DR. CARMEN VALDEZ GAUTHIER
The Jesse Ball DuPont Chair in the Natural Sciences
**Professor of Chemistry**
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## Education

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| HERS 2008-2009 | Higher Education Resources Service – Wellesley College, Wellesley, MA<br>Higher Education Leadership Institute |
| Ph.D. 1989 | Chemistry, University of New Hampshire, Durham, NH<br>Dissertation: Synthesis and Reactions of Phosphonito Polymetallic Complexes and Halogen Oxidation of Cyclotetraphosphoxane Molybdenum Cage Complexes<br>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)

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

**Responsibilities and accomplishments:**

- 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)
- 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)
- Evaluating staff performance within the division – 4 staff. (2007- May 2012)
- Developing, distributing, and administering the division budget. (2007- May 2012)
- Working with department chairs in developing class schedules for the day program. (2007- May 2012)

- Working with the director of the evening program and deans of other schools in staffing evening courses. (2007- May 2012)
- Responsible for hiring and continued evaluation of adjunct faculty in the division. (2007- May 2012)
- 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)
- Involved in the hiring of 8 new full-time faculty members in Biology, Chemistry, Mathematics and Physics (2008-present)
- Spearheaded the self-study and external evaluation for the biology, citrus and horticultural science, and the chemistry and physics departments.
- Organized a retreat for the Natural Sciences and Mathematics division. (Summer 2008)
- Established a chemical hygiene plan for the division. (2007-2009)
- Oversaw the installation and maintenance of the Nuclear Magnetic Resonance (NMR) spectrometer. (2008-2009)
- Assisted chemistry faculty with continuous maintenance of laboratory Instruments and was responsible for NMR-He fills, AA, FT-IR, and computational software. (2000-present)
- Wrote assessment plans and reports for the chemistry and physics department. (2001-2003; 2007-2008)
- Responsible for instrument purchasing in the chemistry department. (2000-2007)
- Performed faculty evaluation for the chemistry department. (2001-2003)
- Wrote and administered several grants for undergraduate summer research. (2002-2005)
- Developed four new courses in the chemistry department and one course in the Honors Program.
    - Descriptive Inorganic Chemistry
    - Analytical Chemistry
    - Forensic Chemistry
    - Environmental Chemistry
    - The Florida Environment: Culture, Ecology, and Place
    - The Florida Environment: Earth, Air, Fire, and Water
    - Inorganic Chemistry Laboratory
- 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-present)
- Established the Gamma Sigma Epsilon Chemistry Honor Society and served as the faculty advisor. (2001-2009)
- Represented the college at several student and community functions. Dreyfus Foundation, President Council, Day on Campus, Lakeland Chamber of Commerce.

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

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

**Responsibilities and accomplishments:**

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

**University of Illinois at Urbana-Champaign:** Urbana, IL (**September 2006** – December 2006)
- *Sabbatical Visiting Associate Professor* in the Chemistry Department – Collaboration with Dr. P. Kelter.

**Responsibilities and accomplishments:**
- Attended first-year chemistry classes for engineers at UIUC and participated in weekly meetings with Teaching Assistants to evaluate students' success.
- Participated in meetings with MIST-STEP grant Principal Investigators.
- Co-organizer of the 2nd Biennial Conference of the International Center for First-Year Undergraduate Chemistry Education (ICUC) – meeting held at the University of Colorado-Boulder.
- 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)
- Attended weekly meeting to discuss advances in inorganic chemistry.
- 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)
- Department Head (August 1996 – June 1998)
- Grades 9-12 science teacher (1996 - 1999)

**Responsibilities and accomplishments:**
- Established new science program.
- Developed the science program for the high school, including lab design, purchasing and hiring of faculty.
- Developed and oversaw science budget for K-12.
- Coordinated the implementation of a new science curriculum for PK-12.
- Established partnerships with local organizations such as the Marie Selby Botanical Garden.
- Developed two new courses for the high school curriculum: Forensic Chemistry and Environmental Studies.
- Developed interdisciplinary curriculum with the art department.
- Taught AP Chemistry, Honors Chemistry, and Honors Physics.

**Manatee Community College:** Bradenton, FL (**August 1995** - July 1996)
- *Adjunct Professor* in the Natural Science Department

**Responsibilities and accomplishments:**
- Taught Physical Science.
- Developed two chemistry courses: Chemistry I and II for allied health sciences.

**Salem State College:** Salem, MA (**August 1989** – December 1994)
- Assistant Professor in the Chemistry and Physics Department (September 1990 – December 1994)
- 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:**
- Taught courses in chemistry and in the interdisciplinary studies program.
- Developed a summer research course for students enrolled in the McNair Summer Program.
- 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)
- Research Assistant (1986-1988)
- Teaching Assistant (1983 – 1986)

**Responsibility and accomplishments:**
- Graduate Student Research Assistantship Award
- Worked in the synthesis, characterization and study of air-sensitive organometallic compounds.
- Extensive experience in Nuclear Magnetic Resonance (NMR), Infrared and Ultraviolet Spectroscopy, and Chromatography.
- 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)**:**
- *Descriptive Inorganic Chemistry (CHE 2255-lecture and lab).
- *Analytical Chemistry (CHE 2235-lecture and lab).
- Honors Thesis (HON 495 and HON 496).
- Honors within the Major (HON 493 and 494).
- Undergraduate Research in Chemistry (CHE 392, CHE 492, CHE 493, CHE 494).
- Inorganic Chemistry (CHE 406-lecture and *laboratory).
- Advanced Inorganic Chemistry (*CHE 4455)
- Applied Physical, Analytical, and Inorganic Chemistry (CHE 3320)
- Senior Seminar (CHE 499).
- Quantitative Analysis (CHE 206, lecture and laboratory).
- College Chemistry (CHE 111, lecture and laboratory).
- College Chemistry with Qualitative Analysis (CHE 112, lecture and laboratory).
- *Forensic Chemistry (CHE 2275-lecture and laboratory).
- *Environmental Chemistry.
- Environmental Investigations and Insights (HON 1173)
- *The Florida Environment: Culture, Ecology and Place (HON 196).
- *Florida Environment: Earth, Air, fire, and Water (HON 197).
- Interdisciplinary Topics in Science (PSC 197).
- Physical Science (PS 105, lecture).
- Physiological Chemistry (CHE 211).
- Introduction to Women's Studies (WST 201).
- First-Year Seminar (FYS 101).

**Out-Of-Door Academy (1996 - 1999):**
- Chemistry.
- Honors Chemistry.
- Advanced Placement Chemistry.
- Physics.

- Environmental Science.
- Forensic Science.

**Manatee Community College (1995-1996):**
- Chemistry for Non-majors I and II (lecture and laboratory).
- General Physical Science I (lecture).

**Salem State College (1989 - 1994):**
- Foundation of Chemistry I (lecture and laboratory).
- General Chemistry of Life Processes (lecture and laboratory).
- Chemistry of Life Processes (lecture and laboratory).
- General Chemistry laboratories for chemistry and engineering majors.
- Physical Chemistry II (lecture and laboratory).
- *Advanced Inorganic Chemistry Laboratory.
- *Research Seminar.
- First Year Seminar I and II.
- *Introductory Chemistry course for high school students enrolled in the Upward Bound Program.

## Publications

**Peer-Reviewed Publications:**
- "Poly(methylmethacrylate) composites of copper-4, 4'-trimethylenedipyridine", Shisi Liu, Lukasz Wojtas, Justin Massing, **Carmen Valdez Gauthier**, Julie P. Harmon, *New J. Chem., 2012*, 36, 1449-1456.
- Spattering of hot cooking oil with water, G Pinto, **C.V. Gauthier**, *J. Chem. Educ.*, 2009, *86* (11), 1281-1285.
- Some consideration regarding the active learning in chemistry, G Pinto, **C.V. Gauthier**, P. Kelter, G. Weaver, Chem. Educator [online], 2008; DOI 10.1333/s00897082130a.
- Nitro-Nanoballs: Nanoscale faceted polyhedra that exhibit host-guest chemistry and thin-film forming capabilities, J. J. Perry IV, **C. V. Gauthier**, R. Schlaf, M. M. Beerbom, B. Lägel, B.V. Doran, and M. J. Zaworotko; manuscript submitted to the *Journal of American Chemical Society*.
- Preparation and characterization of Copper Nanoball-HOPG interfaces using photoemission spectroscopy, B.Moran, M. M. Beerbom, **C. V. Gauthier**, R. Schlaf, M. J. Zaworotko; manuscript submitted to the *Journal of Applied Physics*.
- 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.
- Phytochemistry Studies of the Lichen Usnea Sp.*;* P. Morales, J. Robles, A. Pastor de Abram, K. Gallagher, and **C. V. 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.
- 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 $[RPO]_4$ 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:**

- The Japan Syndrome; **Carmen Gauthier**, VIPEr, https://www.ionicviper.org/literature-discussion/japan-syndrome (accessed July 2014).
- Synthesis, Characterization, and Computational Modeling of $[Co(acacen)L_2]^+$, an Inhibitor of Zinc Finger Proteins; Elizabeth Bajema, Christopher Bailey, **Carmen Gauthier**, James Jeitler, Peter Craig and Shaun E. Schmidt, VIPEr, https://www.ionicviper.org/lab-experiment/synthesis-characterization-and-computational-modeling-coacacenl2-inhibitor-zinc ((accessed July 2014).
- Cobalt Schiff Base Zinc Finger Inhibitors; Elizabeth Bajema, Christopher Bailey, **Carmen Gauthier**, James Jeitler, Peter Craig and Shaun E. Schmidt, VIPEr, https://www.ionicviper.org/literature-discussion/cobalt-schiff-base-zinc-finger-inhibitors, (accessed July 2014).

**Publications and Reports**

- Reaching out to the next generation: Working with High School Chemistry clubs, **C.V. Gauthier**, *In Chemistry*, 2008, 17 (3), pp 10-13.
- College-High School collaboration program to enhance learning in chemistry, **C. V. 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.

**Patents**

- Co-Crystal Forms of Flavonoids with Pharmaceutical Acceptable Molecules, M. J. Zaworotko, **C. Valdez Gauthier**, Padmini Kavuru, and S. Kesani, US patent application submitted on July 2, 2007.

## Presentations

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

- Fostering worldwide interchange of ideas in chemical education through involvement in the International Activities Committee, Carmen V Gauthier, 247th ACS National Meeting, Dallas, TX, March 2014.
- Establishing a cultural network through chemical education, P. Morales Bueno and **C. V. Gauthier**, 245th ACS National Meeting, New Orleans, LA, April 2013.
- Building connections through mentorship and other activities, **C. V. Gauthier**, Cheryl Pierce, and Karen Kaleauti, 2012 Biennial Conference on Chemical Education (BCCE), Pennsylvania State University, PA, July 2012.
- International perspectives in chemical education for a sustainable world, **C. V. Gauthier**, P. Morales-Bueno, Johana Camacho, Cecilia Collado and Carlos Castro-Acuna, 243rd ACS National Meeting, San Diego, CA, March 2012.
- Integrating a service learning component to outreach efforts to chemistry clubs, **C. V. Gauthier,** C. Pierce, 238th ACS National Meeting, Washington, DC, August 2009.
- Reaching out to the next generation: A collaboration between a college and local high schools, **C. V. Gauthier,** C. Pierce, 236th ACS National Meeting, Philadelphia, PA, August 2008.
- Incorporating multinuclear NMR spectroscopy in the inorganic chemistry course, **C. V. Gauthier**, 20th Biennial Conference on Chemical Education, Indiana University, IN, July 2008.
- A shared PBL experience in general chemistry: Collaboration across boundaries, **C. V. Gauthier**, P. Morales-Bueno, 20th Biennial Conference on Chemical Education, Indiana University, IN, July 2008.
- It all started in the Goat Room: Reflections from a forensic science workshop, **C. V. Gauthier**, 233rd ACS National Meeting, Chicago, IL, March 2007.

- Great ideas in chemistry: A day of sharing, **C. V. Gauthier**, G. Sellers, 19th Biennial Conference on Chemical Education, Purdue University, IN, July 2006.
- Balancing research/teaching/outreach at four-year institutions, **C. V. Gauthier**; 231st ACS National Meeting, Atlanta, GA, March 2006.
- A bag full of chemistry, **C. V. 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. V. Gauthier**; First Year Undergraduate Chemistry Education International Conference, University of Illinois at Urbana-Champaign, IL, May 2005.
- 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[3], and M. J. Zaworotko; 229th 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. Capetillo, and H. Darwiche*;* 26th Latin American Congress of Chemistry, Salvador-Bahia, Brazil, May 2004.
- Adapting Traditional Laboratory Experiments to Inquiry-Based Experiments in the General Chemistry Courses, **C. Valdez Gauthier**, and G. Sellers; 26th Latin American Congress of Chemistry, Salvador-Bahia, Brazil, May 2004.
- Art and Chemistry Come Together During National Chemistry Week, **C. Valdez Gauthier** and Elizabeth Newton*;* 223rd ACS National Meeting, Orlando, FL, April 2002.
- Integrating Library Research into a Chemistry Course, **C. Valdez Gauthier** and M.M. Flekke; 222nd ACS National Meeting, Chicago, IL, August 2001.
- Teaching General Chemistry Using Jenzabar*,* **C. Valdez Gauthier**, ACS 30th Northeast Regional Meeting, Durham, NH, June 2001.
- 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.
- 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.
- Interfering with your Vision: Connections of Art and Chemistry, **C. Valdez Gauthier** and Rona Glasser*;* NSTA 2000 National Convention, Orlando, FL, April 2000.
- An Integrated Approach to Writing Research Papers in Chemistry, **C. Valdez Gauthier** and Deborah Iannitto; 15th Biennial Conference on Chemical Education, Waterloo, Ontario-Canada, August 1998.
- 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 $[RPO]_3$ and Cyclo-Tetraphosphoxane $[RPO]_4$, **C. Valdez**, M. M. Turnbull, and E. H. Wong; American Chemical Society National Meeting, September, 1988.

**Invited Lectures:**

- Promoting chemical education collaborations among four-year institutions and high schools, **C. Valdez Gauthier**, Best practices in the teaching and learning of chemistry: international sharing of methods, insights, and results, 22nd International Conference on Chemistry Education, Rome, Italy, July 18, 2012.
- Green Chemistry and sustainable education, **C. Valdez Gauthier**, Global Sustainability symposium, Universidad de Concepcion, Concepcion, Chile, October 12, 2011.
- Fostering collaborations between higher education and K-12 schools, **C. Valdez Gauthier**, 43rd 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 Teachers'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. V. 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. V. 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. V. 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. V. 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. V. Gauthier**, Chemistry Lecture Series, University of North Carolina – Wilmington, NC, February 2006.
- 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. V. Gauthier**, Chemical Lecture Series, Pontifical Catholic University of Peru, Lima, Peru, July 2003.
- How can one do research in a predominantly teaching institution with limited resources?, **C. Valdez Gauthier***;* 17Th Congreso de Quimica, Santiago de Cuba, Cuba, December 2002.
- Career Opportunities in Chemistry*,* **C. V. 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. V. Gauthier**, conference for middle school girls, parents and teachers; organized by the American Association of University Women-Venice Chapter, Venice, FL, March 1997.
- Increasing the Success Rate of Latina Students in the Sciences*,* **C. V. Gauthier**, Faculty Symposium, Wellesley College, Wellesley, MA, July 1994.
- Are we going in the same direction? **C. V. Gauthier**, Minority Faculty/Student Forum, Salem State College, Salem, MA, January 1994.
- Succeeding as a Minority Student in a Predominantly White College*,* **C. V. Gauthier**, African-American and Hispanic Society Lecture Series at Salem State College, Salem, MA, April 1994.
- Synthesis and Reactions of Polyphosphoxane Complexes, **C. V. 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. V. 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. V. Gauthier**, Peruvian Chemical Society, Lima, Peru, June 1993.

**Invited Lectures at Florida Southern College:**

- Common Threads, **C. V. Gauthier**, New Students' Welcome Convocation, Florida Southern College, Lakeland, FL, August 2006.
- The Shroud of Turin, **C. V. Gauthier**, Florida Center for Science and Religion, Florida Southern College, Lakeland, FL, April 2006.
- Much Ado About Chocolate, **C. V. Gauthier**, Family Weekend, and Homecoming Weekend, Florida Southern College, Lakeland, FL, April 2005 and October 2005.
- Forensic Chemistry, **C. V. Gauthier**, Bite of FSC, Florida Southern College, Lakeland, FL, February 2005.
- From Escher to Supramolecular Chemistry – Undergraduate Research at FSC, **C. V. 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 meetings (name of undergraduate authors are underlined):**

- Synthesis and characterization of [M(1,3-adamantanedicarboxylic acid)(4,4'-trimethylenedipyridine)], M = $Cu^{2+}$, $Co^{2+}$,Grace Beggs, Wei Pin Teh, Carmen 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 ligan, WeiPin The, C. Valdez Gauthier, Florida Annual Meeting and Exposition (FAME)-2013, Palm Harbor, FL, May 2013
- Microwave assisted synthesis of imide ligands and metal organic frameworks, Nicholas Traversa and C. Valdez Gauthier, 245th ACS National Meeting, New Orleans, LA, April 2013.
- Effect of reactions conditions on copper-4,4'-trimethylenepyridine and 1,3-adamantane dicarboxylic acid formation, Grace Beggs and C. Valdez Gauthier, 245th ACS National Meeting, New Orleans, LA, April 2013.
- Solid state synthesis of imide ligands, Sarah Grossman, and C. Valdez Gauthier, 44th Biennial Conference of Gamma Sigma Epsilon – Chemistry Honor Society, Pembroke, NC, March 2011.
- Synthesis of metal-organic frameworks using copper (II) and dicarboxylic acids, Patricia Gomez, and C. Valdez Gauthier, 239th ACS National Meeting, San Francisco, CA, March 2010.
- Complexation studies of cobalt II and teraphenylporphyrins, Madelane Teran, 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, A. Tamasi, L. Wolfe, and Carmen 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, J. Massing, K. Yerton and C. Valdez Gauthier; 235th ACS National Meeting, New Orleans, LA, April 2008.
- Synthesis and Characterization of $\{[Co_2(1,3\text{-}ADC)_2(4,4'\text{-}BPY)_4(NO_3)_2]\bullet MeOH\}_n$. Courtney Baker and Carmen Valdez Gauthier; 233rd ACS National Meeting, Chicago, IL, March 2007.
- Synthesis and Characterization of 1-D coordination polymers of $[Cu(NO_3)_2(4,4'\text{-}BPY)_2]n$ and $[Cu(NO_3)_2(4,4'BPY)_2]_n$. E. Garcia Cardona and Carmen Valdez Gauthier; 231st ACS National Meeting, Atlanta, GA, March 2006.
- Design and synthesis of supramolecular compounds using copper (II) ion, 1,3-adamantanedicarboxylic acid and 1,4-cyclohexanedicarboxylic acid and pyridine derivatives. C. Cherenfant, B. West and Carmen Valdez Gauthier; 231st 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. A. Vedenko, B. West, and Carmen Valdez Gauthier; 229th ACS National Meeting, San Diego, CA, March 2005.

- Self-assembly of coordination polymers using zinc(II), glutaric acid and 4,4'-bypiridine. H. Darwiche, 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. S. Bronson; 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. H. Darwiche; D. Nyalani, 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. D. Nyalani, J. Woerner, and C. Valdez Gauthier; 223rd ACS National Meeting, Orlando, FL, April 2002.

**Workshop Presentations:**

- Forensic Science: An Introduction to the Analysis of Evidence – Narcotic Analysis, **C. V. 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. V. Gauthier**, L. Kaplan –leader and organizer, 20th Biennial Conference on Chemical Education, Indiana University, Bloomington, IN, July 2008.
- Inquiry-Based Chemistry Labs, **C. Valdez Gauthier** and George Sellers, Teachers Workshops in Science Week at Pittcon ® 2006, Orlando, FL, March 2006.
- 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.
- 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:**

- Material Science and Nanotechnology, Chemistry Communities for Workshops in the Chemical Sciences, Beloit College, WI, July 2013. NSF funded – week long workshop.
- Facilitating POGIL in an upper level course: analytical chemistry, 21st BCCE, University of North Texas, Denton, TX, August, 2010. NSF funded.
- Applications of the Cambridge Structural Database in Undergraduate Education and Research, 21st BCCE, University of North Texas, Denton, TX, August, 2010. CSDC funded.
- Engaged Learning Institute, Florida Southern College, Lakeland, FL, July 2010.
- Center for Workshops in Chemical Sciences, Renewable Energy, Beloit College, WI, June 2010. NSF funded – week long workshop.
- Technology Institute, Florida Southern College, Lakeland, FL, July 2009.
- Center for Workshops in Chemical Sciences, Advanced Forensic Chemistry, Williams College, Williamstown, MA, June 2009. NSF funded – week long workshop.
- 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.
- Coaching Strong Women in the Art of Strategic Persuasion - COACH sponsored workshop, Chicago, IL, March 24, 2007.

- Leading Without Authority – American Chemical Society Leadership Learning System sponsored workshop, Chicago, IL, March 25, 2007.
- 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.
- Leadership - American Chemical Society sponsored workshop, St. Louis, MO, October 8-10, 2004.
- X-Ray Crystallography for Small Molecules and Proteins - National Science Foundation sponsored workshop, California State University-Fullerton, CA, June 16-21, 2003.
- 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:**

- Mosaic (2014): High School Chemistry Teachers Workshop. Funded ($1000.00)
- 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.
- American Chemical Society-Innovative Activity Grant: 2010: Chemistry Odyssey. In collaboration with Edie Banner and Cheryl Pierce (Lakeland High School), 2009. Funded, $2,900.
- 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.
- John A. Leighty Fund within the Community Foundation of Greater Lakeland: Undergraduate and High School Research in Chemistry, 2005. Funded, $13,000.
- Florida Southern College: Undergraduate Summer Research Grant, 2005. Funded, $3,500.
- ACS-PRF Summer Research Fellowship: 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.
- 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.
- Florida Southern College: 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 22nd International Conference on Chemistry Education, Rome-Italy (ICCE 2012).
- Florida Southern College summer stipend to participate in the 43rd IUPAC Congress – Chemistry Education for the Future: A Global Perspective, San Juan, Puerto Rico, 2011.
- Florida Southern College summer stipend to participate in the "Jornadas para el Aprendizaje Activo (Active Engagement Meeting)," Madrid, Spain 2007.
- Florida Southern College summer stipend to participate in the 27th Latin American Chemistry Congress held in Bahia, Brazil 2004.

**Sabbatical:**

- Sabbatical spent at the University of Illinois at Urbana-Champaign and University of South Florida. (2006-2007).

## Consulting and Other Professional Experiences

**Grant Review:**

- Innovative Activity Grants and Community Interaction Service Grants (American Chemical Society – Education Division), 2002, 2009, 2010, and 2012.
- 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.
- 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)**

- Ph.D Committee for Jason Perman (Chemistry Department – University of South Florida, Current).
- Master Thesis for Shissi Liu (Chemistry Department – University of South Florida), April 2009.
- Chair of Ph.D. dissertation for Brenda Held (Chemistry Department – University of South Florida), April 2007.
- 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 Research papers with Nicole Snyder, 247th ACS National Meeting, Dallas, TX, March 2014.
- 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.
- 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
- 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.
- 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*, 2nd FYI Conference in First Year Chemical Education, University of Colorado, Boulder, CO, May 2007.
- Session Chair – General papers: 234th ACS National Meeting, Boston, MA, August 2007.
- Symposium Organizer and Presider: *Chemistry Across Borders*, 19th Biennial Conference in Chemical Education, Purdue University, West Lafeyette, IN, July 2006.
- Session Chair – General papers: 232nd ACS National Meeting, San Francisco, CA, September 2006.
- Symposium Organizer and Presider: *US – Mexico Collaborations in Chemical Education*, 230th ACS National Meeting, San Diego, CA, March 2005.
- Program Chair: Florida Annual Meeting and Exposition, Orlando, Fl, May 2004.

**Other Professional Experience:**

- All Saints Academy, Board of Trustee (August 2012 – Present).

- Chemistry Collaborations, Workshops and Community of Scholars (cCWCS) – Member of the Leadership Council for the Forensic Sciences Scholars (2011-present).

- 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.

- American Chemical Society (ACS) National:
  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-present) and vice-chair from 2012-present
  ACS Annual Faculty Peer Review Conference: Review Student Affiliate Annual reports. Elected to the Editorial Board of the *In Chemistry* Magazine, 2002-2003, 2008-Present.
  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-present, chair 2009 - present) and Program Committee (2005-present).
  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.

- American Chemical Society (ACS) Local Section:
  Councilor (2007 - present): Represent the local section at the ACS Council meeting and reviews local section annual report.
  National Chemistry 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
Career Coordinator (1999- 2003)

- 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.

- Gulf Coast World of Science Museum, Sarasota, FL
  Chair, Education Committee, 1996-2000.

- University of South Florida: Courtesy appointment in the Chemistry department, 2001-present.

- 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.

- 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.

- Marie Selby Botanical Gardens, Sarasota, FL
  Advisory Board for Children's Garden, 1995-1996.

- New England Board of Higher Education-Science and Engineering Division
  College representative and academic leader, 1992-1994.

**Service to Florida Southern College:**

- Candidate Interview Committee (2012-present).
- Advisory Board for the Teaching and Learning Center (April 2009-2011).
- Curriculum Committee (1999-2001, 2009-Present) -- Committee Chair (2009-2012).
- Natural Science and Mathematics Division Faculty Search Committees (2008-present).
- Transformation Curriculum (2008-2009).
- Tenure Committee (2007-2009).
- Vice-President for Academic Affairs Search Committee, 2007-2008.
- Honors Committee (1999-2001, 2007-2009).
- Wellness Task Force (2007-present)
- General Education Committee (2004-2006).
- President of the FSC Women's Association Board (2005-2006). Board member since 2002.
- Supervised students in scholarly research (2001-present).
- Faculty Senate (2001-2004). Worked with a sub-committee of the Senate on peer evaluation (2004 – 2006).
- Faculty advisor to the FSC - Student Affiliate Chapter of the American Chemical Society and to the Gamma Sigma Epsilon-Chemistry Honors Society (2000-present).
- Member of the Advisory Board for the Florida Center for Science and Religion. (May 2004-present).
- FSC Anti-Harassment Policy Facilitator Committee (2004-2008).
- Co-coordinator of the Active Learning Task Force for the faculty forum (January –April, 2005).
- Campus Safety Advisory Board (2003 –2005).
- Departmental Search Committees (chair: 2000, 2001; and 2002): successful hire of two chemistry faculty and 1 physics faculty; Spanish (2010).
- Core Curriculum Working Group (2000-2001).

**Salem State College**

- Coordinator of the Charlotte Forten Scholars Program, an honors program for minority students. Responsibilities included: recruitment, admission, and advising (1993 - 1994).
- Advisor to McNair scholars (1993 -1994).
- Affirmative Action Committee (1993-1994).
- Chemistry and Physics Curriculum (1990-1994).
- Graduate School Research Seminar (1992-1994).
- Project PALMS (Partnership Advancing the Learning of Mathematics and Science).
- White House Conference on Education (1994).
- Writing Across the Curriculum (1991-1994).
- Women in Science and Engineering (WISE) (1990-1994).
- Student Life (1992-1994).
- Academic Policies (1990-1992).

## Awards and Recognition

- Salutes to Excellence (2008) – award presented by the Florida Local Section of the American Chemical Society.
- ODK Teacher of the Year (2006).
- Who's Who Among America's Teachers (2003, 2004).
- Dissertation Fellowship for Outstanding Ph.D. Candidate, University of New Hampshire, 1987-1988.

## Professional Membership:

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