



CONGRESS PROGRAMM

Tuesday 19 September 2017

Pre-congress Courses

Course	Imparted by
"Life cycle analysis of hydrogen systems"	Dr. Ulises Cano Castillo INEEL
"Basic electrochemical tools for preparing and characterizing electrode surfaces modified by nanostructured materials having electrocatalytic, photoelectrochemical and electrochromic properties. A systemic approach."	Dr. Juan Manríquez Rocha CIDETEQ
"Electrochemical analysis methods"	Dr. Samuel Dessources CINVESTAV
"Synthesis techniques of nanomaterials"	Dra. Rosario Galindo González CONACyT Universidad de Guanajuato

Wednesday 20 September 2017

Oral Session

Time	Work Code	Title
08:00-09:00		Registration
09:00-09:40		Opening
09:40-10:40		PLENARY Dr. Ulises Cano Castillo Instituto Nacional de Electricidad y Energías Limpias, Mexico
10:40-11:00	01_O_01	Theoretical study of the thermodynamic properties of calcium hydride Teresa Ramírez-Rodríguez, William Carbellido-Ramírez, Fray de Landa Castillo-Alvarado Instituto Politécnico Nacional
11:00-11:20	01_O_02	Low-cost charging station for hydride hydrogen storage tanks <u>J.R. Tena Garcia</u> , J.C. Carrillo-Bucio, K. Suárez Alcántara - Unidad Morelia del Instituto de Investigaciones en Materiales de la Universidad Nacional Autónoma de México
11:20-11:40	01_O_03	Biohydrogen production in a lab-scale low-recirculation upflow anaerobic sludge blanket reactor using different feeding strategies Santiago Rodríguez-Valderrama, Carlos Escamilla-Alvarado, Héctor Amézquita-García Universidad Autónoma de Nuevo León, UANL.



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11:40-12:00		COFFEE
12:00-12:20	01_O_19	Hydrogen production through ethanol steam reforming over Yttrium modified MCM-41 supported Nickel catalysts María F. Hernández-Madera, Jorge Tovar-Rodríguez, Emiliano Fratini, Ignacio R. Galindo-Esquivel. Universidad de Guanajuato
12:20-12:40	02_O_04	Development of high performance Sn@Pt/C core-shell electro-catalysts for the Ethanol Oxidation Reaction (EOR) Samuel Dessources, I.L. Alonso-Lemus, F.J. Rodríguez-Varela. Cinvestav-Salttillo
12:40-13:00	02_O_05	Methanol oxidation in presence of acid-Y zeolite Miguel Villicaña Aguilera, Adriana Medina Ramírez, Beatriz Ruíz Camacho. Universidad de Guanajuato
13:00-13:20	02_O_06	N-doped Carbon Nanofibers as Oxygen reduction electrocatalysts in alkaline media. <u>R. Ojeda-López</u> ; G. Ramos-Sanchez, J. M. Esparza-Schulz; I. J. Pérez-Hermosillo; A. Domínguez-Ortiz; I. González. UAM-Iztapalapa.
13:20-13:40	02_O_08	Evaluation of PtRu/C Type Electrocatalysts Prepared by Different Methods for Application in PEM Unit Fuel Cell <u>Marcos M.S. Paula</u> , Elson A. de Souza, Vanessa M.F. de Araújo, Paulo R.C. Couceiro, Roberto Benavides, Leandro A. Pocrifka, Raimundo R. Passos. Instituto de Ciências Exatas e Tecnologia/ICET - UFAM
13:40-14:00	03_O_01	Effect of LnPO_4 incorporation on the electrical properties of $\text{Ln}_2\text{Zr}_2\text{O}_7$ (Ln = Gd and Sm) solid electrolytes M. Salazar-Zertuche, J.A. Díaz-Guillén, C.A. Durón-Sifuentes, N.M. Cepeda-Sanchez, M.E. Bazaldúa-Medellín, A.F. Fuentes. Instituto Tecnológico de Saltillo.
14:00-15:00		LUNCH
15:00-15:20	03_O_02	Novel materials for substitutes of platinum and Nafion in microbial fuel cells <u>E. A. Enciso Hernández</u> , S. Kumar Kamaraj, Sergio Durón Torres, Verónica Ávila Vázquez. Instituto Politécnico Nacional, Unidad Profesional Interdisciplinaria de Ingeniería campus Zacatecas.
15:20-15:40	03_O_03	Roughness analysis in different kind or machining for the collector plates of PEM fuel Cells <u>Héctor Morano</u> , David Huerfano, Dulce Viridiana Melo. ITESM, Campus Estado de México.
15:40-16:00	03_O_04	Design, manufacture and experimental validation of a millimeter PEMFC <u>C. Pacheco</u> , B. Escobar, R. Barbosa, J. Sierra. Centro de Investigación Científica de Yucatán.
16:00-16:20	05_O_01	Ultrasonic synthesis of acanthite silver sulfide nanoparticles for solar energy harvesting <u>Joselyne Soria</u> , Ma. Concepción Arenas-Arrocena. Escuela Nacional de



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		Estudios Superiores Unidad León, Universidad Nacional Autónoma de México, León.
16:20-16:40	05_O_02	Reducing sugar recovery by acid hydrolysis of corn stover for biohydrogen production J. C. Gómora-Hernández, M. C. Hernández-Berriel, S. M. Fernández-Valverde. Depto. de Química, ININ
16:40-17:00	05_O_03	Activated metal-free electrocatalyst from <i>Sargassum spp.</i> for the oxygen reduction reaction K. Perez-Salcedo, I. Lemus, D. Pacheco, R. Barbosa, B. Escobar. Centro de Investigación Científica de Yucatán.
17:00-17:20	05_O_07	Potential of biohydrogen production from paper industry wastes by SSF: A Study of the influence of temperature. I. Moreno-Dávila, E. Herrera-Ramírez, M. Rodríguez-Garza, L. Ríos González, Y. Garza-García.
17:20-19:30		Poster sesión
19:30-24:00		CULTURAL ACTIVITY “CALLEJONEADA”

Thursday 21 September 2017

Oral Session

Time	Work Code	Title
08:00-09:00		Registration
09:00-09:20	01_O_20	A scaled system for biohydrogen production from green microalgae Hernández Hernández E. M., Cortés Escobedo C.A., Velasco Bedrán H.A. Centro de Investigación e Innovación Tecnológica
09:20-09:40	01_O_21	Sizing of electrolyzer for application in combustion engines G. Becerra, E. Osorio, V. M. Sanchez, RG. Gonzalez Huerta and R. Barbosa Universidad de Quintana Roo-Instituto Politécnico Nacional
09:40-10:00	01_O_22	Hydrogen Storage as MgH₂: Current Situation and Perspective J. G. Cabañas Moreno, O. Hernández Silva, C. Ramírez Herrera, K. Suárez Alcántara. Instituto Politécnico Nacional. UNAM.
10:00-10:20	01_O_24	Synthesis and evaluation of the phases SrFe₂O₄ and SrFe₁₂O₁₉ for Hydrogen production from photocathalytic water splitting. J. A. Jiménez Miramontes, M. J. Meléndez Zaragoza, J. M. Salinas Gutiérrez, A. López Ortiz, V. Collins Martínez Centro de Investigación en Materiales Avanzados, S.C.
10:20-10:40	01_O_25	Type and moment of injection of the mixture Hydrogen-Gasoline in an internal combustion engine R.A. Vega Parra, D. Alemán Meza, G.A. Radovich Quiroz Universidad Politécnica de Chihuahua



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10:40-11:40		PLENARY. Dr. Arunachala Mada Kannan Arizona State University, USA
11:40-12:00		COFFEE
12:00-12:20	07_O_01	Market study for the marketing of oxyhydrogen reactors <i>OXHIDROG®</i> Marisol Rico, Juan Manuel Sandoval, Eduardo Oliva, Rosa González Instituto Politécnico Nacional
12:20-12:40	03_O_11	Microstructure and functional properties of polymer nanocomposites filled with carbon nanotubes and carbon nanofibers for applications in bipolar plates C. A. Ramírez Herrera, J. Pérez González, A. Flores Vela, O. Solorza Feria, N. Romero-Partida, J. G. Cabañas Moreno Instituto Politécnico Nacional
12:40-13:00	03_O_12	Performance of microtubular solid oxide fuel cell prototypes at intermediate temperatures C. I. Ramos Villegas, H. J. Ávila Paredes. Universidad Autónoma Metropolitana
13:00-13:20	03_O_13	Effect of gamma irradiation on sulfonated polystyrene-co-acrylic acid membranes to use for fuel cells R. Benavides, R. Urbano, D. Morales Acosta, M.E. Martínez Pardo, H. Carrasco. Centro de Investigación en Química Aplicada. ININ
13:20-13:40	09_O_01	MOF 253- Pt performance electrocatalyst for Oxygen Reduction Reaction V. Ávila Vázquez, I.L. Escalante García, V. H. Collins Martínez, S.M. Durón Torres. Universidad Autónoma de Zacatecas. CIMAV
13:40-14:00	09_O_02	Carbon nanotubes supported nano silver electrocatalyst for oxygen reduction reaction in alkaline media Alfredo Hernández Flores, Carolina Silva Carrillo, Ana Martha Arcila Torres, Sergio Pérez Sicaños, Rosa María Félix Navarro, Irma Lorena Albarrán Sánchez, José Roberto Flores Hernández, and Tatiana Romero Castañón Instituto Tecnológico de Tijuana Instituto Nacional de Electricidad y Energías Limpias
14:00-15:00		LUNCH
15:00-16:00		PLENARY Dr. Omar Herrera. University of British Columbia, Canadá.
16:00-16:20	09_O_03	Analysis of behavior of Carbon Surfaces Modified with S or N for Oxygen Reduction Reaction E. Montiel-Macias, Y. Verde-Gomez, A. M. Valenzuela-Muñoz, P. B. Balbuena Instituto Tecnológico de Cancún Department of Chemical Engineering, Texas A&M University.
16:20-16:40	09_O_04	Green microwave assisted synthesis of CdS/ZnS photocatalyst, decorated with AuPd nanoparticles and supported on CuZnFe₂O for H₂ production. M. Ruiz, V. Sánchez. Universidad Autónoma de Chihuahua.



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16:40-17:00	09_O_05	Green synthesis of Cu₂O/TiO₂ for photocatalytic hydrogen production through photoreforming. M. Segovia, V. Sánchez Universidad Autónoma de Chihuahua
17:00-17:20		COFFEE
17:20-17:40		Sponsor: Biologic Sponsor: ISASA
17:40-18:40		Panoramic Photograpy
18:40-19:00		HSM Assembly
19:30-24:00		GALA DINNER

Friday 22 September 2017

Oral Session

Time	Work Code	Title
08:00-09:00		Registration
09:00-09:20	01_O_26	Theoretical development of the hydrogen-gasoline feed of an internal combustion engine P.T. Cruz Callejo, J.A. Vargas Solorio, D. Alemán Meza, G.A. Radovich Quiroz Universidad Politécnica de Chihuahua
09:20-09:40	01_O_28	Hydrogen generation by aluminum alloy corrosion in aqueous acid solutions promoted by nanometal: kinetics study A. L. Martínez-Salazar, J. A. Melo Banda, M. A. Coronel García, C. H. Treviño Sandoval, J. J. González Barbosa, J. M. Domínguez Esquivel Tecnológico Nacional de México Instituto Mexicano del Petróleo
09:40-10:00	01_O_31	Design and integration of a hybrid electric power plant for a scooter Carlos A. Reynoso, Iván A. Prado, Manuel de J. López, Félix Loyola, Ulises Cano Instituto Nacional de Electricidad y Energías Limpias
10:00-10:20	01_O_32	Cu₂O/TiO₂ nanostructures for hydrogen production from methanol photoreforming O.F. Plascencia-Hernández, G. Valverde-Aguilar, M. A. Valenzuela-Zapata. Instituto Politécnico Nacional
10:20-10:40	04_O_01	Numerical Modeling of the Cathode Catalytic Layer for Polymeric Membrane Fuel Cell <u>Juan Guzmán</u> , Ivan Bustamante, Roberto Hernández, Rafael Escarela, Julio Valle, Brenda Martínez. Universidad Politécnica Metropolitana de Hidalgo
10:40-11:40		PLENARY Prof. Nicolas Alonso Vante, Poitiers University. France
11:40-12:00		COFFEE



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12:00-12:20	04_O_03	Design of Production System for the <i>OXHiDROG</i>® System Maricruz Olalde, Maricruz Olalde, Marisol Rico, Ricardo Rodríguez, Juan Manuel Sandoval, Rosa González: Instituto Politécnico Nacional.
12:20-12:40	04_O_04	Statistical analysis for the electrochemical performance of a 3D reconstructed catalytic layer Romeli Barbosa. Universidad de Quintana Roo.
12:40-13:00	09_O_06	Microwave-assisted green synthesis of Ag-Pd and Fe-Pd nanoparticles supported on SiC and Al₂O₃ for zinc sulfate decomposition. O. Soto, V. Sánchez, D. Chávez. Universidad Autónoma de Chihuahua
13:00-13:20	09_O_15	Co₃O₄ spinel as three dimensional ordered macroporous (3-DOM) electrocatalyst for the water splitting in alkaline media J.E. García-Béjar, E. Ortega-Ortiz, M.P. Gurrola and L. G. Arriaga. Centro de Investigación y Desarrollo en Electroquímica.
13:20-13:40	09_O_16	Styrene-co-butyl acrylate copolymers with potential application as membranes in PEM fuel cell. L. Francisco-Vieira, D. Morales-Acosta, E. Cuara-Díaz, R. Benavides. Centro de Investigación de Química Aplicada
13:40-14:00	09_O_17	Optimal resolution of SEM images for characterizing electrode materials René Ledesma-Alonso, Jaime Ortigón, Romeli Barbosa-Pool. Universidad de Quintana Roo
14:00-15:00		Closure
15:00-24:00		TOURISTIC ACTIVITY

Poster Session

Wednesday 20 September 2017

17:00-19:30

Hydrogen production, storage and applications	
01_P_04	Kinetic Study of the Decomposition of Methane over Pt Catalysts supported on γ-alumina doped with Nd₂O₃ for the Production of H₂. <u>Marina Caballero</u> Universidad Autónoma Metropolitana-Unidad Iztapalapa
01_P_05	Quantum Dot Sensitized Photoelectrodes Used for Hydrogen Generation. A. Cerdán-Pasarán. Universidad de Guanajuato, División de Ciencias Naturales y Exactas. Centro de Investigaciones en Óptica.
01_P_06	Modified electrodes with Ni electrodeposition to eliminate Cr⁺⁶ in alkaline electrolysis process. Jesús Nahúm Hernández Pérez: Instituto Politécnico Nacional -ESIQIE, Laboratorio de Electroquímica y Corrosión, UPALM.



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01_P_07	Test bench development and characterization of RuO₂- IrO₂ and Ir/Ru/CoO_x- SbSnO₂ mixtures for MEAs assemblies in PEMWE. P. M. González Puente- IPN-ESIQIE, Laboratorio de Electroquímica y Corrosión, UPALM.
01_P_08	COMPARISSON OF DENSITY OF STATES OF Mg_xM_{1-x}H ALLOYS (M= Al, Ni, Zn; 0.8 ≤ x ≤ 1.0). O. Ramírez-Rodríguez- Escuela Superior de Ingeniería y Arquitectura “Unidad Ticomán” del Instituto Politécnico Nacional.
01_P_09	Development of ZnO based photo-anodes to improve the electrical performance of dye sensitized solar cell as a previous step for hydrogen generation. C. E. Velázquez-González. Universidad Politécnica de Victoria.
01_P_11	Photocatalytic activity of TiO₂-CoO as mixed oxide for improved H₂ production by water splitting method. A.Pérez-Larios. Universidad de Guadalajara, Centro Universitario de los Altos, Depto. Ingenierías.
01_P_12	Improved Mixed oxide as photocatalyst: TiO₂-Fe_xO_y for H₂ production by water splitting method. A.Pérez-Larios. Universidad de Guadalajara, Centro Universitario de los Altos, Depto. Ingenierías.
01_P_14	Evaluation of an electrochemical hydrogen compressor-purificator system coupled to an oxy-hydrogen reactor. Valeria Juárez Casildo, Rosa de Guadalupe González Huerta. ESQIE-IPN, Lab. Electroquímica y Corrosión, UPALM.
01_P_16	Design and analysis of a monopolar Oxy-hydrogen reactor. Horacio Tapia Baca. Instituto Politécnico Nacional ESQIE, Laboratorio de Electroquímica y Corrosión, UPALM.
01_P_17	SYNTHESIS OF CRYSTALLINE NANOCOMPOSITES OF ZINC SULFIDE ZnS ((ZnS, ZnS/ZnO, ZnS-I/ZnO) WITH POTENTIAL PHOTOCATALYTIC ACTIVITY FOR HYDROGEN PRODUCTION. Puentes Prado Laura Elena. División de Ciencias Naturales y Exactas de la Universidad de Guanajuato.
01_P_18	Effect of advanced synthesis procedures of Nickel Catalysts supported on Cerium modified MCM-41 in ethanol steam reforming. Ignacio R. Galindo-Esquivel. Departamento de Ingeniería Química, Universidad de Guanajuato.
01_P_22	Synthesis and characterization of IrO₂-WO₃ nanoparticles as electrocatalytic material in a PEM electrolyzer. C. E. Ochoa-Dorantes. Instituto Tecnológico de Chetumal.
01_P_23	Synthesis, characterization and photocatalytic evaluation of potassium hexatitanate (K₂Ti₆O₁₃) fibers. M.A. González Lozano. Facultad de Ciencias Químicas, Universidad Juárez del Estado de Durango.



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01_P_27	Ecological motorcycle with dual gasoline-hydrogen fuel. José Javier Jiménez García. Instituto Politécnico Nacional-ESIME-Azc.
01_P_29	Synthesis of spinel-type ferrites by the Oil-in-Water microemulsion reaction method and its evaluation for photocatalytic water-splitting. Arturo A. Rodríguez Rodríguez. Centro de Investigación en Materiales Avanzados S. C. (CIMAV), Unidad Monterrey.
01_P_30	Review of the global delivery pathways of hydrogen fueling stations for fuel cell electric vehicles and their potential application in México Salvador Vidal. Instituto Nacional de Electricidad y Energías Limpias, Gerencia de Energías Renovables. Instituto de Energías Renovables.
Direct Oxidation Fuel Cells	
02_P_01	Methanol oxidation reaction of Pd-Co, Pd-Ni and Pd-Au catalysts obtained by mechanical alloying. A. Ezeta Mejía. Instituto Politécnico Nacional. Escuela Superior de Ingeniería Química e Industrias Extractivas. Departamento de Metalurgia y Materiales. UPALM.
02_P_02	Synthesis and functionalization of nanostructured carbons with Ru organometallic compounds: application as supports for Pt fuel cell electrocatalysts. J.C. Martínez-Loyola. Universidad Tecnológica de Coahuila.
02_P_03	Synthesis and evaluation of Pt anode electrocatalysts supported on carbon structures functionalized with Ru organometallic compounds. E. Candia-García. Instituto Tecnológico de Saltillo.
02_P_07	Synthesis and characterization of Pd electrocatalysts supported on carbon xerogels for the oxidation reaction of ethanol in alkaline media. F. J. Galván-Cabrera. Universidad de Guanajuato, División de Ciencias Naturales y Exactas, Departamento de Ingeniería Química.
02_P_09	Electrochemical Oxidation of Methanol On Layered Double Hydroxides. M. Oliver-Tolentino. Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada.
Fuel Cells components and stacks	
03_P_05	Advances in the knowledge of phase transformation of perovskite $\text{La}_x\text{Sr}_{1-x}\text{Cr}_y\text{Mn}_{1-y}\text{O}_{3-\delta}$ structure with potential application in SOFC cells. José Juan Alvarado Flores. Facultad de Ingeniería en Tecnología de la Madera, Universidad Michoacana de San Nicolás de Hidalgo.
03_P_06	Synthesis and characterization of $\text{Ln}_4\text{Zr}_3\text{O}_{12}$ solid electrolytes for their use in SOFC. J.A. Díaz-Guillén. División de Estudios de Posgrado e Investigación, Instituto Tecnológico de Saltillo.
03_P_07	Electrical and Dielectric Properties of Calcia Doped Ceria Solid Electrolyte System. K.P. Padmasree. Cinvestav-Saltillo.



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03_P_09	Synthesis and characterization of NiCu nanoparticles decorated whit Pt for ORR. M.A. Padilla-Islas. Departamento de Química, CINVESTAV.
03_P_14	Electrochemical study corrosion of a gas diffusion layer based Ti / IrO₂ for URFC. E. Zapata Tun. Instituto Tecnológico de Chetumal.
03-O-10	Effect of Er and Dy doping on the electrical properties of yttria partially stabilized zirconia solid electrolytes C.A. Durón-Sifuentes, J.A. Díaz-Guillén, M. Salazar-Zertuche, O. Burciaga-Diaz, and A.F. Fuentes. Instituto Tecnológico de Saltillo.
Modelling and design	
04_P_02	Design of a Novel Electrochemical Membrane Reactor for Hydrogen Production <i>Via</i> the S-NH₃ Cycle. R. Márquez-Montes. Facultad de Ciencias Químicas, Universidad Autónoma de Chihuahua.
04_P_05	Adsorption and dissociation of O₂ on pure Pd, Ni-doped Pd and NiPd alloy clusters. Heriberto Cruz-Martínez. Programa de Doctorado en Nanociencias y Nanotecnología, CINVESTAV.
04_P_06	Thermodynamic Evaluation during the Reduction of MWO₄ (M = Fe, Mn, Zn) with Methane for the Production of Hydrogen-Syngas. V. Collins-Martínez, M. J. Meléndez-Zaragoza, A. López-Ortiz. Departamento de Ingeniería y Química de Materiales, Centro de Investigación en Materiales Avanzados, S.C.
04_P_07	Validation of a novel kinetic model for fed-batch hydrogen production process using a microalgae consortium isolated from wastewater. Dulce J. Hernández Melchor. Universidad Tecnológica de Tecámac.
04_P_08	Design of a low-power solar-hydrogen system with smart energy management. Jorge Olmedo González. ESIQIE-IPN, Laboratorio de Electroquímica y Corrosión, UPALM.
Renewable energy system	
05_P_05	Photocatalytic Studies of Calcium Doped Intergrowth Oxides Sr_{3.2x}Ca_xLa_{0.8}Fe_{1.5}Co_{1.5}O_{10-δ}. J. Oliva. Cinvestav Unidad Saltillo.
05_P_06	Integration of a flexible solar power generation system. Sánchez-Rodríguez O.A. Centro de Investigación e Innovación Tecnológica.
05_P_07	Application of Electrophoretic Deposition Process to Improve the Anode Efficiency in Dye Sensitized Solar Cell Technology. J. R. Zapata-Cruz. Universidad Politécnica de Victoria.



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Policies, economy and market strategies	
07_P_02	The legal regulation of the H₂ as a strategy for public policy Mexico from the consolidation of a Nacional Council of the hydrogen. María Liliana Ávalos Rodríguez. Instituto de Investigaciones Económicas y Empresariales, Universidad Michoacana de San Nicolás de Hidalgo.
Nanostructured materials	
09_P_07	Sulfur-doped carbon made from cassava peel by microwave functionalization as metal-free electrocatalysts in alkaline media. D.P. Cetina-Arenas. Centro de Investigación Científica de Yucatán.
09_P_08	PtNi Nanoparticles on Micro-/Nano-Structured Carbon for Methanol Electro-Oxidation in Acid Media. D. Macias-Ferrer. Tecnológico Nacional de México/Instituto Tecnológico de Cd. Madero.
09_P_09	Pt₃Fe/C bimetallic alloy nanoparticles as electrocatalysts with improved activity for the ORR. M. M. Tellez-Cruz. Departamento de Química, CINVESTAV.
09_P_10	“Micro-mesoporous N-doped carbon materials obtained from biomass for power generation in alkaline fuel cells.” L. Verduzco. Centro de Investigación Científica de Yucatán.
09_P_12	CoNi@Pt core-shell electrocatalysts with enhanced activity towards oxygen reduction: computational and experimental contributions. H. Cruz-Martínez. Programa de Doctorado en Nanociencias y Nanotecnología, CINVESTAV.
09_P_14	High-Active MoS_x-Carbon Electrocatalyst Towards Hydrogen Evolution Reaction in Acidic Media. C.A. Campos-Roldán. Instituto Politécnico Nacional-ESIQIE, Laboratorio de Electroquímica y Corrosión, UPALM.
09_P_18	Reduced graphene oxide: effect of functional groups in the N-doping process and its ORR catalytic activity. N.M. Sánchez-Padilla. Departamento de Procesos de Transformación de Plásticos, Centro de Investigación de Química Aplicada.
09_P_19	Opportunities of porous silicon in energy renewable technology applications. Edith Osorio. CONACYT-Universidad de Quintana Roo.
09_P_20	Heterostructured materials synthesized via AACVD applied for direct water splitting irradiated with an AAA solar simulator. P. Pizá-Ruiz. Centro de Investigación en Materiales Avanzados, Instituto Tecnológico de Cancún.
09_P_21	Use of the Ti_xCu_yO_z oxide catalyst in water electrolysis. A. Velázquez-Osorio. Escuela Superior de Física y Matemáticas - Instituto Politécnico Nacional.
09_P_22	Synthesis and characterization of ni-mo₂c catalysts supported on hydroxyapatite for hydrogen production reactions.



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Jonathan Jesús Malpica Maldonado. Centro de Investigación en Petroquímica Secundaria, Instituto Tecnológico de Ciudad Madero.	
09_P_23	Interfacial-redox interaction of NO_x species in alkaline conditions at palladium nanoparticles supported on carbon Vulcan. J. Soto-Hernandez. Instituto Politécnico Nacional. DIQI-ESIQIE. Laboratorio de Electroquímica y Corrosión.
09_P_24	Oxygen Reduction Reaction over Graphene Nanosheets Metal-Free Cathode Electrocatalysts M.Z. Figueroa-Torres, I.L. Alonso-Lemus, F.J. Rodríguez-Varela, B. Escobar-Morales, A. Fernandez-Fuentes. Universidad Autónoma de Nuevo León (UANL).
Environmental aspects	
10_P_01	METHYLENE BLUE DEGRADATION BY tio₂ NANOPARTICLES ON MULTIWALLED CARBON NANOTUBES UNDER VISIBLE LIGHT IRRADIATION. G. Rosado. Instituto Tecnológico de Cancún.
10_P_02	Synthesis and characterization of hematite nanoparticles for arsenite removal in aqueous médium. Herlys Viltres Cobas. Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada-Unidad Legaria, Instituto Politécnico Nacional.
10_P_03	Evaluation of a Bipolar Membrane (BPM) in a Microbial Electrolysis Cell (MEC) for Wastewater Treatment. R.A Chacón-Carrera. Centro de Investigación en Materiales Avanzados.