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# Curriculum Vitae

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NAME Román, Félix R. Chemistry Department, University of Puerto Rico at Mayaguez	POSITION TITLE Professor Analytical and Environmental Chemistry
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EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Inter-American University of Puerto Rico	B.S.	05/81	Chemistry
University of Nebraska, Lincoln	M.S.	05/86	Analytical Chemistry
University of Nebraska, Lincoln	Ph.D.	05/89	Analytical Chemistry
Armed Forces Institute of Pathology	Postdoctoral	07/91	Bioanalytical Chemistry

## A. Personal Statement

I am an analytical chemist by training with experience in chemical separations, which have evolved into the field of environmental and medicinal chemistry. At present I am working in the application of nanotechnology for environmental restoration mainly focused in water remediation. I am also interested in the use of magnetic nanoparticles to target and treat cancer and have collaborated in projects in this area. I have laboratory facilities equipped with state-of-the-art instrumentations such as Agilent Liquid chromatography-mass spectrometry ( LC-MS), Agilent 1100 Liquid chromatography coupled to Agilent 7500 inductive coupled plasma mass spectrometry (LC-ICP-MS), several Agilent 1200 liquid chromatographs equipped with diode array, evaporative light scattering detector, fluorescence detectors among other minor equipment's.

**Mentorship program:** I have mentored 13 masters and 7 PhD students during the last decade. Since the PhD program in Applied Chemistry started in 2004 I have graduated 2 PhD and 5 are in progress. These graduates have occupied positions in academia, government and private industry. Others have continued to pursue PhD or postdoctoral fellows at other institutions in the mainland USA.

## B. Positions and Honors

### Positions and Employment

- 1) August 1989 to July 1996, Associate Professor, Department of Mathematics and Physical Sciences, Inter American University of Puerto Rico, San Germán Campus. Directed the Department of Math and Physical Sciences from May 1995- until May 1996.
- 2) August 1996 to May 2002, Associate Professor, Department of Chemistry, University of Puerto Rico at Mayagüez Campus.
- 3) August 2002-present, Professor, Department of Chemistry, University of Puerto Rico at Mayagüez Campus.

## C. Selected Peer-reviewed Publications

- 1) Hossain, F., Perales-Perez, O.J., Hwang, S., Román, F., (2014) Antimicrobial nanomaterials as water disinfectant: Applications, limitations and future perspectives, Science of the Total Environment 466-467 , pp. 1047

- 2) Luis Alamo-Nole, Sonia Bailon-Ruiz, Ricardo Cruz-Acuña, Oscar Perales-Pérez and Félix R. Román; (2014) Quantum Dots of ZnSe(S) Doped with Copper as Nanophotocatalyst in the Degradation of Organic Dyes, *Journal of Nanoscience and Nanotechnology* Vol. 14, 1–7
- 3) Sanchez-Rivera, D., Perales-Perez O. and Roman F.R.; (2013), LC-ICPMS speciation of arsenite and arsenate oxyanions mixtures during their adsorption with dried sludge, *Anal. Methods* 5: 1583-1589
- 4) Diana Sanchez-Rivera, Oscar Perales-Perez and Felix R. Roman (2013) Removal of inorganic arsenic oxyanions using Ca- Fe(III) alginate beads; *Desalin. and Water Treat.* 51, (10-12): 2162-2169
- 5) Cedenõ-Mattei, Y., Reyes, M., Perales-Pérez, O., Román, F.R. (2013) Size-controlled synthesis of MgO nanoparticles and the assessment of their bactericidal capacity) Materials Research Society Symposium Proceedings 1547 , pp. 135
- 6) Arroyo-Ramírez, L., Montano-Serrano, R., Luna-Pineda, T., Román, F.R., Raptis, R.G., Cabrera, C.R. (2013) Synthesis and characterization of palladium and palladium-cobalt nanoparticles on vulcan XC-72R for the oxygen reduction reaction, *ACS Applied Materials and Interfaces* 5 (22) , pp. 11603
- 7) Pineda, T., Perales-Pérez, O., Román-Velázquez, F. Effect of surface functionalization on the adsorption of arsenic using magnetite nanocrystals (2013) *Adsorption Science and Technology* 31 (9) , pp. 807
- 8) Sanchez-Rivera, D., Perales-Perez O. and Roman F.R.; (2013) LC-ICPMS speciation of arsenite and arsenate oxyanions mixtures during their adsorption with dried sludge, *Anal. Methods* 5: 1583-1589
- 9) Diana Sanchez-Rivera, Oscar Perales-Perez and Felix R. Roman (2013). Removal of inorganic arsenic oxyanions using Ca- Fe(III) alginate beads; *Desalin. and Water Treat.* 51, (10-12): 2162-2169 DOI:10.1080/19443994.2012.734693).
- 10) Alamo-Nole, L., Bailon-Ruiz, S., Perales-Perez, O., Roman, F.R. (2012) Preparative size-exclusion chromatography for separation and purification of water-stable Cd-based quantum dots *Analytical Methods* 4 (10): 3127. **This article made the cover page of this journal issue.**
- 11) Transition metal modified and partially calcined inorganic-organic pillared clays for the adsorption of salicylic acid, clofibrilic acid, carbamazepine, and caffeine from water Cabrera-Lafaurie, W.A., Román, F.R., Hernández-Maldonado, A.J. (2012) *Journal of Colloid and Interface Science* 386 (1):381
- 12) Luis A. Alamo-Nole, Oscar Perales-Perez and Felix R. Roman-Velazquez (2012), Use of recycled tires crumb rubber to remove organic contaminants from aqueous and gaseous phases. *Desalin. Water Treat.*, 49 (1-3):296-306
- 13) J. Lopez-Morales, O. Perales-Perez, F. Roman-Velazquez (2012) Sorption of Triclosan onto Tire Crumb Rubber, *Adsorption Science and Technology* (in press, DOI 10.1260/0263-6174.30.10.831)
- 14) Luis Alamo-Nole , Sonia Bailon-Ruiz , Ricardo Cruz- Acuña, Oscar Perales-Pérez and Félix R. Román (2013) Quantum dots of ZnSe(S) doped with copper as nanophotocatalyst in the degradation of organic dyes, *Journal of Nanoscience and Nanotechnology*
- 15) Luis A. Alamo-Nole, Oscar Perales-Perez, Felix R. Roman-Velazquez (2011) Sorption study of toluene and xylene in aqueous solutions by recycled tires crumb rubber ,*Journal of Hazardous Materials*, 185 (1):107-111
- 16) Fuentes-Mattei, E., Rivera, E., Gioda, A., Sanchez-Rivera, D., Roman-Velazquez, F.R., Jimenez-Velez, B.D. ( 2010) Use of human bronchial epithelial cells (BEAS-2B) to study immunological markers resulting from exposure to PM 2.5 organic extract from Puerto Rico, *Toxicology and Applied Pharmacology* 243 (3) , pp. 381
- 17) R. Hernandez, J. Lamboy, L. Ming-Gao, J. Matta, F.R. Roman and E. Melendez ( 2008) Structureactivity studies of Ti(IV) complexes: aqueous stability and cytotoxic properties in colon cancer HT-29 cells; *J. Biol. Inorg. Chem.* Vol. 13, No. 5
- 18) Jose L. Vera, Felix R. Roman and Enrique Melendez. Molybdenocene-oligonucleotide binding study at physiological pH using NMR spectroscopy and cyclic voltametry, *Bioorganic and Medicinal Chemistry*, Volume 14, Issue 24, pages 8683-8691(2006)
- 19) Jose L. Vera, Félix R. Román and Enrique Melendez (2004). Study of titanocene-DNA and molybdenocene-DNA interactions by Inductive Coupled Plasma-Atomic Emission Spectroscopy. *Analytical and Bioanalytical Chemistry*. 379: 399-403