MARYKAY ORGILL
Curriculum Vitae

Professional Address:
Department of Chemistry & Biochemistry
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Educational Background

Ph.D. Chemistry (Chemistry Education) August 2003
Purdue University, West Lafayette, IN
Ph.D. Research Thesis: "Playing with a double-edged sword: Analogies in biochemistry"

M.S. Chemistry (Biochemistry) December 1999
Purdue University, West Lafayette, IN
M.S. Research Thesis: "Structural and kinetic studies on *Escherichia coli* acid phosphatase/phytase"

B.S. Chemistry April 1995
Brigham Young University, Provo, UT
B.S. Research Thesis: "Molecular conformations of methacrylic acid: An infrared spectroscopic study"
Graduated *summa cum laude* with University Honors and Honors in Chemistry

Professional Experience

Research Experience

Adjunct Professor August 2019 – August 2022
School of Chemistry, Faculty of Science. University of New South Wales, Sydney, NSW, Australia.

Visiting Professor May – August 2019
School of Chemistry, Faculty of Science. University of New South Wales, Sydney, NSW, Australia.

Professor of Chemistry & Biochemistry (Chemistry Education) 2016 - present
Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Associate Professor of Chemistry (Chemistry Education) 2010 - 2016
Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Assistant Professor of Chemistry (Chemistry Education) 2004 - 2010

Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Assistant Professor of Science Education and Biochemistry 2003 - 2004
Department of Learning, Teaching, and Curriculum and Department of Biochemistry. University of Missouri-Columbia, Columbia, MO.

Graduate Student in Chemistry Education 1999 - 2003
Performed textbook analysis, observed classroom practices, and interviewed students and instructors in order to determine the roles that analogies play in biochemistry learning. Department of Chemistry. Purdue University, West Lafayette, IN.

Graduate Student in Biochemistry 1997 - 1999
Mutated, expressed, and purified *E. coli* acid phosphatase/phytase; performed kinetic, limited proteolysis, fluorescence, and labeling studies on the protein in order to determine its structure and the location of its disulfide bonds. Department of Chemistry. Purdue University, West Lafayette, IN.

Laboratory Intern and Phlebotomist January to August 1997
Performed venipunctures in the hospital and in the hospital clinic, reported test results to physicians' offices, organized hospital test records in a computer data-bank, translated instructions for Spanish-speaking patients. St. Mary's Regional Medical Center, Reno, NV.

Research Assistant 1993 - 1995
Performed neat, dilute solution, solid, and matrix isolation infrared spectroscopy to study molecular conformations. Brigham Young University, Provo, UT.

Laboratory Technician Summers 1992 and 1993
Performed literature searches, tested MALDI-TOF MS instrument to determine optimum performance parameters, performed spectral analyses (MALDI-TOF MS), developed calibration standards, ordered supplies, and maintained inventory. Research and Development Department. Biomolecular Separations, Inc., Reno, NV.

Teaching Experience

Professor of Chemistry & Biochemistry (Chemistry Education) 2016 - present
Taught general chemistry; preparatory chemistry; biochemistry; general, organic, and biochemistry for allied health majors; and professional development courses for in-service secondary science teachers. Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Associate Professor of Chemistry 2010 - 2016
Taught general chemistry; preparatory chemistry; biochemistry; general, organic, and biochemistry for allied health majors; and professional development courses for in-service secondary science teachers. Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Assistant Professor of Chemistry 2004 - 2010
Taught general chemistry; preparatory chemistry; biochemistry; general, organic, and biochemistry for allied health majors; and professional development courses for in-service secondary science teachers. Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Assistant Professor of Science Education and Biochemistry 2003 - 2004
Taught "College Science Teaching" and assisted in secondary methods courses. Department of Learning, Teaching, and Curriculum and Department of Biochemistry. University of Missouri-Columbia, Columbia, MO.

Chemistry Teacher 2003 - 2004
Rock Bridge High School, Columbia, MO.

Teaching Assistant Spring 2003
Attended lectures, took lecture notes, held weekly office hours, and graded quizzes and exams in an introductory general chemistry class for non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Teaching Assistant Fall 2002
Attended lectures, taught help sessions and laboratory classes in an honors general chemistry class. Department of Chemistry. Purdue University, West Lafayette, IN.

Teaching Assistant Summer 2002
Attended lectures, took lecture notes, held weekly office hours, and graded quizzes and exams in an introductory organic chemistry class for non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Instructor Spring 2002
Co-taught "Molecular Biotechnology" course for upper-class undergraduate chemistry majors and chemistry department graduate students. Department of Chemistry. Purdue University, West Lafayette, IN.

Instructor Fall 2001
Taught "Introductory General Chemistry" course for non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Teaching Assistant Spring 2001
Attended lectures, held weekly office hours to address student questions, and graded exams in an introductory biochemistry class for non-majors. Taught recitation and laboratory classes in a general chemistry class for non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Substitute Lecturer Fall 2000
Taught "Introductory Biochemistry" to third-year non-majors while the instructor was out of town (8 lectures). Department of Chemistry. Purdue University, West Lafayette, IN.

Teaching Assistant Summer 2000
Supervised students in an organic chemistry lab, and graded lab reports and quizzes. Department of Chemistry. Purdue University, West Lafayette, IN.

Instructor Summer 2000
Taught biochemistry in an intensive two-week course to gifted and talented junior high school students. Gifted Education Resource Institute summer programs. Purdue University, West Lafayette, IN.

Instructor Spring 2000
Taught "Introductory Biochemistry" for third-year non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Instructor Summer 1999

Taught food chemistry and biochemistry in intensive two-week courses to gifted and talented junior high school and high school students. Gifted Education Resource Institute summer programs. Purdue University, West Lafayette, IN.

Teaching Assistant Spring 1999

Attended lectures, held twice-weekly office hours to address student questions, and graded exams in an introductory biochemistry class for non-majors. Department of Chemistry. Purdue University, West Lafayette, IN.

Course Supervisor Fall semesters 1998 - 2000, 2002

Supervised four to five teaching assistants for an honors general chemistry course for non-majors, conducted staff meetings, prepared answer keys for quizzes and exams, maintained student records, and taught lecture when the professor was out of town (3 - 5 lectures a semester). Department of Chemistry. Purdue University, West Lafayette, IN.

Private Tutor 1998 - 2000

Tutored general chemistry, high school chemistry, and biochemistry. Department of Chemistry. Purdue University, West Lafayette, IN.

Teaching Assistant 1997 - 1998

Proctored general chemistry labs and exams; taught recitation sessions (for chemical engineers and non-majors). Department of Chemistry. Purdue University, West Lafayette, IN.

Volunteer Missionary 1995 - 1996

Taught short lessons relating religious teachings to Spanish speaking people in New York City; taught English classes.

University Writing Fellow Winter 1995

Developed writing skills of chemistry majors in a "Technical Writing and Chemical Literature" class. Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.

Teaching Assistant 1993 - 1995

Acted as a student assistant in a general chemistry lecture class, a department tutorial lab and organic chemistry labs; answered student questions, maintained safety standards, graded student lab reports, and taught review sessions. Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.

Grant/Funding Activities

Funded Activities

UNLV NSF EPSCoR Undergraduate Research Opportunity Program 2022-2023

Received research support for undergraduate student Sabeeka Raza ($4,000 stipend) and $750 supplies budget.

UNLV Advanced Doctoral Graduate Assistantship Completion Award 2022

Awarded to Nicole Baldwin, University of Nevada, Las Vegas. Funded for one semester to complete her dissertation.

NSF Graduate Research Fellowship 2021-2024

Awarded to Sarah York, University of Nevada, Las Vegas. Funded for $138,000.

UNLV Top Tier Doctoral Graduate Research Assistantship Grant 2017-2020
"Instructors' and students' use and perceptions of visual representations in post-secondary introductory chemistry courses" submitted by MaryKay Orgill (PI). Funded for ~$80,000.

NSF EPSCoR Research Infrastructure Improvement Program, Track 3 2013-2017
"Cyber-Learning Activities to Scaffold STEM Practices (CLASSP)" submitted by PG Schrader (PI, UNLV Department of Teaching and Learning) and MaryKay Orgill (co-PI). Funded for $749,700.

U.S. Department of Education GEAR UP, 2012-2016
"Nevada State GEAR-UP Project: UNLV GEAR-UP STEM Professional Development Program" submitted by Carl Reiber (PI, UNLV Office of the Vice Provost for Academic Affairs) and MaryKay Orgill (co-PI). Grant was awarded to the Nevada System of Higher Education (NSHE). UNLV's subaward from NSHE was funded for $216,000/year for the duration of the project.

NSF-DUE TUES Program 2010-2014
"Collaborative Research: Advancing Chemistry by Enhancing Learning in the Laboratory (ACELL)" submitted by MaryKay Orgill (PI), Nathan Barrows (PI, Grand Valley State University), and George Bodner (PI, Purdue University). Funded for $199,576 (UNLV funds: $97,158).

NSF Partnerships for International Research and Education Program 2010-2017
"PIRE: Towards a Holistic and Global Understanding of Hot Spring Ecosystems: A US-China Based International Collaboration." PI: Brian Hedlund, University of Nevada, Las Vegas. Co-PI of education component: MaryKay Orgill. Funded for $3.75M (Education/teacher outreach component funds: $55,512).

NV Dept. of Education Mathematics and Science Partnership 2010-2013
"Project VISIONS (Venture Into Scientific Inquiry Organized around Nevada Standards)" submitted by MaryKay Orgill (PI), Hasan Deniz (PI, UNLV Department of Curriculum and Instruction), and Mary Pike (PI, Clark County School District, Las Vegas, NV). Funded for $712,000.

NV Dept. of Education Mathematics and Science Partnership 2008 - 2011
"Project MIST (Mathematics Integrated with Science using Technology)" submitted by MaryKay Orgill (PI), Kent J. Crippen (PI, UNLV Department of Curriculum and Instruction), David Miller (PI, Clark County School District, Las Vegas, NV), and Lynn Trell (PI, Clark County School District, Las Vegas, NV). Funded for $860,000.

ACS Grant to Support Undergraduate Programming 2007-2008
Chemical Interactions, the UNLV ACS student affiliate was awarded a grant by the American Chemical Society to host the undergraduate program "Representing the New Faces of Chemistry" at the 2008 Western Regional Meeting in Las Vegas, NV. I was the club advisor. Funded for $2,000.

University Faculty Travel Grant 2007
Received $1,000 from UNLV to fund travel to an American Chemical Society Meeting.

EPSCoR Undergraduate Research Opportunities Program 2007

Received summer research support for undergraduate student Aynsley Sutherland ($4,500 stipend + tuition waiver for 3 credits) and $900 supplies budget.

Nevada Collaborative Teaching Improvement Program 2004 - 2006
"Transforming Middle School Science Achievement using Instructional Technology." Co-Principal Investigator with Dr. Kent Crippen of the UNLV College of Education. Funded for $113,724.

Tuition Funding for Gordon Research Conference 2005
Received tuition and housing funding for the 2005 Gordon Research Conference on Chemistry Education: Research and Practice from the conference chair. New London, CT.

Purdue Research Foundation Summer Grant 2003
Purdue University, West Lafayette, IN.

Purdue University Graduate Student Association Travel Grant 2002
Purdue University, West Lafayette, IN.

Purdue Research Foundation Summer Grant 1999
Purdue University, West Lafayette, IN.

Grant Work (Non-PI)

IUPAC Committee on Chemistry Education 2020-present
"Systems Thinking in Chemistry for Sustainability: Toward 2030 and Beyond (STCS 2030+)" submitted by Peter Mahaffy (Task Group Chair, The King's University), Stephen Matlin (Task Group Chair, Imperial College London), Marietjie Potgieter (Task Group Chair, University of Pretoria), Bipul Behari Saha (Task Group Chair, L.R. Research Laboratories), and Aurelia Visa (Task Group Chair, Coriolan Dragulescu Institute of Chemistry). I am a member of the Steering Group for this Task Group.

University of New South Wales 2018-2019
"'Threshold' vs. 'Expert' Knowledge: A New Way to Teach and Assess First-Year Chemistry" (funded by the UNSW Scientia Education Investment Fund program) submitted by Luke Hunter (PI, University of New South Wales). I am an external evaluator for this project.

IUPAC Committee on Chemistry Education 2018-2019
"Learning Objectives and Strategies for Infusing Systems Thinking into (Post)-Secondary General Chemistry Education" submitted by Peter Mahaffy (Task Group Chair, The King's University) and Stephen Matlin (Task Group Chair, Imperial College London). I am a member of the Steering Group for this Task Group.

NSF-EHR IUSE Program 2017-2019
"Collaborative Research: Creating Assessments for Student Understanding of Core Chemistry Ideas in Introductory Biology" submitted by Sonia Underwood (PI, Florida International University), Rebecca Matz, (PI, Michigan State University), and Kristin Parent (CoPI, Michigan State University). I am the external evaluator for the project.

NSF-EHR IUSE Program 2016-2019
"Fostering connections between macroscopic, submicroscopic, and representational levels using analogical reasoning in the chemistry

laboratory" submitted by Mitchell Bruce (PI, University of Maine) and Alice E. Bruce (CoPI, University of Maine). I am a member of the advisory board for this project.

NSF-EHR IUSE Program 2016-2019

"**ChANgE Chem Lab**: **C**ognitive **A**ppre**n**ticeship for **E**ngineers in **Chem Lab**" submitted by Kent J. Crippen (PI, University of Florida), Maria Korolev (co-PI, University of Florida), Phil Brucat (co-PI, University of Florida), and Chang-Yu Wu (co-PI, University of Florida). I am the external evaluator for the project. Total funds requested: $599,333. (Evaluation funds: $45,000).

Australian Maths & Science Partnership Program 2015-2018

"Advancing Science by Enhancing Learning in the Laboratory (ASELL) in the secondary school sector [ASELL Schools]" submitted by Manjula Sharma (lead Project Director, University of Sydney). I am the international member of the advisory panel for this project.

University of New South Wales 2014-2015

"A Scientific Skills Portfolio Approach to Laboratory Assessment" (funded by the UNSW Learning and Teaching Strategic Development & Enhancement Funding program) submitted by Scott Kable (PI, University of New South Wales). I am an external consultant for this project.

NSF-DUE TUES Program 2013-2016

"**ChANgE Chem**: Transforming **Ch**emistry with **C**ognitive **A**ppre**N**ticeship for **E**ngineers" submitted by Kent J. Crippen (PI, University of Florida), Treavor Boyer (co-PI, University of Florida), Jeffrey K. Keaffaber (co-PI, University of Florida), and Chang-Yu Wu (co-PI, University of Florida). I will be the external evaluator for the project. Total funds requested: $199,617. (Evaluation funds: $18,000).

NSF-DUE TUES Program 2011-2014

"Collaborative Research: An Integrated Cognitive and Conceptual Curriculum for a General Chemistry Inquiry Laboratory" submitted by Kereen Monteyne (PI, NKU) and Barbara Gonzalez (PI, CSUF). I am the external evaluator for the project. Funded for $195,957 (Evaluation funds: $18,545).

Australian Learning and Teaching Council 2009-2010

"Advancing Science by Enhancing Learning in the Laboratory (ASELL)." Project Leaders: Scott H. Kable (University of Sydney), Mark A. Buntine (Curtin University), Simon C. Barrie (University of Sydney), Manjula D. Sharma (University of Sydney), Karen Burke da Silva (Flinders University), Kieran F. Lim (Deakin University), and Simon M. Pyke (University of Adelaide). I was the international member of the advisory board for this project.

U.S. Department of Education 2008-2012

Senior Research Associate for "Highly Qualified, High Quality (HQ^2) Special Educators," funded by the U.S. Department of Education Special Education Preservice Training Improvement Grants Program. PI: Kristin Sayeski, University of Nevada, Las Vegas.

NV Dept. of Education Mathematics and Science Partnership 2004 - 2008

Consultant to the Clark County Public School District in planning and carrying out the professional development program, Project PASS (Proficiency and Success in Science). I was also the instructor of record for the teachers' summer classes. PI: Kent Crippen, University of Nevada, Las Vegas.

Unfunded Activities

NSF-EHR IUSE Program 2017

"Transparent Teaching for Underrepresented STEM Undergraduates' Success." Submitted by Mary-Ann Winkelmes (PI, University of Nevada, Las Vegas), Matthew Bernacki (co-PI, University of Nevada, Las Vegas), MaryKay Orgill (co-PI, University of Nevada, Las Vegas), and David Copeland (co-PI, University of Nevada, Las Vegas). Total funds requested: $1,999,800. Not funded.

NSF-EHR IUSE Program 2016

"Transparent Teaching for Underrepresented STEM Undergraduates' Success." Submitted by Mary-Ann Winkelmes (PI, University of Nevada, Las Vegas), Matthew Bernacki (co-PI, University of Nevada, Las Vegas), MaryKay Orgill (co-PI, University of Nevada, Las Vegas), and David Copeland (co-PI, University of Nevada, Las Vegas). Total funds requested: $1,994,329. Not funded.

Nevada Collaborative Teaching Improvement Program 2012

"Integrating Science and Language Arts at Elementary Level." Co-Principal Investigator with Dr. Hasan Deniz of the UNLV College of Education. Total funds requested: $93,237. Not funded.

NV Dept. of Education Mathematics and Science Partnership 2011

"Nevada Partnership for Effective Mathematics and Science Teaching and Learning (N-PEMSTL)." Submitted by Jeffrey Shih (PI, UNLV College of Education) and MaryKay Orgill (co-PI). Total funds requested: $865,671. Not funded.

NSF Math and Science Partnership Program 2009

"Improving secondary science instruction to increase student achievement in southern Nevada." Submitted by Paul Buck (PI, DRI), MaryKay Orgill (co-PI, UNLV), Larry Rudd (co-PI, NSC), Mary Pike (co-PI, CCSD), and Mark Garner (Co-PI, CSN). Total funds requested: $11,405,113. UNLV funds requested: $1,597,351. Not funded.

U.S. Dept. of Energy - Energy Frontier Research Centers Grant Program 2008

"Radioelement Research Center." Center director: Ken Czerwinski, University of Nevada, Las Vegas. PI of education component: MaryKay Orgill. Funds requested for education component: $969,710. Not funded.

Institutional Development Grant 2007

"Chemistry Learning Center Pilot Program," submitted by MaryKay Orgill (PI) and Lawrence J. Tirri (UNLV Department of Chemistry) to UNLV for internal funding. Funds requested: $39,053. Not funded.

HHMI Undergraduate Science Education Grant 2005

Grant proposal submitted 10/2005 to the Howard Hughes Medical Institute to establish and fund the UNLV HHMI Life Science Scholars Program. A

collaboration of faculty members from Biological Sciences, Physics, Libraries, and Academic Assessment. Not funded.

Awards and Fellowships

2022 Outstanding Graduate Faculty Mentorship Award 2023
University of Nevada, Las Vegas, Las Vegas, NV.
2021 UNLV College of Sciences Distinguished Faculty Teaching Award 2021
University of Nevada, Las Vegas, Las Vegas, NV.
UNLV Scholarship of Teaching and Learning Award 2018
University of Nevada, Las Vegas.
2016-2017 College of Sciences Distinguished Service Award 2018
College of Sciences, University of Nevada, Las Vegas.
2013 GPSA Outstanding Mentor Award 2013
Graduate & Professional Student Association, University of Nevada, Las Vegas.
2013 Distinguished Member (Recipient of student-nominated award) 2013
National Society of Collegiate Scholars, UNLV Chapter
Nevada Regents' Teaching Award (nominated) 2010
University of Nevada, Las Vegas, Las Vegas, NV.
UNLV Foundation Distinguished Teaching Award 2009-2010
University of Nevada, Las Vegas, Las Vegas, NV.
Southern Nevada ACS Service Award 2009
In appreciation for dedication and service to the Southern Nevada Section of the American Chemical Society. Las Vegas, NV.
Alex G. and Faye Spanos Distinguished Teaching Award 2009
University of Nevada, Las Vegas, Las Vegas, NV.
Inspire Integrity Award (Nominated) 2008
The National Society of Collegiate Scholars
Strathmore's Who's Who (Nominated) 2008
University of Nevada, Las Vegas, Las Vegas, NV.
UNLV College of Sciences Distinguished Teacher Award 2008
University of Nevada, Las Vegas, Las Vegas, NV.
CSUN Faculty Excellence Award 2008, 2010
Consolidated Students of the University of Nevada, University of Nevada, Las Vegas, Las Vegas, NV.
Marquis Who's Who in America 2008, 2010
University of Nevada, Las Vegas, Las Vegas, NV.
America's Registry of Outstanding Professionals 2007
University of Nevada, Las Vegas, Las Vegas, NV.
AcademicKeys Who's Who in Sciences Higher Education 2006
University of Nevada, Las Vegas, Las Vegas, NV.
Favorite Chemistry Professor, Spring 2006 2006
Recipient of student-nominated award sponsored by the UNLV chemistry club, Chemical Interactions. Department of Chemistry. University of Nevada, Las Vegas, Las Vegas, NV.

Purdue University Graduate Student Award for Outstanding Teaching 2004
Purdue University, West Lafayette, IN.
Epple Teaching Award 2004
Department of Chemistry. Purdue University, West Lafayette, IN.
Viol Endowed Fellowship 2003
Purdue University, West Lafayette, IN.
Brown-Wetherill Graduate Fellowship 1997 - 1999
Department of Chemistry. Purdue University, West Lafayette, IN.
Karl G. Maeser Graduate Fellowship 1995
Award given to one graduating senior who will be pursuing a graduate degree. Brigham Young University, Provo, UT.
Outstanding Graduating Senior in Chemistry (Keith P. Anderson Award) 1995
Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.
BYU Honored Student Award 1994
Award given to one student from each college each year. I was chosen from the College of Physical and Mathematical Sciences. Brigham Young University, Provo, UT.
Best Presenter at Micro-ACS Conference 1994, 1995
Sponsored by the Central Utah section of the American Chemical Society. Brigham Young University, Provo, UT.
Undergraduate Summer Research Scholarship 1994
Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.
ACS Undergraduate Award in Analytical Chemistry 1994
Co-sponsored by the Analytical Division of the American Chemical Society and the Department of Chemistry and Biochemistry of Brigham Young University. Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.
Catalyst Club Award 1994
Award given to the outstanding junior female chemistry major. Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.
Freshman Chemistry Student of the Year 1992
Department of Chemistry and Biochemistry. Brigham Young University, Provo, UT.
National Science Scholars Program Scholarship 1991 - 1995
Brigham Young University, Provo, UT.
Ezra Taft Benson Scholarship 1991 - 1995
Presidential scholarship. Brigham Young University, Provo, UT.

Other Activities and Honors

Graduation Speaker 1995
Speaker at the Honors Graduation ceremony and at the graduation ceremony for the College of Physical and Mathematical Sciences. Brigham Young University, Provo, UT.
Golden Key Honor Society Scholarship 1992
Brigham Young University, Provo, UT.

Professional Societies

American Association for the Advancement of Science
American Chemical Society

- Member of the Division of Chemical Education
- Vice-President of the ACS Student Affiliate at Brigham Young University 1993 - 1994, in which year we were named an "Excellent" ACS student affiliate.
- President of the ACS Student Affiliate at Brigham Young University 1994 - 1995, in which year we were named an "Outstanding" ACS student affiliate and received a grant to host an undergraduate section of the Rocky Mountain Regional ACS conference in Park City, Utah, in June 1995.
- Member-at-large, Southern Nevada section, 2005 – 2007.
- Member, Program Committee of the ACS Division of Chemical Education, 2007 – 2021.
- Member, Exams Committee (2013 General Chemistry Exam), 2011 – 2013.
- Alternate Councilor, ACS Division of Chemical Education, 2013 – 2015.
- Member, Biennial Conference on Chemical Education (BCCE) Committee of the ACS Division of Chemical Education, 2013 – 2023.
- Member, Executive Committee, 2013 – 2023.
- Associate, ACS Board of Publications, 2014-2015.
- Member, ACS Exams Institute Board of Trustees, 2016-2018.
- Chair-Elect, ACS Division of Chemical Education, 2016.
- Member, Finance Committee of ACS Division of Chemical Education, 2016-2023.
- Chair, ACS Division of Chemical Education, 2017.
- Consultant, American Chemical Society Committee on Education, 2017.
- Immediate Past Chair, ACS Division of Chemical Education, 2018.
- Associate, American Chemical Society Committee on Education, 2018-2020.
    - Participated in strategic planning for the Committee in 2018
- Co-Chair, Biennial Conference Committee, ACS Division of Chemical Education, 2019-2023.
- Named a Fellow of the Society in 2020.
- Member, American Chemical Society Committee on Education, 2021-2025.
- Member-at-large, ACS Committee on Education Executive Committee, 2023.
- Member, ACS National Award Selection Committee, 2022-2024 award cycle.

Golden Key National Honor Society
International Center for First-year Undergraduate Chemistry Education
Iota Sigma Pi—National Honor Society for Women in Chemistry

- Treasurer of the Plutonium chapter 1999 - 2000

National Association for Research in Science Teaching
National Science Teachers Association
Phi Kappa Phi National Honor Society
Phi Lambda Upsilon—National Honorary Chemical Society
Royal Society of Chemistry

- Named a Fellow of the Society in 2017

Sigma Xi, The Scientific Research Honor Society

- Member, 2020-present.

Publications

Peer-Reviewed Articles

33. Lee, E. N., & Orgill, M., & Kardash, C. (2022). Toward equitable assessment of English language learners in general chemistry: Identifying supportive features in assessment items. Journal of Chemical Education, 99, 35-48. [Nominated and selected to be highlighted at the "New and Noteworthy Chemistry Education Research" symposium at the spring 2022 ACS meeting in San Diego, CA; Article was also one of five highlighted in the February 2022 American Chemical Society Publications Education Insider]
32. Lee, E. N., Orgill, M., & Kardash, C. (2020). Supporting English language learners in college science classrooms: Insights from chemistry students. *Multicultural Education, 27,* 25-32.
31. York, S., & Orgill, M. (2020). ChEMIST table: A tool for designing and modifying instruction for a systems thinking approach in chemistry education. *Journal of Chemical Education*, *97*, 2114-2129.
30. Flynn, A. B., Orgill, M., Ho, F. M., York, S., Matlin, S. A., Constable, D. J. C., & Mahaffy, P. G. (2019). Future directions for systems thinking in chemistry education: Putting the pieces together. *Journal of Chemical Education, 96,* 3000-3005.
29. Aubrecht, K. B., Dori, Y. J., Holme, T. A., Lavi, R., Matlin, S. A., Orgill, M., & Skaza-Acosta, H. (2019). Graphical tools for conceptualizing systems thinking in chemistry education. *Journal of Chemical Education, 96,* 2888-2900.
28. Orgill, M., York, S., & MacKellar, J. (2019). Introduction to systems thinking for the chemistry education community. *Journal of Chemical Education, 96,* 2720-2729. [Selected as the ACS Editor's Choice article for June 6, 2019]
27. York, S., Lavi, R., Dori, Y. J., & Orgill, M. (2019). Applications of systems thinking in STEM education. *Journal of Chemical Education, 96,* 2742-2751. [Highlighted as a Google Featured Snippet for the search term "applications of systems thinking in STEM education," November 2019]
26. Nealy, S., & Orgill, M. (2019). Post-secondary underrepresented minority STEM students' perceptions of their science identity. *The Journal of Negro Education, 88,* 249-268.
25. Baldwin, N., & Orgill, M. (2019). Relationship between teaching assistants' perceptions of student learning challenges and their use of external representations when teaching acid-base titrations in introductory chemistry laboratory courses. *Chemistry Education Research and Practice, 20,* 821-836.
24. Bussey, T. J., & Orgill, M. (2019). Biochemistry instructors' use of intentions for student learning to evaluate and select external representations of protein translation. *Chemistry Education Research and Practice, 20,* 787-803. [Nominated and selected to be highlighted at the "New and Noteworthy Chemistry Education Research" symposium at the spring 2020 ACS meeting in Philadelphia, PA]

23. Cornish, S., Yeung, A., Kable, S. H., Orgill, M., & Sharma, M. D. (2019). Using teacher voices to develop the ASELL Schools professional development workshops. *Teaching Science, 65,* 4-12.
22. Gandhi-Lee, E., Skaza, H., Marti, E., Schrader, P.G., & Orgill, M. (2017). Faculty perceptions of recruitment and retention in STEM fields. *European Journal of STEM Education, 2*.
21. Orgill, M., & Cooper, M. M. (2015). Teaching and learning about the interface between chemistry and biology. *Chemistry Education Research and Practice, 16*, 711-713. [Editorial for the 2015 CERP theme issue]
20. Gandhi-Lee, E., Skaza, H., Marti, E., Schrader, P.G., & Orgill, M. (2015). Faculty perceptions of the factors influencing success in STEM fields. *Journal of Research in STEM Education, 1*(1), 30-44.
19. Bussey, T. J., & Orgill, M. (2015). What do students pay attention to in external representations of protein translation? The case of the Shine-Dalgarno sequence. *Chemistry Education Research and Practice, 16*, 714-730.
18. Orgill, M., Bussey, T. J., & Bodner, G. M. (2015). Biochemistry instructors' perceptions of analogies and their classroom use. *Chemistry Education Research and Practice, 16*, 731-746. [Nominated and selected to be highlighted at the "New and Noteworthy Chemistry Education Research" symposium at the spring 2017 ACS meeting in San Francisco, CA]
17. Bussey, T. J., & Orgill, M. (2014). Plenty of room at the bottom for nanoscience education. *Journal of Nano Education, 6*, 81-82.
16. Orgill, M., & Wood, S. A. (2014). Chemistry contributions to nanoscience and nanotechnology education: A review of the literature. *Journal of Nano Education, 6*, 83-108.
15. Bussey, T. J., Litster, M. E., Ho, W., Wood, S. A., & Orgill, M. (2014). Using a field in flux to discuss nature of science in the classroom: The case of defining self-assembly. *Journal of Nano Education, 6*, 157-168.
14. Bussey, T. J., Orgill, M., & Crippen, K. J. (2013). Variation theory: A theory of learning and a useful theoretical framework for chemical education research. *Chemistry Education Research and Practice*, *14(1)*, 9-22. [Highlighted as a Google Featured Snippet for the search term "variation theory," September-December 2019]
13. Orgill, M., & Crippen, K. J. (2010). Teaching with external representations: The case of a common energy level diagram in chemistry. *Journal of College Science Teaching, 40*, 78-84.
12. Asay, L. D., & Orgill, M. (2010). Analysis of essential features of inquiry found in articles published in *The Science Teacher*, 1998-2007. *Journal of Science Teacher Education, 21,* 57-79. [Highlighted as a Google Featured Snippet for the search term "essential features of inquiry," November 2019]
11. Crippen, K. J., Biesinger, K. D., Muis, K. R., & Orgill, M. (2009). The role of goal orientation and self-efficacy in learning from web-based worked examples. Scaffolding motivation through the use of worked examples. *Journal of Interactive Learning Research, 20*, 385-403.
10. Orgill, M., & Crippen, K. J. (2009). What's so big about being small?: The interdisciplinary opportunity of nanoscience. *The Science Teacher, 76*, 41-48.

9. Kang, N.-H., Orgill, M., & Crippen, K. J. (2008). Understanding teachers' conceptions of classroom inquiry with a teaching scenario instrument. *Journal of Science Teacher Education, 19,* 337-354.
8. Orgill, M., & Sutherland, A. (2008). Undergraduate chemistry students' perceptions of and misconceptions about buffers and buffer problems. *Chemistry Education Research and Practice, 9,* 131-143.
7. Orgill, M., & Bodner, G. M. (2007). Locks and keys: An analysis of biochemistry students' use of analogies. *Biochemistry and Molecular Biology Education, 35*, 244-254.
6. Orgill, M., & Thomas, M. (2007). Analogies and the 5E model. *The Science Teacher, 74,* 40-45.
5. Orgill, M., & Bodner, G. M. (2006). An analysis of the effectiveness of analogy use in college-level biochemistry textbooks. *Journal of Research in Science Teaching, 43,* 1040-1060.
4. Friedrichsen, P., Munford, D., & Orgill, M. (2006). Brokering at the boundary: A prospective science teacher engages students in inquiry. *Science Education, 90*, 522-543.
3. Orgill, M., & Bodner, G. M. (2004). What research tells us about using analogies to teach chemistry. Chemical Education: Research and Practice, 5, 15-32.
2. Orgill, M., Baker, B. L., & Owen, N. L. (1999). FTIR studies of conformational isomerism in acrylates and acrylic acids. *Spectrochimica Acta Part A*, *55*, 1021-1024.
1. Baker, B. L., Orgill, M., Owen, N. L., Stephenson, E. H., Williams, G. A., Macdonald, J. N., & Boggs, J. E. (1995). The molecular conformation of methyl methacrylate — An infrared and ab initio study. *Journal of Molecular Structure*, *356*, 95-104.

Reprinted Articles

2. Orgill, M., & Crippen, K. J. (2012). What's so big about being small?: The interdisciplinary opportunity of nanoscience. In E. Brunsell (Ed.), *Integrating engineering + science in your classroom* (pp. 169-180). Arlington, VA: NSTA Press. (Reprinted from *The Science Teacher, 76,* pp. 41-48, 2009).
1. Orgill, M., & Bodner, G. M. (2006). What research tells us about using analogies to teach chemistry. In J. Gilbert (Ed.), *Science education: Major themes in education* (pp. 195-217). New York, NY: Routledge. (Reprinted from *Chemistry Education: Research and Practice*, 5(1), pp. 15-32, 2004)

Textbooks

3. Contributing author, Timberlake's *Chemistry: An Introduction to General, Organic, and Biological Chemistry, 14e* (Pearson Education). In preparation, was to be published in 2020, delayed by COVID-19 pandemic. (5 Chapters + introduction of metacognitive strategies throughout)
2. Contributing author, Timberlake's *General, Organic, and Biological Chemistry: Structures of Life, 6e* (Pearson Education). Publication date: January 29, 2018. (8 Chapters)

1. Contributing author, Timberlake's *Chemistry: An Introduction to General, Organic, and Biological Chemistry, 13e* (Pearson Education). Publication date: February 27, 2017. (3 Chapters)

Book Chapters

10. York, S., Fowler, W. C., & Orgill, M. (2020). Thoughts on using systems thinking to develop chemistry students' professional skills. In K. Y. Neiles, P. S. Mertz, & J. D. Fair (Eds.), *Integrating professional skills into undergraduate chemistry curricula* (pp. 81-102). Washington, D. C.: American Chemical Society.
9. Kahveci, M., & Orgill, M. (2015). Preface. In M. Kahveci & M. Orgill (Eds.), *Affective dimensions in chemistry education* (pp. v-ix). Heidelberg, Germany: Springer-Verlag GmbH. [The preface gives a brief explanation of the affective dimensions of chemistry learning, makes the case that it is important to consider these affective dimension in chemistry education, and previews the contents of the book.]
8. Orgill, M., & Friedrichsen, P. (2013). Teaching high school chemistry as a university science educator: One small investment with a significant return. In M. Dias, C. J. Eick, & L. Brantley-Dias (Eds.), *Science teacher educators as K-12 teachers: Practicing what we teach (ASTE Series in Science Education)* (pp. 197-212). Heidelberg, Germany: Springer-Verlag GmbH.
7. Orgill, M. (2013). How effective is the use of analogies in science textbooks? In M. S. Khine (Ed.), *Scientific analysis of science textbooks: Implications for science education* (pp. 79-99). Heidelberg, Germany: Springer-Verlag GmbH. Invited.
6. Orgill, M. (2012). Variation theory. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 3391-3393). Heidelberg, Germany: Springer-Verlag GmbH. Invited.
5. Orgill, M. (2012). Phenomenography. In N. M. Seel (Ed.), *Encyclopedia of the sciences of learning* (pp. 2608-2611). Heidelberg, Germany: Springer-Verlag GmbH. Invited.
4. Orgill, M., & Bodner, G. M. (2007). Prologue. In G. M. Bodner & M. Orgill (Eds.), *Theoretical frameworks for research in chemistry/science education* (pp. vii-ix). Upper Saddle River, NJ: Pearson Education Publishing. [The prologue of this book gives a brief description of what a theoretical framework is and why it is useful. It also argues for the need for a book that describes theoretical frameworks for qualitative research.]
3. Orgill, M. (2007). Situated Cognition. In G. M. Bodner & M. Orgill (Eds.), *Theoretical frameworks for research in chemistry/science education* (pp. 187-203). Upper Saddle River, NJ: Pearson Education Publishing.
2. Orgill, M. (2007). Phenomenography. In G. M. Bodner & M. Orgill (Eds.), *Theoretical frameworks for research in chemistry/science education* (pp. 132-151). Upper Saddle River, NJ: Pearson Education Publishing.
1. Orgill, M., & Bodner, G. M. (2005). The role of analogies in chemistry teaching. In T. Greenbowe, N. Pienta, & M. Cooper (Eds.), *Chemists' guide to effective teaching* (pp. 90-105). Upper Saddle River, NJ: Pearson Education Publishing.

Co-Edited Books

2. Kahveci, M., & Orgill, M. (Eds.) (2015). *Affective dimensions in chemistry education*. Heidelberg, Germany: Springer-Verlag GmbH.
1. Bodner, G. M., & Orgill, M. (Eds.) (2007). *Theoretical frameworks for research in chemistry/science education*. Upper Saddle River, NJ: Pearson Education Publishing.

Peer-Reviewed Conference Proceedings

8. Nealy, S. A., & Orgill, M. (2018). Underrepresented minority STEM organizations and science identity. In *Proceedings of the 2018 Annual Meeting of the National Association for Research in Science Teaching*, Atlanta, GA.
7. Schrader, P. G., Orgill, M., Skaza, H., Gandhi-Lee, E., Marti, E., Nealy, S., Carroll, K., Olson, T. A., Gerrity, D., Dulger, M., & Nobles, D. (2015). What would an alien eat? A blended learning approach for hands-on STEM professional development. E-Learn 2015 Proceedings: World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education. Greenville, NC: AACE.
6. Deniz, H., Orgill, M., & Carroll, K. (2011). Increasing science teaching efficacy beliefs among elementary teachers through content knowledge improvement. In *Proceedings of the 2011 Annual Meeting of the National Association for Research in Science Teaching*, Orlando, FL.
5. Orgill, M., Bodner, G. M., Ferguson, R., Hunter, W. J. F., & Mayo, P. M. (2007). Theoretical frameworks for research in science education. In *Proceedings of the 2007 Annual Meeting of the National Association for Research in Science Teaching*, New Orleans, LA.
4. Crippen, K. J., Biesinger, K. D., & Orgill, M. (2007). Achievement goal orientation as a predictor for learning in an online environment for undergraduate chemistry. In *Proceedings of the 2007 Annual Meeting of the National Association for Research in Science Teaching*, New Orleans, LA.
3. Kang, N.-H., Orgill, M., & Crippen, K. (2006). A tool for identifying teachers' conceptions of inquiry teaching: Responding to teaching scenarios. In *Proceedings of the 2006 Annual Meeting of the National Association for Research in Science Teaching*, San Francisco, CA.
2. Orgill, M., & Gilmer, P. J. (2006). Using concept inventories to assess students' understanding in general chemistry classes. In *Proceedings of the 2006 Annual Meeting of the National Association for Research in Science Teaching*, San Francisco, CA.
1. Orgill, M., & Bodner, G. M. (2004). Locks and keys: How analogies are used and perceived in biochemistry classes. In *Proceedings of the 2004 Annual Meeting of the National Association for Research in Science Teaching*, Vancouver, BC.

Book Reviews

3. Orgill, M. (2016). Teaching and learning STEM: A practical guide. *Education in Chemistry, July 1. Retrieved from http://www.rsc.org/eic/2016/05/teaching-learning-stem-practical-guide-review*
2. Orgill, M. (2010). Tools for teaching, 2nd edition. *Biochemistry and Molecular Biology Education, 38,* 280. Invited.
1. Orgill, M. (2009). Designing and assessing courses and curricula: A practical guide (3rd ed.). *Biochemistry and Molecular Biology Education, 37,* 197-198. Invited.

Newsletter/Blog Contributions

1. York, S., & Orgill, M. (2020, August). Systems thinking in chemistry education: A new approach for a new (and complex) school year. *GCI Nexus Blog*. Retrieved January 6, 2021 from https://communities.acs.org/t5/GCI-Nexus-Blog/Systems-Thinking-in-Chemistry-Education-A-New-Approach-for-a-New/ba-p/15558 [Invited Newsletter Contribution]

Papers Adopted for Use by Instructors of Courses

1. Orgill, M. (2002). *Phenomenography*. Unpublished manuscript adopted for use in "Qualitative Research Methods in Education" class (Educational Curriculum and Instruction 615). Purdue University, West Lafayette, IN.

Conferences Attended

49. 2022 American Chemical Society Western Regional Meeting, Las Vegas, NV, October 2022.
48. 27th Biennial Conference on Chemical Education. West Lafayette, IN, August 2022.
47. 2022 Systems Chemistry Gordon Research Conference, Sunday River, ME, June 2022.
46. 2021 Pacifichem International Chemical Congress of Pacific Basin Societies, held virtually, December 2021.
45. 51st IUPAC General Assembly, the 48th World Chemistry Congress, and the 104th Canadian Chemistry Conference and Exhibition, held virtually, August 2021.
44. 24th Annual Green Chemistry & Engineering Conference, held virtually, June 2020.
43. 25th Biennial Conference on Chemical Education, South Bend, IN, July/August 2018.
42. 25th IUPAC International Conference on Chemistry Education, Sydney, Australia, July 2018.
41. 255th National Meeting of the American Chemical Society, New Orleans, LA, March 2018.
40. 254th National Meeting of the American Chemical Society, Washington, D.C., August 2017.
39. Gordon Research Conference (Chemistry Education Research and Practice – Chemistry Education within the National and Global Educational Context), Lewiston, ME, June, 2017.
38. 253rd National Meeting of the American Chemical Society, San Francisco, CA, March-April 2017.
37. 252nd National Meeting of the American Chemical Society, Philadelphia, PA, August 2016.
36. 24th Biennial Conference on Chemical Education, Greeley, CO, August 2016.
35. 251st National Meeting of the American Chemical Society, San Diego, CA, March 2016.
34. 23rd Biennial Conference on Chemical Education, Allendale, MI, August 2014.
33. 2014 NCCEP/GEAR UP Annual Conference, Washington, D.C., July 2014.

32. 23rd IUPAC International Conference on Chemistry Education, Toronto, Canada, July 2014.
31. Symposium: China-US Collaborative Research on Life in Terrestrial Geothermal Springs. Yunnan University, Kunming, China, June, 2013.
30. Gordon Research Conference (Chemistry Education Research and Practice – Strengthening the Pillars of Scholarly Work in Chemistry Education), Newport, RI, June, 2013.
29. 245th National Meeting of the American Chemical Society, New Orleans, LA, April 2013.
28. 22nd Biennial Conference on Chemical Education, University Park, PA, July/August 2012.
27. ChemEd 2012 Royal Australian Chemical Institute Chemical Education Conference, Adelaide, South Australia, Australia, July 2012.
26. 67th Northwest Regional Meeting of the American Chemical Society, Boise, ID, June 2012.
25. 243rd National Meeting of the American Chemical Society, San Diego, CA, March 2012.
24. Southern Nevada Annual Mathematics and Science Conference, Las Vegas, NV, January 2012.
23. Gordon Research Conference (Chemistry Education Research and Practice – Foundations and Frontiers), Davidson, NC, June 2011.
22. 2nd Chemistry Education Research Graduate Student Conference, Miami University, Oxford, OH, June 2011.
21. 241st American Chemical Society Meeting, Anaheim, CA, March 2011.
20. 21st Biennial Conference on Chemical Education. Denton, TX, August 2010.
19. 239th American Chemical Society Meeting, San Francisco, CA, March 2010.
18. 237th American Chemical Society Meeting, Salt Lake City, UT, March 2009.
17. 42nd American Chemical Society Western Regional Meeting, Las Vegas, NV, September 2008.
16. 20th Biennial Conference on Chemical Education. Bloomington, IN, July 2008.
15. Southern Nevada T3 Mathematics and Science Conference. Las Vegas, Nevada, February 2008.
14. 2007 Annual Meeting of the National Association for Research in Science Teaching. New Orleans, LA, April 2007.
13. 232nd American Chemical Society Meeting. San Francisco, CA, September 2006.
12. 19th Biennial Conference on Chemical Education. West Lafayette, IN, July 2006.
11. 2006 Annual Meeting of the National Association for Research in Science Teaching. San Francisco, CA, April 2006.
10. 2006 UNLV Academic Assessment Faire. Las Vegas, NV, March 2006.
9. 2005 Gordon Research Conference on Chemistry Education: Research and Practice. New London, CT, June 2005.
8. 49th Annual Conference of the Arizona-Nevada Academy of Science. Las Vegas, NV, April 2005.
7. 229th American Chemical Society Meeting. San Diego, CA, March 2005.
6. 18th Biennial Conference on Chemical Education. Ames, IA, July 2004.
5. 2004 Annual Meeting of the National Association for Research in Science Teaching. Vancouver, BC, April 2004.

4. 38th Midwest Regional American Chemical Society Meeting. Columbia, MO, November 2003.
3. 17th Biennial Conference on Chemical Education. Bellingham, WA, July 2002.
2. 209th American Chemical Society Meeting. Anaheim, CA, March 1995.
1. 207th American Chemical Society Meeting. San Diego, CA, March 1994.

Presentations

National/International

138. York, S., & Orgill, M. (2022, August). *Recommendations for critiquing equity with a critical systems thinking approach*. Presented virtually at the 264th National Meeting of the American Chemical Society (in-person meeting held at Chicago, IL).
137. Ly, A., & Orgill, M. (2022, August). *General chemistry students' perceptions of remote/online v. in-person education during the COVID-19 pandemic*. Poster presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
136. Orgill, M. (2022, August). *Lessons from George Bodner: "Framing" quality chemistry education research*. Presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
135. York, S., & Orgill, M. (2022, August). *Instructors' perceptions of the benefits and challenges of systems thinking in chemistry education*. Poster presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
134. Nealy, S., & Orgill, M. (2022, August). *Post-Secondary URM STEM Students' Perceptions of Their Science Identity*. Presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
133. York, S., & Orgill, M. (2022, August). *Instructors' definitions and understandings of systems thinking in the context of tertiary chemistry classrooms*. Presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
132. Orgill, M., & York, S. (2022, August). *Introduction to systems thinking: Benefits and challenges for chemistry education*. Presented at the 27th Biennial Conference on Chemical Education, West Lafayette, IN.
131. Orgill, M., & York, S. (2022, June). *Leveraging systems thinking to prepare global citizens to meet the challenges of today and tomorrow*. Presented at the 2022 Systems Chemistry Gordon Research Conference, Sunday River, ME. Invited.
130. Lee, E. N., & Orgill, M. (2022, March). *Toward equitable assessment of English language learners in chemistry: Identifying supportive features in assessment items*. Presented at the 263rd National Meeting of the American Chemical Society, San Diego, CA.
129. York, S., & Orgill, M. (2022, March). *Instructors' perceptions of the benefits and challenges of systems thinking in a chemistry education context*. Presented virtually at the 263rd National Meeting of the American Chemical Society.
128. Pullen, R., Orgill, M., & Sharma, M. (2021, December). *Characteristics and trajectories of academic staff who identify as DBER scholars*. Presented virtually

at the 2021 Pacifichem International Chemical Congress of Pacific Basin Societies.

127. Pullen, R., Maisey, S., Orgill, M., & Barakat, S. (2021, December). *An alternative assessment approach for threshold learning outcomes and the impact on student learning strategies*. Presented virtually at the 2021 Pacifichem International Chemical Congress of Pacific Basin Societies.
126. Orgill, M., & York, S. (2021, December). *Identifying the essential characteristics of systems thinking to support chemistry teaching and learning*. Presented virtually at the 2021 Pacifichem International Chemical Congress of Pacific Basin Societies. Invited.
125. Baldwin, N., & Orgill, M. (2021, August). *General chemistry instructors' perceptions of and intentions for external representations used to teach acid-base titrations in introductory chemistry courses*. Presented virtually at the 262nd National Meeting of the American Chemical Society.
124. Orgill, M. (2021, August). *Identifying the essential characteristics of systems thinking and how they can support chemistry teaching and learning*. Presented virtually at the combined conferences of the 51st IUPAC General Assembly, the 48th World Chemistry Congress, and the 104th Canadian Chemistry Conference and Exhibition. Invited.
123. York, S., Fowler, W. C., & Orgill, M. (2021, April). *Thoughts on Using Systems Thinking to Develop Chemistry Students' Professional Skills*. Presented virtually at the 261st National Meeting of the American Chemical Society.
122. Mahaffy, P., & Orgill, M. (2020, December). *Systems thinking in chemistry education: Preparing global citizens for a sustainable future*. Presented as part of the American Chemical Society Webinar program. Invited
121. Lee, E. N., & Orgill, M (2020, August). *Breaking the language barrier: Equitable assessment in general chemistry*. Presented at the 260th National Meeting of the American Chemical Society, held virtually.
120. Orgill, M., & York, S. (2020, July). *Introduction to systems thinking: Benefits and challenges for chemistry education*. Abstract accepted for presentation at the 2020 Biennial Conference on Chemical Education. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.
119. Lee, E., & Orgill, M. (2020, July). *Breaking the language barrier: Equitable assessment in general chemistry*. Abstract accepted for presentation at the 2020 Biennial Conference on Chemical Education. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.
118. York, S., & Orgill, M. (2020, July). *Identifying the essential features of systems thinking to support chemistry teaching and learning*. Abstract accepted for presentation at the 2020 Biennial Conference on Chemical Education. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the

Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.

117. Orgill, M., & Pullen, R. (2020, July). *Using the experiences of new and transitioning chemistry education scholars to inform the preparation of our graduate students*. Abstract accepted for presentation at the 2020 Biennial Conference on Chemical Education. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this presentation could not be given as intended.
116. Orgill, M., & York, S. (2020, June). *Identifying the essential features of systems thinking to support chemistry teaching and learning*. Presented at the 24th Annual Green Chemistry & Engineering Conference, held virtually.
115. Pullen, R., Orgill, M., & Sharma, M. (2019, October). *Investigating the trajectories of academic staff who identify as discipline-based education scholars*. Presented at the 2019 Australian Conference on Science and Mathematics Education, Sydney, NSW, Australia.
114. Pullen, R., Orgill, M., Maisey, S., & Constable, G. (2019, October). *Theoretical frameworks: A means to an end in discipline-based education research*. Presented at the 2019 Australian Conference on Science and Mathematics Education, Sydney, NSW, Australia.
113. Gandhi-Lee, E. N., & Orgill, M. (2019, June). *Breaking the language barrier: Equitable assessment in general chemistry*. Poster presented at the 2019 Chemistry Education Research and Practice (Using Education Research to Foster Meaningful Learning) Gordon Research Conference, Lewiston, ME.
112. Lee, E., & Orgill, M. (2019, April). *Breaking the language barrier: Equitable assessment in general chemistry*. Poster presented at the at the 2019 Annual Meeting of the National Association for Research in Science Teaching (NARST), Baltimore, MD.
111. Sophos, J. M., Cole, R. S., Henderleiter Aldrich, J., Heroux, D. S., Hunnicutt, S. S., Levy, I. J., Reid Mooring, S., Orgill, M., Sorensen-Unruh, C., Sykes, D. S. & Williamson, V. M. (2019, April). *Biennial Conference on Chemical Education: A place to share information about the teaching and learning of chemistry*. Poster presented at the 257th National Meeting of the American Chemical Society, Orlando, FL.
110. Orgill, M. (2018, July). *Choosing a theoretical framework: One data source, multiple potential research projects*. Presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.
109. Nealy, S., & Orgill, M. (2018, July). *Science identity and underrepresented minority STEM organizations*. Presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.
108. Barakat, S., & Orgill, M. (2018, July). *How organic chemists' understandings of resonance progress over time: A pilot study*. Poster presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.
107. Wood, S. A., & Orgill, M. (2018, July). *Reasoning used by general and organic chemistry students to categorize a compound as an acid or a base*. Poster presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.

106. Millick, N., & Orgill, M. (2018, July). *Teaching assistants' perceptions and use of external representations when teaching acid-base titrations in introductory chemistry laboratory courses*. Poster presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.
105. Sophos, J. M., Cole, R. S., Henderleiter Aldrich, J., Heroux, D. S., Hunnicutt, S. S., Levy, I. J., Reid Mooring, S., Orgill, M., Sorensen-Unruh, C., Sykes, D. S. & Williamson, V. M. (2018, July). *Biennial Conference on Chemical Education: A place to share information about the teaching and learning of chemistry*. Poster presented at the 25th Biennial Conference on Chemical Education, South Bend, IN.
104. Millick, N., & Orgill, M. (2018, July). *Teaching assistants' perceptions and use of external representations when teaching acid-base titrations in introductory chemistry laboratory courses*. Presented at the 25th IUPAC International Conference on Chemistry Education, Sydney, Australia.
103. Skaza Acosta, H. J., Orgill, M., & Crippen K. J. (2018, March). *Initial results of an assessment of students' spatial thinking related to enhanced greenhouse effect*. Presented at the at the 2018 Annual Meeting of the National Association for Research in Science Teaching (NARST), Atlanta, GA.
102. Nealy, S., & Orgill, M. (2018, March). *Underrepresented minority STEM organizations and science identity*. Poster presented at the at the 2018 Annual Meeting of the National Association for Research in Science Teaching (NARST), Atlanta, GA.
101. Sophos, J. M., Cole, R. S., Henderleiter Aldrich, J., Heroux, D. S., Hunnicutt, S. S., Levy, I. J., Reid Mooring, S., Orgill, M., Sorensen-Unruh, C., Sykes, D. S. & Williamson, V. M. (2018, March). *Biennial Conference on Chemical Education: A place to share information about the teaching and learning of chemistry*. Poster presented at the 255th National Meeting of the American Chemical Society, New Orleans, LA.
100. Nealy, S., & Orgill, M. (2018, March). *Underrepresented minority STEM organizations and science identity*. Presented at the 255th National Meeting of the American Chemical Society, New Orleans, LA.
99. Orgill, M., Adams, J., Nealy, S., & Kardash, C. (2018, March). *High School science teachers' understandings of the practices of science and engineering*. Presented at the 255th National Meeting of the American Chemical Society, New Orleans, LA.
98. Baldwin, N., & Orgill, M. (2018, March). *Teaching assistants' perceptions and use of external representations when teaching acid-base titrations in introductory chemistry laboratory courses*. Presented at the 255th National Meeting of the American Chemical Society, New Orleans, LA.
97. Orgill, M. (2017, September). What I learned (and how I survived) my first year of teaching high school chemistry. Webinar presented for the American Association of Chemistry Teachers Webinar Series. Invited.
96. Skaza, H., Orgill, M., & Crippen, K. J. (2017, April). *Development of a contextualized spatial thinking assessment for enhanced greenhouse effect*. Presented at the 2017 Annual Meeting of the National Association for Research in Science Teaching (NARST), San Antonio, TX.

95. Barakat, S., Millick, N., & Orgill, M. (2017, April). *Examining the connection between what the team members of an interdisciplinary collaboration identified as their goals and how they thought those goals should be evaluated: The*

ChANgE Chem project. Poster presented at the 253rd National Meeting of the American Chemical Society, San Francisco, CA.

94. Millick, N., Barakat, S., & Orgill, M. (2017, April). *Team members' perceptions of how communication relates to the success of an interdisciplinary grant collaboration: The ChANgE Chem project*. Presented at the 253rd National Meeting of the American Chemical Society, San Francisco, CA.
93. Orgill, M., Adams, J., Nealy, S., & Kardash, C. (2017, April). *Influence of an international field research experience on high school teachers' understandings of the practices of science and engineering*. Presented at the 253rd National Meeting of the American Chemical Society, San Francisco, CA.
92. Orgill, M., Bussey, T. J., & Bodner, G. M. (2017, April). *Biochemistry instructors' perceptions of analogies and their classroom use*. Presented at the 253rd National Meeting of the American Chemical Society, San Francisco, CA.
91. Nealy, S., Adams, J., Kardash, C., & Orgill, M. (2016, August). *Influence of an international research experience on teachers perceptions of science classroom practice*. Presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
90. Orgill, M. (2016, August). *Applying chemical education research to practice: The influence of the ACELL workshop on instructors' perceptions of research-based laboratory pedagogies*. Presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
89. Millick, N., Barakat, S., & Orgill, M. (2016, August). *Faculty and graduate student perceptions of factors that contribute to the success of an interdisciplinary collaboration focused on bridging the educational research/practice gap: The ChANgE Chem project*. Poster presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
88. Barakat, S., Millick, N., & Orgill, M. (2016, August). *Perceived goals and outcomes of an interdisciplinary collaboration focused on bridging the educational research/practice gap: The ChANgE Chem project*. Poster presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
87. Orgill, M. (2016, August). *Coming down from the "ivory tower": What I learned from my first year of teaching high school chemistry*. Presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
86. Adams, J., Nealy, S., Kardash, C., & Orgill, M. (2016, July). *Influence of an international field research experience on teachers' understandings of how science is affected by the social and cultural context in which it is practiced*. Poster presented at the 24th Biennial Conference on Chemical Education, Greeley, CO.
85. Crippen, K. J., Boyer, T. H., Korolev, M., Wu, C. Y., Brucat, P., de Torres, T. & Orgill, M. (2016, April). *ChANgE Chem: Reforming general chemistry with the context of everyday engineering*. Poster presented at the 2016 NSF Envisioning the Future of Undergraduate STEM Education: Research and Practice, Washington, D. C.
84. Nealy, S., Carroll, K., Skaza, H., Marti, E., Gandhi, E., Dulger, M., Gerrity, D., Olson, T., Schrader, P. G., & Orgill, M. (2015, November). What would an alien eat? Findings from an inquiry based teacher training. Poster presented at the 24th NSF EPSCoR National Conference, Portsmouth, NH.
83. Schrader, P. G., Orgill, M. K., Skaza, H., Gandhi-Lee, E., Marti, E., Nealy, S., Carroll, K., Olson, T. A., Gerrity, D., Dulger, M., & Nobles, D. (2015, October).

What would an alien eat? A blended learning approach for hands-on STEM professional development. Paper presented at the annual meeting of eLearn, Kona, HI.

82. Orgill, M. (2015, August). *Do they see what we see? Developing chemistry students' representational competence*. 2015 David P. Mellor Lecture, School of Chemistry, University of New South Wales, Sydney, New South Wales, Australia. Invited.
81. Schrader, P.G., Orgill, M. K., Skaza, H., Gandhi, E., Nealy, S., Marti, E., Dulger, M., Gerrity, D., Olson, T. A., Carroll, K., & Nobles, D. (2015, April). *What would an alien eat? Planning and implementing an intensive summer institute*. Presented at the 2015 Annual Meeting of the American Educational Research Association, Chicago, IL.
80. Crippen, K. J., Boyer, T. H., Wu, C.-Y., Brucat, P., Korolev, M., de Torres, T., & Orgill, M. (2015, April). *Designing for retention of engineers with curriculum reform in general chemistry*. Presented at the 2015 Annual Meeting of the National Association for Research in Science Teaching (NARST), Chicago, Il.
79. Bussey, T. J., & Orgill, M. (2015, March). *Biochemistry instructors' perceptions of their classroom use of analogies*. Presented at the 249th National Meeting of the American Chemical Society, Denver, CO.
78. Nealy, S., Carroll, K., Skaza, H., Marti, E., Gandhi, E., Dulger, M., Gerrity, D., Olson, T., Schrader, P.G., & Orgill, M. (2015, March). *Design, development, and delivery of the Nevada GEAR UP STEM Summer Institute*. Poster presented at the 249th National Meeting of the American Chemical Society, Denver, CO.
77. Skaza, H., Orgill, M., & Crippen, K. (2014, October). *University science faculty perceptions of spatial thinking for environmental literacy*. Poster presented at the 43rd annual meeting of the North American Association for Environmental Education, Ottawa, Canada.
76. Orgill, M., & Bodner, G. M. (2014, August). *ACELL project: Advancing Chemistry by Enhancing Learning in the Laboratory*. Presented at the 248th National Meeting of the American Chemical Society, San Francisco, CA.
75. Crippen, K., Boyer, T. H., Wu, C.-Y., Brucat, P. J., Korolev, M., & Orgill, M. (2014, August). *Curriculum reform in general chemistry for engineers: Results of a field trial*. Poster presented at the 23rd Biennial Conference on Chemical Education, Allendale, MI.
74. Gandhi, E., Skaza, H., Marti, E., Schrader, P.G., & Orgill, M. (2014, August). *Faculty perceptions of the factors influencing success in STEM fields*. Poster presented at the 23rd Biennial Conference on Chemical Education, Allendale, MI.
73. Nealy, S., Carroll, K., Skaza, H., Marti, E., Gandhi, E., Dulger, M., Gerrity, D., Olson, T., Schrader, P.G., & Orgill, M. (2014, August). *Design, development, and delivery of the Nevada GEAR UP STEM Summer Institute*. Poster presented at the 23rd Biennial Conference on Chemical Education, Allendale, MI.
72. Orgill, M., & Schrader, P. G. (2014, July). *Design, development, and delivery of the Nevada GEAR UP STEM Summer Institute*. Presented at the 2014 NCCEP/GEAR UP Annual Conference, Washington, DC.
71. Deniz, H., Orgill, M., Carroll, K, & Adibelli, E. (2014, April). *Exploring impacts of a 3-year summer institute on elementary teachers' science content knowledge and science teaching efficacy beliefs*. Presented at the 2014 Annual Meeting of the American Educational Research Association, Philadelphia, PA.

70. Orgill, M., Bussey, T., Guzman, M., & Chang, C. (2014, March). *Instructors' perceptions of research-based laboratory pedagogies: The influence of the ACELL workshop*. Poster presented at the 247th National Meeting of the American Chemical Society, Dallas, TX.
69. Guzman, M., Chang, C., Bussey, T., & Orgill, M. (2014, March). *How student-directed should a chemistry laboratory activity be? The influence of the ACELL workshop on instructors' and students' perceptions*. Poster presented at the 247th National Meeting of the American Chemical Society, Dallas, TX.
68. Marti, E., Orgill, M., Schrader, PG, Gandhi, E., Curry, C., & Greene, F. (2013, August). *UNLV GEAR UP activities year one: Addressing STEM education in Nevada*. Poster presented at the 3rd Annual Colloquium on P-12 STEM Education: Research to Practice, University of Minnesota, St. Paul, MN.
67. Orgill, M., Carroll, K., Kern, C., Bycraft, M., Conder, J., Dehne, A., Whitney, T., & Williams, N. (2013, June). *Bridging secondary science education and PIRE research through the Next Generation Science Standards*. Symposium: China-US Collaborative Research on Life in Terrestrial Geothermal Springs. Yunnan University, Kunming, China.
66. Orgill, M. (2013, June). *Views on emerging science and its place in the school curriculum: The case of self-assembly*. Presented at the 2013 Chemistry Education Research and Practice (Strengthening the Pillars of Scholarly Work in Chemistry Education) Gordon Research Conference, Newport, RI. Invited.
65. Asif, M., Sharma, A., Orgill, M., Bussey, T. J., Barrows, N., Kay, A., Robb, M., Bodner, G. M., & Gonzalez, B. L. (2013, April). *Development and preliminary analysis of the ACELL Orientation to Laboratory Instruction Survey (OLIS)*. Poster presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
64. Robb, M., Kay, A., Bussey, T., Orgill, M., & Barrows, N. (2013, April). *Bridging the gap: A comparison of students' high school and general chemistry lab experiences*. Poster presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
63. Kay, A., Robb, M., Bussey, T., Orgill, M., & Barrows N. (2013, April). *Fun and frustration: Students' perspectives of college-level laboratories*. Poster presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
62. Samuel, A., Dixon, J., Paraiso, J., Manoharan, N., Zhao, Y., Blakesley, J., Eister, A., Tisdell, C., Uriestegui, & Orgill, M. (2013, April). *Chemical Interactions, University of Nevada, Las Vegas "UNLV's Chemistry Club".* Poster presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
61. Wood, S. A., & Orgill, M. (2013, April). *Developing interview guides to investigate instructors' and students' perceptions of acid/base concepts in general and organic chemistry*. Presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
60. Gandhi, E., Orgill, M., & Schrader, P. (2013, April). *Nevada's GEAR UP: Developing and formalizing a needs analysis for professional development in STEM education*. Presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
59. Bussey, T. J., & Orgill, M. (2013, April). *What do biochemistry students learn from some common external representations of protein translation?* Presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.

58. Orgill, M., Bussey, T. J., Asif, M., Sharma, A., Barrows, N., Kay, A., Robb, M., Bodner, G. M., & Gonzalez, B. L. (2013, April). *Chemistry instructors' perceptions of the laboratory learning environment*. Presented at the 245th National Meeting of the American Chemical Society, New Orleans, LA.
57. Orgill, M., Bussey, T., Litster, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, August). *Researchers' perceptions of self-assembly: Capturing a field in scientific revolution*. Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA.
56. Wood, S., Bussey, T., Litster, M., Orgill, M., Crippen, K., Ho, W., & Kern, C. (2012, August). *Researchers' perceptions of self-assembly: Reactions to visual representations of self-assembly*. Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA.
55. Bussey, T., Litster, M., Orgill, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, August). *Researchers' perceptions of self-assembly: Reactions to published definitions of "self-assembly"*. Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA.
54. Litster, M., Bussey, T., Orgill, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, August). *Researchers' perceptions of self-assembly: Differences between life scientists and chemists*. Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA.
53. Orgill, M. (2012, August). *Theoretical frameworks: What are they, and why should I care?* Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA. Invited.
52. Wood, S., Orgill, M., Brennan, D., & Gandhi, E. (2012, August). *How do students' understandings of acids and bases change as they progress from general to organic chemistry?: A preliminary report*. Presented at the 22nd Biennial Conference on Chemical Education, University Park, PA.
51. Orgill, M. (2012, July). *Sliding toward inquiry: Using the Essential Features of Inquiry to improve learning in the laboratory environment*. Presented at the Seminar Series for the Institute for Innovation in Science & Mathematics Education, University of Sydney, Sydney, New South Wales, Australia. Invited.
50. Orgill, M. (2012, July). *Defining the ill-defined: Challenges and advantages associated with integrating emerging research fields into classroom teaching*. Presented at the ChemEd 2012 Royal Australian Chemical Institute Chemical Education Conference, Adelaide, South Australia, Australia. Invited keynote presentation.
49. Orgill, M., Bussey, T., Litster, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, March). *Researchers' perceptions of self-assembly: Capturing a field in scientific revolution*. Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA.
48. Wood, S., Bussey, T., Litster, M., Orgill, M., Crippen, K., Ho, W., & Kern, C. (2012, March). *Researchers' perceptions of self-assembly: Reactions to visual representations of self-assembly*. Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA.
47. Bussey, T., Litster, M., Orgill, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, March). *Researchers' perceptions of self-assembly: Reactions to published definitions of "self-assembly"*. Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA.

46. Litster, M., Bussey, T., Orgill, M., Wood, S., Crippen, K., Ho, W., & Kern, C. (2012, March). *Researchers' perceptions of self-assembly: Differences between life scientists and chemists.* Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA.
45. Bussey, T., & Orgill, M. (2012, March). *The Intended Object of Learning: What do instructors think students should learn from external representations of biochemistry?* Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA.
44. Orgill, M., Barrows, N., Bodner, G. M., Gonzalez, B. L., Bussey, T., & Asif, M. (2012, March). *Advancing Chemistry by Enhancing Learning in the Laboratory: The ACELL project.* Presented at the 243rd National Meeting of the American Chemical Society, San Diego, CA. Invited.
43. Carroll, K., Orgill, M., Deniz, H., Gilligan, E., & Marino, D. (2012, March). *Using technology and recursive concept mapping to represent learning*. Presented at the 2012 National Conference of the NSTA, Indianapolis, IN.
42. Bussey, T., Orgill, M., Crippen, K., Litster, M., Wood, S., Kern, C., & Ho, W. (2011, June). *Defining a "big idea" in nanoscience: Researchers' identification of the key characteristics of self-assembly*. Poster presented at the 2011 Chemistry Education Research and Practice (Foundations and Frontiers) Gordon Research Conference, Davidson, NC.
41. Litster, M., Wood, S. A., Orgill, M., Crippen, K., Bussey, T., Kern, C., & Ho, W. (2011, June). *Life scientists' conceptions of self-assembly*. Poster presented at the 2011 Chemistry Education Research and Practice (Foundations and Frontiers) Gordon Research Conference, Davidson, NC.
40. Orgill, M., Barrows, N., Bodner, G. M., Gonzalez, B. L., Bussey, T., & Asif, M. (2011, June). *The ACELL project: Advancing Chemistry by Enhancing Learning in the Laboratory*. Poster presented at the 2011 Chemistry Education Research and Practice (Foundations and Frontiers) Gordon Research Conference, Davidson, NC.
39. Orgill, M. (2011, June). *K-12 professional development programs: Turning service opportunities into research opportunities*. Presented at the 2nd Chemistry Education Research Graduate Student Conference, Miami University, Oxford, OH. Invited.
38. Deniz, H., Orgill, M., & Carroll, K. (2011, April). *Increasing science teaching efficacy beliefs among elementary teachers through content knowledge improvement*. Presented at the 2011 National Association for Research in Science Teaching Annual Meeting, Orlando, FL.
37. Wood, S., Orgill, M., Litster, M., Crippen, K., Bussey, T., Kern, C., & Ho, W. (2011, March). *Analysis of researchers' responses to visual representations of self-assembly*. Poster presented at the 241st National Meeting of the American Chemical Society, Anaheim, CA.
36. Bussey, T., Crippen, K. J., Kern, C., Litster, M., & Orgill, M. (2010, August). *Examining researchers' perceptions of self-assembly*. Presented at the 21st Biennial Conference on Chemical Education, Denton, TX.
35. Hedlund, B. P., Dong, H., Zhang, C. L., Ross, C., Orgill, M., Dong, Z., Hartnett, H., Huang, L., Hungate, B., Jiang, H., Jiao, N., Li, L., Li, W.-J., Peters, J., Quake, S., Regner, K., de la Torre, J. R., Xie, S., Wang, Y., & Zhou, H. (2010, May). *The Tengchong Geothermal System PIRE project: US-China collaboration in action.*

Presented at the China-US Collaborative Research on Geomicrobiological Processes in Extreme Environments meeting. State College, PA.

34. Orgill, M. (2009, July). *Making the familiar strange: Learning from students' interpretations of common chemistry concepts and figures*. Presented at Seminar Program, Department of Applied Chemistry, Curtin University of Technology, Perth, Western Australia, Australia. Invited.
33. Orgill, M. (2009, July). *Examining learning from two perspectives: Biochemistry students' use and interpretation of analogies and biochemistry students' perceptions of bioenergetics concepts*. Presented at Seminar Program, School of Biomedical, Biomolecular and Chemical Sciences, University of Western Australia, Perth, Western Australia, Australia. Invited.
32. Orgill, M. (2009, July). *Chemistry and biochemistry students' perceptions of buffers and bioenergetics concepts*. Presented at Seminar Program, School of Chemistry and Physics, University of Adelaide, Adelaide, South Australia, Australia. Invited.
31. Orgill, M. (2009, July). *Examining chemistry learning from two perspectives: Biochemistry students' use and interpretation of analogies and undergraduate chemistry students' perceptions of buffers and buffer problems*. Presented at Seminar Program, School of Chemistry, University of Sydney, Sydney, New South Wales, Australia. Invited.
30. Orgill, M., & Crippen, K. J. (2009, March). *Students' interpretations and use of an energy diagram showing electron transitions: Examining a common external representation*. Poster presented at the 237th American Chemical Society Meeting, Salt Lake City, UT.
29. Crippen, K. J., & Orgill, M. (2009, March). *Nano ideas to macro inclusion: High school teachers learn about nanoscience and articulate its integration*. Presented at the 237th American Chemical Society Meeting, Salt Lake City, UT.
28. Orgill, M., & Crippen, K. J. (2009, March). *What's so big about being small? The interdisciplinary opportunity of nanoscience*. Presented at the 237th American Chemical Society Meeting, Salt Lake City, UT.
27. Bussey, T., & Orgill, M. (2008, July). *Identification of pervasive student conceptions of the central dogma and the implications for the development of a concept inventory*. Poster presented at the 20th Biennial Conference on Chemical Education, Bloomington, IN.
26. Orgill, M. (2008, July). *Undergraduate chemistry students' perceptions of and misconceptions about buffers and buffer problems*. Presented at the 20th Biennial Conference on Chemical Education, Bloomington, IN. Invited.
25. Orgill, M. (2008, July). *Phenomenographic research in chemical education*. Presented at the 20th Biennial Conference on Chemical Education, Bloomington, IN.
24. Ebert, E. K., Kern, C., Mayes, G., Marconi, E., Pollins Bard, H., Doughty, L., Asay, L. D., Crippen, K. J., Bailey, J., Thomas, M., Orgill, M., Waldman, C. A., Messina, F., Reichenbach, R., & Holt, S. (2008, March). *Using action research data to inform instruction: A tale of data sense making*. Presented at the 2008 National Conference of the National Science Teachers Association, Boston, MA.
23. Ebert, E. K., Crippen, K. J., Bailey, J., Thomas, M., Orgill, M., Asay, L. D., Holt, S., Reichenbach, R., Kern, C., Pollins Bard, H., Doughty, L., Mayes, G., Waldman, C. A., Messina, F., & Wagner, C. (2008, March). *Project PASS: Inquiry, conceptual*

change, and self-regulated learning. Presented at the 2008 National Conference of the National Science Teachers Association, Boston, MA.

22. Holt, S., Ebert, E. K., Crippen, K. J., Bailey, J., Orgill, M., Thomas, M., Asay, L. D., Kern, C., Waldman, C. A., Messina, F., Pollins Bard, H., & Reichenbach, R. (2008, March). *Project PASS – Researching the role of scientific argumentation in the classroom*. Presented at the 2008 National Conference of the National Science Teachers Association, Boston, MA.
21. Sutherland, A., & Orgill, M. (2007, August). *Upper-level chemistry students' conceptions of buffers and acid-base equilibrium problems*. Poster presented at 234th American Chemical Society Meeting, Boston, MA.
20. Orgill, M. (2007, April). *Phenomenography*. Presented at the 2007 National Association for Research in Science Teaching Annual Meeting, New Orleans, LA.
19. Crippen, K. J., Biesinger, K. D., & Orgill, M. (2007, April). *Achievement goal orientation as a predictor for learning in an online environment for undergraduate chemistry*. Presented at the 2007 National Association for Research in Science Teaching Annual Meeting, New Orleans, LA.
18. Asay, L. D., Crippen, K. J., Ebert, E. K., Orgill, M., Thomas, M., Bailey, J., & Wagner, C. (2007, March). *Project PASS action research poster session*. Presented at the 2007 National Conference of the National Science Teachers Association, St. Louis, MO.
17. Kaczmarek, K., & Orgill, M. (2006, September). *General chemistry students' perceptions of buffers and buffer problems*. Poster presented at 232nd American Chemical Society Meeting, San Francisco, CA.
16. Orgill, M. (2006, September). *Phenomenographic research in chemical education*. Presented at 232nd American Chemical Society Meeting, San Francisco, CA.
15. Kaczmarek, K., & Orgill, M. (2006, July). *General chemistry students' perceptions of buffers and buffer problems*. Poster presented at the 19th Biennial Conference on Chemical Education, West Lafayette, IN.
14. Orgill, M. (2006, July). *Phenomenographic research in chemical education*. Presented at the 19th Biennial Conference on Chemical Education, West Lafayette, IN.
13. Orgill, M., & Gilmer, P. J. (2006, July). *Using concept inventories to assess students' understanding in general chemistry classes*. Presented at the 19th Biennial Conference on Chemical Education, West Lafayette, IN.
12. Kang, N.-H., Orgill, M., & Crippen, K. (2006, April). *A tool for identifying teachers' conceptions of inquiry teaching: Responding to teaching scenarios*. Presented at the 2006 National Association for Research in Science Teaching Annual Meeting, San Francisco, CA.
11. Orgill, M., & Gilmer, P. J. (2006, April). *Using concept inventories to assess students' understanding in general chemistry classes*. Presented at the 2006 National Association for Research in Science Teaching Annual Meeting, San Francisco, CA.
10. Mayo, P. M., Orgill, M., & Bodner, G. M. (2005, June). *Blind students' use of text, figures, and analogies to visualize abstract chemistry concepts*. Poster presented at Gordon Research Conference on Chemistry Education: Research and Practice, New London, CT.

9. Orgill, M., & Emerich, D. W. (2005, June). *Biochemistry students' perceptions of buffer and bioenergetics problems*. Poster presented at Gordon Research Conference on Chemistry Education: Research and Practice, New London, CT.
8. Orgill, M., & Emerich, D. (2005, March). *Biochemistry students' perceptions of buffer problems*. Presented at 229th American Chemical Society Meeting, San Diego, CA.
7. Mayo, P. M., Orgill, M., & Bodner, G. M. (2005, March). *Blind students' use of text, figures, and analogies to visualize abstract chemistry concepts*. Presented at 229th American Chemical Society Meeting, San Diego, CA.
6. Orgill, M., & Bodner, G. M. (2005, March). *Teaching biochemistry through analogies: How students interpret common biochemistry analogies*. Presented at 229th American Chemical Society Meeting, San Diego, CA.
5. Orgill, M., & Bodner, G. M. (2004, July). *The role of analogies in chemistry teaching*. Presented at 18th Biennial Conference on Chemical Education, Ames, IA.
4. Orgill, M., & Bodner, G. M. (2004, July). *What did you mean when you said an enzyme is like a glove?: How students use and interpret analogies in their biochemistry courses*. Presented at 18th Biennial Conference on Chemical Education, Ames, IA.
3. Orgill, M., & Bodner, G. M. (2004, April). *Locks and keys: How analogies are used and perceived in biochemistry classes*. Presented at the 2004 National Association for Research in Science Teaching Annual Meeting, Vancouver, BC.
2. Orgill, M., & Bodner, G. M. (2002, July). *Biochemistry is like a circle: Analogies in biochemistry*. Presented at the 17th Biennial Conference on Chemical Education, Bellingham, WA.
1. Weinberger, S. R., Egan, R., Orgill, M., & Hoonhout, C. (1993, July). *Analysis of peptide digests by matrix-assisted laser desorption/ionization time-of-flight mass monitoring*. Poster presented at the Seventh Symposium of the Protein Society, San Diego, CA.

Regional

9. York, S., & Orgill, M. (2022, October). *Instructors' definitions and understandings of systems thinking in the context of tertiary chemistry classrooms*. Presented at the 2022 ACS Western Regional Meeting, Las Vegas, NV.
8. Barakat, S., & Orgill, M. (2022, October). *Variation theory: A useful framework for investigating the teaching and learning of chemistry*. Presented at the 2022 ACS Western Regional Meeting, Las Vegas, NV.
7. Ly, A., & Orgill, M. (2022, October). *Students' perceptions of online and in-person education during the COVID-19 pandemic*. Presented at the 2022 ACS Western Regional Meeting, Las Vegas, NV.
6. Orgill, M. (2022, October). *Where do we go from here? Using lessons from the pandemic to inform future chemistry teaching*. Presented at the 2022 ACS Western Regional Meeting, Las Vegas, NV. Invited.
5. Orgill, M., Bussey, T., Wood, S., Litster, M., & Ho, W. (2012, June). *Researchers' perceptions of self-assembly: Reactions to visual representations*. Presented at the 67th Northwest Regional Meeting of the American Chemical Society, Boise, ID. Invited.

4. Bussey, T., & Orgill, M. (2008, September). *Identification of pervasive student conceptions of the central dogma and the implications for the development of a concept inventory*. Poster presented at the 42nd American Chemical Society Western Regional Meeting, Las Vegas, NV.
3. Sutherland, A., & Orgill, M. (2007, October). *Upper-level chemistry students' conceptions of buffers and acid-base equilibrium problems*. Poster presented at 41st Annual Western Regional Meeting of the American Chemical Society Meeting, San Diego, CA.
2. Chan, F., Orgill, M., & Emerich, D. (2005, April). *Biochemistry students' perceptions of buffer problems*. Poster presented at 49th Annual Meeting of the Arizona-Nevada Academy of Science, Las Vegas, NV.
1. Orgill, M., & Bodner, G. M. (2003, November). *Locks & keys and hands & gloves*. Presented at 38th Midwest Regional American Chemical Society Meeting, University of Missouri-Columbia, Columbia, MO.

State/Local

34. Orgill, M. (2023, April). *Leveraging systems thinking to prepare global citizens to meet the challenges of today and tomorrow*. Presented at the Emory University Department of Chemistry seminar series, Atlanta, GA. Invited.
33. Orgill, M. (2022, November). *Leveraging systems thinking to prepare global citizens to meet the challenges of today and tomorrow*. Presented at the University of British Columbia Department of Chemistry seminar series, Vancouver, BC, Canada. Invited.
32. Orgill, M. (2022, November). *Leveraging systems thinking to prepare global citizens to meet the challenges of today and tomorrow*. Presented virtually at the at the Purdue University chemistry education research seminar series. Invited.

33. Orgill, M. (2021, September). *Identifying the essential features of systems thinking and how they can support chemistry teaching and learning*. Presented virtually at the Loyola University Chicago Department of Chemistry and Biochemistry seminar series. Invited.
32. Orgill, M. (2020, October). *Identifying the essential features of systems thinking to support chemistry teaching and learning*. Presented virtually at the San Jose State University Department of Chemistry seminar series. Invited.
31. Orgill, M. (2019, July). *Supporting the science learning of all students: Science identity and equitable assessment in chemistry*. Presented at School of Chemistry Seminar Series, University of Sydney, Sydney, New South Wales, Australia. Invited.
30. Orgill, M. (2019, July). *Supporting the science learning of all students: Science identity and equitable assessment in chemistry*. Presented at School of Life & Environmental Sciences Seminar Series, Deakin University, Waurn Ponds, Victoria, Australia. Invited.
29. Orgill, M. (2016, November). *Influence of an international field research experience on high school teachers' understandings of science, scientists, and the practices of science and engineering*. Presented at a meeting of the Southern Nevada Section of the American Chemical Society, Las Vegas, NV. Invited.

28. Nealy, S., Carroll, K., Skaza, H., Marti, E., Gandhi, E., Dulger, M., Gerrity, D., Olson, T., Schrader, P.G., & Orgill, M. (2014, November). *Design, development, and delivery of the Nevada GEAR UP STEM Summer Institute*. Poster presented at the American Chemical Society Southern Nevada Local Section 3rd Annual Research Poster Exhibition-Competition, Las Vegas, NV.
27. Orgill, M. (2014, November). *What can biochemistry students learn from some common representations of protein translation? Multiple perspectives from the classroom*. Presented at Department of Chemistry Seminar Series, Georgia State University, Atlanta, GA. Invited.
26. Gandhi, E., Marti, E., Orgill, M., & Schrader, P. G. (2014, March). *UNLV GEAR UP activities year one: Addressing STEM education in Nevada*. Poster presented at the 2014 Graduate & Professional Student Research Forum, University of Nevada, Las Vegas, Las Vegas, NV.
25. Orgill, M. (2013, November). *What can biochemistry students learn from some common representations of protein translation? Multiple perspectives from the classroom*. Presented at Department of Chemistry Colloquium Series, University of Iowa, Iowa City, IA. Invited.
24. Orgill, M. (2013, April). *Sliding toward inquiry: Using the Essential Features of Inquiry to improve learning in the laboratory environment*. Presented as the 2012-2013 Jones Distinguished Lecture (Emporia State University), Emporia, KS. Invited.
23. Gandhi, E., Orgill, M., Schrader, P., Marti, E., Curry, C., & Greene, F. (2013, April). *GEAR UP: Addressing STEM education in Nevada*. Presented at the 2013 Festival of Communities and Green Fest, University of Nevada, Las Vegas, Las Vegas, NV.
22. Bussey, T., & Orgill, M. (2013, March). *What do biochemistry students learn from some common external representations of protein translation?* Presented at the 2013 Graduate & Professional Student Research Forum, University of Nevada, Las Vegas, Las Vegas, NV.
21. Gandhi, E., Orgill, M., & Schrader, P.G. (2013, March). *Nevada's GEAR UP: Developing and formalizing a needs analysis for professional development in STEM education*. Presented at the 2013 Graduate & Professional Student Research Forum, University of Nevada, Las Vegas, Las Vegas, NV.
20. Schrader, P.G., Orgill, M., Gandhi, E., & Marti, E. (2013, February). *UNLV, GEAR UP, and STEM: Staging a needs analysis*. Presented at the NCCEP Capacity-Building Workshop, Las Vegas, NV.
19. Hedlund, B., & Orgill, M. (2012, January). *Tengchong PIRE: Opportunities for geobiology and cultural experiences in China*. Presented at the Southern Nevada Annual Mathematics and Science Conference, Las Vegas, NV.
18. Orgill, M. (2011, April). *Defining a "big idea" in nanoscience: Researchers' responses to visual representations of self-assembly*. Presented at the Chemical Education 30th Anniversary Symposium, Department of Chemistry, Purdue University, West Lafayette, IN. Invited.
17. Orgill, M. (2011, March). *Undergraduate chemistry and biochemistry students' perceptions of and misconceptions about buffers and buffer problems*. Presented at Department Seminar Series, Department of Chemistry, Clemson University, Clemson, SC. Invited.
16. Orgill, M. (2010, October). *Undergraduate chemistry and biochemistry students' perceptions of and misconceptions about buffers and buffer problems*. Presented

at Department Seminar Series, Department of Chemistry, Grand Valley State University, Allendale, MI. Invited.

15. Orgill, M. (2010, September). *Undergraduate chemistry and biochemistry students' perceptions of and misconceptions about buffers and buffer problems*. Presented at Seminar Series, School of Life Sciences, University of Nevada, Las Vegas, Las Vegas, NV. Invited.
14. Orgill, M. (2009, November). *Undergraduate chemistry and biochemistry students' perceptions of and misconceptions about buffers and buffer problems*. Presented at Department Seminar Series, Department of Chemistry and Biochemistry, Miami University, Oxford, OH. Invited.
13. Orgill, M. (2008, November). *Making the familiar strange: Learning from students' interpretations of common chemistry concepts and figures*. Presented at Departmental Seminar Series, Department of Chemistry, University of South Florida, Tampa, FL. Invited.
12. Litster, M., & Orgill, M. (2008, February). *Using analogies to supplement the 5E instructional model.* Presented at the Southern Nevada T3 Mathematics and Science Conference. Las Vegas, Nevada.
11. Orgill, M. (2007, October). *Examining biochemistry learning from two perspectives: Biochemistry students' use and interpretation of analogies and biochemistry students' perceptions of buffers and buffer problems*. Presented at Biochemistry Seminar Series, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE. Invited.
10. Sutherland, A., & Orgill, M. (2007, August). *Upper-level chemistry students' conceptions of buffers and acid-base equilibrium problems*. Poster presented at UNLV Undergraduate Summer Research Poster Session, Las Vegas, NV.
9. Orgill, M. (2006, October). *Locks & keys and hands & gloves: How biochemistry students use and perceive analogies*. Presented at Department of Chemistry and Biochemistry Seminar, California State University, Fullerton, Fullerton, CA. Invited.
8. Orgill, M. (2006, March). *Using concept inventories as a measure of student learning*. Presented at the UNLV Academic Assessment Faire, Las Vegas, NV. Invited.
7. Orgill, M. (2004, April). *Using analogies to teach science*. Presented at Conversations in College Science Teaching, University of Missouri-Columbia, Columbia, MO. Invited
6. Orgill, M. (2004, February). *Biochemistry students' perceptions of buffer and bioenergetics problems*. Presented at Mathematics Education and Science Education Research Colloquium Series, University of Missouri-Columbia, Columbia, MO. Invited.
5. Orgill, M. (2003, June). *Biochemistry is like a circle: Analogies in biochemistry*. Presented at Departmental Seminar, Purdue University, West Lafayette, IN.
4. Orgill, M. (2002, November). *Locks and keys: How analogies are used and perceived in biochemistry classrooms*. Presented at Departmental Seminar, Purdue University, West Lafayette, IN.
3. Orgill, M. (1999, November). *Structural and kinetic studies on Escherichia coli acid phosphatase/phytase*. Presented at Departmental Seminar, Purdue University, West Lafayette, IN.

2. Orgill, M. (1995, March). *Molecular conformations of methacrylic acid: An infrared spectroscopic study*. Presented at Micro-ACS Conference sponsored by the Central Utah section of the ACS at Brigham Young University, Provo, Utah.
1. Orgill, M. (1994, March). *Molecular conformations of methacrylic acid: An infrared spectroscopic study*. Presented at Micro-ACS Conference sponsored by the Central Utah section of the ACS at Brigham Young University, Provo, Utah.

Service

National/to Profession

Leadership in Professional Societies

17. Member-at-large, ACS Committee on Education Executive Committee, 2023.
16. ACS National Award Selection Committee, 2022-2024 award cycle.
15. Member, ACS Committee on Education, 2021-2025.
14. Co-Chair, Biennial Conference Committee, ACS Division of Chemical Education, 2019-2023.
13. Associate, ACS Committee on Education, 2018-2020.
12. Immediate Past Chair, ACS Division of Chemical Education, 2018.
11. Consultant, ACS Committee on Education, 2017.
10. Chair, ACS Division of Chemical Education, 2017.
9. Member, ACS Exams Institute Board of Trustees, 2016-2018.
8. Member, ACS Division of Chemical Education Finance Committee, 2016-2023.
7. Chair-Elect, ACS Division of Chemical Education, 2016.
6. Associate, ACS Board of Publications, 2014-2015.
5. Alternate Councilor, ACS Division of Chemical Education, 2013 – 2015.
4. Member, Biennial Conference on Chemical Education (BCCE) Committee of the ACS Division of Chemical Education, 2013 – present.
3. Member, 2013 General Chemistry Exam Committee, ACS Exams Institute, 2011 – 2012.
2. Member, Program Committee of the ACS Division of Chemical Education, 2007 – 2021.
1. Member-at-large, Southern Nevada section of the American Chemical Society, 2005 - 2007.

Article Reviews*

**Not including reviews done as part of Editorial or Review Board responsibilities*

83. Reviewer for *Frontiers in Education (1* review). 2023.
82. Reviewer for *International Journal of Science Education* (2 reviews). 2023.
81. Reviewer for *Journal for STEM Education Research* (1 review). 2022.
80. Reviewer for *Journal of Chemical Education* (2 reviews). 2022.
79. Reviewer for *International Journal of Science Education* (3 reviews). 2022.
78. Reviewer for *Journal of Chemical Education* (2 reviews). 2021.
77. Reviewer for *IEEE Transactions & Society* (1 review). 2021.
76. Reviewer for *Journal of Science Education and Technology* (1 review). 2021.
75. Reviewer for *International Journal of Science Education* (3 reviews). 2021.
74. Reviewer for *International Journal of STEM Education* (1 review). 2020.
73. Reviewer for *Journal of Science Education* and Technology (1 review). 2020.

72. Reviewer for *Journal of Chemical Education* (4 reviews). 2020.
71. Reviewer for *International Journal of Science Education* (1 review). 2020.
70. Reviewer for *International Journal of Science Education* (2 reviews). 2019.
69. Reviewer for *Journal of Chemical Education* (7 reviews). 2019.
68. Reviewer of chapter for *ACS Symposium Series* volume (1 review). 2018.
67. Reviewer for *Journal of Science Education* and Technology (1 review). 2018.
66. Reviewer for *Journal of Biological Education* (1 review). 2018.
65. Reviewer for *Journal of Chemical Education* (3 reviews). 2018.
64. Reviewer for *Journal of Teacher Education* (1 review). 2018.
63. Reviewer for *Journal of Research in Science Teaching* (1 review). 2018.
62. Reviewer for *Learning and Instruction* (1 review). 2018.
61. Reviewer of chapter for *ACS Symposium Series* volume (1 review). 2017.
60. Reviewer for *Journal of Chemical Education* (3 reviews). 2017.
59. Reviewer for *International Journal of Science Education* (2 reviews). 2017.
58. Reviewer for *Journal of Research in Science Teaching* (1 review). 2017.
57. Reviewer for *Journal of Teacher Education* (1 review). 2017.
56. Reviewer for *International Journal of Science Education* (3 reviews). 2016.
55. Reviewer for *Journal of Chemical Education* (3 reviews). 2016.
54. Reviewer for *Instructional Science* (1 review). 2015.
53. Reviewer for *Journal of Science Teacher Education* (2 reviews). 2015.
52. Reviewer for *Journal of Chemical Education* (4 reviews). 2015.
51. Reviewer for *International Journal of Science Education* (3 reviews). 2015.
50. Reviewer for *Journal of Nano Education* (1 review). 2014.
49. Reviewer for *Instructional Science* (1 review). 2014.
47. Reviewer for *Journal of Chemical Education* (5 reviews). 2014.
46. Reviewer for *Journal of Science Teacher Education* (2 reviews). 2014.
45. Reviewer for *Chemistry Education Research and Practice* (4 reviews). 2014.
44. Co-guest theme editor for 2015 theme issue ("Teaching and learning about the interface between chemistry and biology"), *Chemistry Education Research and Practice*. 2014-2015
43. Member, Advisory Panel, *Chemistry Education Research and Practice*. 2014 – present.
42. Reviewer of chapters for *ACS Symposium Series* volumes (2 reviews). 2013.
41. Reviewer for *Journal of Teacher Education* (1 review). 2013.
40. Reviewer for *International Journal of Science Education* (3 reviews). 2013.
39. Reviewer for *Journal of Chemical Education* (5 reviews). 2013.
38. Reviewer for *Instructional Science* (2 reviews). 2013.
37. Reviewer for *Chemistry Education Research and Practice* (3 reviews). 2013.
36. Reviewer for *Instructional Science* (1 review). 2012.
35. Reviewer for *Chemistry Education Research and Practice* (3 reviews). 2012.
34. Reviewer for *Journal of Chemical Education* (6 reviews). 2012.
33. Reviewer for *Chemistry Education Research and Practice* (1 review). 2011.
32. Reviewer for *Journal of Science Education and Technology* (2 reviews). 2011.
31. Reviewer for *Journal of Engineering Education* (1 review). 2011
30. Reviewer for *Journal of Chemical Education* (4 reviews). 2011.
29. Consulting Editor, Editorial Board, *College Teaching*. 2011 – present.
28. Member, Review Panel, *Journal of College Science Teaching*. 2010 – present.
27. Reviewer for *Journal of Engineering Education* (1 review). 2010

26. Reviewer for *Journal of Chemical Education* (4 reviews). 2010.
25. Reviewer for *Journal of Science Teacher Education* (2 reviews). 2010.
24. Reviewer for *Journal of Research in Science Teaching* (3 reviews). 2010.
23. Reviewer for *Journal of Science Teacher Education* (1 review). 2009.
22. Reviewer for *Interdisciplinary Journal of Problem Based Learning* (1 review). 2009.
21. Reviewer for *Journal of College Science Teaching* (1 review). 2009.
20. Reviewer for *Journal of Research in Science Teaching* (1 review). 2009.
19. Reviewer for *Journal of Engineering Education* (3 reviews). 2009
18. Reviewer for *Journal of Science Education and Technology* (2 reviews). 2009.
17. Reviewer for *Journal of Science Teacher Education* (2 reviews). 2008.
16. Reviewer for *Instructional Science* (1 review). 2008.
15. Reviewer for *Journal of Research in Science Teaching* (3 reviews). 2008.
14. Reviewer for *Interdisciplinary Journal of Problem Based Learning* (1 review). 2008.
13. Reviewer for *Journal of Science Education and Technology* (1 review). 2008.
12. Member, Editorial Review Board, *Biochemistry and Molecular Biology Education*. 2008-2012.
11. Reviewer for *Chemistry Education: Research and Practice* (1 review). 2007.
10. Member, Editorial Review Board, *Electronic Journal of Science Education*. 2007-2013.
9. Reviewer for *Journal of Research in Science Teaching* (1 review). 2007.
8. Reviewer for *Interdisciplinary Journal of Problem Based Learning* (1 review). 2007.
7. Reviewer for *Journal of Science Education and Technology* (2 reviews). 2007.
6. Reviewer for *Journal of Research in Science Teaching* (2 reviews). 2006.
5. Reviewer for *Interdisciplinary Journal of Problem Based Learning* (1 review). 2006.
4. Reviewer for *Chemistry Education: Research and Practice* (1 review). 2005.
3. Reviewer for *Journal of Science Education and Technology* (2 reviews). 2005.
2. Reviewer for *Journal of Research in Science Teaching* (3 reviews). 2005.
1. Reviewer for *Journal of Research in Science Teaching* (1 review). 2004.

Meeting Organization

17. Co-organizer of symposium for the 2022 Biennial Conference on Chemical Education. West Lafayette, IN, 2022.
16. Co-organizer of two accepted symposia and an accepted workshop for the 2020 Biennial Conference on Chemical Education. Because of the global COVID-19 pandemic, the 2020 Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, these symposia and the workshop were not held.
15. Discussion leader, 2017 Gordon Research Conference (Chemistry Education Research and Practice – Chemistry Education within the National and Global Educational Context), Lewiston, ME, June, 2017.
14. Program co-chair, Division of Chemical Education, 252nd national meeting of the American Chemical Society. Philadelphia, PA, August 2016.

13. Co-organizer of symposium for 23rd IUPAC International Conference on Chemical Education. Toronto, Canada, July 2014.
12. Co-organizer of symposium for 22nd Biennial Conference on Chemical Education. University Park, PA, July 2012.
11. Program co-chair, 22nd Biennial Conference on Chemical Education. University Park, PA, July 2012.
10. Discussion leader, 2011 Gordon Research Conference (Chemistry Education Research and Practice – Foundations and Frontiers), Davidson, NC, June, 2011.
9. Organizer/coordinator of Division of Chemical Education poster sessions for 237th national meeting of the American Chemical Society. Salt Lake City, UT, March 2009.
8. Program co-chair, Division of Chemical Education, 241st national meeting of the American Chemical Society. Anaheim, CA, March 2011.
7. Co-organizer of action research poster session and 2 sessions for Teacher Researcher Day, 2008 Annual Meeting of National Science Teachers Association. Boston, MA, March 2008.
6. Co-organizer of three symposia for 20th Biennial Conference on Chemical Education. Bloomington, IN, July 2008.
5. Co-organizer of action research poster session for 2007 Annual Meeting of National Science Teachers Association. St. Louis, MO, March 2007.
4. Organizer of paper set for 2007 Annual Meeting of the National Association for Research in Science Teaching. New Orleans, LA, April 2007.
3. Co-organizer of symposium for 232nd American Chemical Society Conference. San Francisco, CA, September 2006.
2. Co-organizer of symposium for 19th Biennial Conference on Chemical Education. West Lafayette, IN, July 2006.
1. Co-organizer of symposium for 18th Biennial Conference on Chemical Education. Ames, IA, July 2004.

Textbook Reviews/Contributions

49. Reviewer of reading quizzes for Timberlake & Timberlake's *Basic Chemistry, 6e* (Pearson-Prentice Hall). 2018.
48. Accuracy reviewer of Instructors Solutions Manual for Timberlake's *Basic Chemistry, 6e* (Pearson-Prentice Hall). 2018-2019.
47. Accuracy reviewer of Instructors Solutions Manual for Timberlake's *General, Organic, and Biological Chemistry: Structures of Life, 6e* (Pearson Education). 2017-2018.
46. Accuracy reviewer of Instructors Solutions Manual for Timberlake & Timberlake's *Basic Chemistry, 5e* (Pearson-Prentice Hall). 2015.
45. Reviewer of reading quizzes for Timberlake & Timberlake's *Basic Chemistry, 5e* (Pearson-Prentice Hall). 2015.
44. Author of digital content (McGraw-Hill), 2014-2015.
43. Accuracy reviewer of Instructors Solutions Manual for Timberlake's *General, Organic, and Biological Chemistry: Structures of Life*, 5e (Pearson-Prentice Hall). 2014.
42. Accuracy reviewer, flash to HTML conversion for online chemistry content (McGraw-Hill). 2014.

41. Test bank tagging for Silberberg's *Chemistry: The molecular nature of matter and change*, 7e (McGraw-Hill). 2013-2014.
40. Accuracy reviewer and correlation developer for Bruice's General, Organic and Biochemistry text (Pearson Education). 2013.
39. Accuracy reviewer of Instructors Solutions Manual for Timberlake's *General, Organic, and Biological Chemistry, 12e* (Pearson Education). 2013.
38. Author, *Student Solutions Manual* to accompany Silberberg's *Chemistry: The molecular nature of matter and change*, 7e (McGraw-Hill). 2012-2013.
37. Author, *Instructor's Solutions Manual* to accompany Silberberg's *Chemistry: The molecular nature of matter and change*, 7e (McGraw-Hill). 2012-2013.
36. Accuracy reviewer of math remediation quizzes for Timberlake's *Basic Chemistry, 4e* (Prentice Hall). 2012.
35. Accuracy reviewer of reading quizzes for Timberlake's *Basic Chemistry, 4e* (Prentice Hall). 2012.
34. Accuracy reviewer of Instructors Solutions Manual for Timberlake's *Basic Chemistry, 4e* (Prentice Hall). 2012.
33. Accuracy reviewer of solutions manual for Timberlake's *Basic Chemistry, 4e* (Prentice Hall). 2012.
32. Digital content developer/consultant for Chang's *Chemistry*, 11e (McGraw-Hill). 2011.
31. Digital content developer/consultant for Silberberg's *Chemistry: The molecular nature of matter and change*, 6e (McGraw-Hill). 2011.
30. Accuracy reviewer of solutions manual for Timberlake's *General, Organic, and Biological Chemistry: Structures of Life*, 4e (Pearson-Prentice Hall). 2011.
29. Reviewer of Timberlake's *General, Organic, and Biological Chemistry: Structures of Life*, 3e (Pearson-Prentice Hall). 2010.
28. Accuracy reviewer of solutions manual for Timberlake's *Chemistry: An Introduction to General, Organic, and Biological Chemistry*, 11e (Pearson-Prentice Hall). 2010.
27. Digital content developer/consultant for Silberberg's *Chemistry: The molecular nature of matter and change*, 6e (McGraw-Hill). 2010.
26. Accuracy reviewer of Tro's *Chemistry: A Molecular Approach*, 2e (Pearson). 2010.
25. Developer/reviewer of online quiz site for Timberlake's *Basic Chemistry, 3e* (Prentice Hall). 2009.
24. Reviewer of Timberlake's *Basic Chemistry,* 3e (art review, Prentice Hall). 2009.
23. Member, Advisory Board for Kotz/Teichel's *Chemistry and chemical reactivity* (Cengage). 2008-2009.
22. Reviewer of online resources for Timberlake's *General, organic and biological chemistry: Structures of life, 3e* (Prentice Hall*).* 2008.
21. Reviewer of online resources for ALEKS (Assessment and Learning in Knowledge Spaces). 2008.
20. Reviewer of Tro's *Essentials of General Chemistry*, 1e (Prentice Hall). 2008.
19. Reviewer of proposed general chemistry text *Chemistry and the logic of life* (Brooks/Cole). 2008.
18. Reviewer of Silberberg's *Chemistry: The molecular nature of matter and change*, 5e (McGraw-Hill). 2007.
17. Accuracy reviewer of Gilbert, Kirss, and Davies's *Chemistry: The science in context*, 2e (WW Norton). 2007.

16. Reviewer/Technical Advisor for Timberlake's *Chemistry: An introduction to general, organic, and biological chemistry*, 9e (Prentice Hall). 2007.
15. Reviewer of Burdge's *Chemistry*, 1e (McGraw-Hill). 2007.
14. Participant, McGraw-Hill textbook symposium, Tucson, AZ. February 2007.
13. Reviewer/focus group participant for W. H. Freeman GOB textbook proposal. 2006.
12. Reviewer of Gilbert, Kirss, and Davies's *Chemistry: The science in context,* 2e (WW Norton). 2006.
11. Reviewer of Timberlake's *Basic chemistry,* 2e (Benjamin Cummings). 2006.
10. Member, Board of Advisors for Silberberg's *Chemistry: The molecular nature of matter and change* (McGraw-Hill). 2006.
9. Reviewer of preparatory/introductory chemistry textbook proposal (Wiley). 2005.
8. Reviewer of Silberberg's *Chemistry: The molecular nature of matter and change* (McGraw-Hill). 2005.
7. Comparative reviewer of Brady and Senese's *Chemistry: Matter and its changes* and Brown, LeMay and Bursten's *Chemistry: The central science*. 2004.
6. Reviewer of non-major version of Berg, Stryer, and Tymoczko's *Biochemistry* (pre-publication version). 2004.
5. Reviewer of Gilbert, Kirss, and Davies's *Chemistry: The science in context*. 2004.
4. Reviewer/focus group participant for *Chemistry: A forensic science approach*. 2004.
3. Reviewer of non-major version of Berg, Stryer, and Tymoczko's *Biochemistry* (under development). 2004.
2. Reviewer of Pratt's *Essential biochemistry, 1e*. 2004.
1. Reviewer of Berg, Stryer, and Tymoczko's Biochemistry, 5e. 2003.

Other

22. Evaluator for global essay competition for Young Voices in the Chemical Sciences for Sustainability, sponsored by the International Organization for Chemical Sciences in Development and the Royal Society of Chemistry, 2023.
21. Grant Proposal Reviewer, International Union of Pure and Applied Chemistry Committee on Chemistry Education, 2023.
20. External review of tenure and promotion applications (3 reviews), 2022.
19. External examination of international MS Thesis, Deakin University (Australia), 2021.
18. Reviewer, ACS Lasting Encounters between Aspiring and Distinguished Scientists (LEADS) Program, 2021.
17. External review of tenure and promotion applications (4 reviews), 2021.
16. Member, National Science Foundation Review Panel, Directorate for Social, Behavioral, and Economic Sciences, 2020.
15. External review of tenure and promotion applications (3 reviews), 2020.
14. Judge, American Chemical Society ChemLuminary Awards, 2020.
13. External examination of international PhD Dissertation, Universiti Brunei Darussalam, 2018.
12. External review of tenure and promotion applications (2 reviews), 2018.
11. External review of tenure and promotion applications (2 reviews), 2017.
10. Member, National Science Foundation Review Panel, Directorate for Education and Human Resources, 2017.

9. External review of tenure and promotion application (1 review), 2016.
8. External review of tenure and promotion application (1 review), 2015.
7. Member, National Science Foundation Review Panel, Division of Research in Formal and Informal Settings, 2014.
6. External review of tenure and promotion application (1 review), 2013.
5. Reviewer of ACS student affiliate grant applications to host Undergraduate programming at ACS Regional Meetings (1 review), 2013.
4. Member, National Science Foundation Review Panel, Directorate for Education and Human Resources, 2012.
3. Reviewer of ACS student affiliate grant applications to host Undergraduate programming at ACS Regional Meetings (3 reviews), 2011.
2. External review of tenure and promotion applications (2 reviews), 2011.
1. Reviewer of ACS student affiliate grant applications to host Undergraduate programming at ACS Regional Meetings, 2010.

State/Local

Meeting Organization

4. Education Co-chair for 2008 Western Regional Meeting of the American Chemical Society. Las Vegas, Nevada, September 2008.
3. Event Supervisor, *Qualitative Analysis*, Missouri Science Olympiad, April 2004.
2. Facilitator, Missouri Science Olympiad Coaches Clinic, Fall 2003.
1. Organized the undergraduate program of the Rocky Mountain Regional Meeting of the American Chemical Society. Park City, Utah, June 1995.

Other

2. Worked with representatives from across Nevada to examine prevalent misconceptions demonstrated in the State Science Proficiency Exam, 2006.
1. Volunteer, National Chemistry Week, Southern Nevada section of the American Chemical Society, 2004.

University

Student Committees

38. Chair, Doctoral Committee (Nhan Nguyen, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2022-present.
37. Member, Honors Thesis Committee (Dana Surwill, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2022.
36. Member, Doctoral Committee (Jasmine Hinton, Department of Physics & Astronomy). University of Nevada, Las Vegas, 2021-2023.
35. Member, Master's Committee (Kayla Cerminara, Department of Physics & Astronomy). University of Nevada, Las Vegas, 2021-2022.
34. Chair, Doctoral Committee (Abigale Ly, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2020-present.
33. Member, Doctoral Committee (Mary Sheppard, Department of Chemistry). University of New Hampshire, 2020-2023.
32. Member, Doctoral Committee (Liya Napollion, Department of Mechanical Engineering). University of Nevada, Las Vegas, 2019-present.

31. Member, Honors Thesis Committee (Heidi Kim, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2019-2020.
30. Chair, Doctoral Committee (Sarah York, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2019-present. [Note: Sarah was the recipient of a 2021 US NSF Graduate Research Fellowship.]
29. Member, Doctoral Committee (Amber Consul, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2017-present.
28. Member, Doctoral Committee (David Chamberlain, Health Physics and Diagnostic Sciences/Interdisciplinary Health Sciences). University of Nevada, Las Vegas, 2018-present.
27. Member, Doctoral Committee (Jessie Webb, Department of Chemistry & Biochemistry), Brigham Young University, 2018-present.
26. Chair, Doctoral Committee (Sabrina Barakat, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2017-present.
25. Member, Doctoral Committee (Rebecca Sansom, Educational Inquiry, Measurement, and Evaluation Program, McKay School of Education), Brigham Young University, 2017-2019.
24. Co-Chair, Doctoral Committee (Mehmet Dulger, Department of Teaching and Learning). University of Nevada, Las Vegas, 2016-2021.
23. Member, Doctoral Committee (Jillian Socea, School of Life Sciences). University of Nevada, Las Vegas, 2016-2021.
22. Member, Master's Committee (Jillian Socea, School of Life Sciences). University of Nevada, Las Vegas, 2015-2016. [Jillian transferred from a master's program to a doctoral program in 2016.]
21. Member, Doctoral Committee (Mehmet Dulger, Department of Teaching and Learning). University of Nevada, Las Vegas, 2015-2016.
20. Member, Master's Committee (Jessie Webb, Department of Chemistry & Biochemistry), Brigham Young University, 2014-2017.
19. Co-Chair, Doctoral Committee (Heather Skaza, Department of Teaching and Learning). University of Nevada, Las Vegas, 2014-2016.
18. Chair, Doctoral Committee (Nicole Millick Baldwin, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2014-2022. [Note: Nicole was the recipient of a 2017 UNLV Top Tier Doctoral Graduate Research Assistantship Grant and a 2022 Fellowship from the UNLV Advanced Doctoral Graduate Assistantship Completion Program.]
17. Member, Doctoral Committee (Erica Marti, Department of Civil and Environmental Engineering and Construction). University of Nevada, Las Vegas, 2013-2016.
16. Member, Master's Committee (Karrie L. Gerlach, Department of Chemistry and Biochemistry). University of Wisconsin-Milwaukee, 2012.
15. Member, Doctoral Committee (Heather Skaza, Department of Teaching & Learning). University of Nevada, Las Vegas, 2012-2014.
14. Chair, Doctoral Committee (Schetema Nealy, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2012-2018.
13. Chair, Doctoral Committee (Eshani Gandhi, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2012-2018.
12. Member, Doctoral Committee (Kyle George, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2011.

11. Chair, Doctoral Committee (Sarah Wood, Department of Chemistry & Biochemistry). University of Nevada, Las Vegas, 2010-2021.
10. Member, Doctoral Committee (Cindy L. Kern, Department of Curriculum and Instruction). University of Nevada, Las Vegas, 2009-2013.
9. Member, Doctoral Committee (Ellen K. Ebert, Department of Curriculum and Instruction). University of Nevada, Las Vegas, 2009-2012.
8. Member, Doctoral Committee (Loretta D. Asay, Department of Educational Psychology). University of Nevada, Las Vegas, 2009-2013.
7. Member, Doctoral Committee (Christopher Klug, Department of Chemistry). University of Nevada, Las Vegas, 2008-2011.
6. Chair, Doctoral Committee (Thomas Bussey, Department of Chemistry). University of Nevada, Las Vegas, 2007-2013.
5. Member, Doctoral Committee (Becky Cox-Hess, Department of Chemistry). University of Nevada, Las Vegas, 2007-2009.
4. Member, Doctoral Committee (Janice Klaassen, Department of Educational Psychology). University of Nevada, Las Vegas, 2006-2010.
3. Member, Master's Committee (Susan Garcia, Department of English). University of Nevada, Las Vegas, 2006-2008.
2. Member, Master's Committee (Jessica Farrel, Department of Biological Sciences). University of Nevada, Las Vegas, 2007.
1. Member, Honors Thesis Committee (Kyle George, Department of Chemistry). University of Nevada, Las Vegas, 2005.

Committee Work

32. UNLV College of Sciences Curriculum Committee (Department of Chemistry & Biochemistry representative), 2022 -
31. Department of Teaching and Learning (College of Education) Search Committee (for one Science Education position), 2019 - 2020. (I served as the co-chair of this committee.)
30. UNLV Faculty Affairs Scholarship of Teaching and Learning Award selection committee. University of Nevada, Las Vegas, 2019-2022.
29. Search Committee (for the Director of the UNLV Center for Mathematics, Science, and Engineering Education), Department of Teaching and Learning. University of Nevada, Las Vegas, 2018 - 2019.
28. Search Committee (for the Director of the UNLV Center for Mathematics, Science, and Engineering Education), Department of Teaching and Learning. University of Nevada, Las Vegas, 2017 - 2018.
27. College of Education Search Committee (for one Science Education position), Department of Teaching and Learning. University of Nevada, Las Vegas, 2016 - 2017.
26. Department of Chemistry Search Committee (for two Faculty In Residence positions). University of Nevada, Las Vegas, 2014.
25. General Chemistry Curriculum Committee, Department of Chemistry. University of Nevada, Las Vegas, 2013 – present.
24. Department of Chemistry Search Committee (for Radiochemist position). University of Nevada, Las Vegas, 2013-2014.
23. Department of Educational Psychology and Higher Education Search Committee (for STEM researcher position). University of Nevada, Las Vegas, 2012-2013.

22. Department of Teaching & Learning Search Committee (for Science Education position). University of Nevada, Las Vegas, 2012-2013.
21. Department of Chemistry Search Committee (for Radiochemist position). University of Nevada, Las Vegas, 2012.
20. Department of Chemistry Search Committee (for Lecturer position). University of Nevada, Las Vegas, 2012.
19. Advisor of UNLV Rebel Radio. University of Nevada, Las Vegas, 2010 - 2011.
18. Adjunct/Associate Graduate Faculty Status Committee, Department of Chemistry. University of Nevada, Las Vegas, 2010 – present.
17. Chemistry Placement Exam Review Committee, Department of Chemistry. University of Nevada, Las Vegas, 2009 – 2010.
16. Graduate Admissions Committee, Department of Chemistry. University of Nevada, Las Vegas, 2008 - present.
15. Space Committee, Department of Chemistry. University of Nevada, Las Vegas, 2008 - present.
14. Planning Committee, Instructional Laboratory Building, Department of Chemistry. University of Nevada, Las Vegas, 2007.
13. College of Sciences Search Committee (for 2 positions), Department of Chemistry. University of Nevada, Las Vegas, 2006 - 2007.
12. College of Education Search Committee (for 1 Science Education position), Department of Curriculum and Instruction. University of Nevada, Las Vegas, 2006 - 2007.
11. MAS Advisory Committee, College of Sciences. University of Nevada, Las Vegas, 2006.
10. College of Education Search Committee (for 2 Science Education positions), Department of Curriculum and Instruction. University of Nevada, Las Vegas, 2005 - 2006.
9. Assessment Committee, Department of Chemistry. University of Nevada, Las Vegas, 2005 - present.
8. Textbook Adoption Committee, Department of Chemistry. University of Nevada, Las Vegas, 2005.
7. Planning Committee, Arthur C. Clarke Center for Imagination and Opportunity. University of Nevada, Las Vegas, 2005 - 2006.
6. Gender Diversity Committee, College of Sciences. University of Nevada, Las Vegas, 2005 - 2007.
5. Math and Science Education Award Committee, College of Sciences. University of Nevada, Las Vegas, 2005.
4. Member, UNLV Center for Mathematics, Science, and Engineering Education, 2004 - present.
3. Advisor of ACS affiliate chemistry club at UNLV, 2004 - 2013.
2. Undergraduate Education Committee, Department of Biochemistry. University of Missouri-Columbia, 2003 - 2004.
1. Awards and Scholarships Committee, Department of Learning, Teaching and Curriculum. University of Missouri-Columbia, 2003 - 2004.

Other

29. Student letters of recommendation (4 letters), Department of Chemistry. University of Nevada, Las Vegas, 2023.

28. Student letters of recommendation (3 letters), Department of Chemistry. University of Nevada, Las Vegas, 2022.
27. Student letters of recommendation (6 letters), Department of Chemistry. University of Nevada, Las Vegas, 2021.
26. Student letters of recommendation (4 letters), Department of Chemistry. University of Nevada, Las Vegas, 2020.
25. Student letters of recommendation (17 letters), Department of Chemistry. University of Nevada, Las Vegas, 2019.
24. Student letters of recommendation (3 letters), Department of Chemistry. University of Nevada, Las Vegas, 2018.
23. Student letters of recommendation (15 letters), Department of Chemistry. University of Nevada, Las Vegas, 2017.
22. Student letters of recommendation (15 letters), Department of Chemistry. University of Nevada, Las Vegas, 2016.
21. Student letters of recommendation (18 letters), Department of Chemistry. University of Nevada, Las Vegas, 2015.
20. Student letters of recommendation (14 letters), Department of Chemistry. University of Nevada, Las Vegas, 2014.
19. Judge, Graduate & Professional Student Association Research Forum, University of Nevada, Las Vegas, 2013, 2014.
18. Student letters of recommendation (28 letters), Department of Chemistry. University of Nevada, Las Vegas, 2013.
17. Student letters of recommendation (25 letters), Department of Chemistry. University of Nevada, Las Vegas, 2012.
16. College-level advocate for the promotion case of Dr. Megan Litster (UNLV School of Life Sciences), College of Sciences, University of Nevada, Las Vegas, 2011.
15. Student letters of recommendation (9 letters), Department of Chemistry. University of Nevada, Las Vegas, 2011.
14. Student letters of recommendation (9 letters), Department of Chemistry. University of Nevada, Las Vegas, 2010.
13. Co-organization of Chemistry Learning Center (with Larry Tirri), Department of Chemistry. University of Nevada, Las Vegas, 2009.
12. Student letters of recommendation (11 letters), Department of Chemistry. University of Nevada, Las Vegas, 2009.
11. Student letters of recommendation (9 letters), Department of Chemistry. University of Nevada, Las Vegas, 2008.
10. Judge, Undergraduate Research Awards, University of Nevada, Las Vegas, 2008-2009.
9. Faculty marshal, December graduation ceremonies, University of Nevada, Las Vegas, 2007-2009, 2011, 2017.
8. Student letters of recommendation (14 letters), Department of Chemistry. University of Nevada, Las Vegas, 2007.
7. Student letters of recommendation (9 letters), Department of Chemistry. University of Nevada, Las Vegas, 2006.
6. Student letters of recommendation (11 letters), Department of Chemistry. University of Nevada, Las Vegas, 2005.
5. Student letter of recommendation (1 letter), Department of Chemistry. University of Nevada, Las Vegas, 2004.

4. Student letter of recommendation (1 letter), College of Education. University of Missouri-Columbia, 2004.
3. Reviewer of Student Teaching Portfolio (1 student), College of Education. University of Missouri-Columbia, Winter 2004.
2. Graduate student recruitment, Department of Biochemistry. University of Missouri-Columbia, 2003 - 2004.
1. Reviewer of Student Teaching Portfolio (1 student), College of Education. University of Missouri-Columbia, Fall 2003.