VÍCTOR HUGO RAMOS SÁNCHEZ, PHD

vramos@uach.mx

POSITIONS

Senior Lecturer, 2015-Present
Lecturer, 2011-2015
Facultad de Ciencias Químicas
Universidad Autónoma de Chihuahua
Chihuahua, México

Lecturer, 2009-2011
Programa Académico de Ingeniería en Energía
Universidad Politécnica de Chiapas
Chiapas, México

Research Technician, 2001-2004
División de Ciencia e Ingeniería Ambiental
Centro de Investigación en Materiales Avanzados, S.C.
Chihuahua, México

EDUCATION

PhD

The University of Sheffield, Chemistry January 2011
Thesis: "Raman and Inelastic Neutron Scattering Experiments in the Sulfur-Iodine Thermochemical Cycle: A Comprehensive Study of the Bunsen Reaction and Direct Decomposition of HI_x"

BS

Universidad Autónoma de Chihuahua, Industrial Chemistry February 2003
Graduated with Honours Distinction
Thesis: "Fabrication and Characterization of Membrane Electrode Assemblies for Application in PEMFC"

Facultad de Ciencias Químicas, circuito Universitario,
Campus Universitario # 2 , Chihuahua, Chih., C.P. 31125
Tels. (614) 236-60-00

HONORS AND AWARDS

Member of the National Researchers System 2017
Level 1, 2017-2019
Candidate, 2015-2016
Candidate, 2012-2014

Messel Bursary 2008
Awarded by the Society of the Chemical Industry in the United Kingdom, to support attendance at meetings and/or laboratory visits for activities related to chemical science.

Best GPA of the BSc Class 2002
First place among the 10th class of BSc in Industrial Chemistry at the Universidad Autónoma de Chihuahua

TEACHING EXPERIENCE

Universidad Autónoma de Chihuahua, Chihuahua, Chih. Aug 2011 to Date
Senior Lecturer, Facultad de Ciencias Químicas

- Spectroscopy, an undergraduate's course averaging 15 students per semester, covering topics, such as vibrational spectroscopy, electronic spectroscopy, atomic spectroscopy.
- Separation Techniques, an undergraduate's course averaging 15 students per semester, covering topics, such as liquid-liquid extraction, crystallization, chromatography.
- Laboratory Management, an undergraduate's course averaging 20 students per semester, covering topics, such as strategic planning, good laboratory practice, legislation, quality assurance.
- Advanced Analytical Techniques, a master's course averaging 4 students per semester, covering topics, such as spectroscopy, chromatography, NMR, calorimetry, cyclic voltammetry.

Bachelor Students Advised

- Roberto Cuevas Lozano: "In situ and Ex situ Support of Bimetallic Nanoparticles: Green Microwave-Assisted Synthesis" for conferment of the degree of BSc in Chemical Engineering. **(2015)**
- Rubén Alonso Chacón Carrera: "Characterization of a Microbial Electrolysis Cell using Wastewater as Substrate" for conferment of the degree of BSc in Chemistry. **(2015)**

- Ana Isabel Casas Hidalgo: “Exploitation of Pecan Nutshell Waste to Obtain Palladium-Based Bimetallic Electrocatalysts” for conferment of the degree of BSc in Chemical Engineering. **(2014)**
- Sergio Alejandro Verástegui Higuera: “Synthesis and Characterization of Ruthenium Promoted Catalysts for Hydrodesulfuration” for conferment of the degree of BSc in Chemical Engineering **(2014)**
- Iris Daniela Almanza Bencomo: “Evaluation of the Percentage of Ruthenium Sulfide as Active Phase in SiO2, Aerosil and γ-Alumina as Catalysts Highly Active for Dibenzothiophene Hydrodesulfuration” for conferment of the degree of BSc in Chemical Engineering **(2014)**

Universidad Politécnica de Chiapas, Tuxtla Gutiérrez, Chis. Oct 2009 to Jul 2011
Lecturer, Programa Académico de Ingeniería en Energía

- Environmental Engineering, an undergraduate’s course averaging 30 students per tetramester, covering topics, such as environmental impact of energy sector, pollution, environmental management.
- Electrochemistry, an undergraduate’s course averaging 40 students per tetramester, covering topics, such as REDOX, electrochemical potential, corrosion and batteries.
- Hydrogen Energy, an undergraduate’s course averaging 30 students per tetramester, covering topics, such as safety, production, and storage of hydrogen.

SELECTED PUBLICATIONS

Journal Publications

“A Sustainable Synthesis of the Naturally Hypolipidemic Agent α-asarone” Alejandro A. Camacho-Dávila, David Chávez-Flores, Gerardo Zaragoza-Galán, Víctor H. Ramos-Sánchez, Synthetic Communications, 2015, 45(14), 1669-1674

“Chemoenzimatic Kinetic Resolution of (R)-Malathion in Aqueous Media” Carlos A Enríquez-Núñez, Alejandro A Camacho-Dávila, Víctor H Ramos-Sánchez, Gerardo Zaragoza-Galán, Lourdes Ballinas-Casarrubias, David Chávez-Flores Chemistry Central Journal, 2015, 9(1), 1-9

“Synthesis of a Functionalized Benzofuran as a Synthon for Salvianolic Acid C Analogues as Potential LDL Antioxidants” Gabriela Lopez Frias, Alejandro A. Camacho-Dávila, David Chávez-Flores, Gerardo Zaragoza-Galán, Víctor H. Ramos-Sánchez, Molecules, 2015, 20, 8654-8665

"A unique approach to the vapour phase of the HIx feed of the sulfur iodine thermochemical cycle: A Raman spectroscopy study" V.H. Ramos-Sanchez, R. Jeans, R.H. Elder, G. Zaragoza-Galán and R. Devonshire, International Journal of Hydrogen Energy, 2015, 40(4), 1657–1664

"Carbon Supported Au-Pd-PdO with Low Metal Loading for Electro-oxidation of Methanol in Alkaline Medium" V-H Ramos-Sánchez, Diana Brito-Picciotto, Ramón Gómez-Vargas, David Chávez-Flores and Edgar Valenzuela, Journal of New Materials for Electrochemical Systems, 2014, 17(3), 133–138

"Pyrene-Fullerene C60 Dyads as Light-Harvesting Antennas" Gerardo Zaragoza-Galán, Jesús Ortíz-Palacios, Bianca X. Valderrama, Alejandro A. Camacho-Dávila, Ernesto Rivera, David Chávez-Flores, Víctor H. Ramos-Sánchez Molecules, 2014, 19, 352-366

"Nanostructured TiO2 Doped with Nb as a Novel Support for PEMFC," Edgar Valenzuela, Victor Ramos-Sanchez, Alejandro Adolfo Lambert Arista, and Oumarou Savadogo. Journal of Materials, Volume. 2013 (2013), Article 706513, 6 pages

"First observation of defined structural motifs in the Sulfur-Iodine Thermochemical Cycle, and their role in hydrogen production" Ramos-Sanchez VH, Tomkinson J, Muñiz-Soria J, Valenzuela E and Devonshire R. International Journal of Spectroscopy, Volume 2011 (2011), Article 691217, 14 pages.

"Effects of the Au(I) – Au(I) closed shell attraction on the electronic and phosphorescent properties in a series of coordination compounds: A theoretical study" Muñiz J, Sansores E, Reyes-Nava JA, Ramos-Sanchez V-H and Olea A. International Journal of Quantum Chemistry, Volume 111, 2011, Pages: 4378–4388

"Raman scattering studies of the condensed phase of the HIx feed of the Sulfur-Iodine Thermochemical Cycle" Ramos-Sanchez VH, Jeans R and Devonshire R. International Journal of Energy Research, Volume 35, Issue 3, 10 March 2011, Pages: 189–208.

"HYTHEC: An EC funded search for a long term massive hydrogen production route using solar and nuclear technologies" Alain Le Duigou, Jean-Marc Borgard, Bruno Larousse, Denis Doizi, Ray Allen, Bruce C. Ewan, Geoff H. Priestman, Rachael Elder, Robin Devonshire, Victor Ramos, Giovanni Cerri, Coriolano Salvini, Ambra Giovannelli, Giovanni De Maria, Claudio Corgnale, Sergio Brutti, Martin Roeb, Adam Noglik, Peter-Michael Rietbrock, Stefan Mohr, Lamark de Oliveira, Nathalie

Monnerie, Mark Schmitz, Christian Sattler, Alfredo Orden Martinez, Daniel de Lorenzo Manzano, Jorge Cedillo Rojas, Stephane Dechelotte and Olivier Baudouin. International Journal of Hydrogen Energy Volume 32, Issues 10-11, EHEC2005, July-August 2007, Pages 1516-1529.

"Active area and particle size of Pt particles synthesized from (NH4)2PtCl6 on a carbon support" Ysmael Verde, Gabriel Alonso-Nunez, Mario Miki-Yoshida, M. Jose-Yacaman, Victor H. Ramos and Arturo Keer. Catalysis Today Volumes 107-108, Selected Contributions of the XIX Ibero American Catalysis Symposium, 30 October 2005, Pages 826-830.

"Pt/C obtained from carbon with different treatments and (NH4)2PtCl6 as a Pt precursor" Ysmael Verde, Gabriel Alonso, Victor Ramos, Hua Zhang, Allan J. Jacobson and Arturo Keer. Applied Catalysis A: General, Volume 277, Issues 1-2, 8 December 2004, Pages 201-207.

Journal Papers Accepted

"Sustainable Application of Pecan Nutshell Waste: Greener Synthesis of Pd-based Nanocatalysts for Electro-oxidation of Methanol" Ana I. Casas Hidalgo, Manuel Román Aguirre, Edgar Valenzuela, José Y. Verde Gomez, Alejandro Camacho Dávila, Rajender S. Varma, and Víctor H. Ramos Sánchez, International Journal of Hydrogen Energy, 2016, Accepted

FUNDED PROJECTS – SCIENCE AND TECHNOLOGY

Ramos-Sánchez, V.H., "Síntesis Verde de Catalizadores Metálicos Basados en Paladio y Soportados en Nanotubos de Carbón para Aplicación en Celdas de Combustible Alcalinas de Metanol Directo" PROMEP, No. 103.5/12/3923, 2012.

Ramos-Sánchez, V.H., "Desarrollo Tecnológico e Innovador de Línea Prototipo para la Fabricación de Conexiones Plásticas Sometidas a Presión Hidráulica a partir de una Formulación Propia" PEI-CONACYT, No. 183405, 2012.

Ramos-Sánchez, V.H., "Aprovechamiento Sostenible de Residuos Urbanos y Agroindustriales de la Región para la Fabricación de Conexiones Hidráulicas de Polietileno (Etapa II)" PEI-CONACYT, No. 213191, 2014.

Ramos-Sánchez, V.H., "Combustibles Solares y Procesos Industriales" SENER-CONACYT, No. 207450, 2014.

Ramos-Sánchez, V.H., “Desarrollo de Tecnología para la Manufactura de Filtros Purificadores de Agua con una Formulación de Polyspun Propia” PEI-CONACYT, No. 222621, 2015.

PROFESSIONAL TRAINING

Seminar or Workshop

Catalytic Properties Using First Principles Methods
Radiation Protection Working with X Rays
Workshop in Computational Methods for the Exploitation of Vibrational Spectra
National Service for Computational Chemistry Gaussian Workshop 2006

PROFESSIONAL AFFILIATIONS

Society of Chemical Industry, 2007- to date
Member 66719

PROFESSIONAL SERVICE

Peer-Reviewed Articles for:

- International Journal of Hydrogen Energy
- Ciencia@UAQ
- International Research Journal of Pure and Applied Chemistry

LANGUAGES

Spanish: Native Language

English: TOEFL = 610; GESE = 11*

AVAILABLE THESIS PROJECTS

For Undergraduates

Synthesis and Dispersion of Mixed Oxides on Porous Media to Implement in High-Flux Solar Radiation Furnace (HFSRF).- The goal of this project is to coat zirconia porous media with mixed oxides of tin and ceria, which will be obtained using sustainable microwave assisted routes of synthesis. The resulting materials will be tested at the High-Flux Solar Radiation Furnace (HFSRF) at IER-UNAM, to produce hydrogen and oxygen at high temperature by means of a thermochemical cycle. This project is fully funded by SENER-CONACYT.

For Postgraduates

Electrochemical Characterization of Dye Sensitized Solar Cells (DSSC).- This project involves the development of a methodology for integral electrochemical characterization of several molecules synthesized in-house. Each molecule to be evaluated, therefore, will require to be prepared and assembled in a DSSC, which will be tested for polarization curves, cyclic voltammetry and electrochemical impedance spectroscopy at different exposure wavelengths. The project is partially funded by SEP-CONACYT in collaboration with Dr. Gerardo Zaragoza Galán.

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