX, USA April 2021
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

37. *Department of Chemistry and Biochemistry*, *Brigham Young University*, Provo, UT, USA March 2021
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

36. *Department of Chemistry*, *Middle Tennessee State University*, Murfreesboro, TN, USA February 2021
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

35. *SciX 2020 Virtual Conference* October 2020
Personick, M. L.* "Plasmon-Mediated Chemistry of Plasmonic/Poorly Plasmonic Hybrid Nanoparticles." (invited oral presentation)

34. *American Chemical Society Fall 2020 Virtual Meeting & Expo* August 2020
Personick, M. L.* "Polyhedral Nanoparticles as Nanoscale Catalytic Model Surfaces." (invited oral presentation)

33. *Department of Chemistry*, *Wesleyan University*, Middletown, CT, USA February 2020
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (seminar)

32. *Department of Materials Science and Engineering, MIT,* Cambridge, MA, USA October 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

31. *International Institute for Nanotechnology*, *Northwestern University*, Evanston, IL, USA October 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

30. *Department of Chemistry*, *Brown University*, Providence, RI, USA October 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

29. *Department of Chemical & Environmental Engineering*, *Yale University*, New Haven, CT, USA October 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

28. *Gordon Research Conference on Plasmonically-Powered Processes*, Hong Kong, China July 2019
Personick, M. L.*; Habib, A.; Etemad, L. L.; King, M. E. "Hybrid Bimetallic Nanostructures through Plasmon-Assisted Metal Ion Reduction." (poster presentation)

27. *Department of Chemistry & Biochemistry, University of Arkansas*, Fayetteville, AR, USA April 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

26. *American Chemical Society Spring 2019 National Meeting*, Orlando, FL, USA March 2019
Personick, M. L.* "Controlling the Surface of Dilute Bimetallic Nanoparticles via Halide-Mediated Metal Ion Reduction." (invited oral presentation)

25. *Department of Chemistry, Connecticut College*, New London, CT, USA March 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

24. *Department of Chemistry, Trinity College*, Hartford, CT, USA February 2019
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

23. *Department of Chemistry, Barnard College*, New York, NY, USA September 2018
Personick, M. L.* "Growing Model Catalysts Through the Tailored Design of Shaped Bimetallic Nanoparticles." (invited seminar)

22. *Gordon Research Conference on Noble Metal Nanoparticles*, South Hadley, MA, USA June 2018
Personick, M. L.*; Stone, A. L.; Solti, D.; Robertson, D. D.; King, M. E.; Distler, M. E. "Established Monometallic Nanoparticle Chemistry as a Springboard for the Design of Dilute Bimetallic Alloy Catalysts." (poster presentation)

21. *Gordon Research Seminar and Conference on Noble Metal Nanoparticles*, South Hadley, MA, USA June 2018
King, M. E.*; **Personick, M. L.** "Iodide Assisted Underpotential Deposition of Copper at the Surface of High-Index Faceted Palladium Nanoparticles." (GRS oral presentation and GRC poster presentation, GRC poster award oral presentation)

20. *255th American Chemical Society National Meeting*, New Orleans, LA, USA March 2018
Personick, M. L.*; Stone, A. L.; Solti, D.; King, M. E.; Jung, H.; Kent, I. A. "Approaches for Bridging Dissimilar Reduction Kinetics in the Synthesis of Bimetallic Nanomaterials." (oral presentation, invited session chair)

19. *255th American Chemical Society National Meeting*, New Orleans, LA, USA March 2018
King, M. E.*; **Personick, M. L.** "Coupling Competitive Surface Interactions: A Synthetic Route to Enhanced Grain Boundaries at the Exterior of Multiply Twinned Palladium Nanoparticles." (oral presentation)

18. *255th American Chemical Society National Meeting*, New Orleans, LA, USA March 2018
Robertson, D. D.*; King, M. E.; **Personick, M. L.** "(Ag)Au Concave Cubes as Experimental Models of Computationally Predicted Active Sites for the Oxygen-Assisted Coupling of Alcohols." (oral presentation)

17. *91st ACS Colloid and Surface Science Symposium*, New York, NY, USA July 2017
King, M. E.*, **Personick, M. L.** "Synthesis of Gold-Palladium Nanoparticles with Mixed Surface Curvature through Iodide-Facilitated Reduction of Palladium." (oral presentation)

16. *2017 Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, USA April 2017
Personick, M. L.*; King, M. E. "Synthesis of Alloyed Nanoparticles with Mixed Concave-Convex Surfaces." (invited oral presentation)

15. *253rd American Chemical Society National Meeting*, San Francisco, CA, USA April 2017
Personick, M. L.*; King, M. E.; Jung, H.; Stone, A. L.; Robertson, D. D.; Kent, I. A. "Polyhedral Metal Nanoparticles with Bimetallic Surfaces: Kinetic Control and Surface Passivation." (invited oral presentation, invited session chair)

14. *Gordon Research Conference on Chemical Reactions at Surfaces*, Lucca (Barga), Italy February 2017
Personick, M. L.* "Selective Oxygen-Assisted Reactions Catalyzed by Metallic Gold: Paradigms for the Design of Catalytic Processes." (invited oral presentation)

13. *17th Annual Wesleyan University Molecular Biophysics Retreat*, Middletown, CT, USA September 2016
Personick, M. L.* "Synthesis of Functional Nanomaterials with Complex Shapes Using Basic Chemistry." (invited seminar)

12. *252nd American Chemical Society National Meeting*, Philadelphia, PA, USA August 2016
King, M. E.*; **Personick, M. L.** "Synthesis of Shaped Palladium Nanoparticles with Bimetallic Surfaces via Selective Surface Passivation." (poster presentation and invited Sci-Mix poster)

11. *Gordon Research Conference on Catalysis*, New London, NH, USA June 2016
Personick, M. L.*; King, M. E. "Defects by Design: Towards the Synthesis of Noble Metal Nanoparticles with Corrugated Surfaces and Tailored Defect Structures." (poster presentation)

10. *90th ACS Colloid and Surface Science Symposium*, Cambridge, MA, USA June 2016
Personick, M. L.* "Understanding Shape Control of Noble Metal Nanoparticles through the Lens of Basic Chemistry." (Victor K. LaMer Award plenary lecture)

Presentations Prior to Wesleyan

9. *249th American Chemical Society National Meeting*, Denver, CO, USA March 2015
Personick, M. L.*; Zugic, B.; Friend, C. M. "Tailored Mesoscale Gold Alloy Materials for Energy- and Resource-Efficient Catalysis." (oral presentation and invited Sci-Mix poster)

8. *Boston Regional Inorganic Colloquium*, Boston, MA, USA October 2014
Personick, M. L.* "Tailored Mesoscale Gold Materials for Energy- and Resource-Efficient Catalysis." (invited seminar)

7. *New England Catalysis Society Spring Meeting*, Worcester, MA, USA May 2014
Personick, M. L.*; Zugic, B.; Friend, C. M. "Hollow Nanoporous Gold Microspheres Exhibit Gold-Like Activity for Alcohol Oxidation." (poster presentation, received award for best poster)

6. *Department of Chemistry, Wesleyan University*, Middletown, CT, USA December 2013
Personick, M.L.* "Understanding Shape Control of Noble Metal Nanoparticles through the Lens of Basic Chemistry." (seminar)

5. *Department of Chemistry and Biochemistry, Middlebury College*, Middlebury, VT, USA November 2013
Personick, M.L.* "Understanding Shape Control of Noble Metal Nanoparticles through the Lens of Basic Chemistry." (invited seminar)

4. *Gordon Research Conference and Seminar on Noble Metal Nanoparticles*, South Hadley, MA, USA June 2012
Personick, M. L.*; Langille, M. R.; Zhang, J.; Mirkin, C. A. "Defining Rules for the Shape Evolution of Gold Nanoparticles." (poster presentation)

3. *Iota Sigma Pi Chicago Chapter Induction Ceremony*, Chicago, IL, USA November 2011
Personick, M. L.* "Noble Metal Nanoparticles: Exploring the Unique Properties and Applications of Nanoscale Materials." (invited seminar)

2. *Associated Colleges of the Chicago Area Fall Seminar Series*, Lisle, IL, USA September 2011
Personick, M. L.* "Noble Metal Nanoparticles: Exploring the Unique Properties and Applications of Nanoscale Materials." (invited seminar)

1. *International Conference on Biological Inorganic Chemistry*, Nagoya, Japan July 2009
Personick, M. L.*; Choi, S. "Mechanism and Kinetics of the Oxidation of Purine Derivatives Coordinated to Pt(IV) Complexes." (poster presentation)

PROFESSIONAL ACTIVITIES

- Chair of the Early Career Advisory Board for *Chemical Reviews* (May 2020 to present)
- Peer reviewer (journals): *Journal of the American Chemical Society*, *ACS Nano, Nanoscale, Particle, Topics in Catalysis, Journal of Physical Chemistry, Journal of Physical Chemistry Letters, Chemical Communications, Chemistry of Materials, ChemCatChem, ACS Catalysis, Journal of Materials Chemistry A, Small, Polyhedron, ACS Applied Materials & Interfaces, ACS Applied Nano Materials, Electrophoresis, Applied Physics Letters, Chemical Reviews*
- Peer reviewer (funding agencies): National Science Foundation, ACS Petroleum Research Fund, Army Research Office, European Research Council, Center for the Advancement of Science in Space
- Reviewed fellowship applications as a panelist for the National Defense Science and Engineering Graduate (NDSEG) Fellowship Program (January 2015-2017, 2019)
- Session chair (invited) for "Power Hour: Committed to inclusion and the professional development of women in science" at the Gordon Research Conference on Catalysis, New London, NH (June 2016)
- Symposium co-organizer for "Frontiers and Challenges in Nanoparticle-Mediated Chemical Transformations" at the 2022 ACS Spring Meeting, San Diego, CA (March 2022)
- Member of the organizing committee for NSF Workshop on "Addressing Rigor and Reproducibility in Heterogeneous Catalysis" (workshop scheduled for July 2022)

TEACHING

- VIPEr Fellow (2018-2021). VIPEr Fellows are a NSF-funded cohort of postsecondary chemistry faculty who are working collaboratively to develop active learning activities for the foundational inorganic chemistry curriculum. (VIPEr = Virtual Inorganic Pedagogical Electronic Resource)
- CHEM 127: **Molecules on the Menu**, Spring 2022 (general education/non-majors)
- CHEM 144: **Principles of Chemistry II**, Spring semesters 2017-2021
- CHEM 361: **Advanced Inorganic Chemistry**, Fall 2018, Fall 2021, Fall 2022
- CHEM 376: **Integrated Chemistry Laboratory II**, Spring 2016
- CHEM 377: **Chemistry of Materials and Nanomaterials**, Fall 2015, Fall 2016, Fall 2020
- CHEM 379: **Nanomaterials Laboratory**, Fall 2017
- CHEM 521/522: **Chemistry Symposia I/II**, Fall/Spring 2015-present (except Fall 2018, Fall 2019)

DEPARTMENT AND UNIVERSITY SERVICE

- Chemistry department graduate committee (Fall 2015-present, chair Spring/Summer 2020 and Fall 2021-present)
- Chemistry department curriculum committee (Fall 2017-present)
- Chemistry department colloquium organizer (Fall/Spring 2015-present, except Fall 2018 and Fall 2019)
- Mentoring Committee for Prof. Anthony Davis (Summer 2021-present)
- Mentoring Committee for Prof. Ben Elling (Fall 2021-present)
- Mentoring Committee for Prof. Carlos Jimenez-Hoyos (Fall 2022-present)
- Polymer chemist faculty search committee member (May 2020-January 2021)
- Chemistry representative to the science library committee (Fall 2015-Summer 2017)
- College of Integrative Sciences (CIS) steering committee (Fall 2017-present)
- University Honors committee (Summer 2021-Spring 2022)
- Mentor for Provost's Faculty Mentoring Communities program (Fall 2021-present)
- Scanning electron microscope faculty committee (Spring 2017-present)
- Natural Sciences and Mathematics divisional safety committee (2017-present)
- Natural Sciences and Mathematics BA/MA admissions committee (2022-present)
- Faculty mentor for the Wesleyan women's crew team (Fall 2016-present)

DIVERSITY, EQUITY, AND INCLUSION

- Completed Inclusive STEM Teaching Project 6-week course (Summer 2021)
- Faculty mentor for Wesleyan Women in Science (WesWIS) (Fall 2018-Spring 2019)
- Research mentor for two Ronald E. McNair Post Baccalaureate Achievement Program scholars
- Research mentor for three Wesleyan Math and Science Scholars (WesMaSS) Program scholars

OUTREACH

- Co-leader for Wesleyan Girls in Science Summer Camp (2016-2018)
- Mentor for Army Educational Outreach Program High School Summer Apprenticeship Program (HSAP), 2019 (participation funded but cancelled in summer 2020 and 2021 due to ban on campus visitors as a result of the pandemic)

<u>Outreach and General Audience Presentations</u>

- Wesleyan University Research in Sciences Summer Seminar Series (July 2015)
- Wesleyan Natural Sciences and Mathematics (NSM) seminar series (October 2015, January 2020)
- Wesleyan McNair Program Faculty Research Talks series (November 2015)
- Wasch Center for Retired Faculty Lecture Series (March 2019)
- Tilde Science Café in Branford, CT (May 2019)

GRADUATE RESEARCH ADVISEES

1. Dr. Melissa King, 2015-2019
   Awards: Noble Metal Nanoparticles GRC Poster Award (2018), elected to chair Noble Metal Nanoparticles Gordon Research Seminar in 2020 (postponed to 2022 due to COVID-19), Tishler Prize for Teaching (2017)
   Post-graduation: Postdoctoral Researcher (UMass Lowell), Assistant Professor (Clarkson University, beginning Fall 2022)
2. Sean McDarby, 2015-2022
   Awards: The Wallace C. Pringle Prize for Research in Chemistry (2021)
   Post-graduation: Postdoctoral Researcher (Universities Space Research Association, NASA Glenn Research Center)
3. Madison Bechard, 2021-2022
   Post-graduation: Edison Coatings
4. Gabriel Halford, 2022-present

UNDERGRADUATE RESEARCH ADVISEES

1. Haeyoon Jung BA '17/MA '18, 2015-2018
   Awards: ACS Connecticut Valley Section Award (2017)
   BA/MA thesis: "Progress Towards the Synthesis of Shaped Palladium-Silver Nanoparticles and Their Catalytic Applications for Selective Hydrogenation"
   Post-graduation: Dental School, Fall 2019 (UCSF)
2. Samutr Assavachin '17, 2015-2017
   Post-graduation: Chemistry Ph.D. program, Fall 2018 (UC Davis)
3. Aidan Stone '17, 2015-2017
   Awards: Bradley Prize (2017), ACS Undergraduate Award in Inorganic Chemistry (2016)
   Honors thesis (high honors): "A Study of the Growth and Formation of Platinum-Silver and Platinum-Gold Nanoparticles"
   Post-graduation: Chemical Engineering Ph.D. program, Fall 2018 (Brown University)
4. Daniel Robertson '18, 2016-2018
   Awards: 2018 ACS Division of Inorganic Chemistry Undergraduate Research Award Honorable Mention (R1 category); Wallace C. Pringle Prize for Research in Chemistry (2018); Karl Van Dyke Prize (2018); Phi Beta Kappa (2018); ACS Division of Inorganic Chemistry Student Travel Award (2018); CIS Student Travel Award (2018); ACS Undergraduate Award in Inorganic Chemistry (2017)
   Honors thesis (high honors): "Catalyzing the Oxygen-Assisted Coupling of Alcohols with Au and (Ag)Au Nanoparticles"
   Post-graduation: Chemistry Ph.D. program, Fall 2018 (UCLA)
5. Max Distler '18, 2016-2018
   Awards: Peirce Prize (2018); Graham Prize (2018); Martius Yellow Award (2017)
   Post-graduation: Chemistry Ph.D. program, Fall 2018 (Northwestern University)
6. David Solti '18, 2017-2018
   Awards: ACS Undergraduate Award in Inorganic Chemistry (2018)
   Honors thesis (honors): "An Examination of the Effects of Ionic Additives on Au Nanoparticle Synthesis"
   Post-graduation: Chemistry Ph.D. program, Fall 2018 (Rice University)

7. Isabella (Eija) Kent '19, 2016-2019
   WesMaSS Scholar
   Awards: American Institute of Chemists Award (2019)
   Honors thesis (honors): "Effect of Secondary Metals in Gold Alloyed Nanoparticle Synthesis"
   Post-graduation: Master of Public Health program, Fall 2020 (Dartmouth College)
8. Sydney Taylor-Klaus '20, 2017
9. Sonja Welch '20, 2017-2020
   Post-graduation: Veoci
10. Tenzin Ngodup '20, 2018-2020 (joint with Mukerji Lab)
    McNair Scholar, WesMaSS Scholar
    Awards: 2020 inductee of the American Society for Biochemistry and Molecular Biology (ASBMB) Honor Society
    Post-graduation: Pharmacology and Toxicology Ph.D. program, Fall 2020 (University of Michigan)
11. Claire (Jing Jing) Wang BA '20/MA '21, 2018-2021
    Honors thesis (honors): "Optimization of Shaped Palladium and Platinum Nanoparticles and Progress Towards the Catalytic Hydrogenation of 1-Hexyne Using Bimetallic Particles"
    MA thesis: "The Optimization of Several One-Pot Syntheses of Shaped Palladium-Silver Nanoparticles and Preliminary Catalytic Studies on Their Selective Hydrogenation of 1-Hexyne"
    Awards: ACS Award in Inorganic Chemistry (2020)
    Post-graduation: Chemistry Ph.D. Program, Fall 2021 (UNC Chapel Hill)
12. Leila Etemad '21, 2018-2020
    Post-graduation: Clinical Research Coordinator, Department of Neurosurgery, UCSF
13. Abrar Habib '21, 2018-2021
    McNair Scholar
    Awards: ACS Undergraduate Award in Inorganic Chemistry (2021)
    Post-graduation: Via Separations
14. Emma Shapiro '21, 2019-2021
    Awards: Bradley Prize (2021); ACS Connecticut Valley Section Award (2021)
    Post-graduation: Environmental Engineering Ph.D. Program, Fall 2021 (Northwestern University)
15. Sterre Hesseling '22, 2020-2022
    Awards: The Wallace C. Pringle Prize for Research in Chemistry (2022); Bradley Prize (2021)
    Honors thesis (high honors): "Optimization of a Platinum-Gold Nanoparticle Synthesis in Halide-Free Surfactant"
    Post-graduation: high school science teaching fellowship
16. Gianna Argento BA '21/MA '22, 2020-2022
    Awards: American Institute of Chemists Award (2021)
    MA thesis: "Exploring Plasmon-Mediated Shape Reconfiguration Pathways of Silver Nanoparticles"
    Post-graduation: TBD
17. Dylan Judd BA '22/MA '23, 2021-present
    Awards: Bradley Prize (2022)
18. Jessica Luu '24, 2021-present
    WesMaSS Scholar
19. Maggie Lee '23, 2021-present
20. Samuel Applegate '23, 2021-present

POSTDOCTORAL RESEARCHERS

1. Dr. Elizabeth Fugate, 2020

VISITING RESEARCHERS

1. Sebastian Hertle (MA student, University of Stuttgart, Germany), Spring 2022