

**44th ACS Junior Technical Meeting
29th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)**

ABSTRACTS FOR POSTER SESSIONS

(Arranged in alphabetical order by field and presenter's last name)

- Chemistry
- Education
- Engineering
- Environmental Sciences
- Geosciences
- Life Science
- Mathematics
- Physics

Chemistry

Alicea, Ismael, UPR-RIO PIEDRAS; Rodriguez, Maria M., Department of Chemistry, University of Puerto Rico Mayaguez Campus; Weichsel, Andrzej, Department of Biochemistry and Molecular Biophysics, University of Arizona, Tucson; Montfort, William R., Department of Biochemistry and Molecular Biophysics, University of Arizona, Tucson, Bonaventura, Joe, Department of Chemistry, University of Puerto Rico Mayaguez Campus; Schreiter, Eric, Department of Chemistry, University of Puerto Rico Rio Piedras Campus

[Chemistry 1]

S-Nitrosylation-Induced Conformational Change in Blackfin Tuna Myoglobin

Arroyo-Ramirez, Lisandra, UPR-RIO PIEDRAS; Raphael G. Raptis, Chemistry, UPR-Rio Piedras; Carlos R. Cabrera, Chemistry, UPR-Rio Piedras

[Chemistry 2]

Palladium-Cobalt Precursor for Catalyst Formation on Carbon Surfaces

Aviles, Edward, UPR-RIO PIEDRAS; Rodriguez, Abimael; Chemistry Department, UPR-Rio Piedras

[Chemistry 3]

A Novel Diterpenoid β -lactam From the Caribbean Marine Sponge Hymeniacidon sp

Betancourt, José, UPR-RIO PIEDRAS; Rivera, José M., Department of Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 4]

Thermosensitive Self-Assembled Supramolecules

Casañas, Barbara, UPR-RIO PIEDRAS; Morales, Mara, Chemistry, UPR-Rio Piedras; Miller, Andrismery, Chemistry, UPR-Rio Piedras; Ramirez, Jonathan, Chemistry, UPR-Rio Piedras, Sanchez, Yariel, Chemistry, UPR-Rio Piedras; Colón, Jorge L., Chemistry, UPR-Rio Piedras; Montes, Ingrid, Chemistry, UPR-Rio Piedras

[Chemistry 5]

Chemical and Electrochemical Characterization of Metallocenes Derivatives Intercalated Into Zirconium Phosphate Layers

Cedeño-Mattei, Yarilyn, UPR-MAYAGUEZ; Perales-Perez, Oscar, UPR-Mayaguez;
Uwakweh, Oswald, UPR-Mayaguez

[Chemistry 6]

Effect of Rare Earth Doping on Magnetic Properties of Cobalt Ferrite Nanocrystals

Charry, Gustavo, UPR-MAYAGUEZ; De Jesús, Maritza, Department of Chemistry, University of Puerto Rico at Mayagüez; Pérez, Fernando, Agricultural and Biosystems Engineering Department, University of Puerto Rico at Mayagüez; Huertas, Javier, Agricultural and Biosystems Engineering Department, University of Puerto Rico at Mayagüez, Dumas, José, Agricultural Experiment Station, University of Puerto Rico at Río Piedras

[Chemistry 7]

Beer Volatile Analysis: Validation of the Headspace Solid-Phase Microextraction (Hs/Spme) Coupled to Gas Chromatography Mass Spectrometry (Gc/Ms/Fid)

Contés-de Jesús, Enid, UPR-RIO PIEDRAS; Li, Jing, NASA-Ames Research Center; Lu, Yijiang, Eloret Corporation; Cabrera, Carlos R., UPR-Rio Piedras

[Chemistry 8]

Nano-Metallic Decorated Single Wall Carbon Nanotubes Sensors For Gas Detection

Das, Soma, UPR-RIO PIEDRAS; Chakraborty Indranil, Dept. of Chemistry, University of Puerto Rico- Río Piedras; Raphael G. Raptis, Dept. of Chemistry, University of Puerto Rico- Río Piedras

[Chemistry 9]

Synthesis and Relaxation Characteristics of novel Water-soluble Iron-pyrazolate clusters: Development towards a new class of MRI Contrast Agents

Delgado, Yamixa, UPR-RIO PIEDRAS; Bansal, Vibha, Chemistry, UPR-Cayey; Legault, Marc, Physics, UPR-Bayamón; Barletta, Gabriel, Chemistry, UPR-Humacao

[Chemistry 10]

Subtilisin Carlsberg in organic solvents: Binding conformations of two active site inhibitors

Díaz, Agustín, UPR-RIO PIEDRAS; Melissa Martínez, University of Puerto Rico-Río Piedras; Annette Medina, University of Puerto Rico-Río Piedras; Amanda David, University of Puerto Rico-Río Piedras, Riviam J. Pérez, University of Puerto Rico-Río

Piedras; Mitk'El B. Santiago, University of Puerto Rico-Rio Piedras; Jorge L. Colón, University of Puerto Rico-Rio Piedras

[Chemistry 11]

Iron diimines complexes ion-exchanged in Zirconium Phosphate

Enríquez, Yanira, UPR-RIO PIEDRAS

[Chemistry 12]

Designing a New Generation of Electrochemical Biosensors for the Detection of Pseudomonas aeruginosa Exotoxin A

Feliciano, Ileana, UPR-RIO PIEDRAS; Caban, Miguel, Chemistry, UPR Rio Piedras; Cabrera, Carlos, Chemistry, UPR Rio Piedras

[Chemistry 13]

Electrochemical Studies of the Electron Transfer through L-cysteine Monolayer on Palladium Using a Redox Probe

Flores, Giselle, UPR-RIO PIEDRAS; Pagán, Miraida, Chemistry, UPR-Rio Piedras; Almenas, Mariangely, Chemistry, UPR-Rio Piedras, Griebenow, Kai, Chemistry, UPR-Rio Piedras

[Chemistry 14]

Mechanism of Moisture-induced Solid-phase Aggregation and Stabilization of Proteins

García, María del Mar, UPR-RIO PIEDRAS; Guadalupe, Ana R., Department of Chemistry, University of Puerto Rico, Río Piedras Campus

[Chemistry 15]

Spectroscopic and Electrochemical Studies of Organic Dyes in the Presence of Insulin Peptides

Gimenez, Lizabeth, UPR-RIO PIEDRAS; Rivera, Adriana, UPR-Rio Piedras Chemistry

[Chemistry 16]

Synthesis of New Acetylenic Fatty Acids and Their Alkene Analogues as Antimalarial Compounds

Hernandez Lugo, Dionne Marie, UPR-RIO PIEDRAS; Sri Lakshmi Katar, Department of Functional Nanomaterials, University of Puerto Rico in Rio Piedras; Amairy E. Plaud, Department of Functional Nanomaterials, University of Puerto Rico in Rio Piedras; Gerardo Morell, Department of Functional Nanomaterials, University of Puerto Rico in Rio Piedras

[Chemistry 17]

Electrochemical Properties of Tin Oxide Electrode for Rechargeable Lithium Batteries

Jiménez, José, UPR-MAYAGUEZ; Lysenko, Sergiy, Physics Department, UPR-Mayaguez; Liu, Huimn, Physics Department, UPR-Mayaguez; Fachini, Esteban, Center for Nanoscale Materials, UPR-Rio Piedras, Resto, Oscar, Center for Nanoscale Materials, UPR-Rio Piedras; Cabrera, Carlos, Center for Nanoscale Materials, UPR-Rio Piedras; ,

[Chemistry 18]

Different Approaches for the Characterization of Silver Nanoparticles Embedded in Optical Media

Mateo, Juan J, UPR-RIO PIEDRAS; Y. Ishikawa, University of Puerto Rico; C. Cabrera, University of Puerto Rico

[Chemistry 19]

Hydrogen reaction over Platinum: Density Functional Theory / Molecular Dynamics theoretical study

Morales-García, Flavia, UPR-RIO PIEDRAS; Mayol-Bracero, Olga L., Institute for Tropical Ecosystem Studies, University of Puerto Rico, San Juan, Puerto Rico; Repollet-Pedrosa, Milton, Department of Chemistry, University of Puerto Rico, San Juan, Puerto Rico; Kasper-Giebl, Anne, Institute for Chemical Technologies and Analytics, Vienna University of Technology, Vienna, Austria, Ramírez-Santa Cruz, Carlos, Institute for Chemical Technologies and Analytics, Vienna University of Technology, Vienna, Austria; Puxbaum, Hans, Institute for Chemical Technologies and Analytics, Vienna University of Technology, Vienna, Austria

[Chemistry 20]

Aerosols Collected at a Tropical Marine Environment: Size-resolved Chemical Composition Using IC, TOC, and Thermal-optical Analyses

Nieves, Karinel, UPR-RIO PIEDRAS; Wei, Xiaomei, Chemistry, UPR-Rio Piedras; Rodriguez, Abiamel D., Chemistr, UPR-Rio Piedras; Wang, Yuehong, Institute of Tuberculosis Research, College of Pharmacy, University of Illinois at Chicago,

Franzblau, Scott G., Institute of Tuberculosis Research, College of Pharmacy, University of Illinois at Chicago

[Chemistry 21]

Synthesis and In Vitro Biological Evaluation of Ring B Abeo-Sterols as Novel Inhibitors of Mycobacterium Tuberculosis

Otaño-Vega, Myrna, UPR-RIO PIEDRAS; Montes-González, Ingrid, Chemistry, UPR-RP; Guadalupe, Ana, Chemistry, UPR-Rio Piedras

[Chemistry 22]

Synthesis and Characterization of Ferrocenyl Chalcones

Pacheco, Yamaris, UPR-RIO PIEDRAS; Griebenow, Kai, Chemistry Department, UPR-Rio Piedras

[Chemistry 23]

Nanoparticulate Protein Formulations

Pagan, Miraida, UPR-RIO PIEDRAS; Flores, Giselle, Chemistry Department, UPR-RP; Almenas, Mariengely, Chemistry Department, UPR-RP; Griebenow, Kai, Chemistry Department, UPR-Rio Piedras

[Chemistry 24]

Chemical Glycosylation: A New Method to Prevent Solid-Phase Protein Aggregation

Rivera-Vélez, Nelson E., UPR-RIO PIEDRAS; Sánchez Pomales, Germarie, UPR-Río Piedras; Cabrera, Carlos R., UPR-Río Piedras

[Chemistry 25]

Study of the Ionic Strength Effect on Non-Covalent DNA-CNT Composite Formation

Rivero, Kennett, UPR-RIO PIEDRAS; Raptis, Raphael G., Department of Chemistry, University of Puerto Rico (Rio Piedras)

[Chemistry 26]

Heterobimetallic Clusters Containing a Redox-Active Fe₄O₄-Cubane Core

Sanchez-Pomales, Germanie, UPR-RIO PIEDRAS; Santiago-Rodriguez, Lenibel, Department, of Chemistry, UPR-Rio Piedras; Pagan-Miranda, Coral, Department, of Chemistry, UPR-Rio Piedras; Cabrera, Carlos R., Department, of Chemistry, UPR-Rio Piedras

[Chemistry 27]

DNA-Carbon Nanotubes Complexes Assembled On Gold Surfaces

Santiago, Diana, UPR-RIO PIEDRAS; Rodríguez-Calero, Gabriel G., Chemistry, UPR-Río Piedras; Cabrera, Carlos R., Chemistry, UPR-Río Piedras

[Chemistry 28]

Characterization of Nano-Catalysts for Direct Methanol Fuel Cell Applications

Santiago, Lenibel, UPR-RIO PIEDRAS; Santiago-Rodríguez, Lenibel, Chemistry, University of Puerto Rico Río Piedras Campus; Sánchez-Pomales, Germanie, Chemistry, University of Puerto Rico Río Piedras Campus; Cabrera, Carlos R., Chemistry, University of Puerto Rico Río Piedras Campus

[Chemistry 29]

Single-Walled Carbon Nanotubes Modified Gold Surface as DNA Electrochemical Sensor

Silva, Diana, UPR-RIO PIEDRAS; O'Neill, Rosann, Chemistry, UPR-RP; Carballeira, Néstor M., Chemistry, UPR-Rio Piedras

[Chemistry 30]

Total synthesis of the novel (5Z,9Z)-2-methoxy-5,9-octadecadienoic acid

Vallejo, Pamela, UPR-RIO PIEDRAS; Rivera-Hernández, Reynaldo O., Department of Chemistry, University of Puerto Rico; Gioda, Adriana, Pontificia Universidade Catolica do Rio de Janeiro; Mayol-Bracero, Olga L., Institute for Tropical Ecosystem Studies, University of Puerto Rico

[Chemistry 31]

African Dust in the Caribbean: Impact on the Chemical Composition of Aerosols, Clouds and Rainwater at a Tropical Montane Cloud Forest

Computer Sciences

Valenzuela, Eliana, UPR-MAYAGUEZ; Rodriguez-Martinez, Manuel, ECE
Department, University of Puerto Rico at Mayaguez

[Computer Sciences 1]

Education

Aponte-Santini, Juan Carlos, UPR-RIO PIEDRAS; Montes, Ingrid, Department of
Chemistry, UPR-RP; Bonilla, Víctor, Department of Graduate Studies, UPR-Rio Piedras

[Education 1]

*Assessment of How the Selected Topics in Chemistry Course Influences in the
Students of the General Chemistry Course*

Fajardo, Johanna, UPR-RIO PIEDRAS; Montes, Ingrid, Department of Chemistry,
UPR-RP; Bonilla, Víctor, Department of Graduate Studies, UPR-Rio Piedras

[Education 2]

*Are Affective Aspects of Students with Different Learning Styles Influencing their an
Achievement in the Organic Chemistry Course?*

Vazquez, Daniel, UPR-RIO PIEDRAS; Borrero, Michelle, PhD, Department of Biology,
UPR-Río Piedras

[Education 3]

*A Project-based Laboratory Course in Molecular and Cellular Biology to Enhance
Student Preparedness to Pursue a Scientific Career*

Engineering

Anaya, Nelson, UPR-MAYAGUEZ; Hwang, Sangchul, Civil Engineer, UPR-MAYAGUEZ; Padilla, Ingrid, Civil Engineer, UPR-Mayaguez

[Engineering 1]

Enhanced TCE Remediation with Polymer-aided Alcohol Flushing

Arevalo, Ana Graciela, UPR-MAYAGUEZ; Hernandez-Maldonado, Arturo J, Chemical Engineering Department, UPR-Mayaguez

[Engineering 2]

Nanoporous Sorbents for Spacecraft Air Ultrapurification

Avilés, Sully Mar, UPR-MAYAGUEZ; Carreras, Gretselle, Chemical Engineering, UPR-Mayaguez; Suleiman, David, Chemical Engineering, UPR-Mayaguez

[Engineering 3]

Synthesis and Characterization of Poly(styrene-isoprene-styrene) Nanostructured Ionomers

Barrera, Carola, UPR-MAYAGUEZ; Herrera, Adriana, University of Puerto Rico at Mayaguez; Nayla, Bezares, University of Puerto Rico at Mayaguez; Rinaldi, Carlos, University of Puerto Rico at Mayaguez

[Engineering 4]

Synthesis of Monodisperse PEG modified MNP for Biomedical Applications

Belen, Daphne, UPR-MAYAGUEZ; Hernandez-Maldonado, Arturo J., Department of Chemical Engineering, University of Puerto Rico; Kim, Chul, The Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA 91125, USA; Hwang, Son-Jong, The Division of Chemistry and Chemical Engineering, California Institute of Technology

[Engineering 5]

Detemplation and Coordination Chemistry of SBE-Type Metal-Substituted Aluminophosphates Nanoporous Sorbents

Cameron, Ana Raquel, UPR-MAYAGUEZ

[Engineering 6]

Electric Field Effect on the Rheology of MWCNT Dispersions in Liquid Crystalline Polymers

Falcón, Juan C., UPR-MAYAGUEZ; Hwang, Sangchul, Civil Engineering, UPR-Mayaguez; Padilla, Ingrid, Civil Engineering, UPR-Mayaguez

[Engineering 7]

Spatial Distribution and Temporal Trend of Explosives in Soil with Surface Vegetation

García-Ricard, Omar, UPR-MAYAGUEZ; Hernández-Maldonado, Arturo, Department of Chemical Engineering, UPR - Mayaguez Campus

[Engineering 8]

Synthesis and Characterization of Porous Coordination Polymer for Adsorption Applications

Gonzalez, Anthony, UPR-MAYAGUEZ; Florián Algarín Vivian, Chemical Engineering, UPR Mayaguez; Acevedo Rullan, Aldo, Chemical Engineering, UPR Mayaguez

[Engineering 9]

Effect of Formulation Parameters on Gelation Temperature of Biopolymers Mixtures

Hernández, Imiraily, UPR-MAYAGUEZ; Hwang, Sangchul, Department of Civil Engineering, University of Puerto Rico, Mayagüez Campus

[Engineering 10]

Plant Growth on the Land Restored with Coal Combustion Byproduct Aggregates

Herrera, Adriana, UPR-MAYAGUEZ; Barrera, Carola, Ing. Química; Ayala, VANessa, Ing. Química; Latorre, Magda, Ing. Química, Torres-Lugo, Madeline, Ing. Química; Rinaldi, Carlos, Ing. Química

[Engineering 11]

Synthesis and Functionalization of Monodisperse Magnetic Nanoparticles with Carboxymethyl-Dextran (CmDx) and Polyethylene Glycol (Peg) for Cancer Treatment

Hidalgo-Hernandez, Ruth, UPR-MAYAGUEZ; Plaza, Nayomi, Mechanical Engineering, University of Puerto Rico-Mayaguez Campus; Suarez, Marcelo, Engineering Science and Materials

[Engineering 12]

Effects of Magnesium Levels in Aluminum Matrix Composites Subject to Mechanical Wear and Abrasion

Lara, Patricia, UPR-MAYAGUEZ; Matilde L. Sánchez, Department of Industrial Engineering University of Puerto Rico, Mayaguez; Yarilyn CeUniversity of Puerto Rico, Mayaguezdeño-Mattei, Department of Material Science, University of Puerto Rico, Mayaguez; Óscar Perales, Department of Material Science, University of Puerto Rico, Mayaguez, Mauricio Cabrera-Ríos, Department of Industrial Engineering University of Puerto Rico, Mayaguez

[Engineering 13]

Experimental Optimization of Nanomagnetic Properties

Latorre, Isomar, UPR-MAYAGUEZ; Roman, Daniel, Civil Engineering, UPR-Mayaguez; Hwang, Sangchul, Civil Engineering, UPR-Mayaguez

[Engineering 14]

A Statistical Approach for Restoration of Disturbed Land with Coal Combustion Byproduct Aggregates

Mera, Daniel, UPR-MAYAGUEZ

[Engineering 15]

Power Consumption in Real Time Operating Systems

Miranda, Felix Gabriel, UPR-MAYAGUEZ

[Engineering 16]

Thermal and Rheological Studies of Nematic PHBA-PET Nanocomposites

Obregón, Luis Guillermo, UPR-MAYAGUEZ; Velazquez, Carlos, Chemical Engineering/UPR-Mayaguez

[Engineering 17]

Effect of Particle Size in Mixing of Granular Materials Under Periodic shear

Padilla-Luciano, Yeira, UPR-MAYAGUEZ; Bogere, Moses N., Chemical Engineering, University of Puerto Rico, Mayaguez; Ogden, Kimberly, Department of Chemical and Environmental Engineering, University of Arizona

[Engineering 18]

Bioremediation of Copper from Chemical Mechanical Planarization (CMP) Wastewater

Paez, Daniel, UPR-MAYAGUEZ; Olavarria, Jeniffer, Chemistry Department, University of Puerto Rico at Mayaguez; Diaz, Ruben, Mechanical Engineering Department, University of Puerto Rico at Mayaguez; De Jesus, Marcos, Chemistry Department, University of Puerto Rico at Mayaguez

[Engineering 19]

Nanofabrication of Metal-Polymer Composites for Surface-Enhanced Raman Spectroscopy Based Biosensing

Perla, Torres, UPR-MAYAGUEZ; Rosado, Sahid, Civil Engineering, UPR-Mayaguez; Hwang, Sangchul, Civil Engineering, UPR-Mayaguez

[Engineering 20]

Effect of Aquatic Structure made of Cement and Coal Ash Byproducts on Water Quality

Reyes, Damian, UPR-MAYAGUEZ; Hernandez, Joany R., Chemical Engineering; Leon, Jose, Chemical Engineering; Estremera, Miguel, Chemical Engineering, Martínez, Emilio, Chemical Engineering; Cardona, Nelson, Chemical Engineering

[Engineering 21]

Bifunctional Materials for the Catalytic Conversion of Cellulose into Soluble Feedstocks

Rivera, Melissa, UPR-MAYAGUEZ; Ducoudray, Gladys O., Electrical and Computer Engineering, University of Puerto Rico at Mayaguez

[Engineering 22]

Built-in Analog Supply Current Sensor for Analog and Mixed Signal Integrated Circuits

Rivera, Sindia, M., UPR-MAYAGUEZ; Hernandez-Maldonado, Arturo J., Chemical Engineering, UPR-MAYaguez

[Engineering 23]

NASA Sustainability: A Novel Sorbent for the Removal of PPCPs from Water

Rivera-Ramos, Milton E., UPR-MAYAGUEZ; Hernández-Maldonado, Arturo J.

[Engineering 24]

Separation of CO₂ from Light Gas Mixtures using Ion-Exchanged

Sanchez, Matilde Luz, UPR-MAYAGUEZ; Clara E. Isaza, Facultad de Ciencias Biologicas Universidad Autonoma de Nuevo Leon; Alexandra Medina-Borja, Department of Industrial Engineering University of Puerto Rico at Mayaguez; José M. Castro, Department of Industrial Welding and Systems Engineering, The Ohio State University, Mauricio Cabrera-Ríos, Department of Industrial Engineering University of Puerto Rico at Mayaguez

[Engineering 25]

Data Envelopment Microarray Analysis

Santos, Angel, UPR-MAYAGUEZ; Martinez Inesta, Maria, Chemical Engineering Department, University of Puerto Rico

[Engineering 26]

Synthesis of Ni Nanostructures Using Microporous Materials

Soto, Denisse, UPR-MAYAGUEZ; Rinaldi, Carlos, Chemical Engineering, UPR-Mayaguez

[Engineering 27]

Magnetorheology Simulations of Spherical Magnetic Nanoparticles in Dilute Suspensions: A Comparison with Conventional Magnetoviscosity Equations

Villalobos, Jose, UPR-MAYAGUEZ; Jia, Yi, Department of Mechanical Engineering, University of Puerto Rico, Mayaguez Campus

[Engineering 28]

Free Battery Wireless Pressure Sensor using Parallel Plates

Environmental Sciences

Bonilla-Rivera, Carmen E., TURABO UNIV; Pérez-Jiménez, José, Biología, Universidad del Turabo

[Environmental Sciences 1]

Phylogeography of Sulfate-reducing bacteria at El Yunque Rain Forest in Puerto Rico

Burgos, Sofia, UPR-RIO PIEDRAS; Ramirez, Alonso, ITES, UPR-Rio Piedras

[Environmental Sciences 2]

The Effect of Land Use on Eukarya Diversity in Stream Benthic Biofilms

Concepcion, Daniel, UPR-MAYAGUEZ; Hwang, Sangchul, Civil Engineering Department, UPRM; Falcon, Juan, Civil Engineering Department, UPR-Mayaguez

[Environmental Sciences 3]

Lessons Learned from Operation of Field-Scale Small Water Purification Systems

Delgado, Diana, UPR-RIO PIEDRAS; Restrepo Carla, Department of Biology, UPR-Rio Piedras

[Environmental Sciences 4]

Fluctuating asymmetry in Puerto Rican Populations of Papilionidae Butterflies

Padilla, Luis, UPR-MAYAGUEZ

[Environmental Sciences 5]

Mass Media During Natural Disasters and Vulnerability of Coastal Communities: A Case Study of the San Jose Community in Mayagüez, Puerto Rico

Rodriguez, Nydia J., UPR-MAYAGUEZ; Dr. Baqar R. Zaidi, Marine Sciences, UPR Mayaguez

[Environmental Sciences 6]

Seasonal Variation of Multiple Antibiotic Resistant Enterococcus Species in Waters and Sediments of Barceloneta-Manatí, Puerto Rico

Geosciences

Cuevas, David, UPR-MAYAGUEZ; Sherman, Clark E., Marine Sciences, UPR-Mayaguez; Ramirez, Wilson, Geology, UPR-Mayaguez; Chizmadia, Lysa, Geology, UPR-Mayaguez, Hubbard, Dennis, Geology, Oberlin College, Oberlin, OH, USA

[Geosciences 1]

Siltation stress in fossil reef corals of the Mid-Holocene Cañada Honda reef in Southwestern Dominican Republic: environmental implications and coral response

Life Sciences

Caceres, Rita, UPR-RIO PIEDRAS; Ortiz-Zayas, Jorge, Biology, Institute for Tropical Ecosystem Studies; Blanco, Felipe, Instituto de Biología, Facultad de Ciencias Exactas y Naturales, Universidad de Antioquia, Antioquia, Colombia

[Life Sciences 1]

Hydrology of the Temporary Pond used for Reproduction of the Endangered Species, Peltophryne Lemur

Capo, Coral, UPR-RIO PIEDRAS; Lasalde-Dominicci, J.A., University of Puerto Rico, Río Piedras Campus, Department of Biology

[Life Sciences 2]

α7-nicotinic Acetylcholine Receptors are Up-Regulated After Exposure to HIV-1 gp120: Potential Implication in the Pathogenesis of HIV-1 Associated Dementia

Conde-Costas, Carlos, UPR-RIO PIEDRAS; Conde-Costas, Carlos, Natural Sciences/Biology, UPR-Rio Piedras; Ortiz-Zayas, Jorge, Natural Sciences,/Biology, UPR-Rio Piedras

[Life Sciences 3]

Nitrogen Dynamics in a Tropical Cave Sream

Dávila, Catalina, UPR-RIO PIEDRAS; Bonilla, Natasha, Biología/Ciencias Naturales; Cuevas, Janice, Biología/Ciencias Naturales; Marcos, Patricia, Biología/Ciencias Naturales; Rosado, Jorge, Biología/Ciencias Naturales; Dávila, Catalina, Biología/Ciencias Naturales; Toranzos, Gary Antonio, Biología/Ciencias Naturales

[Life Sciences 4]

Prevalence of Enterophages as Indicators of Fecal Pollution in Tropical Waters

Delgado, Manuel, UPR-RIO PIEDRAS; Carrasquillo, Onelys, Biology, University of Puerto Rico Rio Piedras; Emmanuelli, Lilliana, Biology, University of Puerto Rico Rio Piedras; Madera, Bismark, Biology, University of Puerto Rico Rio Piedras, Gomez, Christopher, Department of Neurology, University of Chicago; Lasalde-Dominicci, Jose, Biology, University of Puerto Rico Rio Piedras

[Life Sciences 5]

Alcohol Promotes Kinetic Alterations on Acetylcholine Receptors in a Model of Slow-Channel Congenital Myasthenic Syndrome

Díaz, Madeline, UPR-RIO PIEDRAS; Santana, Dianichia, Department of Biology, University of Puerto Rico, Humacao Campus; Ortiz, José, Department of Biology, University of Puerto Rico, Humacao Campus; Rosado, Arelys, of Chemistry, University of Puerto Rico, Río Piedras Campus, del Pilar, Joselyn, of Chemistry, University of Puerto Rico, Río Piedras Campus; Vega, Esther Z., of Biology, University of Puerto Rico, Humacao Campus; Guadalupe, Ana R., of Chemistry, University of Puerto Rico, Río Piedras Campus

[Life Sciences 6]

Development of a Nucleic Acid Biosensor for the Electrochemical Detection of Salmonella

Figuerola, Cielo, UPR-RIO PIEDRAS; Rivera-Meléndez, José A., Biology, UPR-Rio Piedras; Yu, Mei, Biology-ITES, UPR-Rio Piedras; Govender, Yogani, Biology-CATEC, UPR-Rio Piedras

[Life Sciences 7]

A Multidisciplinary Approach Towards Understanding the Distribution and Abundance of the Land Crab (Cardisoma Guanhumí) in Puerto Rico

Fumero, Jose J., UPR-RIO PIEDRAS; Meléndez-Ackermean, Elvia, ITES, UPR-Rio Piedras

[Life Sciences 8]

Reproductive Phenology of Guaiacum Sanctum

Lozada-Troche, Chad, UPR-MAYAGUEZ; Ballantine, David L., Marine Sciences, UPR-Mayaguez

[Life Sciences 9]

Two New Red Algal Species (Rhodymeniaceae, Rhodymeniales) from Puerto Rico

Malave, Josue, UPR-MAYAGUEZ; Rios Velazquez, Carlos, Biology, University of Puerto Rico at Mayaguez; Toro Ramos, Alana, Biology, University of Puerto Rico at Mayaguez; Fry, Rebecca, Biological Engineering Division and Center for Environmental Health Sciences-Massachusetts Institute of Technology, Cambridge, Samson, Leona, 2Biological Engineering Division and Center for Environmental Health Sciences-Massachusetts Institute of Technology, Cambridge

[Life Sciences 10]

Development of a High-Throughput System to Monitor the Global Dynamics of Sub-cellular Localization of a Saccharomyces cerevisiae Proteome Upon Exposure to an Alkylating Agent

Ocasio Torres, María, UPR-RIO PIEDRAS; Lori Hosaka LaPlante, Saint Anselm College, New Hampshire; Brian Penney, Saint Anselm College, New Hampshire; Jason R. Friedman, Shoals Marine Laboratory, Cornell University

[Life Sciences 11]

The Relative Role of Nematocysts in Nudibranch Defense

Olivera, Lening, Ponce School of Medicine; Devin Mueller, Department of Psychology, University of Wisconsin – Milwaukee, P.O. Box 413, Milwaukee, WI 53201-0413; Daniel S. Pine, Section on Development and Affective Neuroscience, NIMH Intramural Research Program, Bethesda, MD, USA 20817-2670; Gregory J. Quirk, Departments of Psychiatry and Anatomy & Neurobiology, University of Puerto Rico School of Medicine

[Life Sciences 12]

The Effects of Yohimbine and Amphetamine on Fear Expression and Extinction in Rats

Pantoja-Feliciano, Ida Gisela, UPR-RIO PIEDRAS; Dominguez-Bello, Maria Gloria, Department of Biology, University of Puerto Rico, Río Piedras Campus

[Life Sciences 13]

Detecting Vertical Transfer of Antibiotic Resistance Genes in the Absence of Antibiotics

Rodriguez, Carlos A., UPR-RIO PIEDRAS; Alberto Lopez Torres, Asuntos Ambientales, UMET; Hector J. Claudio, Escuela de Derechos, UPR-RP; Rafael L. Joglar, Department of Biology, UPR-Rio Piedras

[Life Sciences 14]

*Nesting Site Manipulations, and Population Densities of the Green Iguana (*Iguana iguana*)*

Ruiz, Francheska, UPR-RIO PIEDRAS

[Life Sciences 15]

How to mark small frogs? A new take on a previously used technique.

Santiago, Tasha, UPR-RIO PIEDRAS; Bonilla, Natasha, Environmental Microbiology, UPR Rio Piedras; Urdaneta, Miguel, Microbiology, UPR Rio Piedras, Toranzos, Gary, Environmental Microbiology, UPR Rio Piedras

[Life Sciences 16]

Developing Detection Methods for the Characterization of Enterophages as Microbial Indicators of Water Contamination

Seda Miró, Jasmine, UPR-MAYAGUEZ; Govind, Nadathur S., Marine Sciences, University of Puerto Rico - Mayaguez

[Life Sciences 17]

*Genetic heterogeneity of iron transport gene FET3 in *Debaryomyces hansenii* strains*

Soto, Kristina, UPR-MAYAGUEZ; Visscher, Pieter, Marine Science, University of Connecticut; Ríos- Velázquez, Carlos, Biology, University of Puerto Rico- Mayaguez

[Life Sciences 18]

Isolation and Characterization of Purple Non-Sulfur Anoxygenotrophic Bacteria from Tropical Hypersaline Microbial Mats in the Cabo Rojo Salterns of Puerto Rico

Torres, Irimar, UPR-MAYAGUEZ; Adel González, Biology, UPR-Mayaguez; Christian Castro, Biology, UPR-Mayaguez; Lynn Williamson, Bacteriology, University of Wisconsin-Madison, Heather K. Green., Bacteriology, University of Wisconsin-Madison; Lylliam Casillas, Biology, UPR-Humacao; Carlos Rios Velázquez, Biology, UPR-Mayaguez

[Life Sciences 19]

Generation of High Molecular Weight Metagenomic Libraries from a Young Tropical Hypersaline Microbial Mat on the Dry and Rainy Seasons

Torres_Pratts, Hernán, UPR-MAYAGUEZ; Schizas, Nikolaos, Marine Science, UPR-Mayaguez

[Life Sciences 20]

Phylogeny of the Mithrax-Mithraculus (Crustacea: Brachyura: Majidae) crab complex

Mathematics

Almodóvar, Edgard, UPR-RIO PIEDRAS; Pérez, María Eglée, UPR-Rio Piedras

[Mathematics 1]

Exploratory Data Analysis on the Hawksbill Turtle

Guzman, Haydee, UPR-RIO PIEDRAS; Dr. Janwa, Heeralal, Mathematics Department, University of Puerto Rico, Rio Piedras

[Mathematics 2]

Edwards Curve Over Finite Fields Of Characteristic 2^m And Their Zeta Functions.

Hernandez, Mariely, UPR-RIO PIEDRAS

[Mathematics 3]

Bayesian Analysis of Movement After Release for Headstarted Mona Island Iguana (Cyclura cornuta stejnegeri)

Molina, Sandro, UPR-RIO PIEDRAS; Guihua Gong (Advisor)

[Mathematics 4]

Torsion on the K_0 -Group of a Recursive Subhomogeneous Algebra

Nadal, Mónica, UPR-RIO PIEDRAS; Marcano, Mariano, Department of Computer Science, University of Puerto Rico - Rio Piedras Campus

[Mathematics 5]

Parameter Estimation in Mathematical Models of Renal Na-K-2Cl Cotransporters

Ruiz, Claudia, UPR-RIO PIEDRAS; Toledo-Hernandez Carlos, Department of Biology, University of Puerto Rico, Rio Piedras Campus; Marcano Mariano, Department of Computer Science, University of Puerto Rico, Rio Piedras Campus; Sabat Alberto, Department of Biology, University of Puerto Rico, Rio Piedras Campus, Bayman Paul, Department of Biology, University of Puerto Rico, Rio Piedras Campus

[Mathematics 6]

A Mathematical Model for the Interaction Between a Sea Fan Colony, Its Immune System, and a Potential Pathogen

Physics

Asmat, Martin, UPR-MAYAGUEZ; Singh, Surinder, Engineering Science and Materials, UPR-Mayaguez; Tomar, Maharaj, Physics, UPR-Mayaguez; Perales, Oscar, Engineering Science and Materials, UPR-Mayaguez

[Physics 1]

Synthesis and Characterization of P-Type Transparent Conducting Oxides

Burgos, Juan, UPR-RIO PIEDRAS; Velez, Julian

[Physics 2]

Magnetic Tunnel Junctions with Ferroelectric Barriers

Carpena, Jennifer, UPR-RIO PIEDRAS; Fonseca, Luis F., Physics Department, University of Puerto Rico Río Piedras; Resto, Oscar, Physics Department, University of Puerto Rico Río Piedras

[Physics 3]

Development of a Field Emission Measurement Setup for Future and Further Studies of Nano-Field Emitters

Karan, Naba, UPR-RIO PIEDRAS; Saavedra-Arias Jose, Department of Physics, University of Puerto Rico; Thomas Reji, Department of Physics, University of Puerto Rico; Katiyar Ram, Department of Physics, University of Puerto Rico

[Physics 4]

Structural and Electrochemical Performance of Layered $\text{Li}(\text{Mn}_{0.5-x}\text{Cr}_{2x}\text{Ni}_{0.5-x})\text{O}_2$ Cathode Materials

Ortega, Nora Patricia, UPR-RIO PIEDRAS; Kumar Ashok, Physics, University of PUerto Rico-Rio Piedras Campus; Katiyar ram, Physics, University of PUerto Rico-Rio Piedras Campus; Rinaldi Carlos, Chemical Engineering-University of PUerto Rico-Mayaguez Campus

[Physics 5]

Dynamic Temperature Dependent Magneto-Electric Coupling in $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3/\text{CoFe}_2\text{O}_4$ layered nanostructure

Saavedra, Jose Javier, UPR-RIO PIEDRAS; Karan, Naba, Department of Physics, UPR-Rio Piedras; Torres, Loraine, Department of Physics, UPR-Rio Piedras; Thomas, Reji, Department of Physics, UPR-Rio Piedras, Ishikawa, Yasuyuki, Department of Chemistry, UPR-Rio Piedras; Katiyar, Ram, Department of Physics, UPR-Rio Piedras

[Physics 6]

First Principles Computational Studies and Structural Behavior on Layered Cathode Materials for Li-ion Batteries.

Samanta, Kousik, UPR-RIO PIEDRAS; Samanta Kousik, Physics, University of Puerto Rico; Bhattacharya Pijush, Physics, Fisk University; Katiyar Ram, Physics, University of Puerto Rico

[Physics 7]

Photoluminescence and Ferromagnetic Properties of Zn_{1-x}Cu_xO thin films

Sola, Francisco, UPR-RIO PIEDRAS; Biaggi-Labiosa, Azlin, Physics. UPR-Rio Piedras; Fonseca, Luis F., Physics. UPR-Rio Piedras; Resto, Oscar, Physics. UPR-Rio Piedras, Lebron-Colon, Marisabel, Materials and Structures Division- Polymeric Materials Branch, National Aeronautics and Space Administration-Glenn Research Cent; Meador, Michael, Materials and Structures Division- Polymeric Materials Branch, National Aeronautics and Space Administration-Glenn Research Cent

[Physics 8]

Field Emission and Radial Distribution Function Studies of Fractal Like Amorphous Carbon Nanotips

Yang, Boqian, UPR-RIO PIEDRAS; Feng, Peterxian, Physics, UPR.Rio Piedras

[Physics 9]

Controlled-density Regular Arrays of ZnO Nanoparticle/ nano-rods Formed on Si (100) via Radio-frequency Sputtering