



## EDUCATION

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2002-present <b>Ph.D. in Chemistry</b>	University of Puerto Rico Date expected: 06/2009	Río Piedras, PR GPA: 4.00/4.00
• Dissertation topic: “ <i>Non-Covalent Complexes of DNA-Carbon Nanotubes: From Synthesis to Applications</i> ”		
1998 – 2002 <b>B.S. in Chemistry</b>	University of Puerto Rico Magna Cum Laude	Río Piedras, PR GPA: 3.94/4.00

## PUBLICATIONS (15 TOTAL: 10 PUBLISHED, 2 SUBMITTED AND 4 TO BE SUBMITTED)

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Sánchez-Pomales, G.; Pagán-Miranda, C.; Santiago-Rodríguez, L.; Cabrera, C. R. “**DNA-Wrapped Carbon Nanotubes: From Synthesis to Applications**” *review article to be submitted to ACS Nano*.

Sánchez-Pomales, G.; Pagán-Miranda, C.; Santiago-Rodríguez, L.; Cabrera, C. R. “**Hybridization-Mediated Deposition of Carbon Nanotubes on DNA Self-Assembled Monolayers on Gold**” *to be submitted to J. Am. Chem. Soc.*

Sánchez-Pomales, G.; Pagán-Miranda, C.; Santiago-Rodríguez, L.; Cabrera, C. R. “**Assembly of DNA-Carbon Nanotube Complexes on Gold**” *to be submitted to J. Electroanal. Chem.*

Santiago-Rodríguez, L.; Sánchez-Pomales, G.; Cabrera, C.R., “**Single-Walled Carbon Nanotubes Modified Gold Electrodes as an Impedimetric DNA Sensor**”, *to be submitted to Electroanalysis*.

Sánchez-Pomales, G., “**Non-Covalent Complexes of DNA-Carbon Nanotubes: from Synthesis to Applications**”, Dissertation Thesis, University of Puerto Rico, *submitted* 2009.

Santiago-Rodríguez, L.; Sánchez-Pomales, G.; Cabrera, C.R., “**Electrochemical DNA Sensing at Single-Walled Carbon Nanotubes Chemically Assembled on Gold Surfaces**”, *submitted to Bioelectrochemistry*.

Sánchez-Pomales, G.; Santiago-Rodríguez, L.; Cabrera, C. R. “**DNA-Functionalized Carbon Nanotubes for Biosensing Applications**”, *J. Nanosci. Nanotechnol.*, **2009**, *9*, 2175 (**review article**).

Santiago-Rodríguez, L.; Vargas-Barbosa, N. M.; Sánchez-Pomales, G.; Cabrera, C.R. “**Bioelectrochemical Sensing Based on ss-DNA-Carbon Nanotubes Covalently Attached on Gold Electrodes**”, *J. Nanosci. and Nanotechnol.*, **2009**, *9*, 2450.

Sánchez-Pomales, G.; Santiago-Rodríguez, L.; Rivera-Vélez, N. E.; Cabrera, C. R. “**Control of DNA Self-Assembled Monolayers Surface Coverage by Electrochemical Desorption**”, *J. Electroanal. Chem.*, **2007**, *611*, 80.



## **AWARDS AND HONORS (56)**

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### *Fellowships and Scholarships (17)*

National Science Foundation (NSF) East Asia and Pacific Summer Institute (EAPSI) Fellowship (2009)

Society of Hispanic Professional Engineers AHETEMS Scholarship (2008)

2008-2009 Hispanic Scholarship Fund (HSF) scholarship (2008)

NSF-Institute for Functional Materials Graduate Fellowship (2008)

2007-2008 HSF scholarship (2008)

NSF-Institute for Functional Materials Graduate Fellowship (2007)

Puerto Rico Industrial Development Company Graduate Scholarship (2007)

Deanship for Graduate Studies and Research's "Tournament of Golf" Graduate Scholarship (2007)

Society of Hispanic Professional Engineers AHETEMS Scholarship (2007)

Ford Foundation Dissertation Fellowship- Honorable Mention (2007)

2006-2007 HSF Scholarship (2007)

Xerox Scholarship (2006)

Society of Hispanic Professional Engineers AHETEMS Scholarship (2006)

USA Funds Scholarship (2004-2008)

National Science Foundation (NSF) Graduate Research Fellowship (2004)

Graduate Assistance in Areas of National Need (GAANN) Graduate Fellowship (2003)

Minority Access to Research Careers (MARC) Honors Program Undergraduate Fellowship (2001)

### *Research Achievement Awards (7)*

National Research Council-National Institute of Standards and Technology (NRC-NIST) Postdoctoral Research Associateship Program Award

Best Poster Award at the Arizona 7th Annual Student Research Conference- 2<sup>nd</sup> place graduate category (2007)

Best Poster Award at the Arizona 7th Annual Student Research Conference- Honorable mention undergraduate category (co-author) (2007)

Best Poster Award (1<sup>st</sup> place) at the Trends in Nanotechnology Conference (2006)

Best Poster Award at the Arizona 6th Annual Student Research Conference- 1<sup>st</sup> place graduate category (2006)

Best Poster Award at the Arizona 7th Annual Student Research Conference- 3<sup>rd</sup> place undergraduate category (co-author) (2007)

NASA's Center for Nanoscale Materials Summer Research Assistantship (2003)

*Academic Achievement Awards and Honors (11)*

Iota Sigma Pi National Honor Society for Women in Chemistry Awarded Student Membership (2008)

Federation of Analytical Chemistry and Spectroscopy Societies Student Award-Honorable Mention (2007)

Electrochemical Society Awarded Student Membership (2007)

Selected as the student to represent the University of Puerto Rico, Río Piedras Campus (main campus) in the website and brochure for prospective students (2005) (<http://estudiantes.upr.edu/index.php?campusIDX=5>)

Dean's Recognition to Distinguished Students of the University of Puerto Rico (2004)

Most Outstanding Chemistry Student Award (2002)

Chemistry Student of the Year Award sponsored by the Puerto Rico's College of Chemists (2002)

Nomination for "Who's Who Among Students in American Universities and Colleges" (2002-2004)

First place- Chemistry Olympics (2001 and 2002)

Nomination for "National Merit Award" (2001)

Honor Roll (1999-2002)

Dean's Honor List (1998-2002)

*Travel Grants (21)*

Travel Fellowship to attend the "Negotiating the Ideal Faculty Position" workshop at Rice University (2008)

Travel Fellowship to attend the Pan-American Advanced Studies Institute (PASI) on Microscopy Techniques for Nanomaterials (2008)

International Center for Materials Research (ICMR) International Travel Fellowship to collaborate with the University of New South Wales in Sydney, Australia (2008)

Travel Award to attend the Procter and Gamble's Research and Technical Careers in Industry Conference (2008)

Travel Grant to attend the Marie Curie Psi-k Training Summer School on Modern Concepts for Creating and Analyzing Surfaces and Nanoscale Materials (2008)

Travel Award to attend the 5<sup>th</sup> Marie Curie Cutting Edge Conference on Synthesis and Applications of Self-Assembling Materials at Nanoscale (2008)

Travel Award to attend the ICMR-JNCASR Winter School on the Chemistry and Physics of Materials (2007)

Travel Scholarship to attend the SACNAS (Society for the Advancement of Chicanos and Native Americans in Science) National Conference (2007)

Travel Grant to attend the Dow Chemical Company's BEST Symposium (2007)

Travel Grant to attend the ICYS-ICMR Summer School on Nanomaterials (2007)

Travel Award to attend the Arizona 7th Annual Student Research Conference (2007)

Travel Grant to attend the 211<sup>th</sup> Meeting of the Electrochemical Society (2007)

Travel Fellowship to attend the Fourth San Luis Symposium and Summer School on Surfaces, Interfaces and Catalysis (2007)

Travel Fellowship to attend the PASI on Novel Materials for Micro- and Nano-Electronics (2007)

Travel Fellowship to attend the European School on Nanosciences and Nanotechnologies (2006)

Travel Bursary to attend the Trends in Nanotechnology Conference (2006)

Travel Scholarship to attend the SACNAS National Conference (2006)

Travel Fellowship to attend the PASI on Transmission Electron Microscopy (2006)

Travel Fellowship to attend the PASI on Tools and Techniques in Nanoscience (2006)

Travel Award to Attend the Arizona 6th Annual Student Research Conference (2006)

Oak Ridge Associated Universities (ORAU)-Sponsored Travel Award for the 55<sup>th</sup> Meeting of Nobel Prize Winners (2005)

### **ORAL PRESENTATIONS (19 TOTAL: 2 INVITED; 17 CONTRIBUTED)**

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#### *Invited Talks (2 total: 2 as presenting author)*

“DNA-Functionalized Carbon Nanotubes as Electrochemical Biosensors”, **Nanobiology, Nanomedicine and Innovation for Biotechnology Workshop**, San Juan, Puerto Rico, November 2008.

“DNA-Coated Carbon Nanotubes: Synthesis, Assembly and Characterization”, **1<sup>st</sup> University of New South Wales Molecular Devices Symposium**, Sydney, NSW, Australia, July 2008.

#### *Contributed Talks (17 total: 10 as presenting author)*

“Assembly of DNA-Carbon Nanotube Complexes on Gold Surfaces”, **214<sup>th</sup> Meeting of the Electrochemical Society**, Honolulu, Hawaii, October 2008.

“Deposition of Carbon Nanotubes on DNA and Mercaptohexanol Self-Assembled Monolayers”, **43rd ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Arecibo, Puerto Rico, March 2008 (co-author).

“Study of Ionic Strength Effect on Non-Covalent DNA-Carbon Nanotube Composite Formation”, **43rd ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Arecibo, Puerto Rico, March 2008 (co-author).

“DNA-Assisted Purification and Assembly of Single-Walled Carbon Nanotubes”, **Federation of Analytical Chemistry and Spectroscopy Societies Conference**, Memphis, Tennessee, October 2007.

“Characterization of the DNA-Mediated Purification and Assembly of Single-Walled Carbon Nanotubes”, **SACNAS National Conference**, Kansas City, Missouri, October 2007.

“Carbon Nanotubes Covalently Attached on Gold as Substrates for DNA Sensing Using Methylene Blue”, **SACNAS National Conference**, Kansas City, Missouri, October 2007 (co-author).

“Electrochemical Impedance Spectroscopy Detection of Single-Stranded DNA Self-Assembled Monolayers on Gold Electrode Surfaces”, **212<sup>th</sup> Meeting of the Electrochemical Society**, Washington DC, October 2007 (co-author).

“DNA/Carbon Nanotubes Mixed Self-Assembled Monolayers on Gold: an Electrochemical and Surface Study”, **211<sup>th</sup> Meeting of the Electrochemical Society**, Chicago, Illinois, May 2007.

“Disulfide-Modified Single Stranded DNA Self-Assembled Monolayers on Gold: an Electrochemical Study”, **42<sup>th</sup> ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Bayamon, Puerto Rico, March 2007 (co-author).

“DNA-Wrapped Carbon Nanotubes Assembled on Gold Substrates”, **210<sup>th</sup> Meeting of the Electrochemical Society**, Cancún, México, November 2006.

“Vertical Attachment of DNA-Carbon Nanotube Complexes on Gold Substrates”, **SACNAS National Conference**, Tampa, Florida, October 2006.

“DNA-Assisted Purification and Assembly of Carbon Nanotubes”, **Pan-American Advanced Institute on Tools and Techniques in Nanoscience (PASI)**, San José, Costa Rica, June 2006.

“Monocapas de Auto-Ensamblaje de Complejos de ADN-Nanotubos de Carbono y su Aplicación para Sensores de ADN: un Estudio Electroquímico y de Superficie”, **XVII Congreso de la Sociedad Iberoamericana de Electroquímica**, La Plata, Argentina, April 2006.

“Self-Assembled Monolayers of DNA-Functionalized Carbon Nanotubes”, **XIV International Materials Research Congress**, Cancún, México, August 2005 (co-author).

“Study of Self-Assembled Monolayers of DNA and DNA-Carbon Nanotube Hybrids and their Application to DNA Sensors”, **2<sup>nd</sup> International Conference on Nanomaterials and Nanotechnologies**, Crete, Greece, June 2005.

“Study of DNA and Mercaptohexanol Self-Assembled Monolayers on Gold Substrates”, **40<sup>th</sup> ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Mayaguez, Puerto Rico, March 2005 (co-author).

“Study of the Non-Covalent Functionalization of Carbon Nanotubes by DNA”, **2005 Materials Research Society Spring Meeting**, San Francisco, California; March 2005.

#### **SELECTED POSTER PRESENTATIONS (50 TOTAL: 28 AS PRESENTING AUTHOR)**

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“DNA-Carbon Nanotube Complexes Assembled on Gold Surfaces”, **43<sup>rd</sup> ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Río Piedras, Puerto Rico, March 2009.

“Single-Walled Carbon Nanotubes Modified Gold Surfaces as DNA Electrochemical Sensor”, **43rd ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Río Piedras, Puerto Rico, March 2009 (co-author).

“Carbon Nanotubes Deposited Over Self-Assembled Monolayers on Gold”, **Annual Biomedical Research Conference for Minority Students**, Orlando, Florida, November 2008 (co-author).

“Carbon Nanotubes Deposited Over Self-Assembled Monolayers on Gold”, **214<sup>th</sup> Meeting of the Electrochemical Society**, Honolulu, Hawaii, October 2008 (co-author).

“Non-Covalently Functionalized Carbon Nanotubes Assembled On Gold Substrates”, **Marie Curie Psi-k Training Summer School on Modern Concepts for Creating and Analyzing Surfaces and Nanoscale Materials**, Costa Brava, Spain, May 2008.

“Methylene Blue as DNA Hybridization Indicator Using Single-Walled Carbon Nanotubes Covalently Attached on Gold Surfaces”, **Marie Curie Psi-k Training Summer School on Modern Concepts for Creating and Analyzing Surfaces and Nanoscale Materials**, Costa Brava, Spain, May 2008 (co-author).

“DNA-Coated Single-Walled Carbon Nanotubes Self-Assembled on Gold Substrates”, **5<sup>th</sup> Marie Curie Cutting Edge Conference on Synthesis and Applications of Self-Assembling Materials at Nanoscale**, Funchal, Madeira, Portugal, April 2008.

“Methylene Blue as DNA Hybridization Indicator Using Self-Assembled Single-Walled Carbon Nanotubes on Gold Surfaces”, **5<sup>th</sup> Marie Curie Cutting Edge Conference on Synthesis and Applications of Self-Assembling Materials at Nanoscale**, Funchal, Madeira, Portugal, April 2008 (co-author).

“DNA-Coated Single-Walled Carbon Nanotubes Self-Assembled on Gold Surfaces”, **Annual EPSCoR Meeting**, San Juan, Puerto Rico, April 2008.

“Non-Covalently Functionalized Carbon Nanotubes Assembled on Gold Substrates”, **43rd ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Arecibo, Puerto Rico, March 2008.

“Non-Covalently Functionalized DNA-CNT Complexes: Purification and Self-Assembly”, **ICMR-JNCASR Winter School on the Chemistry and Physics of Materials**, Bangalore, India, December 2007.

“Gold Substrate Modified with Single-Walled Carbon Nanotubes for DNA Sensing Applications”, **ICMR-JNCASR Winter School on the Chemistry and Physics of Materials**, Bangalore, India, December 2007 (co-author).

“Self-Assembly of DNA and DNA-Wrapped Carbon Nanotubes on Gold”, **Annual Biomedical Research Conference for Minority Students**, Austin, Texas, November 2007 (co-author).

“Self-Assembly of DNA and DNA-Wrapped Carbon Nanotubes on Gold”, **Minority Access to Research Careers Program Annual Poster Presentations at the University of Puerto Rico**, Río Piedras, Puerto Rico, November 2007 (co-author).

“DNA-Wrapped Carbon Nanotubes: Synthesis, Characterization and Alignment”, **American Chemical Society (ACS) Puerto Rico-Local Chapter, Senior Technical Meeting**, Mayaguez, Puerto Rico, October 2007.

“Carbon Nanotubes Covalently Attached on Gold as Substrates for DNA Sensing”, **American Chemical Society (ACS) Puerto Rico-Local Chapter, Senior Technical Meeting**, Mayaguez, Puerto Rico, October 2007 (co-author).

“DNA-Wrapped CNTs: Synthesis, Characterization and Alignment ”, **American Association for the Advancement in Science, Puerto Rico Section Conference**, Bayamon, Puerto Rico, October 2007.

“DNA Covalently Attached to Single-Walled Carbon Nanotubes Electrode for DNA Sensing Applications”, **American Association for the Advancement in Science, Puerto Rico Section Conference**, Bayamon, Puerto Rico, October 2007 (co-author).

“Electrochemical Characterization of Disulfide-Modified Single-Stranded DNA Self-Assembled Monolayers”, **SACNAS National Conference**, Kansas City, Missouri, October 2007 (co-author).

“Non-Covalent Functionalization and Self-Assembly of Carbon Nanotubes on Gold”, **ICYS-ICMR Summer School on Nanomaterials**, Tsukuba, Japan, July 2007.

“DNA Covalently Attached to Single-Walled Carbon Nanotubes Electrode for DNA Sensing”, **ICYS-ICMR Summer School on Nanomaterials**, Tsukuba, Japan, July 2007 (co-author).

“Characterization of the DNA-Mediated Purification and Assembly of Carbon Nanotubes”, **5th Poster Presentation of Graduate Research at the University of Puerto Rico**, Río Piedras, Puerto Rico, July 2007.

“Characterization of DNA Covalently Attached to Single-Walled Carbon Nanotubes Electrode for DNA Sensing”, **5th Poster Presentation of Graduate Research at the University of Puerto Rico**, Río Piedras, Puerto Rico, July 2007 (co-author).

“Electrochemical Studies of Disulfide-Modified Single-Stranded DNA Self-Assembled Monolayers on Gold Substrates ”, **211<sup>th</sup> Meeting of the Electrochemical Society**, Chicago, Illinois, May 2007 (co-author).

“Characterization of the DNA-Mediated Purification and Assembly of Carbon Nanotubes”, **Arizona 7th Annual Student Research Conference**, Tempe, Arizona, April 2007.

“Electrochemical Studies of Disulfide-Modified Single-Stranded DNA Self-Assembled Monolayers on Gold”, **Arizona 7th Annual Student Research Conference**, Tempe, Arizona, April 2007 (co-author).

“Self-Assembly of DNA-Carbon Nanotube Complexes on Gold Surfaces”, **The Fourth San Luis Summer School and Conference on Surfaces, Interfaces and Catalysis**, Cuernavaca, México, April 2007.

“Characterization of the DNA-Mediated Purification and Self-Assembly of Carbon Nanotubes”, **Pan-American Advanced Studies Institute on Micro- and Nano-Electronics**, Reñaca, Chile, January 2007.

“Electrochemical Study and Preparation of Gold Substrates Functionalized with Single-Walled Carbon Nanotubes for DNA Biosensor Applications”, **Pan-American Advanced Studies Institute on Micro- and Nano- Electronics**, Renaca, Chile, January 2007 (co-author).

“DNA-Mediated Purification and Self-Assembly of Carbon Nanotubes”, **Pan-American Advanced Studies Institute on Nano- and Bio-Technology**, Bariloche, Argentina, November 2006.

“DNA-Mediated Purification and Self-Assembly of Carbon Nanotubes”, **Annual Biomedical Research Conference for Minority Students**, Anaheim, California, November 2006 (co-author).

“Electrochemical Study and Preparation of Gold Substrates Functionalized with Single-Walled Carbon Nanotubes for DNA Biosensor Applications”, **210<sup>th</sup> Meeting of the Electrochemical Society**, Cancún, Mexico, November 2006 (co-author).

“Study of 4-Aminothiophenol Self-Assembled Monolayers on Gold Surface and Covalent Attachment of Carbon Nanotubes via Amide Bond”, **SACNAS National Conference**, Tampa, Florida, October 2006 (co-author).

“DNA-Assisted Purification and Self-Assembly of SWNTs on Gold”, **Trends in Nanotechnology TNT 2006**, Grenoble, France, September, 2006.

“DNA-Mediated Self-Assembly and Purification of SWNTs”, **European School on Nanosciences and Nanotechnologies ESONN 2006**, Grenoble, France, August, 2006.

“DNA-Mediated Self-Assembly of Carbon Nanotubes on Gold”, **International Conference on Nanoscience and Technology ICN+T 2006**, Basel, Switzerland, July, 2006.

“Self-Assembled Monolayers of DNA-Wrapped Carbon Nanotubes on Gold: a Surface and Electrochemical Study”, **2<sup>nd</sup> Transdisciplinary Research Conference**, Mayaguez, Puerto Rico, May, 2006.

“Surface and Electrochemical Study of Mercaptohexanol and DNA Self-Assembled Monolayers on Gold Substrates”, **2<sup>nd</sup> Transdisciplinary Research Conference**, Mayaguez, Puerto Rico, May 2006 (co-author).

“Self-Assembled Monolayers of DNA-Wrapped Carbon Nanotube on Gold: a Surface and Electrochemical Study”, **Arizona 6th Annual Student Research Conference**, Tempe, Arizona, April 2006.

“Study of Self-Assembled of DNA on Gold” **Arizona 6th Annual Student Research Conference**, Tempe, Arizona, April 2006 (co-author).

"Self-Assembled Monolayers of DNA-Carbon Nanotube Hybrids on Gold: an AFM, XPS and Electrochemical Study", **ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Cayey, Puerto Rico, March 2006.

“DNA-Mediated Self-Assembly of Single-Walled Carbon Nanotubes on Gold”, **20 years of EPSCoR in Puerto Rico**, Rio Grande, Puerto Rico, September, 2005.

"DNA-Mediated Self-Assembly of Single-Walled Carbon Nanotubes on Gold", **40th ACS, Puerto Rico Local Chapter, Junior Technical Meeting**, Mayaguez, Puerto Rico, March 2005.

“Study of Self-Assembled Monolayers of DNA, Mercaptohexanol and DNA-Carbon Nanotube Hybrids and Their Application to DNA Sensors", **ACS, Puerto Rico-Local Chapter, Senior Technical Meeting**, Isabela, Puerto Rico, November 2004.

"Surface and Electrochemical Characterization of DNA Self-Assembled Monolayers on Gold Substrates", **2004 Annual Biomedical Research Conference for Minority Students**, Dallas, Texas, November 2004 (co-author).

"Electrochemical, XPS and AFM Studies of Bare and Modified Polycrystalline Gold Electrodes", **2nd Poster Presentation of Graduate Research at the University of Puerto Rico**, Río Piedras, Puerto Rico, July 2004.

"Ab Initio Study of Metallic Species in the Upper Atmosphere", **227th ACS National Meeting**, Anaheim, California, March 2004.

"Ab Initio Calculations of the Dissociative Electron Attachment Reactions Relevant to the Formation of Atomic Metal Enhanced Layers in the Mesopause", **Minority Access to Research Careers Program Annual Poster Presentations at the University of Puerto Rico**, Río Piedras, Puerto Rico, May 2002.

"Ab Initio Calculations of the Dissociative Electron Attachment Reactions Relevant to the Formation of Atomic Metal Enhanced Layers in the Mesopause", **222rd ACS National Meeting**, Orlando, Florida, April 2002.

"Ab Initio Calculations of Reactions Relevant to the Formation of Atomic Metal Enhanced Layers in the Mesopause", **Research Experience for Undergraduates (REU) Summer Symposium at the University of Puerto Rico**, Río Piedras, Puerto Rico, July 2001.

## **SERVICE (11)**

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### *Service to the Scientific Community (3)*

Participated as a peer-reviewer for the following journals: Research Letters in Nanotechnology, Physica Status Solidi (a), and Journal of Physics: Conference Series (2006-2007)

Chairperson of one session of the Pan-American Advanced Studies Institute on Micro- and Nano- Electronics, Reñaca, Chile (2007).

Participated as a panelist of the "223 ACS National Meeting" discussion workshop named "Chemically Incorrect" and in the activity "Kids and Chemistry" (2002).

### *Service to the University (8)*

Participated as a speaker of a Laboratory Security talk given to high school students of the Nano Summer Camp (2008)

Organized and prepared several workshops for doctoral and high school students about scientific posters preparation and oral presentation skills (2005-2007)

Participated as a speaker in an orientation workshop about graduate students given to REU (Research experience for undergraduates) participants (2004)

Worked as a mentor and research trainer for three undergraduate students of the MARC Program (2004-present)

Worked as a recruiting leader and mentor for the AGEP Peer-Mentoring Program (2003-2005)

Participated as a speaker of the Orientation and Welcome Activity for Graduate Students of the University of Puerto Rico (2003 and 2004)

Participated as a panelist of the Second Workshop for Directors and Coordinators of Graduate Departments of the University of Puerto Rico (2003)

Worked as a mentor for undergraduate students of the Pre-MARC Program (2002-2006)

Worked as a tutor for the Organic Chemistry undergraduate course (2001).

## **PROFESSIONAL MEMBERSHIPS (10)**

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Iota Sigma Pi (2008-present)

Society of Chemistry Graduate Students (2007-present)

Electrochemical Society (2007-present)

Society for the Advancement of Chicanos and Native Americans in Science (2006-present)

Society of Hispanic Professional Engineers (SHPE) (2006-present)

Materials Research Society (MRS) (2005-2006)

American Chemical Society (ACS) (2000-2006)

Alliance for Graduate Education and the Professorate (AGEP) (2002-2005)

Golden Key National Honor Society (2001-2002)

Minority Access to Research Careers (MARC) Honors Program (2001-2002)

## **GENERAL RESEARCH INTERESTS**

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Functionalization and purification of carbon nanotubes • Self-assembled monolayers • Electrochemical biosensors • Electrochemical characterization of nanomaterials • Surface characterization of nanomaterials • Metallic electrodes