## DR. CARMEN VALDEZ GAUTHIER

The Jesse Ball DuPont Chair in the Natural Sciences

# Professor of Chemistry Department of Chemistry, Biochemistry and Physics

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# **Education**

HERS 2008- Higher Education Resources Service - Wellesley College, Wellesley, MA

2009 Higher Education Leadership Institute

Ph.D. 1989 Chemistry, University of New Hampshire, Durham, NH

Dissertation: Synthesis and Reactions of Phosphonito Polymetallic Complexes and Halogen

Oxidation of Cyclotetraphosphoxane Molybdenum Cage Complexes

Advisor: Edward H. Wong

B.Sc. 1983 Chemistry, Pontifical Catholic University of Peru, Lima, Peru

# **Employment History**

Florida Southern College: Lakeland FL (August 1999 – present)

- o Professor of Chemistry (August 2007 present)
- o Associate Professor (2004 2007)
- o Assistant Professor (1999 -- 2004)
- o Division Chair, Natural Sciences and Mathematics (2007- May 2012)
- o Chair, Department of Chemistry and Physics (2001-2003), (June 2012-May 2019)

## Responsibilities and accomplishments:

- Responsible for leading the department to attain the ACS Approved program for the Chemistry program (April 2019).
- O Developed two academic track in the chemistry major:
  - o Environmental Chemistry
  - o Forensic Chemistry
- Overseeing, development, and implementation of academic plans within the Natural Sciences and Mathematics Division, coordinating academic plans with the department chairs and providing feedback to faculty on individual faculty plans. (2009-present)
- Evaluating the assessment of all programs in the division: Biology, Chemistry, Computer Sciences,
   Computer Sciences Mathematics, Citrus and Horticulture Science, and Mathematics. (2007-present)
- O Evaluating faculty annual reports, promotion and tenure applications, faculty-student collaborative research, summer stipend and sabbatical proposals, and faculty and staff hiring. (2007- present)
- Making recommendations to the Dean of Arts and Sciences and representing 20 faculty members from the division. (2007-May 2012)
- Supporting faculty and department chairs in course development and curriculum design. (2007-May 2012)
- o Evaluating staff performance within the division 4 staff. (2007- May 2012)

- o Developing, distributing, and administering the division budget. (2007- May 2012)
- O Working with department chairs in developing class schedules for the day program. (2007- May 2012)
- O Working with the director of the evening program and deans of other schools in staffing evening courses. (2007- May 2012)
- o Responsible for hiring and continued evaluation of adjunct faculty in the division. (2007- May 2012)
- O Developed and continue to direct a mentoring program for new faculty. (2009-present)
- Worked in close collaboration with the Dean of Arts and Sciences and Provost in determining staff positions. (2008-present)
- O Involved in the hiring of 8 new full-time faculty members in Biology, Chemistry, Mathematics and Physics (2008-present)
- o Spearheaded the self-study and external evaluation for the biology, citrus and horticultural science, and the chemistry and physics departments. (2007-2008)
- Organized a retreat for the Natural Sciences and Mathematics division. (Summer 2008)
- o Established a chemical hygiene plan for the division. (2007-2009)
- Oversaw the installation and maintenance of the Nuclear Magnetic Resonance (NMR) spectrometer. (2008-2009)
- O Assisted chemistry faculty with continuous maintenance of laboratory Instruments and was responsible for NMR-He fills, AA, FT-IR, and computational software. (2000-present)
- O Wrote assessment plans and reports for the chemistry and physics department. (2001-2003; 2007-2008)
- o Responsible for instrument purchasing in the chemistry department. (2000-present)
- o Performed faculty evaluation for the chemistry department. (2001-2003)
- o Wrote and administered several grants for undergraduate summer research. (2002-2005)
- O Developed four new courses in the chemistry department and one course in the Honors Program.
  - o Bioinorganic Chemistry
  - o Descriptive Inorganic Chemistry
  - o Analytical Chemistry
  - o Forensic Chemistry
  - o Environmental Chemistry
  - o The Florida Environment: Culture, Ecology, and Place
  - o The Florida Environment: Earth, Air, Fire, and Water
  - o Inorganic Chemistry Laboratory
- o Directed undergraduate student research in chemistry. (2001 present)
- Served as faculty advisor for the FSC-Chapter of the American Chemical Society. Chapter has received a commendable or outstanding award in the last eight years. (2000-2013)
- Established the Gamma Sigma Epsilon Chemistry Honor Society and served as the faculty advisor. (2001-2013)
- o Represented the college at several student and community functions. Dreyfus Foundation, President Council, Day on Campus, Lakeland Chamber of Commerce.

# Pontifical Catholic University of Peru: Lima, Peru (March 2015-June 2015, August 2016 – December 2016)

- O Visiting faculty in the Chemistry Department
- O Visiting Faculty in the School of Engineering Collaboration with the Civil Engineering Department and the Corrosion and Protection Institute.

#### Responsibilities and accomplishments

- o Developed and taught a course in Bioinorganic Chemistry
- o Research in the area of synthesis of metal-organic materials using electrochemical approaches
- o Work with Civil and Mechanical engineering faculty in developing application for metal organic materials in the area of construction.
- o Gave scientific seminars in the chemistry department and the corrosion and protection institute.

O Mentored students in research and soft skills.

#### University of South Florida: Tampa, FL (January 2015 - March 2015)

o Sabbatical Visitor in the Chemistry Department - Collaboration with Dr. J. Harmon

#### Responsibilities and accomplishments:

- o Research in the area of polymer composites.
- Use techniques utilized in polymer characterizations such Differential Scanning calorimeter (DSC) and dielectric spectroscopy.
- O Submitted two abstract to a national and an international conference.

### University of South Florida: Tampa, FL (January 2007 - June 2007)

o Sabbatical Visitor in the Chemistry Department - Collaboration with Dr. M. J. Zaworotko

# Responsibilities and accomplishments:

- o Research in the area of co-crystals and purification of Epigalocatechin gallate (EGCG).
- Obtained single x-crystal structure of a co-crystal of EGCG.
- o Master use of Powder X-ray.
- o Co-author of a patent "Co-Crystal Forms of Flavonoids with Pharmaceutical Acceptable Molecules."
- o Mentored graduate students in Dr. Zaworotko's labs.
- Developed applications of Mercury and Cambridge Crystallographic Structural Database for the FSC undergraduate inorganic course.
- o Collaborated with Dr. Julie Harmon on "Polymer Composites using Metal-Organic Frameworks."
- O Attended research seminars in the chemistry department.

# University of Illinois at Urbana-Champaign: Urbana, IL (September 2006 – December 2006)

o Sabbatical Visiting Associate Professor in the Chemistry Department - Collaboration with Dr. P. Kelter.

#### Responsibilities and accomplishments:

- O Attended first-year chemistry classes for engineers at UIUC and participated in weekly meetings with Teaching Assistants to evaluate students' success.
- o Participated in meetings with MIST-STEP grant Principal Investigators.
- o Co-organizer of the 2<sup>nd</sup> Biennial Conference of the International Center for First-Year Undergraduate Chemistry Education (ICUC) meeting held at the University of Colorado-Boulder.
- o Attended and led the round table discussion on sustainability at the International Meeting ICUC-PIEQ XV of Sustainable Development in Chemical Education. (Argentina, October 2006)
- o Attended weekly meeting to discuss advances in inorganic chemistry.
- o Participated in weekly meeting with the Latin American Studies department on topics of education and indigenous rights in a global arena.

#### Out-Of-Door Academy: Sarasota, FL (August 1996 – June 1999)

- O Department Head (August 1996 June 1998)
- o Grades 9-12 science teacher (1996 1999)

#### Responsibilities and accomplishments:

- o Established new science program.
- o Developed the science program for the high school, including lab design, purchasing and hiring of faculty.
- o Developed and oversaw science budget for K-12.
- o Coordinated the implementation of a new science curriculum for PK-12.
- o Established partnerships with local organizations such as the Marie Selby Botanical Garden.

- o Developed two new courses for the high school curriculum: Forensic Chemistry and Environmental Studies.
- o Developed interdisciplinary curriculum with the art department.
- o Taught AP Chemistry, Honors Chemistry, and Honors Physics.

# Manatee Community College: Bradenton, FL (August 1995 - July 1996)

o Adjunct Professor in the Natural Science Department

## Responsibilities and accomplishments:

- o Taught Physical Science.
- O Developed two chemistry courses: Chemistry I and II for allied health sciences.

# Salem State College: Salem, MA (August 1989 – December 1994)

- o Assistant Professor in the Chemistry and Physics Department (September 1990 December 1994)
- o Math and Science Coordinator for the Alternatives for Individual Development (A.I.D.) and Student Support Service (S.S.S.) (September 1989 August 1990)

## Responsibilities and accomplishments:

- o Taught courses in chemistry and in the interdisciplinary studies program.
- O Developed a summer research course for students enrolled in the McNair Summer Program.
- o Coordinator for the Charlotte Forten Honors Program. Responsible for recruitment, mentoring and curriculum development.
- Participated in the development and training of middle school teachers in Interdisciplinary Math/Chemistry Education at Eastern Junior High School in Lynn, MA. The program was funded by the Turning Point Carnegie Grant, 1993 – 1994.
- Coordinated the math and science support classes for students enrolled in the A.I.D. and S.S.S. programs.

# University of New Hampshire; Durham, NH (September 1983 – December 1988)

- o Research Assistant (1986-1988)
- Teaching Assistant (1983 1986)

#### Responsibility and accomplishments:

- o Graduate Student Research Assistantship Award
- o Worked in the synthesis, characterization and study of air-sensitive organometallic compounds.
- o Extensive experience in Nuclear Magnetic Resonance (NMR), Infrared and Ultraviolet Spectroscopy, and Chromatography.
- O Prepared experiments, laboratory lectures, supervised students in the laboratory, graded laboratory reports, conducted help sessions for General Chemistry students, proctored and graded quizzes and exams.
- Set-up experiments, prepared laboratory hand-out and laboratory lectures, graded laboratory reports for Advanced Physical Chemistry and Advanced Inorganic Chemistry.

# Courses Taught (courses developed are marked with an \*)

# Florida Southern College, Lakeland FL (1999 – present):

- o \*Bioinorganic Chemistry
- o \*Descriptive Inorganic Chemistry (CHE 2255-lecture and lab).
- o \*Analytical Chemistry (CHE 2235-lecture and lab).
- o \*Bioinorganic Chemistry (CHE 4450)
- o Honors Thesis (HON 4495 and HON 4496).
- o Honors within the Major (HON 4493 and 4494).

- o Introduction to Research (CHE 4410)
- o Undergraduate Research in Chemistry (CHE 392, CHE 492, CHE 493, CHE 494).
- o Inorganic Chemistry (CHE 406-lecture and \*laboratory).
- o Advanced Inorganic Chemistry (\*CHE 4455)
- o Applied Physical, Analytical, and Inorganic Chemistry (CHE 3320)
- o Senior Seminar (CHE 499).
- o Quantitative Analysis (CHE 206, lecture and laboratory).
- o College Chemistry (CHE 111, lecture and laboratory).
- o College Chemistry with Qualitative Analysis (CHE 112, lecture and laboratory).
- o \*Forensic Chemistry (CHE 2275-lecture and laboratory).
- o \*Environmental Chemistry.
- o Environmental Investigations and Insights (HON 1173)
- o \*The Florida Environment: Culture, Ecology and Place (HON 196).
- o \*Florida Environment: Earth, Air, fire, and Water (HON 197).
- o Interdisciplinary Topics in Science (PSC 197).
- o Physical Science (PS 105, lecture).
- o Physiological Chemistry (CHE 211).
- o Introduction to Women's Studies (WST 201).
- o First-Year Seminar (FYS 101).

### Out-Of-Door Academy (1996 - 1999):

- o Chemistry.
- o Honors Chemistry.
- o Advanced Placement Chemistry.
- o Physics.
- o Environmental Science.
- o Forensic Science.

#### Manatee Community College (1995-1996):

- o Chemistry for Non-majors I and II (lecture and laboratory).
- o General Physical Science I (lecture).

### Salem State College (1989 - 1994):

- o Foundation of Chemistry I (lecture and laboratory).
- o General Chemistry of Life Processes (lecture and laboratory).
- o Chemistry of Life Processes (lecture and laboratory).
- o General Chemistry laboratories for chemistry and engineering majors.
- o Physical Chemistry II (lecture and laboratory).
- o \*Advanced Inorganic Chemistry Laboratory.
- o \*Research Seminar.
- o First Year Seminar I and II.
- o \*Introductory Chemistry course for high school students enrolled in the Upward Bound Program.

# **Publications**

#### **Peer-Reviewed Publications:**

- O Copper (II) Complexes with Tridentate Bis(pyrazolylmethyl)pyridine Ligands: Synthesis, X-Ray Crystal Structures and ε-Caprolactone Polymerization," J. Rueda-Espinosa, J. F. Torres, **C. Valdez Gauthier,** L. Wotjas, G. Verma, M. Macias, J. Hurtado, *Chem. Select*, 2017, 2 (30), 9815-9821.
- o "Synthesis and applications of metal-organic frameworks in the formation of composite materials," **C. Valdez Gauthier**, *Proceedings of the XXXI Latin American Congress of Chemistry*, October 2014.

- o "Poly(methylmethacrylate) composites of copper-4, 4'-trimethylenedipyridine", Shisi Liu, Lukasz Wojtas, <u>Justin Massing</u>, **C. Valdez Gauthier**, Julie P. Harmon, *New J. Chem.*, 2012, 36, 1449-1456.
- O Spattering of hot cooking oil with water, G Pinto, C. Valdez Gauthier, J. Chem. Educ., 2009, 86 (11), 1281-1285.
- o Some consideration regarding the active learning in chemistry, G Pinto, **C. Valdez Gauthier**, P. Kelter, G. Weaver, Chem. Educator [online], 2008; DOI 10.1333/s00897082130a.
- Writing in an Introductory Chemistry Course for Non-Science Majors; C. Valdez Gauthier,
   Crosscurrent, Journal of Writing Across the Curriculum at Salem State College; Donnalee Rubin, editor, 1993, 7
   9.
- O Phytochemistry Studies of the Lichen Usnea Sp.; P. Morales, J. Robles, A. Pastor de Abram, K. Gallagher, and **C. Valdez Gauthier**; *Quimica*, 1993, 7, 13-19.
- Halogenated Derivatives of the Dimolybdenum Tetraphosphoxane Cage; M. M. Turnbull, C. Valdez,
   E. H. Wong, E. J. Gabe, and F. L. Lee; *Inorganic Chemistry*, 1992, 31, 208 214.
- o Tetradentate Ligands for the Mo-Mo Quadruple Bond; E. H. Wong, **C. Valdez**, E. J. Gabe, and F. L. Lee; *Polyhedron*, 1989, 8, 1 5.
- Two Approaches to the Synthesis of Bimetallic Cage Complexes of the Tetraoxatetraphosphorinane [RPO]<sub>4</sub> Ring; E. H. Wong, M. M. Turnbull, K. D. Hutchinson, **C. Valdez**, E. J. Gabe, F. L. Lee, and Y. Pe Page; *J. Am. Chem. Soc.*, 1988, 112, 8422 8428.

#### **Electronic Publications:**

- o The Japan Syndrome; **C. Valdez Gauthier**, VIPEr, <a href="https://www.ionicviper.org/literature-discussion/japan-syndrome">https://www.ionicviper.org/literature-discussion/japan-syndrome</a> (accessed February 27, 2016)
- Synthesis, Characterization, and Computational Modeling of [Co(acacen)L<sub>2</sub>]<sup>+</sup>, an Inhibitor of Zinc Finger Proteins; Elizabeth Bajema, Christopher Bailey, C. Valdez Gauthier, James Jeitler, Peter Craig and Shaun E. Schmidt, VIPEr, <a href="https://www.ionicviper.org/lab-experiment/synthesis-characterization-and-computational-modeling-coacacenl2-inhibitor-zinc">https://www.ionicviper.org/lab-experiment/synthesis-characterization-and-computational-modeling-coacacenl2-inhibitor-zinc</a> (accessed February 27, 2016).
- Cobalt Schiff Base Zinc Finger Inhibitors; Elizabeth Bajema, Christopher Bailey, C. Valdez Gauthier, James Jeitler, Peter Craig and Shaun E. Schmidt, VIPEr, <a href="https://www.ionicviper.org/literature-discussion/cobalt-schiff-base-zinc-finger-inhibitors">https://www.ionicviper.org/literature-discussion/cobalt-schiff-base-zinc-finger-inhibitors</a>, (accessed February 27, 2016).

# **Publications and Reports**

- Chapters in Peru and Florida Build Skills and Outreach Programs Together, **C. Valdez Gauthier and Betty Galarreta**, *In Chemistry*, January 23, 2023, <a href="https://inchemistry.acs.org/student-chapters/chapters-in-peru-and-florida-build-professional-skills-and-outreach-programs-together.html">https://inchemistry.acs.org/student-chapters/chapters-in-peru-and-florida-build-professional-skills-and-outreach-programs-together.html</a>.
- o Reaching out to the next generation: Working with High School Chemistry Clubs, **C. Valdez Gauthier**, *In Chemistry*, 2008, 17 (3), pp 10-13.
- O College-High School collaboration program to enhance learning in chemistry, **C. Valdez Gauthier**, C. Pierce, pages 331-338 in *Aprendizaje Activo de Química y Física*, Equipo Sirus, 1st Ed., Spain, 2007.
- Integrating Library Research into Chemistry Courses, C. Valdez Gauthier and M. M. Flekke, chapter in Survival Handbook for the New Chemistry Instructor, D. M. Bunce and C. Z. Muzzi, Eds. Prentice Hall, 2003.

# **Presentations**

### Peer Reviewed Oral Presentations (undergraduate students' names are underlined):

Earth week during the pandemic: an international collaboration. Galarreta, B., **Gauthier C. V.**; 73<sup>rd</sup> Southeastern Regional Meeting American Chemical Society Meeting, Puerto Rico, October 2022.

- Research in Metal-Organic Materials with undergraduates students. Gauthier C. V.; Congreso Iberoamericano de Quimica and XXIX Congreso Peruano de Quimica (invited speaker), Lima-Peru, October 2018
- Modifying organic polymers using metal-organic materials: A perspective from a Fulbright fellow in Peru. Gauthier, C. V.; Nakamatzu, J.; Kim, S.; 253th ACS National Meeting, San Francisco, CA, March, 2017.
- o "Synthesis and applications of metal-organic frameworks for tuning of polymers properties," C. Valdez Gauthier, VII International Congress of Materials, Cusco-Peru, October 2016.
- Establishing successful interdisciplinary collaborations in Peru. C. Valdez Gauthier, The International Chemical Congress of the Pacific Basin Societies 2015 (Pacifichem 2015), Honolulu, HI, December 2015.
- O Synthesis of metal-organic materials (MOMS) using a microwave reactor. **C. Valdez Gauthier**, J.J. Flanagan, 250th ACS National Meeting, Boston, MA, August 2015.
- Synthesis and applications of metal-organic materials (MOMs) in the formulation of composite
  materials containing methyl-methacrylate. C. Valdez Gauthier, Cycle of Scientific Conferences
  organized by the Peruvian Chemical Society, Lima, Peru. May 2015.
- Synthesis and application of metal organic frameworks in the formulation of composite materials. C.
   Valdez Gauthier, J. Harmon, Grace Beggs and Wei Pin Teh, 31st Latin American Congress of Chemistry, Lima, Peru, October 14-17, 2014.
- Outreach is more than arm's length: Scientific exploration through chemistry, C. Valdez Gauthier and D. Bromfield Lee, 23<sup>rd</sup> International Conference on Chemistry Education, Toronto, Canada, July 13-18, 2014.
- Fostering worldwide interchange of ideas in chemical education through involvement in the International Activities Committee, C. Valdez Gauthier, 247th ACS National Meeting, Dallas, TX, March 2014.
- Establishing a cultural network through chemical education, P. Morales Bueno and C. Valdez Gauthier 245<sup>th</sup> ACS National Meeting, New Orleans, LA, April 2013.
- Building connections through mentorship and other activities, C. Valdez Gauthier, Cheryl Pierce, and Karen Kaleauti, 2012 Biennial Conference on Chemical Education (BCCE), Pennsylvania State University, PA, July 2012.
- o International perspectives in chemical education for a sustainable world, **C. V. Gauthier C. Valdez Gauthier** ACS National Meeting, San Diego, CA, March 2012.
- o Integrating a service learning component to outreach efforts to chemistry clubs, **C. Valdez Gauthier**, C. Pierce, 238th ACS National Meeting, Washington, DC, August 2009.
- o Reaching out to the next generation: A collaboration between a college and local high schools, **C. Valdez Gauthier**, C. Pierce, 236<sup>th</sup> ACS National Meeting, Philadelphia, PA, August 2008.
- O Incorporating multinuclear NMR spectroscopy in the inorganic chemistry course, **C. Valdez Gauthier**, 20th Biennial Conference on Chemical Education, Indiana University, IN, July 2008.
- A shared PBL experience in general chemistry: Collaboration across boundaries, **C. Valdez Gauthier**, P. Morales-Bueno, 20th Biennial Conference on Chemical Education, Indiana University, IN, July 2008.
- o It all started in the Goat Room: Reflections from a forensic science workshop, **C. Valdez Gauthier** 233<sup>rd</sup> ACS National Meeting, Chicago, IL, March 2007.
- o Great ideas in chemistry: A day of sharing, **C. Valdez Gauthier**, G. Sellers, 19th Biennial Conference on Chemical Education, Purdue University, IN, July 2006.
- o Balancing research/teaching/outreach at four-year institutions, **C. Valdez Gauthier** 231st ACS National Meeting, Atlanta, GA, March 2006.
- o A bag full of chemistry, **C. Valdez Gauthier**, G. Sellers, and C. Pierce; Florida Association of Science Teachers Annual Meeting, Orlando, FL, November 2005.
- Integrating a longer-term research project in a first-year chemistry course, C. Valdez Gauthier; First Year Undergraduate Chemistry Education International Conference, University of Illinois at Urbana-Champaign, IL, May 2005.

- o Thin film deposition of a nitro-nanoball structure on gold and graphite surfaces using photoemission spectroscopy, **C. V. Gauthier**, R. Schlaf, M. M. Beerbom, B. Lägel, B.V. Doran, J. J. Perry IV<sup>3</sup>, and M. J. Zaworotko; 229<sup>th</sup> ACS National Meeting, San Diego, CA, March 2005.
- Synthesis and Characterization of Coordination Polymers with Copper (II), 1,3-Adamantanedicarboxylic Acid and Amine Derivatives, C. Valdez Gauthier, S. E. Bronson, J. F. <u>Capetillo</u>, and <u>H. Darwiche</u>; 26<sup>th</sup> Latin American Congress of Chemistry, Salvador-Bahia, Brazil, May 2004.
- Adapting Traditional Laboratory Experiments to Inquiry-Based Experiments in the General Chemistry Courses, C. V. Gauthier, and G. Sellers; 26th Latin American Congress of Chemistry, Salvador-Bahia, Brazil, May 2004.
- o Art and Chemistry Come Together During National Chemistry Week, **C. Valdez Gauthier** and Elizabeth Newton; 223<sup>rd</sup> ACS National Meeting, Orlando, FL, April 2002.
- Integrating Library Research into a Chemistry Course, C. Valdez Gauthier and M.M. Flekke; 222<sup>nd</sup> ACS National Meeting, Chicago, IL, August 2001.
- o Teaching General Chemistry Using Jenzabar, **C. Valdez Gauthier**, ACS 30<sup>th</sup> Northeast Regional Meeting, Durham, NH, June 2001.
- O Conectando Quimica a la Historia y el Arte: Como Se Desarrollo el Blue Jeans? **C. Valdez Gauthier** and Jane Dalton; XXIV Latin American Congress of Chemistry, Lima Peru, October, 2000.
- o Stimulating Thought in Science Trough Art: Why Blue Jeans are Blue?, **C. Valdez Gauthier** and Jane Dalton; NSTA 2000 National Convention, Orlando, FL, April, 2000.
- o Interfering with your Vision: Connections of Art and Chemistry, **C. Valdez Gauthier** and Rona Glasser; NSTA 2000 National Convention, Orlando, FL, April 2000.
- o An Integrated Approach to Writing Research Papers in Chemistry, **C. V. Gauthier** and Deborah Iannitto; 15th Biennial Conference on Chemical Education, Waterloo, Ontario-Canada, August 1998.
- o A Potpourri of Writing Assignments in Chemistry. **C. Valdez Gauthier**; X Latin-American Symposium of Chemical Education, Lima-Peru, October 1996.
- Molybdenum Complexes of Cyclo-Triphosphoxane [RPO]<sub>3</sub> and Cyclo-Tetraphosphoxane [RPO]<sub>4</sub>, C. Valdez, M. M. Turnbull, and E. H. Wong; American Chemical Society National Meeting, September, 1988.

#### Peer Reviewed Poster Presentations (undergraduate students' names are underlined):

- Opportunities for international research, teaching, and community outreach collaborations, **C. Valdez Gauthier**, 47th IUPAC World Chemistry Congress, July 2019, Paris, France.
- Self-assembly of metal organic materials incorporating 1,3-adamantanedicarboxylic acid and 1,3 bis(4-pyridyl) propane for tuning of polymer properties. C. Valdez Gauthier, J.J. Flanagan, G. Beggs, J. Harmon, G. Craft, and A. Lopez, The International Chemical Congress of the Pacific Basin Societies 2015 (Pacifichem 2015), Honolulu, HI, December 2015.

#### **Invited Presentations:**

- "Mentoring and Fostering Collaborations in Chemical Education Research and Teaching,"
   C. Valdez Gauthier, A Shared Journey of Research: Honoring Maria Oliver-Hoyo, American Chemical Society National Meeting, March 2023, Indianapolis, IN.
- o "Challenges and opportunities during the pandemic," **C. Valdez Gauthier**, Resilience of (Women in) Chemistry Symposium, American Chemical Society National Meeting, August 2022, Atlanta, GA.
- o "Challenges and opportunities in an academic career path," **C. Valdez Gauthier,** Symposium on Career Opportunities in Chemistry, Pontifical Catholic University, Lima-Peru, August 2020 (Zoom symposium).
- "Applications of chemistry at the pre-Columbian archeological site in Peru: Huaca de la Luna," C.
   Valdez Gauthier, as part of the Archeology club lecture series, Winter Haven, FL, November 2017.
- o "50-years of chemistry: synthesis, characterization, and application of MOMs," **C. Valdez Gauthier,** Pontifical Catholic University of Peru, August 2017, Lima, Peru.

- o "Metal-organic materials: An integrated approach involving basic research, applications, and international collaborations," **C. Valdez Gauthier**, Techsuyo 2017, Stanford University. This was a meeting between scientists, government officials, and venture capitalists in the US and the government of Peru, Palo Alto, CA, August 2017.
- o "Applications of metal-organic materials in the fine tuning of polymers properties," **C. Valdez Gauthier**, Physics Colloquium, Pontifical Catholic University of Peru, Lima-Peru, October 2016.
- Self-assembly of metal-organic materials for tuning of polymer properties, C. Valdez Gauthier,
   University of North Carolina-Charlotte Department of Chemistry Seminar Series, Charlotte, NC,
   February 8, 2015.
- Synthesis and applications of metal-organic materials (MOMs) in the formulation of composite
  materials containing methyl-methacrylate, C. Valdez Gauthier, Cycle of Scientific Conferences
  organized by the Peruvian Chemical Society, Lima, Peru, May 28, 2015.
- o Synthesis and applications of metal-organic frameworks, **C. Valdez Gauthier**, Corrosion and Protection Institute of the Pontifical Catholic University of Peru, Lima, Peru, May 12, 2015.
- O Career launch and acceleration as a chemist, **C. Valdez Gauthier**, Universidad Nacional Mayor de San Marcos, Lima, Peru, April 16, 2015.
- O Synthesis and application of metal organic materials in the formulation of composite materials, **C. Valdez Gauthier**, Universidad Nacional Mayor de San Marcos, April 15, 2015.
- Promoting chemical education collaborations among four-year institutions and high schools, C. V.
   Gauthier, Best practices in the teaching and learning of chemistry: international sharing of methods, insights, and results, 22<sup>nd</sup> International Conference on Chemistry Education, Rome, Italy, July 18, 2012.
- o Green Chemistry and sustainable education, **C. Valdez Gauthier**, Global Sustainability symposium, Universidad de Concepcion, Concepcion, Chile, October 12, 2011.
- o Fostering collaborations between higher education and K-12 schools, **C. Valdez Gauthier**, 43<sup>rd</sup> IUPAC Congress, San Juan, Puerto Rico, August 3, 2011.
- Partnerships between a college chemistry department and high schools: A recipe for deep learning in chemistry, **C. Valdez Gauthier**, 27th Annual High School-University Chemistry Teacher's Conference, University of Colorado-Boulder, CO, October 23, 2010.
- Aprendizaje de química a través del servicio a la comunidad- un proyecto en Florida Southern College, C. Valdez Gauthier, Ibero-American Congress of Chemistry, Cuzco-Peru, October 14, 2008.
- College-High School collaborations to enhance deep learning in chemistry, C. Valdez Gauthier, Chemical Engineering Department, E.T.S.I. Industriales, Universidad Politecnica de Madrid, Madrid, Spain, June 2007.
- A collaboration experience between a college, a professional organization, and a high school in order to enhance the teaching and learning of chemistry, C. Valdez Gauthier Reunión Internacional ICUC-PIEQ XV de Educación Química para el Desarrollo Sustentable (Plenary Speaker), San Luis, Argentina, October 2006.
- The Balancing Act: Teaching, Research and Community Service at a Four-Year Institution, C.
   Valdez Gauthier, Careers in Academia Lecture Series, University of Illinois at Urbana-Champaign, Urbana, IL, December, 2006.
- Síntesis y estudios de formación de capas múltiples de estructuras supramoleculares usando la espectroscopía de fotoemisión, C. Valdez Gauthier, 2006 Chemistry Department Seminar, Pontifical Catholic University of Peru, Lima, Peru, November, 2006.
- Synthesis and thin film deposition studies of supramolecular structures using photoelectron spectroscopy, C. Valdez Gauthier, Chemistry Lecture Series, University of North Carolina – Wilmington, NC, February 2006.
- O Diseño y Síntesis de Redes Metalo-Orgánicas que Contienen Cobre (II), Ácidos Carboxílicos y Aminas; **C. Valdez Gauthier**, J. F. Capetillo, A. Vedenko, and B. West; 5th International Congress on Chemistry and Chemical Engineering, Havana, Cuba, October, 2004.

- Self-assembly of supramolecular structures using polycarboxylic Acids and Amine Derivatives, C.
   Valdez Gauthier, Chemical Lecture Series, Pontifical Catholic University of Peru, Lima, Peru, July 2003.
- O How can one do research in a predominantly teaching institution with limited resources?, **C. Valdez Gauthier**; 17<sup>Th</sup> Congreso de Quimica, Santiago de Cuba, Cuba, December 2002.
- O Career Opportunities in Chemistry, **C. Valdez Gauthier** as part of the Great American Teach-In, Plant City High School, Plant City, FL, November 2001.
- Helping Young Women to Succeed in Science, C. Valdez Gauthier, conference for middle school girls, parents and teachers; organized by the American Association of University Women-Venice Chapter, Venice, FL, March 1997.
- o Increasing the Success Rate of Latina Students in the Sciences, **C. Valdez Gauthier**, Faculty Symposium, Wellesley College, Wellesley, MA, July 1994.
- O Are we going in the same direction? **C C. Valdez Gauthier**, Minority Faculty/Student Forum, Salem State College, Salem, MA, January 1994.
- O Succeeding as a Minority Student in a Predominantly White College, **C. Valdez Gauthier** African-American and Hispanic Society Lecture Series at Salem State College, Salem, MA, April 1994.
- o Synthesis and Reactions of Polyphosphoxane Complexes, **C. Valdez Gauthier**, Chemical Lectures Series, Pontifical Catholic University of Peru, Lima, Peru, June 1993.
- Chemical Education: A New Approach for Teaching Chemistry at the Elementary School Level, C.
   Valdez Gauthier, Chemical Lectures Series, Pontifical Catholic University of Peru, Lima, Peru, June 1993.
- Chemical Education: An Overview of the Project PALMS (Partnerships Advancing the Learning of Mathematics and Science) in Massachusetts, C. Valdez Gauthier Peruvian Chemical Society, Lima, Peru, June 1993.

## Invited Lectures at Florida Southern College:

- o "Research and Applications of Metal-Organic Materials (MOMs): A Perspective from a Fulbright Scholar in Peru," C. Valdez Gauthier, Fiat Lux Keynote Event, Florida Southern College, Lakeland, FL April 2023.
- o "Implicit Bias in STEM," **C. Valdez Gauthier**, American Chemical Society FSC Chapter, Florida Southern College, Lakeland, FL, November 2021.
- o "My Journey Through Chemistry," **C. Valdez Gauthier**, Gamma Sigma Epsilon Induction ceremony, Florida Southern College, Lakeland, FL, April 2019.
- o "Women in Chemistry," **C. Valdez Gauthier,** as part of the Women in Stem course. I was invited by Dr. Melanie Langford, Florida Southern College, April 2017.
- o "MOMs in Mila: Doing Research Abroad," **C. Valdez Gauthier**, as part of the Chemistry, Biochemistry, and Physics Lecture Series, March 2017.
- O Common Threads, **C. Valdez Gauthier**, New Students' Welcome Convocation, Florida Southern College, Lakeland, FL, August 2006.
- o The Shroud of Turin, **C. Valdez Gauthier**, Florida Center for Science and Religion, Florida Southern College, Lakeland, FL, April 2006.
- o Much Ado About Chocolate, **C. Valdez Gauthier**, Family Weekend, and Homecoming Weekend, Florida Southern College, Lakeland, FL, April 2005 and October 2005.
- o Forensic Chemistry, **C. Valdez Gauthier**, Bite of FSC, Florida Southern College, Lakeland, FL, February 2005.
- o From Escher to Supramolecular Chemistry Undergraduate Research at FSC, **C. Valdez Gauthier**, President's Council meeting, Florida Southern College, Lakeland, FL, February 2005.
- Education Across Cultures. Diversity Council of the Lakeland Chamber of Commerce, Lakeland, FL, August 2004.

# Research Presentations made by C. Valdez Gauthier's undergraduate students at national and regional meetings (name of undergraduate authors are underlined):

- o Metal Organic Materials synthesis and applications to development of latent fingerprints, <u>Emmelyne McGovern</u>, C. Valdez Gauthier, 263<sup>rd</sup> ACS National Meeting, San Diego, CA March 2022.
- O Synthesis of zinc-metal-organic materials for biomedical applications drug delivery, <u>Prasamsa Surapaneni</u>, C. Valdez Gauthier, 263<sup>rd</sup> ACS National Meeting, San Diego, CA March 2022.
- o Preparation of zinc metal-organic materials towards drug delivery vessels, <u>Alec Bigness</u>, J.M. Montgomery, and C. Valdez Gauthier\*, 257th ACS National Meeting, Orlando, FL March 2019.
- Synthesis of Zinc (1,3-adamantane dicarboxylic acid) complexes with varying nitrogen compound linkages with high thermal stability, <u>Jerrod Flanagan</u>, C. Valdez Gauthier, 2014 SERMACS meeting, Nashville, TN, October 2014.
- Synthesis and characterization of [M(1,3-adamantanedicarboxylic acid)(4,4'-trimethylenedipyridine)],
   M = Cu<sup>2+</sup>, Co<sup>2+</sup>, Grace Beggs, Wei Pin Teh, C. Valdez Gauthier, 247th ACS National Meeting, Dallas,
   TX, March 2013. [ORAL]
- Synthesis of novel transition metal complexes using oxydiacetate as primary ligand and 2, 2' pyridine as auxiliary ligand, <u>WeiPin Teh</u>, C. Valdez Gauthier, Florida Annual Meeting and Exposition (FAME)-2013, Palm Harbor, FL, May 2013
- O Microwave assisted synthesis of imide ligands and metal organic frameworks, <u>Nicholas Traversa</u> and C. Valdez Gauthier, 245<sup>th</sup> ACS National Meeting, New Orleans, LA, April 2013.
- Effect of reactions conditions on copper-4,4'-trimethylenepyridine and 1,3-adamantane dicarboxylic acid formation, <u>Grace Beggs</u> and C. Valdez Gauthier, 245th ACS National Meeting, New Orleans, LA, April 2013.
- o Solid state synthesis of imide ligands, <u>Sarah Grossman</u>, and C. Valdez Gauthier, 44th Biennial Conference of Gamma Sigma Epsilon Chemistry Honor Society, Pembroke, NC, March 2011.
- o Synthesis of metal-organic frameworks using copper (II) and dicarboxylic acids, <u>Patricia Gomez</u>, and C. Valdez Gauthier, 239th ACS National Meeting, San Francisco, CA, March 2010.
- o Complexation studies of cobalt II and teraphenylporphyrins, <u>Madelane Teran</u>, and C. Valdez Gauthier, 238th ACS National Meeting, Washington, DC, August 2009.
- Synthesis of coordination polymers using the imide ligand [N-(4-carboxyphenyl)-5-carboxypthalimide] and other novel imide ligands, <u>A. Tamasi, L. Wolfe</u>, and C. Valdez Gauthier, 237th ACS National Meeting, Salt Lake City, UT, March 2009.
- Synthesis and coordination of novel imide ligands from 1,2,4-benzenetricarboxylic anhydride and aminobenzoic acid derivatives: A green chemistry approach, <u>J. Massing, K. Yerton</u> and C. Valdez Gauthier; 235th ACS National Meeting, New Orleans, LA, April 2008.
- O Synthesis and Characterization of {[Co<sub>2</sub>(1,3-ADC)<sub>2</sub>(4,4'-BPY)<sub>4</sub>(NO<sub>3</sub>)<sub>2</sub>]•MeOH}<sub>n</sub>. Courtney Baker and C. Valdez Gauthier; 233<sup>rd</sup> ACS National Meeting, Chicago, IL, March 2007.
- O Synthesis and Characterization of 1-D coordination polymers of [Cu(NO<sub>3</sub>)<sub>2</sub>(4,4'-BPY)<sub>2</sub>]n and [Cu(NO<sub>3</sub>)<sub>2</sub>(4,4'BPY)<sub>2</sub>]<sub>n</sub>. <u>E. Garcia Cardona</u> and C. Valdez Gauthier; 231<sup>st</sup> ACS National Meeting, Atlanta, GA, March 2006.
- Design and synthesis of supramolecular compounds using copper (II) ion, 1,3adamantanedicarboxylic acid and 1,4-cyclohexanedicarboxylic acid and pyridine derivatives. <u>C.</u>
   <u>Cherenfant, B. West</u> and C. Valdez Gauthier; 231<sup>st</sup> ACS National Meeting, Atlanta, GA, March 2006.
- Design of Supramolecular compounds using copper (II) ion, 1,3-cyclohexanedicarboylic acid, 1,3-adamantanedicarboxylic acid, and ammonia derivatives. <u>A. Vedenko, B. West</u>, and C. Valdez Gauthier; 229th ACS National Meeting, San Diego, CA, March 2005.
- o Self-assembly of coordination polymers using zinc(II), glutaric acid and 4,4'-bypiridine. <u>H. Darwiche</u>, and C. Valdez Gauthier; ACS 55th Southeast Regional Meeting, Atlanta, GA, November 2003.
- Crystal engineering: self-assembly of supramolecular arrays using copper carboxylates and amine derivatives. <u>S. Bronson</u>; and C. Valdez Gauthier; ACS 55th Southeast Regional Meeting, Atlanta, GA, November 2003.

- Self-assembly of one-dimensional supramolecular arrays using transition metal salts and hexamethylenetetramine. <u>H. Darwiche; D. Nyalani</u>, and C. Valdez Gauthier; 225th ACS National Meeting, New Orleans, LA, March 2003.
- Community takes off with chemistry: A contribution by the Florida Southern College Student
  Affiliates of the American Chemical Society. <u>D. Nyalani, J. Woerner</u>, and C. Valdez Gauthier; 223<sup>rd</sup>
  ACS National Meeting, Orlando, FL, April 2002.

## Workshop Presentations:

- Forensic Science: An Introduction to the Analysis of Evidence Narcotic Analysis, C. Valdez
   Gauthier, L. Kaplan –leader and organizer, 21st Biennial Conference on Chemical Education, North
   Texas, TX, August 2010.
- Forensic Science Workshop: Analysis of suspected powdered drug material, C. Valdez Gauthier, L. Kaplan –leader and organizer, 20<sup>th</sup> Biennial Conference on Chemical Education, Indiana University, Bloomington, IN, July 2008.
- o Inquiry-Based Chemistry Labs, **C. Valdez Gauthier** and George Sellers, Teachers Workshops in Science Week at Pittcon ® 2006, Orlando, FL, March 2006.
- O Juxtaposing High School and College Chemistry through Inquiry-Based Laboratories, **C. Valdez Gauthier** and G. Sellers; 18th Biennial Conference on Chemical Education, Iowa State University, IA, July 2004.
- O Why were blue jeans blue? **C. Valdez Gauthier** and Jane Dalton; North Carolina Art Education Association Annual Meeting, Raleigh, NC, March 1999.
- Microscale Laboratory Techniques for Chemistry and Biology; A. Davis, S. K. Swope, and **C. Valdez Gauthier**; NSTA 1992 National Convention, Boston, MA, March 1992.

# Workshops Attended:

- o POGIL National Meeting, Washington University, St. Louis, MO, June 2018
- o COACh-the-COAChes, 249th American Chemical Society National Meeting, Denver, CO, March 2015. Sponsored by the Committee on the Advancement of Women Chemists.
- VIPEr: Bioinorganic Applications of Coordination Chemistry, Northwestern University, Evanston, IL, July 2014. Workshop sponsored by a grant to Online Network of Inorganic Chemistry from NSF.
- o Material Science and Nanotechnology, Chemistry Communities for Workshops in the Chemical Sciences, Beloit College, WI, July 2013. NSF funded week long workshop.
- o Facilitating POGIL in an upper level course: analytical chemistry, 21st BCCE, University of North Texas, Denton, TX, August, 2010. NSF funded.
- o Applications of the Cambridge Structural Database in Undergraduate Education and Research, 21st BCCE, University of North Texas, Denton, TX, August, 2010. CSDC funded.
- o Engaged Learning Institute, Florida Southern College, Lakeland, FL, July 2010.
- O Center for Workshops in Chemical Sciences, Renewable Energy, Beloit College, WI, June 2010. NSF funded week long workshop.
- o Technology Institute, Florida Southern College, Lakeland, FL, July 2009.
- o Center for Workshops in Chemical Sciences, Advanced Forensic Chemistry, Williams College, Williamstown, MA, June 2009. NSF funded week long workshop.
- o Standard POGIL Workshop at Washington College, Chestertown, MD, June 2008. NSF funded week long workshop.
- The Chemistry of Leadership: A Women's Leadership Program COACH sponsored workshop, New Orleans, LA, April 5, 2008.
- o Coaching Strong Women in the Art of Strategic Persuasion COACH sponsored workshop, Chicago, IL, March 24, 2007.
- o Leading Without Authority American Chemical Society Leadership Learning System sponsored workshop, Chicago, IL, March 25, 2007.

- o The Writing Heuristic Approach National Science Foundation sponsored workshop, Purdue University, IN, August 1, 2006.
- Center for Workshops in Chemical Sciences, Chemistry and Art National Science Foundation sponsored workshop, Millersville University, Pam, May 27-June 1, 2006.
- o Leadership American Chemical Society sponsored workshop, St. Louis, MO, October 8-10, 2004.
- o X-Ray Crystallography for Small Molecules and Proteins National Science Foundation sponsored workshop, California State University-Fullerton, CA, June 16-21, 2003.
- o Spartan software in the chemistry curriculum, Rollins College, January 2003.
- Center for Workshops in Chemical Sciences, Forensic Chemistry NSF sponsored workshop, Williams College, MA, June 6-11, 2002.

# Grants, Fellowships, and Stipends

## Grants and Fellowships:

- o Faculty/Student Summer Collaborative Research 2022: Synthesis and applications of Metal-Organic Materials. Funded, \$5641.
- Faculty/Student Summer Collaborative Research 2020: Synthesis and applications of Metal-Organic Materials. Funded, \$5735. Cancelled due to COVID
- o Virtual Inorganic Pedagogical Electronic Resource (VIPEr) Fellow as part of the National Science Foundation's Improving Undergraduate Education program (2018-present)
- National Science Foundation, 2014: Chemistry Coalitions Workshops and Communities of Scholars (cCWCS). Not funded, \$36,240.00
- o American Chemical Society-International Activities Committee: 2014: Festival de Quimica and Chemical Education Symposium at the 31st Latin American Congress of Chemistry. Funded, \$20,000.
- o Mosaic (2014, 2015): High School Chemistry Teachers Workshop. Funded, \$1000.00
- o Mosaic: (2013): Summer Experiences for High School Students (in collaboration with Deborah Bromfield Lee). Funded, \$3000.
- American Chemical Society-Innovative Activity Grant, Mosaic Foundation and CF Industries: 2012: Fostering Chemistry Collaborations between High Schools, Higher Education and Industries 2012. Funded, \$3730.
- o <u>American Chemical Society-Innovative Activity Grant:</u> 2010: Chemistry Odyssey. In collaboration with Edie Banner and Cheryl Pierce (Lakeland High School), 2009. Funded, \$2,900.
- o American Chemical Society-Innovative Activity Grant: Career day for high school students. In collaboration with Cheryl Pierce (Lakeland High School), 2007. Funded, \$2,800.
- American Chemical Society-Innovative Activity Grant: Symposium for high school teachers. In collaboration with George Sellers (Florida Local section), 2006. Funded, \$3,000.
- o John A. Leighty Fund within the Community Foundation of Greater Lakeland: Undergraduate and High School Research in Chemistry, 2005. Funded, \$13,000.
- o <u>Florida Southern College</u>: Undergraduate Summer Research Grant, 2005. Funded, \$3,500.
- <u>ACS-PRF Summer Research Fellowship</u>: Investigation of the electronic structure of macro-molecular thin films and interfaces. In collaboration with Dr. R. Schlaf (University of South Florida), 2004. Funded, \$8,000.
- o John A. Leighty Fund within the Community Foundation of Greater Lakeland: Undergraduate Research and Mentoring Program in the Life Sciences and Computer Science. In collaboration with Dr. Gwendolyn Walton (FSC), 2004. Funded, \$15,000.
- O <u>Florida Southern College</u>: Undergraduate Summer Research Grant: Crystal Engineering: Crystal Engineering, 2003. Funded, \$13,000.

Florida Southern College: Undergraduate Summer Research Grant: Crystal Engineering: Self-Assembly of Supramolecular Arrays Using Metal-Carboxylates and Amine Derivatives, 2002.
 Funded, \$12,450.

# **Summer Stipend:**

- Florida Southern College summer stipend to present a paper and to participate in the Global Education Round Table Discussion in the 22<sup>nd</sup> International Conference on Chemistry Education, Rome-Italy (ICCE 2012).
- o Florida Southern College summer stipend to participate in the 4<sup>3rd</sup> IUPAC Congress Chemistry Education for the Future: A Global Perspective, San Juan, Puerto Rico, 2011.
- o Florida Southern College summer stipend to participate in the "Jornadas para el Aprendizaje Activo (Active Engagement Meeting)," Madrid, Spain 2007.
- o Florida Southern College summer stipend to participate in the 27th Latin American Chemistry Congress held in Bahia, Brazil 2004.

#### Sabbatical:

- o Sabbatical spent at the Pontifical Catholic University of Peru, Lima-Peru (January 2015-June 2015)
- Sabbatical spent at the University of Illinois at Urbana-Champaign and University of South Florida. (2006-2007).
- Sabbatical spent at the University of South Florida and Pontifical Catholic University of Peru (January 2015-June2 2015)

# **Consulting and Other Professional Experiences**

#### **Grant Review:**

- External Reviewer for the State of Florida five-year review for Florida Gulf Coast University –
   Chemistry and Physics Department.
- o 2015 UNCF-Merck Science Initiative (UMSI) Selection Committee Review and chose finalist for the 2015 cohort of Undergraduate, Graduate and Postdoctoral Fellows.
- Innovative Activity Grants and Community Interaction Service Grants (American Chemical Society
   Education Division), 2002, 2009, 2010, and 2012.
- o National Science Foundation's Transforming Undergraduate Science, Technology, Engineering and Mathematics Education (TUES) program, Type 1 competition Panel Review, July 2011.
- National Science Foundation's Course, Curriculum, and Laboratory Improvement (CCLI) program,
   Type 1 competition Panel Review, June 2009, July 2013.
- o Student Chapter Annual Reports (2010, 2011, 2012, and 2013).
- Bard Research Fund, a fund to support faculty's scholarly and artistic projects with significant potential as a distinguish contribution to the humanities, the social or natural sciences, or the arts, Bard College, 2005-2006.

# Member of Thesis Committee (University of South Florida)

- o Chair of Ph.D. dissertation for Adrian Villalta-Cedras (Chemistry Department University of South Florida), May 2014.
- o Ph.D Committee for Jason Perman (Chemistry Department University of South Florida, Current).
- o Master Thesis for Shissi Liu (Chemistry Department University of South Florida), April 2009.
- o Chair of Ph.D. dissertation for Brenda Held (Chemistry Department University of South Florida), April 2007.

o Chair of Ph.D. Dissertation Committee for Bart Heldreth (Chemistry Department - University of South Florida), November 2004.

# **Professional Conferences Organizational Support:**

- Co-Organize and Preside Undergraduate Oral Research Symposium with Nicole Snyder and Joshua Ruppel: 249th ACS National Meeting, Boulder, CO, March 2015; 250th ACS National Meeting, Boston, MA, August 2015; 251st ACS National Meeting, San Diego, CA, March 2016; 252nd ACS National Meeting, Philadelphia, PA, August 2016; 253rd ACS National Meeting, San Francisco, CA, April 2017; 254th ACS National Meeting, Washington, DC, August, 2017; 255th ACS National Meeting, New Orleans, LA, March 2018; 256th ACS National Meeting, Boston, MA, August 2018; 257th ACS National Meeting, Orlando, FL, March 2019; 258th ACS National Meeting, San Diego, CA, August 2019; 259th ACS National Meeting (Virtual), Philadelphia, PA, March 2020, 263rd ACS National Meeting, San Diego, CA, March 2022, 265th ACS National Meeting, Indianapolis, IN, March 2023.
- o Co-organize and Preside Undergraduate Research papers with Nicole Snyder, 247th ACS National Meeting, Dallas, TX, March 2014.
- o Program Co-Chair (with Nicole Snyder of Hamilton College): Division of Chemical Education 245th ACS National Meeting, New Orleans, LA, August 2013.
- Program Co-Chair (with Nicole Snyder of Hamilton College): Division of Chemical Education -240th ACS National Meeting, Boston, MA, August 2010.
- o Co-organizer with Santiago Sandi-Urena (University of South Florida) of the Chemical Education program at the Florida Annual Meeting and Exposition, Palm Harbor, FL, May 2011, 2012 and 2013
- o Session Chair, Chemical Education Symposium (with David Brown of Florida Gulf Coast University), Florida Annual Meeting and Exposition, Palm Harbor, FL, May 2009.
- Organizer and Presider of a Presidential Symposium (with George Sellers of Ware Shoals High School of South Carolina): *Bridging the Gap: Building Collaborations with High School Chemistry Clubs*, 238th ACS National Meeting, Washington, DC, August 2009.
- o Session Chair: ACS Southeastern Regional Meeting, Puerto Rico, October 2009.
- Symposium Organizer and Presider (with Patricia Morales Bueno of the Pontifical Catholic University of Peru): Student Center Methodologies in First Year chemistry Using a Global Perspective, 20th Biennial Conference in Chemical Education, Indiana University, Bloomington, IN, July 2008.
- Scientific Committee Board (with Dr Paul Kelter of the University of Illinois at Urbana-Champaign, Gabriela Weaver of Purdue University, Gabriel Pinto of the Universidad Politecnica de Madrid), Engaged Learning Meeting, Madrid, Spain, July 2007.
- Symposium Organizer and Presider: New Ideas and techniques in Teaching Lecture and Laboratory in General Chemistry Courses, 2<sup>nd</sup> FYI Conference in First Year Chemical Education, University of Colorado, Boulder, CO, May 2007.
- o Session Chair General papers: 234th ACS National Meeting, Boston, MA, August 2007.
- O Symposium Organizer and Presider: *Chemistry Across Borders*, 19th Biennial Conference in Chemical Education, Purdue University, West Lafeyette, IN, July 2006.
- o Session Chair General papers: 232nd ACS National Meeting, San Francisco, CA, September 2006.
- o Symposium Organizer and Presider: *US Mexico Collaborations in Chemical Education*, 230th ACS National Meeting, San Diego, CA, March 2005.
- o Program Chair: Florida Annual Meeting and Exposition, Orlando, Fl, May 2004.

# Other Professional Experience:

- o *Mid-Florida Fulbright Association:* Board member since 2022-present. Serve as secretary of the board and currently appointed as Director of Advocacy to the Fulbright Association.
- o American Chemical Society (ACS) National.

ACS National Awards Committee: Review nomination for ACS-National Awards (2019-Present). ACS Committee on Committees (ConC): Elected by the ACS Council to serve a three-year term (223-present). Responsible for providing leadership to the International Activities Committee (IAC) and the Committee on Ethics.

ACS Exam Institute: Board of Trustee for the ACS Exam Institute (2016-present)

ACS Society Committee on Education (SOCED): Member on the K-12 sub-committee. (2015 – present). Vice-Chair (2018-2020), Chair (2021-2022)

ACS Education Department: ChemClub Advisory Board, responsible for the implementation and evaluation of the Chemistry Club program launched by ACS in 2005, 2006 –2012.

Committee on Membership Affairs: Member (2011-2014 and vice-chair from 2012-2014)

ACS Annual Faculty Peer Review Conference: Review Student Affiliate Annual reports. Elected to the Editorial Board of the *In Chemistry* Magazine, 2002-2003, 2008-2015.

Committee on Community Activities (2004 – 2009): Elected as chair of the 2008 Chemist's Celebrate Earth Day Committee, and chair of the Volunteer Engagement sub-committee, 2007-2009. Division of Chemical Education: member of the International Activities Committee (2001-2014,

ACS Division of Chemical Education's Examination Institute: Member of the Committee Responsible for producing the 2007 General Chemistry Examination, 2004 – 2006. Duties included: writing questions, performing statistical analysis for exam, and selecting final question for final exam. Reviewer for the Journal of Chemical Education and Inorganic Chemistry: Reviewer since 2010 to present.

• American Chemical Society (ACS) Local Section:

chair 2009 - 2014) and Program Committee (2005-2017).

Councilor (2007 - present): Represent the local section at the ACS Council meeting and reviews local section annual report.

National Chemistry Week and Chemistry Celebrate Earth Week Coordinator (2000-present): Responsible for overseeing outreach efforts in Tallahassee, Gainesville and Lakeland. Members of the Executive Committee (2004 – present): serve as chair of the local section in 2005, and Career Coordinator (1999-2003).

- o *All Saints Academy*: Board of Trustee (August 2012 August 2018). Responsible for Teachers compensation and curriculum committees.
- o *Chemistry Collaborations, Workshops and Community of Scholars (cCWCS)* Member of the Leadership Council for the Forensic Sciences Scholars (2011 2017).
- Gamma Sigma Epsilon Chemistry Honor Society: Executive President (2007-2009) –
  responsible for organizing the biennial conference in 2007 and installation of new chapters. Under
  my leadership, ten new chapters were installed, including the one at the University of North
  Carolina-Chapel Hill. Presided over 2009 Biennial Conference.
- Polk County Industry Community Advisory Panel. Responsible for providing scientific advice to industry and community members in Polk County, 2002-2009. Serve on the Education and Newsletter Committees.
- o *International Center for First-Year Undergraduate Chemical Education*: Board member (2006-2010): Member of the organizing committee for the second biennial conference of FYI Chemistry at the University of Colorado-Boulder, May 2007. Elected to membership in 2004.
- Hispanic Business Council of the Lakeland Chamber of Commerce: Member of the education committee - responsible for developing educational programs to increase the number of Hispanic students at the post-secondary level, 2002-2008.

- O Gulf Coast World of Science Museum: Chair, Education Committee, 1996-2000, Sarasota, FL.
- o University of South Florida: Courtesy appointment in the Chemistry department, 2001-2014.
- o Marie Selby Botanical Gardens: Advisory Board for Children's Garden, 1995-1996, Sarasota, F.
- New England Board of Higher Education-Science and Engineering Division: College representative and academic leader, 1992-1994.

# Service to Florida Southern College:

- o Chair and member of several tenure and promotion peer evaluation committees (2013-present)
- o Graduate Council Committee (2019 -present)
- o Distinguish Scholarship Committee (2017 2020).
- o Diversity, Equity, and Inclusion curriculum subcommittee (August 2020 Present)
- o Tenure Committee and Peer Teaching Evaluation committees in the Arts and Sciences, Education, and Physical Therapy schools (2019-Present).
- o Institutional Review Board Committee (2016 2019)
- o Candidate Interview Committee (2012 2016).
- o Advisory Board for the Teaching and Learning Center (April 2009-2011).
- o Curriculum Committee (1999-2001, 2009-Present) -- Committee Chair (2009-2012).
- o Natural Science and Mathematics Division Faculty Search Committees (2008-2012).
- o Transformation Curriculum (2008-2009).
- o Tenure Committee (2007-2009).
- o Vice-President for Academic Affairs Search Committee, 2007-2008.
- o Honors Committee (1999-2001, 2007-2009).
- o Wellness Task Force (2007-present)
- o General Education Committee (2004-2006).
- o President of the FSC Women's Association Board (2005-2006). Board member since 2002.
- O Supervised students in scholarly research (2001-present).
- Faculty Senate (2001-2004). Worked with a sub-committee of the Senate on peer evaluation (2004 2006).
- o Faculty advisor to the FSC Student Affiliate Chapter of the American Chemical Society and to the Gamma Sigma Epsilon-Chemistry Honors Society (2000-2014).
- o Member of the Advisory Board for the Florida Center for Science and Religion. (May 2004- 2014)).
- o FSC Anti-Harassment Policy Facilitator Committee (2004-2008).
- o Co-coordinator of the Active Learning Task Force for the faculty forum (January April, 2005).
- o Campus Safety Advisory Board (2003 –2005).
- O Departmental Search Committees (chair: 2000, 2001; and 2002): successful hire of two chemistry faculty and 1 physics faculty; Spanish (2010).
- o Core Curriculum Working Group (2000-2001).

## Salem State College

- o Coordinator of the <u>Charlotte Forten Scholars Program</u>, an honors program for minority students. Responsibilities included: recruitment, admission, and advising (1993 1994).
- o Advisor to McNair scholars (1993 -1994).
- o Affirmative Action Committee (1993-1994).
- o Chemistry and Physics Curriculum (1990-1994).
- o Graduate School Research Seminar (1992-1994).

- o Project PALMS (Partnership Advancing the Learning of Mathematics and Science).
- o White House Conference on Education (1994).
- o Writing Across the Curriculum (1991-1994).
- o Women in Science and Engineering (WISE) (1990-1994).
- o Student Life (1992-1994).
- o Academic Policies (1990-1992).

# Awards and Recognition

- o 2018 American Chemical Society Fellow
- o 2018 VIPEr Fellow (NSF funded program)
- o 2016-2017 Fulbright Core Scholar in Peru
- o The Jesse Ball DuPont Chair in The Natural Sciences (2013-present)
- o Salutes to Excellence (2008) award presented by the Florida Local Section of the American Chemical Society.
- ODK Teacher of the Year (2006).
- o Who's Who Among America's Teachers (2003, 2004).
- Dissertation Fellowship for Outstanding Ph.D. Candidate, University of New Hampshire, 1987-1988

# **Professional Membership:**

- o American Chemical Society (ACS)
- o American Association of Chemistry Teachers
- o American Association for the Advancement of Science
- o Council on Undergraduate Research
- o Society of the Sigma Xi
- o Gamma Sigma Epsilon, Chemistry Honors Society
- o Phi Kappa Phi
- o Phi Eta Sigma, Freshman Honorary Society
- o Delta Kappa Gamma Society International Gamma Upsilon, Florida