

CURRICULUM VITAE - FLORENCIO ELOY HERNANDEZ

University of Central Florida • Department of Chemistry and CREOL/The College of Optics and Photonics •
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LEADERSHIP

After advancing to the rank of Professor in 2015, I started a new journey to become an academic leader and serve my community. To achieve this goal, I completed my MBA at UCF in 2018, and have participated in several leadership initiatives in our institutions including the Academic Leadership Academy (2016-2017), Chairs and Directors Excellence Program (2016-2017), and the Provost Faculty Fellow Program (2017-2018). As the Graduate Coordinator of the Chemistry Graduate program, and in collaboration with Department of Physics and UCF Global, I have been leading efforts for the development of a new initiative for the Americas and the Caribbean, and have developed and implemented new processes to improve and simplify admissions, expand recruiting and retention, revise the curriculum and handbook, and develop conduct and appeals policies. In my new role as the Interim Associate Dean for Research of the College of Community Innovation and Education at UCF, I provide leadership for the college to serve our fast-growing and diverse Central Florida Community through promoting transformative and interdisciplinary scholarship, strong partnerships with private and public organizations, community engagement and the implementation of break-through teaching strategies.

EDUCATION:

2015-2018	Master in Business Administration University of Central Florida	Orlando, FL, USA
1992-1996	Doctor in Science (Physical-Chemistry) Universidad Central de Venezuela (Aristide Marcano) and L'Université Franche-Comté (Hervé Maillotte)	Caracas, Venezuela Besançon, France.
1987-1992	Bachelor Degree Chemistry "Licenciado en Química" Universidad Central de Venezuela	Caracas, Venezuela

APPOINTMENTS:

Since 06/28/19	Interim Associate Dean for Research, College of Community innovation and Education, UCF	Orlando, FL
Since 08/08/18	Chemistry Graduate Coordinator, Department of Chemistry, UCF	Orlando, FL
08/15/17 to 08/06/218	Provost Faculty Fellow, Academic Affairs Division, UCF	Orlando, FL
Since 04/11/16	Professor of Chemistry and Optics, Department of Chemistry and CREOL, UCF	Orlando, FL
04/16/08 to 04/10/16	Associate Professor of Chemistry and Optics, Department of Chemistry and CREOL, UCF	Orlando, FL
08/08/02 to 04/16/08	Assistant Professor of Chemistry and Optics, Department of Chemistry and CREOL, UCF	Orlando, FL
08/08/01 to 05/08/02	Visiting Assistant Professor of Chemistry, Department of Chemistry, UCF	Orlando, FL
10/15/98 to 8/08/02	Visiting Research Scientist , CREOL/The College of Optics and Photonics, (E. W. Van Stryland), UCF	Orlando, FL
01/01/97 to 02/31/99	Postdoctoral Research Fellow The Venezuelan Institute for Scientific Research (IVIC)	Caracas, Venezuela

PROFESSIONAL EXPERIENCE

☛ Since June 2019 – Interim Associate Dean for Research, College of Community Innovation and Education

As the Interim Associate Dean for Research of the College of Community Innovation and Education, I provide leadership for the college to serve our fast-growing and diverse Central Florida Community through promoting transformative and interdisciplinary scholarship, strong partnerships with private and public organizations, community engagement and the implementation of break-through teaching strategies for helping many achieve more.

Among my responsibilities there are:

- Create mechanisms to facilitate interdisciplinary and cross-college research activities to form successful collaborative research groups.
- Provide and facilitate mentorship and consultation for faculty regarding preparation of research proposals (identification of potential funding, conceptualization, design, and finances for grant proposals) and ongoing grant-related research activities.
- Encourage faculty to pursue diverse external funding sources in the expansion of their research ambitions (public and private opportunities at the local, state, and federal levels).
- Promote the integration of research activities into community practices to contribute to the public good through collaboration between faculty and community partners.
- Act as liaison between the college and the UCF Office of Research & the UCF Foundation.
- Implement relevant constructive policies and practices on research personnel, safety and compliance, IRB, and the approval of new research proposals.
- Oversee college research administration service team, budgets and programs, as well as research facilities within the college.
- Supports the Dean and marketing and communications in showcasing faculty research and community impact.
- Conduct or direct special projects as assigned by the Dean.
- Provide College-level executive guidance for unresolved issues.

☛ Since 2018 – Chemistry Graduate Coordinator

As the Chemistry Graduate Program Coordinator (CGPC) I am the academic leader of the graduate program in the Department of Chemistry. Working alongside the Department Chair, and closely with the faculty and students in the graduate program, as well as with the associate deans and deans of the College of Sciences and that of Graduate Studies, I ensure the smooth operation, quality and growth of the program.

Among my responsibilities there are:

- Support of day-to-day operations of the Chemistry Graduate Program, including adherence to academic policies, academic standing, exceptions, etc.
- Maintain good communication with faculty and students in the graduate program, and the associate deans and deans of the College of Sciences and that of Graduate Studies.
- Supervise and coordinate the administration and governance of graduate studies within the program.

- Serve as the liaison among the graduate students, program faculty, and the College of Sciences and the College of Graduate Studies administration.
- Serve as a point of contact for all graduate students enrolled in the program.
- Develop and implement new recruiting strategies.
- Oversee recruitment of students to the program.
- Oversee departmental admissions and review processes of applicants.
- Assign graduate teaching assistantships.
- Orient and counsel graduate students with respect to program and degree requirements until a permanent adviser is selected and assist in that selection as necessary.
- Provide written criteria to each student, upon entry, of expectations and what constitutes acceptable progress through the program and the grounds for the student's termination from it.
- Oversee graduate program planning and curriculum development (Chemistry Ph.D. and M.S. programs), program reviews, and assessments.
- Coordinate annual review of the graduate catalog.
- Oversee graduate program committees.
- Plan and conduct student orientation sessions.
- Oversee the process of conflict resolution within the department.
- Communicate with the chair, program faculty, and graduate students about important deadlines and changes to graduate programming.
- Maintain smooth conduct of the programs which might include such things as recommendation of students for fellowships/scholarship and honors, further graduate study, jobs, and special programs; coordination and administration of comprehensive examinations.
- Conduct analyses related to graduate student progression, retention, and quality.
- Review program-specific graduate student handbooks to ensure compliance with University and accreditation policies.
- Represent the Chemistry Graduate Program on campus committees and interacts as appropriate with all levels of college and university administration.
- Assume other duties assigned by the Chair.

➔ 2017-2018 - Provost Faculty Fellow

In this position I learned, directly from the academic leaders of the institution, how to positively influence decisions, build teams and delegate, communicate with precision and empathy, listen with focus and resolve conflicts, remain present and aware of myself and my surroundings at all times, and how to ask questions that lead to positive nurturing conversations. I also acquired a better understanding of how my academic institution works from the inside and what are some of the existent challenges in higher education in our country. Additionally, I participate in the design and development of new ideas that could transform education in the 21st century, i.e. The Centre of Excellence in "Smart Experimental Education", Careers of the Future, and The UCF-Americas Impact Initiative.

In this position I also had the opportunity to provide input towards efforts to strengthen and support the environment UCF faculty need to succeed in their academic careers:

- Co-developed and Co-led the UCF/Faculty Excellence Associate Professor Mentoring Program. This faculty-driven initiative was intended to address mid-career faculty needs in a targeted but also comprehensive way.
- Co-led the UCF/Faculty Excellence Mid-Career Advisory Sub-Committee.

- Developed the Deans' Ever-increasing Empathy & Motivation (DEEM) Program to change the negative perception that many Faculty have of not being valued by the institution.
- Proposed the Boosting Scholar Incentive Award to motivate Mid-Career Faculty to maintain their academic enthusiasm and continue active in teaching, research and service throughout their career path to attain Full Professor and beyond.

➔ **2016-2017 - Academic Leadership Academy**

I chaired the new UCF Emeritus Criteria committee and was engaged in the creation of the UCF Unit Bylaws document.

➔ **2016-2017 - The Faculty Excellent Advisory Council**

I provided input towards efforts to strengthen and support UCF faculty: electronic faculty reporting survey, template language for interdisciplinary and internationalization, departmental bylaw template, and University level P&T review procedures.

➔ **2016-2017 - College of Sciences**

I revised the new College Promotion Instructors & Lecturers Criteria committee, chaired the P&T college committee and the Research Incentive Award and the Teaching Promotion Incentive Award committees.

➔ **2016-2017 - Faculty representative in the B&A committee of the UCF Faculty Senate**

I propose a new resolution to reconsider the registration procedures for UCF employees, administrators, faculty and their corresponding relatives.

➔ **2015-2017 - Chair Chemistry Graduate Committee**

I revised curriculum, coordinated the development of new courses, helped assess the program, revised the candidacy exam requirements, revisited the policies for changing dissertation committee member, redesigned the chemistry graduate seminar program, and wrote many letters on behalf of chemistry graduate students to apply for fellowships and scholarships.

➔ **Since 2015 - Interdisciplinary Studies Advisory Committee**

I proposed the creation of two new ID-programs at UCF, i.e. Ph.D.-MBA and Ph.D.-ALIMA, and I have been involved in discussions related to the new IDS Ph.D. program.

➔ **Since 2015 - Undergraduate Research Council**

I contribute with new ideas and direct participation as judge and reviewer of the Undergraduate Research Forum and Undergraduate Fellowship committee, respectively.

➔ **2015-2016 - UCF Faculty Senate**

In the Budget & Administration Committee, I worked directly in the post-tenure evaluations, encouragement of interdisciplinary research, and the protection of the humanities at UCF.

➔ **Since 2012 - College of Graduate Studies**

I have worked directly with the Associate Deans on the evaluation and prioritization of minority fellowships such as McNair/RAMP/Auzene Fellowship selection Committee

➔ **2011-2012 -Chemistry Seminar Coordinator**

I raised \$20,000 in internal funding to run this program and promoted our young faculty through their tenure-track. Invited 14 external speakers, two Noble Laureate included.

➔ **2010-2016 - Coordinator of OCTET and BIOTEC**

I successfully designed, organized and directed these two intensive summer camps for local high school students.

➔ **2010 - Chair, American Chemical Society-Orlando Section - (Approximately 600 members)**

I initiated the Earth Day outreach activity, convinced the chapter board to contribute with funding to invite, in collaboration with UCF, two Noble Laureate, and developed and obtain ACS-IPG and industry funding (\$4,500) to create and run a chemistry summer camp (OCTET) for high school students.

➔ **2008-2010 - ACS Chemistry Olympiad Coordinator**

I was in charge of coordinating all the logistic for the Orlando Section (seven counties).

RESEARCH ACTIVITIES

I received my PhD from the Universidad Central de Venezuela (Venezuela) in collaboration with L'Université Franche-Comté (France) in 1996, for my investigations of the development and application of the double-beam Z-scan to study linear and nonlinear absorption processes via thermal lensing, performed under the supervision of A. Marcano and H. Maillotte. I spent three years as a postdoctoral associate in the physics department at IVIC-Venezuela, and three years as Visiting Research Scientist in CREOL under the supervision of Eric Van Stryland, before joining the Department of Chemistry at UCF in 2002. My research focuses in the application of state-of-the-art two-photon circular dichroism (TPCD) to understand: The fundamental activity of chiral molecules and macromolecules in biological processes, mainly those involved in Alzheimer disease; The properties of optically active asymmetric catalysts used in the pharmacological and flavor industry; The design of novel metamaterials leading to the construction of perfect lenses and cloaking devices; The design of novel chemical, explosive, radiological, and biological sensors for environmental analysis, homeland security and biomedicine. Passionate about teaching and learning, six years ago I initiated a new line of investigation in chemistry educational research (CER). My CER mainly focuses on ways to introduce authenticity to chemistry education, and incorporation of active learning and critical thinking upper-level chemistry courses to emulate scientific thinking and increase learning.

RESEARCH GRANTS:

1. *Project Title:* Two-photon circular dichroism and isotope-edited FTIR building synergy for the Structural analysis of Amyloid beta 1-42 oligomers
Source of Support: Florida Health (8AZ13)
Total Award Amount: \$ 200,000 (PI 50%)
Total Award Period: Spring 2018-Spring 2020
2. *Project Title:* EAGER_IDBR: Development of a two-photon circular dichroism spectrometer with extreme spectral capabilities in the far UV (FUV-TPCD)
Source of Support: NSF- IDBR & CMI (IDBR-1422826)
Total Award Amount: \$ 225,010 (PI 100%)
Total Award Period: September 2014-July 2017
3. *Project Title:* EAGER:Photo-Activated Current and Magnetization in Au-Nanorings (PACMAN)
Source of Support: NSF-ECCS (ELECT, PHOTONICS, & MAG. DEVICE) (ECCS-1238738)
Total Award Amount: \$80,000 (PI 40%) [Co-PIs Enrique del Barco & Shengli Zou]
Total Award Period: August 2012-July 2014
4. *Project Title:* “Field-deployable, nano-sensing approach for real-time detection of free mercury, speciation and quantification in surface stream waters and groundwater samples at the U.S. Department of Energy contaminated sites”
Source of Support: DOE (TES_SBR-1049185)
Total Award Amount: \$523,882 (Co-PI 50%), [PI Andres Campiglia]
Total Award Period: June 2010-May 2014
5. *Project Title:* "Purchase and Development of a Cyber-Enabled Broadly Tunable kHz fs-Laser System"
Source of Support: NSF-CHE, Chemical Instrumentation (NSF-ARRA-0840431)
Total Award Amount: \$500,000 (Co-PI 30%) [PI Kevin D. Belfield, Co-PIs Steve Kuebler & Andre Gesquiere]
Total Award Period: June 2009

6. *Project Title:* "Self-Organized Aggregates in Photonics (SOAP): A comprehensive approach to multiphoton absorbing supramolecular assemblies"
Source of Support: NSF-CHE, Collaborative Research in Chemistry (CHE-0832622)
Total Award Amount: \$1,800,000 (Co-PI 25%) [PI Kevin D. Belfield, Co-PIs Artem Masunov & Tatiana V. Timofeeva] \$10,000 (100% - RET Summer 2010)
Total Award Period: September 2008-August 2013
7. *Project Title:* "LIBS-THz spectroscopy for improvised explosive devices (IED) detection"
Source of Support: IAI-DOD
Total Award Amount: \$80,000 (100% PI)
Total Award Period: November 2007-March 2009 (Phase II)
8. *Project Title:* "Understanding clotting activation in cancer: a study of the structure and in vivo behavior of tumor-derived microparticles"
Source of Support: GALA Florida Hospital - UCF
Total Award Amount: \$ 40,000 (PI 60%) [Co-PI Monica Davila]
Total Award Period: May 2007-May 2008
9. *Project Title:* Radiation Combining terahertz time- domain spectroscopy (THz- TDS) with LIBS for hazardous materials detection
Source of Support: IAI-DOD
Total Award Amount: \$16,000 (100% PI)
Total Award Period: November 2006-March 2007 (Phase I)
10. *Project Title:* Sensitive Chemical Vapor Detection using Light Induced Fluorescence and LIBS
Source of Support: Lockheed Martin
Total Award Amount: \$39,320 (100% PI)
Total Award Period: November 2005-March 2006 (Phase III)
11. *Project Title:* Chemical Vapor Detection Using Laser Induced Breakdown (LIBS)
Source of Support: Lockheed Martin
Total Award Amount: \$37,723 (100% PI)
Total Award Period: March 2005-August 2005 (Phase II)
12. *Project Title:* Remote vapor detection optical nose (REVADON)
Source of Support: Lockheed Martin
Total Award Amount: \$32,608 (100% PI)
Total Award Period: October 2004-December 2004 (Phase I)
13. *Project Title:* RF-Smart Nanostructures
Source of Support: Nanotek Consortium, Kraft Food
Total Award Amount: \$4,000 (100% PI)
Total Award Period: January 2005-December 2005

14. *Project Title:* Optical, photonic, and electronic materials ACS PRF summer school

Source of Support: Petroleum Research Fund

Total Award Amount: \$31,080 (*Senior Personnel*) [PI Kevin D. Belfield]

Total Award Period: May 2005-Summer 2005

15. *Project Title:* Laser-assisted direct metallization for microelectronic applications

Source of Support: Florida Photonics Center for Excellence

Total Award Amount: \$15,000 (*Co-PI 70%*) [PI Kathleen Richardson]

Total Award Period: August 2004-July 2005

16. *Project Title:* Radiation decay engineering in multiphoton absorber using nanoparticles

Source of Support: UCF-Internal Research Award

Total Award Amount: \$7,500 (*100% PI*)

Total Award Period: August 2004-July 2005

TEACHING-ORIENTED GRANTS:

17. *Project Title:* “DCL: Synthesis and Design Workshop on Digitally-Mediated Team Learning”

Source of Support: NSF - DRL - Core R&D Program

Total Award Amount: \$99,999 (*Senior Personnel*)

Total Award Period: August 2018

18. *Project Title:* “Physical Science Capstone Course for Florida Consortium”

Source of Support: Quality Enhancement Plan (QEP) UCF

Total Award Amount: \$3,000 (*UCF Co-PI 25%*)

Total Award Period: May 2017

19. *Project Title:* “SoTL in a senior level undergraduate STEM course fusing a Reversed Learning Scheme with an Informal Learning Space: Reaching a new generation!”

Source of Support: *i-STEM* UCF

Total Award Amount: \$20,000 (*UCF PI 100%*)

Total Award Period: August 2016-August 2017

20. *Project Title:* “Creation of a Florida Consortium Physical Sciences Capstone Course”

Source of Support: Florida Consortium of Metropolitan Research Universities/Helmsley Charitable Trust

Total Award Amount: \$2,000 (*UCF Co-PI 25%*), [PI Enrique del Barco]

Total Award Period: June 2016-August 2016

21. *Project Title:* “Physics Youth Scholastic and Instructing Camp for Orlando Scientists (PHYSICOS)”

Source of Support: American Physics Society - GMAG

Total Award Amount: \$5,000 (*Co-PI 50%*), [PI Enrique del Barco]

Total Award Period: October 2016-October 2018

22. *Project Title:* “Orlando Chemistry Tutoring, Enrichment, and Training Camp (OCTET)”

Source of Support: American Chemical Society - Innovative Program grant

Total Award Amount: \$3,000 (*PI 50%*), [Co-PI Yi Liao]

Total Award Period: October 2011-October 2012

23. *Project Title:* "UCF Technology Fee - Computational Tools for Chemistry Students"

Source of Support: University of Central Florida

Total Award Amount: \$140,000 (Co-PI 25%) [PI Kevin D. Belfield, Co-PI Shengli Zou & Robert Igarashi]

Total Award Period: January 2010

24. *Project Title:* Curriculum Development Educational Award

Source of Support: Ocean Optics

Total Award Amount: \$1,840 (100% PI)

Total Award Period: August 2004

HONORS & AWARDS:

- 2016-2017 Teaching Incentive Program (**TIP**) Award presented by UCF
- 2015-2016 Research Incentive Award (**RIA**) presented by UCF
- Since 02/2014 Invited to serve as Associate Editor of the IEEE Journal of Photonics
- 2012-2015 Invited to serve in the Editorial Board of Dataset Papers in Physical Chemistry, Hindawi Publishing Corporation
- 2010-2011 Chair Elect/Chair of the American Chemical Society-Orlando Local Section
- 2010-2011 Teaching Incentive Program (**TIP**) Award presented by UCF
- 2011 Graduated a Ph.D. student, Dr. Carlos Toro, with the University of Central Florida and College of Sciences Outstanding Dissertation Award 2011
- Since 2010 Full Faculty Graduate Member in the College of Graduate Studies at UCF
- 2010 Invited to serve in the Advisory Board of BIT's 1st Annual World Congress of Nanomedicine 2010, Beijing, China
- 2009-2010 Research Incentive Award (**RIA**) presented by UCF
- 2005-2006 Teaching Incentive Program (**TIP**) Award presented by UCF
- 2004 American Chemical Society (Orlando Section) Outstanding Chemist Award
- 2001-Awarded by Laser Focus World, for excellence in technical communications
- 1997-Awarded by the Venezuelan Researcher Promotion Program (PPI)
- 1994-Awarded by the Venezuelan Researcher Promotion Program (PPI)
- 1992- BID-CONICIT Fellowship for Ph.D. in science (1992)

SOCIETES:

- OSA (173-233), IEEE, ACS (2392828), Societé Française d'Optique

COMMUNICATION LANGUAGES:

- Spanish (native), English (Fluent), French (Fluent)

COLLABORATIONS:

Throughout my tenure at UCF I have had the opportunity to establish many fruitful and solid collaborations with international and national scientist. These collaborations have contributed to the development of my career and my success attracting external funding and publishing high quality peer-reviewed articles in well-recognized journals. Next, I present the list of my most notorious international and national collaborators with whom I have constructively published and/or received external funding.

International:

- Dr. Antonio Rizzo (IPCF-CNR, Pisa, Italy)
- Dr. Cleber R. Mendonca, (U. Sao Paulo, Brasil)
- Dr. Lorenzo Echevarria (USB, Caracas, Venezuela)
- Dr. Fabrizio Santoro (IPCF-CNR, Pisa, Italy)
- Dr. Magdalena Cid (U. Vigo, Vigo, Spain)
- Dr. Jeanne Crassous (U. Rennes, Rennes, France)
- Dr. Irena G. Stara (ASCR, Prague, Czech Republic)
- Dr. Ivo Stary (ASCR, Prague, Czech Republic)
- Dr. Leonardo Deboni (U. Sao Paulo, Brasil)
- Dr. Mykhailo Bondar, (Institute of Physics, Prospect Nauki, Ukraine)
- Dr. Olga Przhonska, (Institute of Physics, Prospect Nauki, Ukraine)
- Dr. Juhani Huuskonen, (Department of Chemistry, University of Jyväskylä, Finland)
- Dr. Remy Passier (U. Franche-Comte, France)
- Dr. Na Lin (RITAN, Sweden - Shandong University)
- Dr. Zahra Dezhahang, (Department of Chemistry, University of Alberta, Canada)
- Dr. Mohammad Reza Poopari, (Department of Chemistry, University of Alberta, Canada)
- Dr. Yunjie Xu, (Department of Chemistry, University of Alberta, Canada)
- Dr. Carlos Borrás (USB, Caracas, Venezuela)

National:

- Dr. Vladimiro Mujica, Arizona State University, AZ
- Dr. Kevin D. Belfield, New Jersey Institute of Technology, NJ
- Dr. Andres Campiglia, Department of Chemistry, UCF
- Dr. Artem Masunov, NSTC & Department of Chemistry, UCF
- Dr. Stephen M. Kuebler, Department of Chemistry & CREOL, UCF
- Dr. Andre Gesquiere, NSTC & Department of Chemistry, UCF
- Dr. Enrique del Barco, Department of Physics, UCF
- Dr. Shengli Zou, Department of Chemistry, UCF
- Dr. Suren Tatulian, Department of Physics, UCF
- Dr. Andrew Frazer, Department of Chemistry, UCF
- Dr. Fernando Rivera, Department of Sociology, UCF
- Dr. Amanda Anthony, Department of Sociology, UCF
- Dr. Sheng Yao, Department of Chemistry, UCF
- Dr. Mohanraja Kumar, USF
- Dr. Gang Chen, Department of Chemistry, UCF
- Ron DeMara, Department of Electrical and Computer Engineering, UCF
- Richard Hartshorne, College of Community Innovation and Education.

PUBLICATIONS IN PEER-REVIEWED JOURNALS:

Total # of # Articles = 96, Total # of Citations = 1865, h-index = 26 (ISI Web of Sciences)

Total # of # Articles = 96, Total # of Citations = 2835, h-index = 31, i10-index = 65 (Google Scholar)

1. D. Iacocca, P. Patiño, M. Roperio and F. E. Hernández, "Oxidation of some vapor free liquid organic compounds by a low pressure oxygen plasma", *Revista Brasileira de Aplicacoes de Vacuo* **11**, 126-134 (1992)
2. V. P. Kozich, A. Marcano, F. E. Hernández and J. Castillo, "Differential thermal lensing to study two-photon absorption spectra in solution", *Applied Spectroscopy* **48**, 1419-1422 (1994)
3. V. P. Kozich, A. Marcano, F. E. Hernández and J. Castillo, "Dual-beam time resolved Z-scan in liquids to study heating due to linear and nonlinear light absorption", *Applied Spectroscopy* **48**, 1506-1512 (1994)
4. P. Patiño, F. E. Hernández and S. Rondon, "Reaction of O (³P) with secondary C-H bonds of saturated hydrocarbons in non-equilibrium plasmas" *Plasma Chemistry and Plasma Processing* **15**, 159-171 (1995)
5. Valery Kozich, Florencio E. Hernández and A. Marcano O., "Pulse-induced thermal lensing in Kerr media", *Applied Spectroscopy* **49**, 1804-1808 (1995)
6. F. E. Hernández, A. Marcano O. and H. Maillotte, "Sensitivity of the total beam profile distortion Z-scan for measurements of nonlinear refraction", *Optics Communications* **134**, 529-535 (1997)
7. F. Cherioux, P. Audebert, L. Grossard, F. E. Hernández, A. Lacourt and H. Maillotte, "New third order nonlinear polymers functionalized with DR and DO chromophores with increased stability", *Chemistry of Materials* **9**, 2921-2925 (1997)
8. Marcano O., F. E. Hernández, A. D. Sena, "Two-color near field eclipsing Z-scan technique for the determination of nonlinear refraction", *Journal of the Optical Society of America B* **14**, 3363-3366 (1997)
9. F. E. Hernández, A. Marcano, Y. Alvarado, A. Biondi, H. Maillotte, "Measurement of nonlinear refraction index and two-photon absorption in a new organometallic compound", *Optics Communications* **152**, 77-82 (1998)
10. M. E. Zoghbi, P. Bolaños, C. Villalba-Galea, A. Marcano, F. E. Hernández, M. Fill, and A. L. Escobar, "Spatial Ca²⁺ Distribution in Contracting Skeletal and Cardiac Muscle Cells", *Biophys J.* **78**, 164-173 (2000)
11. F. E. Hernández, S. Yang, E. W. Van Stryland, and D. J. Hagan, "High dynamic range cascaded-focus optical limiter", *Opt. Lett.* **25**, 1180 (2000)
12. F. E. Hernández, S. Yang, V. Dubikovski, W. Shensky II, E. W. Van Stryland, and D. J. Hagan, "Dual focal plane visible optical limiter", *J. of Nonlinear Opt. Phys. and Mat.* **9**, 423 (2000)
13. F. E. Hernández, S. Yang, D. Hagan, and E. W. Van Stryland, "Wavelength independent "Babinet Compensator Optical Limiter" (BCOL)", *LCMC* **358**, 301 (2001)
14. F. E. Hernández, W. Shensky III, Ion Cohanoschi, D. J. Hagan and E. W. Van Stryland, "India Ink / CS₂ Used as a Broadband Laser Safety Device", *Laser Focus World* **37**, 125+ (2001). (Invited paper)
15. F. E. Hernández, W. Shensky III, Ion Cohanoschi, D. J. Hagan and E. W. Van Stryland, "Viscosity Dependence of Optical Limiting in Carbon Black Suspensions", *Applied Optics-LP* **41**, 1103 (2002)
16. Kevin D. Belfield, Yong Liu, Raluca A. Negres, Meigong Fan, Guilan Pan, David J. Hagan, and F. E. Hernandez, "Two-Photon photochromism of an organic material for holographic recording", *Chemistry of Materials* **14**, 3663 (2002)
17. Shensky, W., III; Cohanoschi, I.; Hernandez, F. E.; Van Stryland, E. W.; Hagan, D. J. "Carbon-black suspension based broadband optical limiter", *Trends in Optics and Photonics* **79** (Nonlinear Optics), 266-268. (2002)

18. Florencio E. Hernández, Kevin D. Belfield, Ion Cohanoschi, “Symmetrical charge transfer enhances three-photon absorption in Fluorene Derivatives”, *Chem. Phys. Lett.* **391**, 22-26 (2004)
19. Kevin D. Belfield, Florencio E. Hernandez, Ion Cohanoschi, Mykhailo V. Bondar, Eric W. Van Stryland, Two-photons and Beyond: 2, 3, and 4 Photon Absorption in Conjugated Fluorenes, *Polymeric Materials: Science and Engineering* **91**, 346-347 (2004)
20. Florencio E. Hernández, Kevin D. Belfield, Ion Cohanoschi, Mihaela Balu and Katherine. J. Schafer, “Three and Four-Photon Absorption of a Multiphoton Absorbing Fluorescent Probe”, *Appl. Opt.* **43**, 5394-5398 (2004)
21. K.D. Belfield, M.V. Bondar, F.E. Hernandez, A.R. Morales, O.V. Przhonska, and K.J. Schafer, “Nonlinear transmission and Excited-state absorption in fluorene derivatives”, *Appl. Opt.* **43**, 6339-6343 (2004)
22. Ion Cohanoschi, Kevin D. Belfield, Florencio E. Hernández, “Three-Photon Absorption Enhancement in Symmetrical Charge Transfer Pull-Pull Fluorene Derivatives”, *Chem. Phys.Lett.* **406**, 462-466 (2005)
23. Florencio E. Hernández, Shenjiang Yu, Marisol García, Andrés D. Campiglia, “Fluorescence lifetime Enhancement of Organic Chromophores Attached to Gold Nanoparticle”, *J. Phys. Chem. B* **109**, 9499-9504 (2005)
24. Carlos Zapata-Rodriguez, Florencio E. Hernández, “Focal squeeze in axicons”, *Opt. Comm.* **254**, 3-9 (2005)
25. Ion Cohanoschi, Florencio E. Hernández, “Surface Plasmon Enhancement of Two- and Three-Photon Absorption of Hoechst 33258 dye in Activated Gold Colloid Solution”, *J. Phys. Chem. B* **109**, 14506-14512 (2005)
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4. V. P. Kozich, A. Marcano, J. Castillo, F. E. Hernández, "Chlorophyll nonlinearities studies with Z-scan technique", 5th International Conference of Lasers Applications in life Science, 28/06/94, Minks, Byelarusia.
5. A. Marcano O., F. E. Hernández, H. Maillotte, "Sensitivity enhancement of nonlinear refraction measurements with the open Z-scan by digital image processing", Conference on Laser and Electro-Optics 1996 (CLEO/EUROPE-EQEC'96), 08/09/96, Hamburg, Germany.
6. F. E. Hernández, A. Marcano O, Ysayas Alvarado, A. Biondi, "Measurements of nonlinear refraction index and two-photon absorption in a novel organometallic compound", 1997 OSA Annual Meeting, 12/10/97, Long Beach, California, EUA
7. H. Maillotte, A. Marcano O., F.E. Hernández, F. Cherioux, P. Audebert, L. Grossard, "Multichannel TPD Z-scan method for n₂ measurements of new polymers", Summer School NATO-ASI "Beam shaping and control with nonlinear optics", 08/97, Cargese, France.
8. Escobar AL., Zoghbi ME, Villalba-Galea C., Fill M., Hernadez E., Marcano A y Bolanos P., "Sub-cellular calcium dynamics in striated muscle cells", Biophysical Society, 02/1998, Kansas City, EUA.
9. A. Marcano O., A. Solis, F. E. Hernandez and H. Maillotte, "Total profile distortion Z-scan", 3 Ibero-American Optics Meeting and 6th Latin American meeting on optics, lasers, and their applications, 09/1998, Cartagena, Colombia.
10. F. E. Hernández, S. Yang, D. Hagan, and E. W. Van Stryland, "Wavelength independent "Babinet Compensator Optical Limiter" (BCOL)", OLC'99, 09/99, Puerto Rico, USA.
11. F. E. Hernández, S. Yang, E. W. Van Stryland and D. J. Hagan, "High dynamic range, cascaded-focus nanosecond optical limiter", CLEO'00 (Post deadline paper), Saint Francisco, CA, USA.

12. F. E. Hernández and D. J. Hagan, “Continuously Variable, “Wavelength-Independent Polarization Rotator”, CLEO’00, St. Francisco, CA, USA.
13. E. W. Van Stryland, S. S. Yang, F. E. Hernández, V. Dubikovskiy, and D. J. Hagan, “Cascaded Optical Limiters and Modeling”, ISOPL 2000, Venice, Italy.
14. F. E. Hernández, S. Yang, W. Shensky III, D. J. Hagan, and E. W. Van Stryland, “High dynamic range cascaded optical limiters”, SPIE’00, St. Diego, CA, USA.
15. Kevin D. Belfield, David J. Hagan, Yong Liu, Raluca A. Negres, and Meigong Fan^S, F. E. Hernandez, “Two-Photon photochromism of a photorefractive organic material for holographic recording”, SPIE’00, St. Diego, CA, USA.
16. F. E. Hernández, S. Yang, E. W. Van Stryland and D. J. Hagan, “Electrostriction effect contribution for high dynamic range optical limiters”, NLO’00, Hawaii, USA.
17. F. E. Hernández, S. Yang, W. Shensky III, E. W. Van Stryland and D. J. Hagan, “Hybrid optical limiter based on Pb-Phthalocyanine and CS₂’ OSA’00, Providence, USA.
18. W. Shensky III, F. E. Hernández, V. Dubikovskiy, E. W. Van Stryland, D. J. Hagan, “Enhancement of nonlinear self-action in CS₂ for nanosecond optical limiting”, CLEO’01, Baltimore, USA.
19. F. E. Hernández, W. Shensky III, E. W. Van Stryland, D. J. Hagan, “Wavelength independent, high dynamic range optical limiter”, SPIE’01 (Invited talk), San Diego, California, USA.
20. C. R. Mendonça, F. E. Hernández, D. J. Hagan, and E. W. Van Stryland, “Two-photon induced birefringence in azobenzene dye films”, OSA’01, Long Beach, California, USA.
21. F. E. Hernández, C. R. Mendonça, Ion Cohanoschi, W. Shensky III, D. J. Hagan and E. W. Van Stryland, “Viscosity Dependence of Optical Limiting in Carbon Black Suspensions”, CLEO’02, Long Beach, California, USA.
22. W. Shensky III, Ion Cohanoschi, F. E. Hernández, D. J. Hagan and E. W. Van Stryland, “Broadband optical limiter using carbon-black suspensions in CS₂”, CLEO’02, Long Beach, California, USA.
23. Shi-Wei Chu, Francois Bresson, I-Hsiu Chen, Jin-Wei, Ming-Chun Tien, Chi-Kuang Sun, and F. E. Hernandez, “3-dimensional electric field visualization utilizing electric-field-induced second harmonic generation in liquid crystals”, CLEO’02, Long Beach, California, USA.
24. E. W. Van Stryland, J. M. Hales, R. A. Negres, W. Shensky III, F. E. Hernández, V. A. Dubikovskiy, and D. J. Hagan. “Broadband nonlinear absorption spectroscopy for optical limiter”, SPIE’02, Seattle, Washington, USA.
25. F. E. Hernández, C. R. Mendonça, Ion Cohanoschi, D. J. Hagan, and E. W. Van Stryland. “Carbon particle recovery model in CBS nonlinear transmittance”, SPIE’02, Seattle, Washington, USA.
26. Belfield K. D., Liu Y., Hernandez F. E., “Two-photon photochromism of a fulgide-containing polymer for holographic recording”, ACS Spring National Meeting’02, Orlando Florida, USA
27. Belfield K. D., Liu Y., Schafer K. J., Hernandez F. E., “Two-photon induced modulation of optical properties in polymers for photonic applications”, ACS Spring National Meeting’02, Orlando Florida, USA
28. Florencio E. Hernández, Kevin D. Belfield, Ion Cohanoschi, Mihaela Balu and Katherine. J. Schafer, “Three and Four-Photon Absorption of a Multiphoton Absorbing Fluorescent Probe”, CLEO’04, San Francisco, California, USA.
29. Florencio E. Hernández, Kevin D. Belfield, Ion Cohanoschi, Mihaela Balu and Katherine. J. Schafer, “Three and Four-Photon Absorption in NPH2Bz/Hexane”, SPIE’04, San Francisco, Colorado, USA.
30. Belfield K.D., Hernandez F. E., Cohanoschi I., Bondar M. V., Van Stryland E. W., “Two-photons and beyond: 2, 3 and 4 photon absorption in conjugated fluorenes”, ACS National Meeting Fall’04, Philadelphia, PA, USA
31. Florencio E. Hernandez, Kevin D. Belfield, Ion Cohanoschi, “Three is Better than Two”, Summer School in Nanophotonics’04, Cargese, Corsica, France.

32. Florencio E. Hernández, Kevin D. Belfield, Ion Cohanoschi, Mihaela Balu and Katherine. J. Schafer, “Three and four-photon absorption of a multiphoton absorbing fluorescent probe”, CLEO’04, San Francisco, California, USA.
33. L. Petit, N. Carlie, M. Blangero, K. Richardson, T. Cardinal, F. E. Hernandez, Y. Go, A. Schulte, “Effect of the introduction of silver in germanium – based sulfide glasses”, Glass & Optical Materials Division Fall 2004 Meeting, Incorporating the XIVth International Symposium on Non-Oxide Glasses (ISNOG)’2004, Cocoa Beach, Florida, USA.
34. Ion Cohanoschi, Kevin D. Belfield, Florencio E. Hernandez, “Three-photon absorption induced fluorescence in π -conjugated fluorene derivatives”, CLEO’05, Baltimore, Maryland, USA.
35. Florencio E. Hernández, Shenjiang Yu, Marisol García, Andrés D. Campiglia “Fluorescence lifetime Enhancement of Organic Chromophores” FACSS’05, Quebec City, Quebec, Canada
36. Florencio E. Hernandez, Matthew Rex, Jessica Griffin, and Andres D. Campiglia “Gold nanorods: a novel approach to improving limits of detection for Mercury determination in aqueous samples” FACSS’05, Quebec City, Quebec, Canada.
37. Marisol Garcia, Celine Perego, Florencio E. Hernandez, “Truly Non Invasive Glucose Optical Sensor Using Gold Nanoparticles”, ACS Annual Meeting Spring’06, Atlanta, USA
38. Corredor C. C., Belfield K. D., Bondar M. V., Cohanoschi I., Hernandez F. E., Przhonska O. V., “Two-photon 3-D data storage: Photochromic reactions of two diarylethene derivatives under one- and two-photon excitation”, ACS Spring’06 National Meeting, Atlanta, Georgia, USA.
39. Belfield K. D., Bondar M. V., Cohanoschi I., Hernandez F. E., Kachkovsky O. D., Przhonska O. V., Yao S., “Excited-state absorption and anisotropy properties of multiphoton absorbing fluorene derivatives”, ACS Spring’06 National Meeting, Atlanta, Georgia, USA
40. Yao S., Belfield K. D., Hernandez F. E., Cohanoschi I., Hales J. M., “Synthesis of novel highly efficient two-photon chromophores using fluorenyl bridge bearing electron donor or acceptor groups”, ACS Spring’06 National Meeting, Atlanta, Georgia, USA
41. Corredor C. C., Belfield K. D., Cohanoschi I., Hernandez F. E., “3-D optical data storage based on reversible fluorescence control from a fluorescent dye to a photochromic diarylethene by two-photon excitation”, ACS Spring’06 National Meeting, Atlanta, Georgia, USA
42. Florencio E. Hernandez, Matthew Rex, and Andres D. Campiglia “Pushing the limits of mercury sensor with gold nanorods” NANOTECH’06, Boston, USA
43. Ion Cohanoschi, Kevin D. Belfield, Carlos Toro, Florencio E. Hernandez, “The Impact of the Conjugation Length on the Three-Photon Absorption Cross-Section of Fluorene Derivatives”, CLEO’06, Long Beach, CA, USA
44. Matthew Rex, Florencio Hernandez, Andres Campiglia, “Separation of Gold Nanorods with Capillary Electrophoresis to Achieve Better Limits of Detection for Mercury in Water”, FACSS’06, Orlando, USA
45. Florencio E. Hernandez, Ion Cohanoschi, Carlos Toro, “Surface Plasmon Enhancement of Two- and Three-Photon Absorption of Hoechst 33258 dye in Activated Gold Colloid Solution”, EOS’06, Paris, France
46. Carlos Toro, Leonardo De Boni, Artëm E. Masunov, and Florencio E. Hernández, “Untangling the Excited States of DR1 in Solution: An Experimental and Theoretical Study”, ACS Annual Meeting’08, New Orleans, USA
47. Leonardo De Boni, Carlos Toro, Florencio E. Hernandez, “Pump polarization-state preservation of white-light supercontinuum generation”, CLEO’08, San José, CA, USA
48. Carlos Toro, Leonardo de Boni, Na Lin, Fabrizio Santoro, Antonio Rizzo, Florencio E. Hernandez, “Rotatory Optical Two-photon Absorption Recognition (ROTAR)”, Chirality’09, Breckenridge, Colorado, USA

49. Carlos Toro, Leonardo De Boni, Erin L. Wood, Florencio E. Hernandez, “Optical Saturable Absorption in Gold Nanoparticles”, FAME’10, Tampa, Florida, USA
50. Remy Passier, Carlos Toro, Carlos Diaz, James P. Ritchie, Artem Masunov, Kevin D. Belfield, Florencio E. Hernandez, “Temperature Effect on Switching Thiocarbocyanine Dye Molecular Aggregates”, FAME’10, Tampa, Florida, USA
51. Florencio E. Hernandez, Leonardo de Boni, Carlos Toro, Na Lin, Fabrizio Santoro, Antonio Rizzo, “Nonlinear Optical Chiral Absorption (NOCA)”, 19th International Laser Physics Workshop 2010, Foz do Iguaçu, Brazil
52. Carlos Diaz, Andrew Frazer, Alma Morales, Supriyo Ray, Suren Tatulian, Kevin D. Belfield, and Florencio E. Hernández, “Experimental-theoretical characterization of a new optically active binaphthyl fluorene based Salen ligand”, 241st ACS Annual Meeting 2011, Anaheim, California, USA
53. Florencio Eloy Hernández, Carlos Diaz and Antonio Rizzo, “Two-Photon Absorption Circular Dichroism in a Series of binaphthyl Derivatives”, Chirality 2011, Liverpool, UK
54. Florencio E. Hernández, Carlos Diaz, Andrew Frazer, Alma Morales, Kevin D. Belfield, Supriyo Ray, “Determination of the 3D structure of a novel axially-chiral binaphthyl fluorene based Salen ligand in solution using ECD and, comparison of the experimental ECD and TPCD spectra, Chirality 2012, Fort Worth, TX, USA
55. Florencio E. Hernández, Carlos Diaz, Andrew Frazer, Lorenzo Echevarria, “Application of two-photon circular dichroism and a fragment-recombination approach for the structural analysis of large molecules with multiple chirality, 14th International Conference on Chiroptical Spectroscopy 2013, Nashville, TN, USA
56. Carlos Diaz, Lorenzo Echevarria, Florencio E. Hernández, “Conformational study of an axially-chiral ligand in solution using two-photon circular dichroism and the fragment-recombination approach”, 247th ACS Annual Meeting 2014, Dallas, Texas, USA
57. Stephen Kuebler, Henry Williams, Carlos Diaz, Gabriel Padilla, Florencio Hernandez, “Nonlinear Excitation Associated with Direct Laser Writing in SU-8”, 2014 Frontiers in Optics/Laser Science Conference, Tucson, Arizona, USA
58. Julie Donnelly, Florencio E. Hernández, “Conformational Study of Δ^9 -tetrahydrocannabinol (Δ^9 -THC) via Linear and Nonlinear Circular Dichroism”, 249th ACS Annual Meeting 2015, Denver, Colorado, USA
59. Yuly Vesga, Mary Higgs, Carlos Diaz, Florencio E. Hernández, “Theoretical Study of the Two-Photon Circular Dichroism of Molecular Structures Simulating Aromatic Amino Acids Residues in Proteins with Secondary Structures”, 249th ACS Annual Meeting 2015, Denver, Colorado, USA - (Poster)
60. Julie Donnelly, Carlos Diaz, Florencio E. Hernández, “OCTET & BIOTEC: A Model of a Summer Intensive Designed to Cultivate the Future Generation of Young Leaders in STEM”, 251st ACS Annual Meeting 2016, San Diego, California, USA
61. Julie Donnelly, Florencio E. Hernández, “Multiphoton spectroscopy on Thioflavin T: A nonlinear approach for amyloid detection”, 251st ACS Annual Meeting 2016, San Diego, California, USA
62. Julie Donnelly, Florencio E. Hernández, OCTET and BIOTEC: A Model of a Summer Intensive Camp Designed to Cultivate the Future Generation of Young Leaders in STEM, Florida Educational Research Association (FERA) 2016 Annual Meeting – Lakeland, FL November 16-18, 2016
63. Julie Donnelly, Florencio E. Hernández, SoTL in an upper-level undergraduate STEM course fusing a Reversed Learning Scheme with an Informal Learning Space, Sunshine State Teaching and Learning Conference - 2017 Inaugural Conference: teaching in the 21st Century - St. Pete Beach, Florida, February 15-17, 2017

64. Julie Donnelly, Stephanie Castillo, Warinya Chemnasiri, Florencio E. Hernández, Determination of the overall antioxidant strength of teas combining metal nanoparticles, plasmonics, and fluorescence: Designing new experiments for the physical chemistry laboratory, 253rd ACS Annual Meeting 2017, San Francisco, California, USA, April 2-6, 2017
65. Julie Donnelly, Florencio E. Hernández, Two-photon absorption spectroscopy on curcumin in solution: A state-of-the-art physical chemistry experiment, 253rd ACS Annual Meeting 2017, San Francisco, California, USA, April 2-6, 2017
66. Eduardo Romero, Jessica Dipold, Florencio E. Hernandez, Synchronized Double Pump-Probe Technique for Polarization Dependent Time-Resolved Chiral Spectroscopy, IEEE Photonics Conference (IPC) 2017, Orlando, USA, October 01-05, 2017.
67. Juan E. Arias, Eduardo Romero, Florencio E. Hernandez, Karin Y. Chumbimuni-Torres, Computational Characterization of Metastable-state Photoacids, PITTCON 2018, Orlando, USA, February 26-March 01, 2018
68. Julie Donnelly, Florencio E. Hernández, The Effect of a Week-Long Authentic Research Experience on High School Students' Views on the Nature of Science, 255th ACS National Meeting, New Orleans, LA, March 18-22, 2018
69. Eduardo Romero, Florencio E. Hernandez, Solvent Effect and Tunneling Corrections on the Intermolecular Proton Transfer of the Guanine-Cytosine and Adenine-Thymine DNA Base Pairs: A Polarizable Continuum Model Study, 255th ACS National Meeting, New Orleans, LA, March 18-22, 2018.
70. Estefanía Sucre, Ricardo Fernandez-Teran, Marco Filosetta, Neudo Urdaneta, Florencio Hernández, Lorenzo Echevarria, Two-Photon Induced Fluorescence of ICT dimethylamino-substituted-halogenated heterocyclic chalcones, Latin America Optics and Photonics Conference (LAOP), Pontificia Universidad Católica del Perú, Lima, Peru, November 12-15 2018.
71. Ron DeMara, Laurie Cambell, Richard Harthorwe, Julie Donnelly, Florencio E. Hernandez, "Methods and Outcomes of the NSF Project on Synthesizing Environments for Digitally-Mediated Team Learning", ASEE 126th Annual Conference & Exposition, Tampa, Florida, June 15-19 2019.
72. Eduardo Romero, Florencio E. Hernandez, Structural Analysis of Amyloid Beta Oligomers Responsible of Alzheimer Disease Using Electronic Structure Methods, 257th ACS National Meeting, Orlando, FL, March 31-April 4, 2019.
73. Christopher Felton, Florencio E. Hernandez, E.Q.U.I.P.M.E.N.T: Education through questioning, using inquiry, and projects to maintain engagement and nourish thinking, 257th ACS National Meeting, Orlando, FL, March 31-April 4, 2019.

INVITED TALKS:

1. F. E. Hernández, S. Yang, W. Shensky III, V. Dubikovsky, E. W. Van Stryland and D. J. Hagan, "High dynamic range cascaded-focus optical limiter", Kent State University, Ohio, 10/2000
2. F. E. Hernandez, "Recent Advances in Optical Limiting", Instituto Venezolano de Investigaciones Científicas (IVIC), Caracas, Venezuela, 06/2002
3. F. E. Hernandez, "Enhancement of Nonlinear Absorption Processes by Surface Plasmon in Nano- and Biophotonics", Universidad de Santiago de Compostela, Santiago de Compostela, Spain, 07/2004.
4. F. E. Hernandez, "Three is better than two!", University of Alabama at Hustville, Alabama, USA, 11/2004
5. F. E. Hernandez, "New Advances in Nonlinear Optical Phenomena Assisted By Surface Plasmon (NANOPAS) ", 1st INEST Meeting, Williamsburg, VA, USA, 05/2005

6. F. E. Hernandez, “Nuevos Avances en Optical No Lineal Asistida por Plasmon de Superficie”, 1st Photochemistry and Biophotonic Summer School and Conference , Universidad Simón Bolívar, Caracas, Venezuela, 09/2005
7. F. E. Hernandez, “Three-Photon Absorption in Organic Molecules & Metal Nanoparticles Assisting Nonlinear Absorption”, Universite de Bordeaux, Bordeaux, France, 11/2005
8. F. E. Hernandez, “High Order Nonlinear Optics and Plasmonics for Bioimaging, Photodynamic Therapy & Sensing”, Universidade de Vigo, Vigo, Spain, 06/2006
9. F. E. Hernandez, “High Order Nonlinear Optics and Plasmonics for Biomedical Applications & Sensing”, Institut de Ciencies Fotoniques, Barcelona, Spain, 06/2006
10. F. E. Hernandez, “Fluorescence lifetime enhancement of organic chromophores attached to gold nanoparticles”, FACSS’06, Orlando, USA, 09/2006
11. F. E. Hernandez, “Surface Plasmon Resonance in Linear and Nonlinear Optics: Paving a New Road for Biomedical Applications and Sensing”, Institut de Ciencies Fotoniques, Barcelona, Spain, 03/2007
12. F. E. Hernandez, “A golden opportunity to detect ultra-low levels of mercury and clean up mercury-contaminated waters”, FAME-ACS 2007, Orlando, Florida, USA, 05/10/2007
13. F. E. Hernandez, “Nanotecnología y Optica: Absorción Multifotónica de Alto Orden y Plasmón de Superficie”, VIII Congreso Venezolano De Química & III Escuela de Espectroscopia y Optica, Caracas, Venezuela, 06/2007 (Two Lectures)
14. Florencio E. Hernández, Ion Cohanoschi, Arthur Thibert, Carlos Toro, Shengli Zou, “Surface Plasmon Enhancement at a Liquid-Metal-Liquid Interface”, FACSS’07, Memphis, USA, 09/2007
15. Florencio E. Hernández, Matt Rex, Arthur Thibert, Andres Campiglia “Au-Nanorods Cleaning the Environment - “A new opportunity for mercury sensing and remediation in aqueous and vapor samples”, ISNEPP’07, Fort Lauderdale, USA, 12/2007
16. Florencio E. Hernández, “Au-Nanorods Cleaning the Environment - “Plasmonics in linear and nonlinear optics: new advances”, Florida Atlantic University, Boca Raton, USA, 04/2008
17. Carlos Toro, Arthur Thibert, Leonardo De Boni, Artem Masunov, and Florencio E. Hernández, “Unexpected Fluorescence Emission of Disperse Red 1 in Solution at Room Temperature”, FAME-ACS 2008, Orlando, USA, 05/2008
18. Florencio E. Hernández, “Nonlinear Optics in Chiral Systems: New Advances and Applications”, XI Encuentro Nacional de Óptica & II Conferencia Andina y del Caribe en Óptica y sus Aplicaciones, Pamplona, Colombia, 11/2008
19. Florencio E. Hernández, “Nonlinear chiro-optical properties of organic axial optically active molecules”, Academia Nacional de Ciencias, Caracas, Venezuela, 11/2009
20. Florencio E. Hernández, “Nonlinear Optics in Chiral Systems: New Advances and Applications”, National Central University of Taiwan, Taipei, Taiwan, 12/2009
21. Florencio E. Hernández, “Optical Nonlinear Properties in Chiral Systems”, University of Florida, Gainesville, Florida, 02/2010
22. F. E. Hernandez, “Surface Plasmon Resonance in Linear and Nonlinear Optics: Biomedical Applications and Sensing”, University of Sao Paulo, Sao Paulo, Brazil, 07/2010
23. F. E. Hernandez, “Three steps toward two-photon absorption circular dichroism”, Clemson University, South Carolina, 10/2011
24. Florencio E. Hernández, “The effect of the π -electron delocalization curvature on the two-photon circular dichroism of molecules with axial chirality”, J. Phys. Chem. Lett. online presentation 2012: <http://www.slideshare.net/jpcoffice/jpcl-101021-jz300577-herndez-presentation>
25. Lorenzo Echevarria, Carlos Diaz, Florencio Eloy Hernandez, “Absorción de dos Fotones y Sistemas Quirales: Perspectivas Teóricas y Experimentales”, ENO - CANCOA 2013 - XIII Encuentro Nacional

- de Optica - IV Conferencia Andina y del Caribe en Optica y sus Aplicaciones, Medellin, Colombia, 11/2013
26. Florencio Eloy Hernandez, "Two-Photon Circular Dichroism: Expanding the Frontiers of Chiral Spectroscopy", Arizona State University, Arizona, 03/2014
 27. Florencio Eloy Hernandez, "New Advances and Applications in Nonlinear Chiral Spectroscopy", University of Vigo, Vigo, Spain, 06/2014
 28. F. E. Hernandez, "Two-Photon Circular Dichroism: Pushing the Limits of Chiral Spectroscopy", 91st FAME-ACS, Innisbrook, Florida, USA, 05/07/2015
 29. Julie Donnelly, Florencio E. Hernández, "Conformational Study of Δ^9 -tetrahydrocannabinol (Δ^9 -THC) via Linear and Nonlinear Circular Dichroism", 249th ACS Annual Meeting 2015, <http://presentations.acs.org/common/presentation-detail.aspx/Spring2015/BIOT/PODBIOT/PODBIOT3>
 30. Florencio Eloy Hernandez, Two-Photon Circular Dichroism: "A novel Approach for Nonlinear Chiral Spectroscopy", University of Alabama, Tuscaloosa, USA 07/2015
 31. Florencio Eloy Hernandez, Pushing the Limits of Polarization Dependence Nonlinear Spectroscopy "Development and Application of Two-Photon Circular Dichroism", Universidad de Antioquia, Medellin, Colombia 03/2016
 32. Florencio Eloy Hernandez, "Florida Consortium Physical Sciences Capstone Research Program", Florida Consortium of Metropolitan Universities Summit, Miami, Florida, USA 09/2016
 33. Florencio E. Hernández, "Exploring New Opportunities in Academia: Serving the Scientific Community and Creating an Impact in the Future of Science and Technology in USA and Beyond", NSF, Washington DC, 02/2017
 34. Florencio E. Hernández, Leonardo De Boni, Carlos Toro, Na Lin, Carlos Diaz, Lorenzo Echevarria, Yuly Vesga, Remy Passier, Fabrizio Santoro, Irena G. Stará, Ivo Starý, Emmanuel Anger, Chengshuo Shen, Mehdi El Sayed Moussa, Nicolas Vanthuyne, Jeanne Crassous, Antonio Rizzo, Pushing the Limits of Polarization Dependence Nonlinear Spectroscopy "From the Theoretical Predictions to the Experimental Demonstration of Two-Photon Circular Dichroism: "Uncovering an Esoteric Nonlinear Optical Property of Chiral Molecules", Universidad de Pisa, Pisa, Italy 04/2017
 35. Florencio E. Hernández, "From the theoretical predictions to the experimental demonstration of two-photon circular dichroism: Uncovering the nonlinear optical property of chiral molecules", 255th ACS National Meeting, New Orleans, LA, March 18-22, 2018.
 36. Florencio E. Hernández, "From the Theoretical Predictions to the Experimental Demonstration of Two-Photon Circular Dichroism: "Uncovering the Nonlinear Optical Property of Chiral Molecule"", Summer School in Optics and Photonics: Non Linear Optics and Photonics, Cali, Colombia, July 15-20, 2018.

TEACHING ACTIVITIES

As a professor in the physical sciences, my main objective is to help students develop critical thinking skills and internalize the significance of high ethical and moral values. Knowing by my own experience that the impact of my teaching philosophy goes beyond the space and time boundaries of the classroom and the lecture, I try to inspire my students by leading through example. My continuous success in teaching at UCF is certified by my three consecutive UCF Teaching Incentive Program Awards (2005-2006, 2010-2011, & 2016-2017). During the last few years I have developed a special interest for education, primarily for the design of new strategies to teach a totally new technologically advanced generation, the Millennial. For this purpose I have participated in many professional development workshops to grow as an instructor and mentor. At present I am working in the development of a unique multiuser technological platform that simultaneously brings tutoring and promote STEM careers among college freshmen students where, when and how they want it.

TEACHING ACTIVITIES AT UCF: (*Graduate level course)

<u>Semester</u>	<u>Course</u>	<u>Contact Hours</u>	<u>Course Name</u>
Fall'01	CHM3410	4	PChem-I (Thermodynamics)
*Fall'01	CHS6410	2	Chemical Thermodynamics
Spring'02	CHM3411	3	PChem-II (Kinetics, Quantum, Stat. Thermo.)
Spring'02	CHM3411L	6	PChem. Lab.
Fall'02	CHM3410	4	PChem-I (Thermodynamics)
*Fall'02	CHS6410	2	Chemical Thermodynamics
Spring'03	CHM3411	3	PChem-II (Kinetics, Quantum, Stat. Thermo.)
Spring'03	CHM3411L	6	PChem. Lab.
Fall'03	CHM3410	4	PChem-I (Thermodynamics)
*Fall'03	CHS6410	2	Chemical Thermodynamics
Spring'04	CHM3411	3	PChem-II (Kinetics, Quantum, Stat. Thermo.)
Spring'04	CHM3411L	6	PChem. Lab.
Fall'04	CHM3410	4	PChem-I (Thermodynamics)
*Fall'04	CHS6938	3	Chemical Thermodynamics
Spring'05	CHM3411	3	PChem-II (Kinetics, Quantum, Stat. Thermo.)
Spring'05	CHM3411L	6	PChem. Lab.
*Fall'05	CHS6938	3	Chemical Thermodynamics
Spring'06	CHM3411L	6	PChem. Lab.
*Spring'06	CHM6971	3	Optical Materials and Polymers
*Fall'06	CHS6938	3	Chemical Thermodynamics
Spring'07	CHM3411L	6	PChem. Lab.
*Summer_C'07	CHM6908	1	Nonlinear Optics and Spectroscopy
Fall'07	CHM3410	4	PChem-I (Thermodynamics)
Spring'08	CHM3411L	6	PChem. Lab.
*Spring'08	CHM6971	3	Optical Materials
Fall'08	CHM2045H	3	Honors Chemistry Fundamentals I
Spring'09	CHM3411L	6	PChem. Lab.
Summer_C'09	CHM1020	4	Concepts of Chemistry
*Fall'09	CHS6938	3	Chemical Thermodynamics
Spring'10	CHM3411L	6	PChem. Lab.
Summer_A'10	CHM2041	8	Fundamental of Chemistry IB
*Fall'10	CHS6938	3	Chemical Thermodynamics
Spring'11	CHM3411L	6	PChem. Lab.

Summer_A'11	CHM3411L	8	PChem. Lab.
Fall'11	CHM-2040	3	Fundamental of Chemistry IA
Spring'12	CHM-2040	3	Fundamental of Chemistry IA
Summer_B'12	CHM2041	8	Fundamental of Chemistry IB
Fall'12	CHM-2040	3	Fundamental of Chemistry IA
Spring'13	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'13	CHM-2041	8	Fundamental of Chemistry IB
Fall'13	CHM-2040	3	Fundamental of Chemistry IA
Spring'14	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'14	CHM-2041	8	Fundamental of Chemistry IB
Fall'14	CHM-2040	3	Fundamental of Chemistry IA
Spring'15	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'15	CHM-2041	8	Fundamental of Chemistry IB
Fall'15	CHM-2040	3	Fundamental of Chemistry IA
Spring'16	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'16	CHM-2041	8	Fundamental of Chemistry IB
Fall'16	CHM3410	4	PChem-I (Thermodynamics)
Spring'17	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'17	CHM-2041	8	Fundamental of Chemistry IB
Fall'18	CHM3410	4	Fundamental of Chemistry IA
Spring'19	CHM-2041	3	Fundamental of Chemistry IB
Summer_B'19	CHM-2041	8	Fundamental of Chemistry IB

MENTORING:

▪ Visiting Professor:

- Dr. Lorenzo Echevarria, Universidad Simón Bolívar, Caracas, Venezuela (04/2012 to 04/2013)
- Dr. Carlos Borrás, Universidad Simón Bolívar, Caracas, Venezuela (04/2014 to 09/2014)
- Dr. Oscar Baldovino, Universidad Autónoma de Tamaulipa, Reinos, Mexico (Since 08/2016)

▪ Postdoctoral Fellows:

- Dr. Leonardo DeBoni, University of Sao Paulo, Brazil (04/2007 to 06/2009)
- Dr. Rémy Passier, L'Université Franche-Comté, France (08/2009 to 07/2010)

▪ High School Teacher:

- Mr. Sean Campbell, Lyman High School, Orlando, Florida (06/2010 to 09/2010)

▪ High School Student:

- Miss Sarah Baker, Lake Highland School, Orlando, Florida (Fall 2010)
- Anupa Thirmiya, Seminole High School, Sanford, Florida (Since Fall 2015)

▪ Graduate Students:

1. Ion Cohanoschi (MS), Ph.D. Student, College of Optics and Photonics: CREOL & FPCE, UCF (07/2003 to 12/2006), ***Graduated*** → OptiGrate - Senior production engineer → Instructor of Math and Physics, New Jersey Institute of Technology.
2. Marisol Garcia (BS), M.S. Student, Department of Chemistry, UCF (08/2004 to 04/2006), ***Graduated*** → PMex - Perforation Engineer.
3. Erin Wood (BS), M.S. Student, Department of Chemistry, UCF (08/2007 to 07/2009), ***Graduated*** → Ph.D. Student at University of Vermont, ***Graduated*** → Postdoc NIST.

4. Carlos Toro (BS), Ph.D. Student, Department of Chemistry, UCF (08/2005 to 07/2010), **Graduated** COS & UCF - Outstanding Dissertation Award 2011. → Managing Editor -Journals at ACS.
5. Herminso Villarraga, MS. Student, CREOL/The College of Optics and Photonics, UCF (10/2010 to 12/2011) **Graduated** → CT Metrology Specialist, Nikon Metrology Inc.
6. Carlos Diaz (BS), Ph.D. Student, Department of Chemistry, UCF (01/2009 to 05/2015), **Graduated** Honorable College of Sciences, Outstanding Dissertation Award 2016. → Instructor, University of Colorado - Colorado Spring.
7. Warinya Chemnasiri, Ph.D. Student, Department of Chemistry, UCF (08/2010 to 11/2015), **Graduated** → Lumentum R&D, Staff Material Engineer, Thailand.
8. Yuly Vesga, Ph.D. Student, Department of Chemistry, UCF (01/2012 to 12/2016), **Graduated** → Research Scientist, Argonide Corp.
9. Julie Donnelly (MS), Ph.D. Student, Department of Chemistry, UCF (08/2013 to 04/2018) **Graduated** → Post-Doc, FCTL, UCF
10. Eduardo Romero (MS), Ph.D. Student, Department of Chemistry, UCF (Since 08/2015)
11. Christopher Felton (BS), Ph.D. Student, Department of Chemistry, UCF (Since 01/2018)

▪ Visiting Graduate Students:

12. Jacob Powel, Ph.D. Student, Department of Chemistry, UCF (Spring & Summer 2011) → Ph.D. Student at University of Central Florida, **Graduated**
13. Felipe Garcia, Visiting Ph.D. Student, Universidad de Valle, Caliz, Colombia (Spring & Summer 2011) → Ph.D. Student at University of Dayton
14. José Antonio Tiburcio, Visiting Ph.D. Student, Cinvestat-Campus Merida, Mexico (05/2012 to 05/2013), **Graduated** → Professor of Physics, Universidad Nacional Jorge Basadre Grohmann, Tacna, Peru
15. Jessica Dipold, Visiting Ph.D. Student, University of Sao Paolo, Brazil (08/2017 to 12/2017)

▪ Undergraduate Students [USA (*) and Europe (#)]:

1. Ascanio Biondi, “Measurement of nonlinear refraction index and two-photon absorption in a new organometallic compound”, Department of Chemistry, Universidad Central de Venezuela, from Spring 1997 to Spring 1998
2. * Sean Burrows, “Fabrication of carbon nanoparticles in Kerr solvents, characterization of the process”, Department of Chemistry, UCF, from Fall 2002 to Spring 2003
3. * Anne Ryan, “Synthesis of Gold Nanophotonic Material for use in Intersystem Crossing Studies”, Department of Chemistry, UCF, from Summer 2003 to Summer 2004, also Summer 2003 (REU-College of Optics and Photonics CREOL & FPCE)
4. # Maxime Blangero, “Development and characterization of new Silver-Europium doped GeS₂ and GeS₂-Sb₂₃/Ga₂S₃ glasses with enhanced luminescence properties using SPR”, Summer 2004 (REU-College of Optics and Photonics CREOL & FPCE)
5. * Horacio Carias, “Synthesis and optical characterization of noble metal nanostructures”, Department of Chemistry, UCF, from Summer 2004 to Summer 2005 (Chemistry), also Summer 2005 (REU-College of Optics and Photonics CREOL & FPCE)
6. # Celine Perego, “Development and characterization of new silver and gold nanoparticles based glucose sensor”, Summer 2005 (REU-College of Optics and Photonics CREOL & FPCE)
7. # Amel Barbot, “Three-photon optical characterization of J-aggregates and photoinitiators”, Summer 2005 (REU-College of Optics and Photonics CREOL & FPCE)
8. Tanveer, “Functionalization of glass substrate with metal to enhance the radiative decay rate”, Department of Chemistry, UCF, From 08/2005 to 05/2006

9. # Axel Quinzac, “New ways to functionalize glass slides with gold nanorods”, Summer 2006 (REU-College of Optics and Photonics CREOL & FPCE)
10. *Arthur Thibert, “Exploiting the Properties of Gold Nanorods to Develop Mercury Filters”, Department of Chemistry, UCF, from 05/2006 to 05/2007, also Summer 2006 (REU-College of Optics and Photonics CREOL & FPCE)
11. *Ashley Roberts, “Radiative Decay Engineering on Dye-Liquid Crystals Cells coated with Gold Nanoparticles”, Summer 2007 (REU-College of Optics and Photonics CREOL & FPCE)
12. *Jessica King, “Fundamental study of decay rates of organic molecules near conductive metal surfaces: “A novel approach for solar energy storage”, Summer 2008 (REU-CREOL/the College of Optics and Photonics).
13. Maria Alejandra Ortega, “Study of nonradiative mechanisms of organic molecules near metal surfaces at the nanoscale”, Department of Chemistry, Universidad Simón Bolívar, Caracas, Venezuela, Summer 2008.
14. *Maha Mourad, “Development of a Glucose sensor based on the Au nanorods-Hg amalgamation process”, Duke University, Summer 2009 Internship.
15. *Lobaba Habach, “Enhancing the sensitivity of a metal nanoparticle noninvasive-glucose sensor using core-shell nanostructures”, Department of Chemistry, UCF, Since 05/2010
16. *Julian Leland, Demonstrating the Phosphorescence Lifetime Enhancement Due to Metal Nanoparticles, Department of Chemistry, UCF, Spring 2010, also Summer 2010 (REU-CREOL/the College of Optics and Photonics)
17. Jacob Reimers, “Radiative Decay Engineering on Azulene-Au nanoparticles Hibrid Organic-Plasmonic Systems”, Summer 2011 (REU-CREOL/ The College of Optics and Photonics).
18. Shannon Sullivan, “Development of a novel fluorescence-based hydrogen sensor”, Department of Chemistry, UCF, Spring 2012.
19. Nathalie Meeks, “Development and characterization of a multiphoton ionization spectrometer for the study of ultra-traces of contaminants in aqueous solutions and analysis of optically active systems”, Summer 2012 (REU-CREOL/ The College of Optics and Photonics).
20. Mary Higgs, “Structural analysis of chiral molecules using TPCD: A computational study”, Department of Chemistry, UCF, from Fall 2012 to Spring 2014.
21. Stephanie Castillo, “Chiral distillation using photon-momentum of circularly polarized light”, Department of Chemistry, UCF, since Spring 2013. RAMP!/Mc.Nair/ICubed, from Fall 2013 to Fall 2014.
22. Solange Hernandez, “Design of catchy thermal lens experiments for k-12 students”, Department of Chemistry, UCF, from Fall 2013 to Spring 2014.
23. Nicholas Orta, “Development of a hydrogen sensor based on selective reduction of double bonds in CY dyes”, Department of Chemistry, UCF, from Fall 2013 to Fall 2014.
24. Roosvelly Diaz, “The Use of Social Networking Platforms in Education”, Sophomore, Valencia Community College, from Fall 2014 to Spring 2015.
25. Victoria Canellas, “Development of a fluorescence-based Metal sensor using curcumin”, Biomedical Sciences, UCF, since Summer 2015
26. Asad Matani, “Spectroscopic Characterization of Dyes in Condoms: A Direct Application in Forensic Sciences”, Biomedical Sciences, UCF, Summer-Fall 2016.
27. Farheen Ali, “SPR based Environmental Optical Sensor”, Biomedical Sciences, UCF, Fall 2016.
28. Shane Thomas, “Development of a C-dots based Cr+6 optical sensor”, Department of Chemistry, UCF, since Spring 2017.
29. Maryem Hinaoui, “Study of using Learning Catalytics in a large enrollment chemistry freshmen course on student engagement”, Department of Chemistry, UCF, Spring 2017-Spring 2019.

30. Alexandra French, “Application of Surface Plasmon Enhancement at a Liquid–Metal–Liquid Interface in Environmental Analysis”, Department of Chemistry, UCF, since Spring 2017.
31. Melanie Rodriguez, “ECD Characterization of β -Amyloids in Biological Solvents”, Biomedical Sciences, UCF, Fall 2018.
32. Miranda Londono, “Study of Molecular Aggregation of Curcumin in Solution using UV-vis, Fluorescence Emission and Life-time Spectroscopy”, Biomedical Sciences, UCF, Spring 2019.

PROFESSIONAL DEVELOPMENT IN EDUCATION:

Faculty Book Club: (UCF Counseling Center & FCTL)

- Garbology (Summer 2014)
- Quiet: The Power of Introverts (Spring 2013)
- The Tyranny of Choice (Fall 2012)
- Mad at School (Spring 2012)
- The Outliers (Spring 2011)
- Mirroring People (Summer 2011)
- The Narcissism Epidemic (Fall 2011)
- College of the Overwhelmed (Spring 2010)
- The Art of Happiness (Fall 2010)

Workshops:

- 2018 Florida Consortium Learning Assistant Workshop (11/17/2018)
- Increasing adoption of CUREs and inquiry-based labs in the physical sciences (12/17/2016)
- UCF S.A.F.E., Student veteran Allied Faculty Education, training (04/2014)
- FCTL - Technology Camp (01/2012)
- FCTL - STEM - Developing a Vision of Effective Mentoring and a Mentoring Philosophy (10/14/10)
- FCTL - STEM - Understanding the Diverse Factors that Influences Graduate Students’ Mentoring Needs (11/04/10)
- FCTL - STEM - How to Turn Good Mentoring Principles into Practice (12/02/10)
- FCTL - STEM - Mentoring Graduate Students: Summary of Best practice (12/16/10)
- FCTL - Turnitin (Spring 2010)
- ACS - Engaging and Motivating Volunteers (01/23/10)
- ACS - Engaging Colleagues in Dialogue (01/24/10)

Conferences:

- ASU+GSV Summit, San Diego, CA (04/15-18/2018)
- UCF 2017 Summer Faculty Development Conference - QEP Track (05/08/2017)
- 9th Annual Florida Statewide Symposium: Engagement in Undergraduate Research (10/31/2016)
- UCF State of STEM Education Conference (08/5/2015)
- UCF Service Learning Day “Engaging STEM ” (09/30/10)

Programs and projects:

- SoTL in a senior level undergraduate STEM course fusing a Reversed Learning Scheme with an Informal Learning Space: Reaching a new generation!

The main goal of this project is to study the effect of using a reversed learning scheme in an informal learning space, combined with a no-test assessment philosophy, on the performance (learning) and engagement of senior level undergraduate students in science, technology, engineering, and math (STEM) courses. Our specific objectives are: i) to leverage on the basic principle of flipped classrooms to establish a culture of inquiry before class; ii) to create a structure-free, relaxed, and interactive atmosphere for active-learning (methodology & space) where students choose to work in groups or individually and instructors serve as coaches; iii) to expand on the no-tests alternatives for measuring students' knowledge and skills; and iv) to evaluate the impact of the program using previously established assessment instruments.

- Freshmen Undertake Networking in Science, Technology, Engineering and Mathematics (FUN-STEM)

The main goal of this project is to develop a unique multiuser technological platform that simultaneously brings tutoring and promote STEM careers among college freshmen students where, when and how they want it. Our specific objectives are: i) To combine all social networking sites (SNS), email and text messages to assist students according to their individual preferences; ii) to provide a "24/7" consulting service when they need it most; iii) to motivate and engage students through online tutoring; and, iv) to leverage the reaching capability of this platform to effectively promote STEM among these students.

- Global Research Objectives & Occupations for Vibrant Y-generation "GROOVY" (Spring 2015)

GROOVY is a program designed to advance the national STEM agenda on college freshmen students via first-year seminars. This initiative consists of inviting faculty members from our university and perhaps professionals from industry to talk to the class for approximately 15 min about their experiences in STEM careers, their research projects, and job opportunities in the field. GROOVY is foreseen as a retention and recruiting vehicle for the Y-generation to pursue STEM careers.

- The Use of Social Networking Platforms in Education (Fall 2014 – Spring 2015)

The purpose of this research is to understand the use of social networking platforms in education by college students. In order to gather the necessary information for the study, the PIs will distribute a paper survey. Students are at least 18 years old. The survey, which is absolutely voluntary and anonymous, has already been approved by the IRB. Freshmen Chemistry and Sociology courses will be targeted. This study is the fruit of a strong collaboration between Dr. Fernando Rivera (Sociology) and Dr. Florencio E. Hernandez (Chemistry).

- Assessment of the Impact of Twitter in freshman chemistry CHM-2040 and CHM-2041 (Fall 2013 – Fall 2014)

The purpose of this study is to assess the impact of twitter in teaching large classes. Hypothesis: Twitter maintain students engage in the class during the semester. After evaluating the results of the survey I will pursue publishing an article in the Journal of Chemical Educaiton. Only students in my CHM-2040 and CHM-20441 section will take the survey at the end on the semester. Students are at least 18 years old. The survey is absolutely voluntary and anonymous. Subject to IRB approval.

- Spinning Orthodox Forms in Inspirational State-of-the-art Teaching Styles “SOFISTS”, (2011-2013)

This program refer to the synergistic combination of the traditional teaching style described above and the inclusion of specific technological advances for teaching such as the multiple applications available in iPads, Dropbox, Twitter and other SNS. This renovated teaching approach assists the instructor in stimulating thoughts and responses that capture the students’ attention, fuel their imagination, inspire their scientific essence and take them to a deeper level of understanding in chemistry while enjoying the development of their critical thinking skills. In fact, I started working with the Faculty Center for Teaching and Learning (FCTL) at UCF, to validate the efficacy of SOFISTS, a renovated strategy designed to create the next generation of “wise men” for our society.

OUTREACH ACTIVITIES:

- The Physics Youth Scholastic and Instructing Camp for Orlando Scientists “PHYSICOS” (Since summer 2017):

An intensive summer week biology camp to prepare high school students of Central Florida for the US – National Physics Olympiad, and to provide research opportunities to high school students and teachers.

- The Biology Integrated Orlando Training and Enrichment Camp “BIOTEC” (Since summer 2015):

An intensive summer week biology camp to prepare high school students of Central Florida for the US – National Biology Olympiad, and to provide research opportunities to high school students and teachers.

- The Orlando Chemistry Tutoring, Enrichment and Training Camp “OCTET” (Since summer 2010):

An intensive summer week chemistry camp to prepare high school students of Central Florida for the US – National Chemistry Olympiad, and to provide research opportunities to high school students and teachers.

- Teaching Chemistry to Children - A colorful hand-print periodic table of the elements - Earth Day 2011 at Lake Eola, Orlando, Florida.

103 children of all ages participated in making a 12 ft by 5 ft periodic table with their hand while having fun learning chemistry.

SERVICE ACTIVITIES

Professional services include a range of different occupations in our career which provide direct support to the profession, institution, college, department and community. When performed correctly, these initiatives contribute with the growth, productivity, visibility and leadership of the whole institution. Since 2008 I have provided valuable service and leadership to my community, department, college, university, and profession. I have been an active member in numerous department, college, and university committees, including the Undergraduate Research Council, Interdisciplinary Studies Advisory Committee, and the Faculty Senate. I have reviewed 100+ articles and more than 120 proposals from recognized scientific journals and federal agencies, respectively. I became Associate Editor of a prestigious journal of the IEEE, and member of editorial/advisory boards of international conferences/journals. I coordinated four outreach programs and the Chemistry Olympiad for the ACS-Orlando section (2008-2010), and served as Chair of the ACS-Orlando section in 2011, among others.

REVIEWER ACTIVITIES:

▪ *Reviewer of the following journals:* Journal of the American Chemical Society, Journal of Physical Chemistry B, Journal of Physical Chemistry A, Journal of Physical Chemistry Letters, Langmuir, Angewandte Chemie, ACS Photonics, Chemistry of Materials, Chemical Physics, Journal of Material Research, Journal of Materials Chemistry C, Chemical Physics Letters, RSC Advances, Spectroscopy Letters, Scientific Report, Journal of Fluorescence, Spectrochimica Acta A, Plasmonics, Analytical Chemistry, ACS Nano, International Journal of Molecular Sciences, Analytica Chimica Acta, Optics Letter, Optics Express, Applied Optics, Journal of Molecular Structure, IEEE-Photonics Journals, Journal of the Optical Society of America B, Optics Communications, Photonics Journal-IEEE.

▪ *Reviewer of the following book:* “Engineering and Chemical Thermodynamics”, Edited by Jenny Welter, editor for chemical engineering at John Wiley & Sons. Reviewed requested by Dr. Welter at John Wiley & Sons in year 2005

▪ *Reviewer of the following Federal and International Agencies:* National Science Foundation, German Research Foundation, U.S. Civilian Research & Development Foundation, Petroleum Research Fund, Fulbright Program.

EDITORIAL BOARDS:

- Associate Editor, IEEE Photonics Journal (Since 02/2014)
- Dataset Papers in Physical Chemistry, Hindawi Publishing Corporation (02/2012 – 03/2015)

ADVISORY BOARDS:

- International Symposium on Nanotechnology in Environmental Protection and Pollution, **ISNEPP 2007**, Fortlauderdale, USA
- International Joint Conference on Knowledge Management for Composite Materials, Nano Technology and Fuel Cell, **KMCM 2007**, Düsseldorf, Germany
- BIT's 1st Annual World Congress of Nanomedicine 2010, Beijing, China

SOCIETIES BOARDS:

- American Chemical Society-Orlando Local Section (Chair Elect 2010)
- American Chemical Society-Orlando Local Section (Chair 2011)

PANEL BOARDS:

- NSF-BIO Instrument Development for Biological Research (**IDBR**) 12/2008
- NSF-BIO Instrument Development for Biological Research (**IDBR**) 11/2009
- NSF-CHE Major Research Instrumentation (**MRI-R²**) Program 11/2009
- NSF- CHE-DMR-DMS Solar Energy Initiative (**SOLAR**) 05/2010
- NSF-BIO Instrument Development for Biological Research (**IDBR**) 11/2010
- NSF-BIO Instrument Development for Biological Research (**IDBR**) 11/2011
- NSF-BIO Instrument Development for Biological Research (**IDBR**) 11/2013
- NSF-BIO Instrument Development for Biological Research (**IDBR**) 11/2014
- Fulbright Scholar Peer Review Discipline Committee 2014-2016 (**FBSP**)
- NSF-CHE Chemical Measurements and Instrumentation (**CMI**) 11/2016
- NSF-CHE Centers for Chemical Innovation (**CCI**) 11/2017

UNIVERSITY SERVICE AT UCF SINCE 2007:

- UCF Undergraduate Research Week Committee (2007-2008, **Chair** of Scientific Exhibit)
- Senior member - 2006 Optical, Photonic, and Electronic Materials ACS PRF Summer School
- Chemistry Graduate Committee (2010-2012)
- Chemistry Department Seminar **Coordinator** (2008-2012)
- Teaching Incentive Award Committee (2008-2009, **Chair** 2008)
- Judge in the Physical Sciences and Mathematics category for the 6th Annual Showcase of Undergraduate Research Excellence (04/02/09)
- Judge in the 1st NanoFlorida Conference 2008 (09/26-27/2008)
- College of Sciences Excellence in Distinguished Research Award Committee (2008)
- College of Sciences Excellence in Graduate Teaching Award Committee (2008)
- Chemistry Promotion and Tenure Committee (since 2008)
- NanoScience and Technology Center Promotion and Tenure Committee (2009-2010)
- **Chair** - Research Incentive Award Committee (2010-2011 and 2016-2017)
- UCF Faculty Senate (2010-2013 and 2015-2016)
- **Chair** - College of Sciences Instructor/Lecturer Promotion Committee (2011-2013 & 2015-2017)
- College of Sciences SEED Grant Committee (2015)
- McNair/RAMP/Auzene Fellowship selection Committee (since 2012)
- Undergraduate Research Council (2015-2016)
- Interdisciplinary Advisory Committee (since 2015)
- **Chair** - Chemistry Graduate Committee (since 2015)
- The Faculty Excellent Advisory Council (2016-2017)
- College of Sciences Sabbatical year Committee (2017)
- College of Sciences Instructor & Lecturer Criteria Committee (2017)
- **Chair** - Department of Chemistry, Multiple Faculty Collective Search (2017)
- **Chair** - Department of Chemistry, College of Sciences Promotion & Tenure Committee (2017-2019)
- 2017-2018 Faculty Excellence Advisory Committee
- **Chair** - College of Sciences 5-years Department of Biology Chair Evaluation Committee (2019)

- Chemistry Graduate Committee (2015-2018)
- Academic Affairs, Professor and Senior Associate Provost, Academic Affairs, Search Committee (2019)
- Vice President of the Latino Faculty and Staff Association (LaFaSA) (Since 2019)

PROFESSIONAL DEVELOPMENT:

- 2017-2018 Provost Faculty Fellow, UCF
- 2016-2017 Academic Leadership Academy, UCF
- 2016-2017 Chairs/Directors Excellence Program & Chairs/Directors Council, UCF