

**GENERAL PROGRAM MACROMEX 2008  
INAUGURAL US – MEXICO MEETING ADVANCES IN POLYMER SCIENCE  
“BRIDGING THE GAP BETWEEN ACADEMIA AND INDUSTRY”**

**SUNDAY DECEMBER 7<sup>TH</sup>**

**SESSION POLYOLEFINS  
SUNDAY DECEMBER 7<sup>TH</sup>, 15:00-20:00  
BIG ROOM**

**15:00-15:30 Reactor Blends of Cross-linked Elastomer nano-gels and Polypropylene**

**A.H. Dekmezian\***, P. Jiang, K.R. Squire, C. A. García-Franco, S. Jacob, A. Mehta  
ExxonMobil Chemical Company Baytown Technology and Engineering Complex / West

**15:30-16:00 Homogeneous and Heterogeneous Ethylene Polymerization with the Aluminohydride of Zirconocene  $\text{SiMe}_3\text{Cp}^*\text{ZrHf}(\text{Ind})_2$  Activated with MAO**

R. González Hernández, S. Collins, M García Zamora , Elsa E. Morales , **O. Pérez Camacho\***

Centro de Investigación en Química Aplicada (CIQA),  
Department of Polymer Science, University of Akron

**16:00-16:30 Model Dendritic Polybutadiene-1,4. Precursors for Well-Defined Low Density Polyethylene (wdLDPE)**

**Nikos Hadjichristidis**

University of Athens, Department of Chemistry

**16:30-17:00 Characterization of Long Chain Branching (LCB) in Polyolefins.**

**César A. García-Franco**

ExxonMobil Chemical Company Baytown Technology and Engineering Complex / West

**17:00-17:30 COFFEE BREAK**

**17:30-18:00 High Output Polyolefin Research & Development**

**Josef Schroer**

Chemspeed Technologies

**18:00-18:30 Isobutylene Polymer Nanocomposite as Advanced Tire Innerliner Materials.**

**Weiquing Weng\***, Brendan Rodgers, Robert N Webb, Benjamin S. Hsiao.

Exxon-Mobil Chemical Company Baytown Technology and Engineering Complex / West

**18:30-19:00 Catalysts for UHMWPE**

**R.L. Jones\*** and M. Armoush

DSM PTG, Berkeley, CA

**19:00-19:30 Current Challenges Faced by the PEMEX in the Polyethylene Industry**

**Rodolfo Flores**

Pemex Petroquímica, Coatzacoalcos Veracruz

**19:30-20:00 High Throughput Testing of Catalysts for Polyolefin Production**

**Javier Revilla-Vázquez**

CID-Kuo

**COCKTAIL-OPENING**  
**SUNDAY DECEMBER 7<sup>TH</sup>, 20:00-21:30**  
**BIG ROOM**

**MONDAY DECEMBER 8<sup>TH</sup>**

**SESSION SYNTHESIS (1&2)  
MONDAY DECEMBER 8<sup>TH</sup> 8:00-14:00 & 16:00-18:00  
ROOM A**

**8:00-8:30 Precision Polyolefins**

**K B Wagener**

George & Josephine Butler Polymer Research Laboratory University of Florida Gainesville,  
Florida 32611 USA

**8:30-9:00 Atom Transfer Radical Polymerization in Dispersed Media**

**Krzysztof Matyjaszewski**

Carnegie Mellon University,  
Center for Macromolecular Engineering

**9:00-9:30 Synthesis of new renewable polymers from terpenes**

**Marc A. Hillmyer**

University of Minnesota

**9:30-10:00 Novel, Metal-free Syntheses of Functional Aromatic Polymers.**

**Mikhail G. Zolotukhin**

Instituto de Investigaciones en Materiales, Universidad Nacional Autonoma de Mexico.

**10:00-10:30 Recent Developments in the Anionic Synthesis of Chain-end  
and In-chain Functionalized Polymers.**

**Roderic P. Quirk**

Institute of Polymer Science and Polymer Engineering  
The University of Akron

**10:30-11:00 Progress in controlled grafting via nitroxide mediated radical  
polymerization**

**Enrique Saldívar-Guerra**

Centro de Investigación en Química Aplicada

**11:00-11:30 COFFEE BREAK**

**11:30-12:00 Using the Fabrication Technologies from the Microelectronics Industry to  
Address the Unmet Needs in Drug Delivery**

**Joseph M. DeSimone\***

Departments of Chemistry & Pharmacology  
University of North Carolina at Chapel Hill

Dept. of Chemical & Biomolecular Engineering  
North Carolina State University

**12:00-12:30 Polyoxetanes : Novel Surface Science from Versatile Telechelics**

**Kenneth J. Wynne**

Virginia Commonwealth University  
kjwynne@vcu.edu

**12:30-13:00 Orchestrated Anchoring of Antibiotic Molecules to Polymeric Surfaces and Other Nano-Objects.**

Nattharika Aumsuwan, Min Yu, and **Marek W. Urban\***

The University of Southern Mississippi  
School of Polymers and High Performance Materials  
Shelby F. Thames Polymer Science Research Center

**13:00-13:30 Polymerization of Styrene and Methyl Methacrylate Mediated by Ruthenium(II) and Osmium(II) Cyclometalated Complexes with Bidentate Ligands.**

<sup>1</sup> C. Aguilar Lugo, <sup>2</sup> R. Le Lagadec, <sup>1</sup> S. Lopez Morales, <sup>1</sup> G.

Cedillo Valverde and <sup>1</sup> **L. Alexandrova**

<sup>1</sup> Instituto Investigaciones en Materiales, <sup>2</sup> Instituto de Química, Universidad Nacional Autónoma de México

**13:30-14:00 Antimicrobial Agents derived from Natural Polymers**

**William H. Daly**

Macromolecular Studies Group, Department of Chemistry,  
Louisiana State University, Baton Rouge

**14:00-16:00 LUNCH**

**16:00-16:30 Synthesis and Micellization Behavior of Well-Defined Janus H-Shaped (PDMS)<sub>2</sub>PBd(PS)<sub>2</sub> Terpolymers**

**Nikos Hadjichristidis,**

Department of Chemistry, University of Athens, Greece

**16:30-17:00 Polymer Brushes for Tailoring the Biology-Polymer Interface**

**Christopher K. Ober**

Materials Science & Engineering  
Cornell University

**17:00-17:30 Modified Acrylic Bone Cements**

**Eduardo Mendizábal**

Universidad de Guadalajara

**17:30-18:00 Tunable Polarizers: +359° to -359° Using a Single Macromolecule**  
**Bruce M. Novak\***, Justin Kennemur, Gonglu Tian, Hongzhi Tang  
Department of Chemistry  
North Carolina State University

**SESSION BLOCK COPOLYMERS**  
**MONDAY DECEMBER 8<sup>TH</sup> 8:00-12:30**  
**ROOM B**

**8:00-8:30 Periodic and Tunable Structures Derived from Functional Block Copolymers via ATRP**  
**Lynn Loo**  
Princeton University

**8:30-9:00 The use of the RAFT-technique for the preparation of temperature/pH sensitive polymers in different architectures**  
**A. Licea-Claveríe\***, R. Salgado-Rodríguez, J. Alvarez-Sánchez, L. Picos-Corrales, C. Obeso-Vera, J.M. Cornejo-Bravo, C.J. Hawker and C.W. Frank  
Centro de Graduados e Investigación, Instituto Tecnológico de Tijuana,  
Fac. de Ciencias Químicas e Ingenierías, Universidad Autónoma de Baja California,  
Materials Research Laboratory, University of California, Santa Barbara  
Department of Chemical Engineering, Stanford University, Stanford,

**9:00-9:30 Nanostructure – electrical properties relationships in  $\pi$  electron systems based on self-assembling block copolymers and conducting polymers**  
**Tomasz Kowalewski**  
Department of Chemistry  
Carnegie Mellon Univ

**9:30-10:00 A Look Back at on how Chain Architecture Affects the Order-Disorder Transition in Block Copolymers**  
**Isaac Sanchez**  
University of Texas at Austin

**10:00-10:30 New method to prepare block and gradient copolymers from methylmethacrylate and vinylacetate**  
H. C. García-Valdez, H. Maldonado-Textle and **R. Guerrero-Santos\***  
Centro de Investigación en Química Aplicada, Polymer Chemistry Department

**10:30-11:00 Controlling Hierarchical Structure and Properties in Conjugated Block Copolymers**

**Rachel A. Segalman**

Chemical Engineering Department  
University of California, Berkeley

**11:00-11:30 COFFEE BREAK**

**11:30-12:00 Photochromic block copolymer poly(styrene-*b*-azo monomer) by ATRP.**

Yoliria Vasquez, **Luis E. Elizalde\***, Maria de los Ángeles Najera, Gladys de los Santos. Centro de Investigación en Química Aplicada.

**SESSION MEMBRANES  
MONDAY DECEMBER 8<sup>TH</sup> 12:30-14:00 & 16:00-18:00  
ROOM B**

**12:30-13:00 Probing free volume in dense polymer membranes**

**Anita J. Hill**

CSIRO Materials Science and Engineering

**13:00-13:30 Advances in Proton Exchange Membrane for Fuel Cells**

**James E. McGrath**

Chemistry and Macromolecules and Interfaces Institute  
Virginia Tech

**13:30-14:00 Dense and Asymmetric Gas Separation Membranes based on Polysulfones, Polyarylates and new 3F polymers**

**Alberto Ruiz-Treviño**

Universidad Iberoamericana

**14:00-15:30 LUNCH**

**15:30-16:00 Mixed-Gas Transport Properties of Microporous Polymers**

**Ingo Pinnau**<sup>1</sup>, Sylvie Thomas<sup>1</sup>, Michael D. Guiver<sup>2</sup>, Naiying Du<sup>2</sup>

<sup>1</sup>Membrane Technology and Research, Inc., <sup>2</sup>Institute for Chemical Process and Engineering, National Research Council Canada, Ottawa

**16:00-16:30 High Flux Membranes: Properties of Thin Glassy Polymer Films**

**Donald R. Paul**

Department of Chemical Engineering and Texas Materials Institute  
University of Texas at Austin

**16:30-17:00 New Desalination Membrane Materials Based on Sulfonated Polysulfone**

**Benny Freeman**

University of Texas at Austin

**17:00-17:30 Gas transport properties of rigid copolyaramides**

**Manuel Aguilar**

CICY, Centro de Investigación Científica de Yucatán

**17:30-18:00 Structure-morphology-physical properties relationship in gas separation membranes made from aromatic-aliphatic copolyetherimides**

**Ángel Marcos**<sup>\*1,3</sup>, Ángel E. Lozano<sup>1,3</sup>, José G. de la Campa<sup>1,3</sup>, Javier de Abajo<sup>1,3</sup>, Alberto Tena<sup>2,3</sup>, Laura Palacio<sup>2,3</sup>, Pedro Prádanos<sup>2,3</sup>, Antonio Hernández<sup>2,3</sup>,

<sup>1</sup> Instituto de Ciencia y Tecnología de Polímeros, CSIC, Madrid, SPAIN. <sup>2</sup> Dpto. Física Aplicada, Universidad de Valladolid, Valladolid, SPAIN. <sup>3</sup> Surface and Porous Materials (SMAP), UA CSIC-UVA, R&D Building, Valladolid, SPAIN

Membrane Research and Technology  
Menlo Park CA

**POSTER SESSION  
MONDAY DECEMBER 8<sup>TH</sup> 18:30-20:00  
BIG ROOM**

**TUESDAY DECEMBER 9<sup>TH</sup>**

**SESSION BIOPOLYMERS  
TUESDAY DECEMBER 9<sup>TH</sup> 8:00-14:00 & 16:00-18:30  
ROOM A**

**8:00-8:30 Nano-oligopeptide self assemblies for oral drug delivery**  
**Raphael M. Ottenbrite\***, Ruifeng Zhao, Mamoru Haratake  
Department of Chemistry  
Virginia Commonwealth University

**8:30-9:00 Polypeptide materials for biomedical applications**  
**Timothy Deming**  
University of California at Los Angeles

**9:00-9:30 Poly(amino acid)s and PEGylated poly(amino acid)s for surface modification of neural prostheses**  
Willy Vayaboury, **Carmen Scholz\***  
Alamanda Polymers, Huntsville, AL, Department of Chemistry,  
University of Alabama in Huntsville, Huntsville, AL

**9:30-10:00 Capturing Protein Activity in Simple Polymers**  
**Gregory N. Tew**  
Polymer Science and Engineering  
University of Massachusetts, Amherst

**10:00-10:30 Engineering therapy through biomaterials: from stem cells to drug delivery**  
**Krishnendu Roy, PhD**  
Department of Biomedical Engineering  
The University of Texas at Austin

**10:30-11:00 Manipulation of cellular interactions with polysaccharide-derivatized materials**  
**Kristi L. Kiick**  
University of Delaware, Department of Materials Science and Engineering

**11:00-11:30 COFFEE BREAK**

**11:30-12:00 Novel chitosan-based biomaterials for biomedical applications**  
**Gabriel Luna-Barcenas\***, Eduardo Elizalde-Peña(1), Isaac C. Sanchez(1),  
Francisco Villaseñor-Ortega(2), Lorenzo Guevara-Olvera(2), Beatriz Garcia-

Gaitan(3), and Cristina Velasquillo(4)

CINVESTAV Unidad Queretaro, MEXICO

1 Department of Chemical Engineering, The University of Texas at Austin

2 Department of Biochemical Engineering, Instituto Tecnológico de Celaya, MEXICO

3 Department of Chemical Engineering, Insitituto Tecnológico de Toluca, MEXICO

4 Instituto Nacional de Rehabilitacion, Mexico D.F. MEXICO

**12:00-12:30 Biodegradable Polymers for Biomedical Applications**

**Kathryn Uhrich**

Rutgers University, Dept. of Chemistry, Piscataway, NJ

**12:30-13:00 Plasma-Enhanced Synthesis of Nanoparticles: Potential for Immunotherapy**

**F.S. Denes\***, H. Schreiber, J. Prechl, H. Jiang, A. Zozulya, Zs. Fabry, and M. Sandor

Department of Pathology and Laboratory Sciences and Biological Systems Engineering and Center for Plasma-Aided Manufacturing, University of Wisconsin, Madison

**13:00-13:30 Impact of Process and Physical Structure on the Performance of Polymeric Biomaterials**

**Michael Jaffe**

Department of Biomedical Engineering, New Jersey Institute of Technology, Medical Device Concept Laboratory

**13:30-14:00 Title to be announced. Christine Schmidt**

**14:00-16:00 LUNCH**

**16:00-16:30 A Reactive Nanoparticle Route to Prepare Hybrid Nanocomposites**

**Patricia Heiden**

Michigan Technological University

**16:30-17:00 Networks, Toroids, Helices, and Beyond: Tunable Nanostructure through**

**Charged Polymer or Charged Peptide Solution Assembly**

**Darrin J. Pochan**

Materials Science and Engineering  
University of Delaware

**17:00-17:30 Characterization and properties of a silylated acrylic polymer**

**Ricardo Vera-Graziano\*** and Filiberto Rivera-Torres.

Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México

**17:30-18:00 Characterization of multiphase morphology of polylactones obtained by ring-opening polymerization catalyzed by *Yarrowia lipolytica* lipase**

<sup>1</sup>Karla A. Barrera-Rivera, <sup>1,2</sup>Arturo Flores-Carreón and Antonio Martínez-Richa<sup>1\*</sup>

<sup>1</sup>Facultad de Química and <sup>2</sup>Instituto de Investigación en Biología Experimental, Universidad de Guanajuato, Noria alta s/n Guanajuato, Gto. 36050

**18:00-18:30 Plasma Semiconductive Polymers in Cell Regeneration**

**Roberto Olayo**

Departamento de Física, Universidad Autónoma Metropolitana, Unidad Iztapalapa

**SESSION OPTOELECTRONICS  
TUESDAY DECEMBER 9<sup>TH</sup> 8:00-12:30  
ROOM B**

**8:00-8:30 Photoluminiscent Nanocomposites PS/CdSe (Quantum Dots) Via Miniemulsion Polymerization.**

B.A. Aguilar, C.A. Hernández, **R. Ibarra\***, E.A. Zaragoza, M. Carpenter  
Centro de Investigación en Materiales Avanzados, S.C.  
State University of New York at Albany (SUNY)

**8:30-9:00 Electropolymerizable Dendrimer and Hybrid Nanomaterials: Networks, Nanoparticles, and Sensors**

**Rigoberto Advincula**

Department of Chemistry and Department of Chemical and Biomolecular Engineering,  
University of Houston

**9:00-9:30 Dielectric relaxations in chitosan films: influence of water contents**

**Evgen Prokhorov**

CINVESTAV Querétaro

**9:30-10:00 Organic Materials with Large Two-Photon Cross-Sections and Third-Order Polarizabilities**

**Seth Marder / Steve Barlow**

Georgia Institute of Technology

**10:00-10:30 Aumento en la procesabilidad de un sensor distribuido polimérico de hidrocarburos, a través de la incorporación de poli isopreno.**

Miguel Orozco Alvarado, **Alfredo Márquez Lucero\***

CIMAV

**10:30-11:00 Optical Materials from Aromatic Trifluorovinyl Ethers**

**Dennis Smith**

Clemson University

**11:00-11:30 COFFEE BREAK**

**11:30-12:00 Preparation and Characterization of Stable Aqueous Ferrofluids Using Low Molecular Weight Sulfonated Polystyrene.**

R. Ledezma Rodríguez, D. Bueno Baqués and **R. F. Ziolo\***

Centro de Investigación en Química Aplicada.

**12:00-12:30 Polymer Semiconductors for Electronics and Optoelectronics**

**Samson A. Jenekhe**

University of Washington

Department of Chemical Engineering and Department of Chemistry

**SESSION NANOCOMPOSITES AND BLENDS  
TUESDAY DECEMBER 9<sup>TH</sup> 12:30:14:00 & 16:00-18:30  
ROOM B**

**12:30-13:00 Structure and Dynamics of Silica Nanoparticle Tethered Polymer Brushes**

**Ramanan Krishnamoorti**

University of Houston

**13:00-13:30 Electrically Responsive Polymer Nanocomposites**

**Richard A. Vaia**

Nanostructured and Biological Materials Branch AFRL/RXBN

**13:30-14:00 Clay Aerogel/Polymer Composite Materials**

**David A. Schiraldi\***, Matthew D. Gawryla, Jack R. Johnson III, Eric Arndt,

**Jared Griebel**

Case Western Reserve University

**14:00-16:00 LUNCH**

**16:00-16:30 Rheology of complex fluids: polymer nanocomposites**

**Octavio Manero**

Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México

**16:30-17:00 Nanocomposites involving Polymer Blend Matrices**  
**Lloyd Robeson**

**17:00-17:30 Acrylonitrile, Nanoclay and Shear; Their Effect on the Exfoliation and Properties of ABS/ NanoClay Nanocomposites Prepared Via Melt Mixing**  
**Luis F. Ramos de Valle\***, Patricia Patiño Soto, Saul Sánchez Valdes  
CIQA Centro de Investigación en Química Aplicada

**17:30-18:00 Applications of Nanomaterials in the Automotive Industry**  
**Will Rodgers**  
General Motors

**18:00-18:30 Coarsening Dynamics of Cocontinuous Blends**  
**Carlos R. López-Barrón\*** and Christopher W. Macosko  
Dept. of Chemical Engineering, University of Minnesota.

**POSTER SESSION**  
**TUESDAY DECEMBER 9<sup>TH</sup> 18:30-20:00**  
**BIG ROOM**

**GALA DINNER**  
**TUESDAY DECEMBER 9<sup>TH</sup> 20:45**  
**BIG ROOM**

**WEDNESDAY DECEMBER 10<sup>TH</sup>**

**FORUM ACADEMIA-INDUSTRY COOPERATION  
WEDNESDAY DECEMBER 10<sup>TH</sup> 8:00-10:30**

**PANEL: Kris Matyjaszewski (Carnegie Mellon University), Benny Freeman (University of Texas at Austin), Isabel Saénz (CIP-COMEX), Alejandra Zarco (Conacyt). Presiding: Leopoldo Rodríguez (FUMEC-ADIAT)**

**10:30-10:45 COFFEE BREAK**

**PARALLEL DISCUSSION GROUPS  
WEDNESDAY DECEMBER 10<sup>TH</sup> 10:45-12:00**

**AUTOMOTIVE-AEROSPACE INDUSTRY**

**Juan Pablo Jiménez (Ford México), Will Rodgers (GM), Carmen Marina Trejo (CENAM), Oliverio Rodríguez Fernández (CIQA), Luis Francisco Ramos (CIQA), Magdalena Trujillo (FI-UNAM), CIATEQ**

**THERMOPLASTICS INDUSTRY**

**Rodolfo Flores (Pemex Petroquímica), Javier Revilla (CiD-Kuo), Odilia Pérez (CIQA)**

**PAINTS, COATINGS AND ADHESIVES INDUSTRY**

**Isabel Sáenz (CIP-Comex), Kris Matyjaszewski (Carnegie Mellon University), Jorge Herrera (CIQA), Esther Treviño (CIQA), Marek Urban (University of Southern Mississippi).**

**ORAL SESSIONS**

**SESSION NANO\_AM\_A NANOCOMPOSITES AND BLENDS  
WEDNESDAY DECEMBER 10<sup>TH</sup> 10:45-13:45  
ROOM B**

**10:45-11:05 Mechanical Properties and Fracture Behavior of PVC-Bentonite Nanocomposites.**

**O. Flores, A. Romo-Uribe\*, M. E. Romero-Guzmán, A. González, B. Campillo & Carlos A. Cruz-Ramos.**  
Instituto de Ciencias Físicas y Facultad de Química, UNAM; Rohm and Haas Co.,

**11:25-11:45 Polymer capped metal nanoparticles for sensor applications.**

**E. Giorgetti\***, G. Dellepiane, M. Muniz-Miranda, F. Giammanco, E. Arias and I. Moggio. INSTM and ISC-CNR (Italy); Università di Genova (Italy); Università di Firenze (Italy); Università di Pisa (Italy); CIQA.

**11:45-12:05 *In situ*-polymerization Route for the Preparation of PET/MWCNT Polymer Nanocomposites.**

Cruz-Delgado Víctor J, Hernández-Hernández Ernesto, Esparza-Juárez M. Elena, Méndez-Padilla M. Guadalupe, Rodríguez-Hernández M. Teresa, Huerta-Martínez Blanca M, Medellín-Rodríguez Francisco J., Hsiao, Benjamin S., **Ávila-Orta Carlos A.\*** CIQA; FCQ UASLP; State University of New York at Stony Brook.

**12:05-12:25 Synthesis and Evaluation of Polymeric Nanocomposites based in Zinc Nanoparticles (in Spanish).**

Juan Manuel Arce Ramos, **Vladimir A. Escobar Barrios\***, René Rangel Méndez. Facultad de C. Químicas, UASLP, IPICYT.

**12:25-12:45 Carbon Nanotube - Polyaniline Composites: Synthesis and Properties.**

**Yadira I. Vega-Cantú.**

IPICYT.

**12:45-13:05 Development of PS/Multi-Walled CNT nanocomposite and Characterization.**

**Carreño-Marquez J\***, Zaragoza-Contreras A., Hernández-Escobar C., Mendoza-Duarte M. Flores-Gallardo S. CIMAV, UACHihuahua

**13:05-13:25 Hybrid magnetic nanocomposites based on plasticized PVC: Mechanical and Magnetic characterization.**

**O. S. Rodríguez-Fernández\***, F. Y. Castellanos, R. Betancourt and I.G. Yáñez-Flores. CIQA.

**13:25-13:45 Preparation of Nanocomposites of Recycled PET and Cloisite 10a.**

E.E. Banda Cruz, **J.L. Rivera Armenta\***, S.G. Flores Gallardo, E.I. López Martínez, M.E. Mendoza Duarte. Instituto Tecnológico de Cd. Madero & CIMAV.

**SESSION PRE\_AM**  
**POLYMER REACTION ENGINEERING AND EMULSION POLYMERIZATION**  
**WEDNESDAY DECEMBER 10<sup>TH</sup> 10:45-14:05**  
**ROOM C**

**10:45-11:05 Modeling of Controlled Radical Polymerization Processes in Homogeneous and Heterogeneous Phases**

**Eduardo Vivaldo-Lima**

Departamento de Ingeniería Química, Facultad de Química

**11:05-11:25 Water-Based Coatings based on Mixtures of Acrylic Dispersions and Alkyd Emulsions**

Patrick J.J. Kivit, **Esteban Aramendia\***, Amadeo A. Cabrera, Lucero M. Ríos Department of Chemical Engineering and Chemistry, Eindhoven, The Netherlands  
Centro de Investigación en Polímeros, COMEX, Tepexpan, Mexico

**11:25-11:45 Microemulsion Copolymerization Modeling Study Via a Combined Integral-Differential Experimental Data Processing Approach.**

**F. López-Serrano\***, E. Mendizábal, J. E. Puig and J. Álvarez

Universidad Nacional Autónoma de México. Universidad de Guadalajara. Universidad Autónoma Metropolitana-Iztapalapa

**11:45-12:05 Kinetic Modeling of Styrene Emulsion Polymerization: a Step Toward Prediction**

**Jorge Herrera-Ordóñez\***, **Shirley Carro**, **Lorena Farías-Cepeda**

Dpto. de Procesos de Polimerización, Centro de Investigación en Química Aplicada (CIQA) Facultad de Ciencias Básicas, Ingeniería y Tecnología, Universidad Autónoma de Tlaxcala

**12:05-12:25 Modeling and Analysis for Copolymerization Systems of Acrylonitrile – Vinyl Acetate.**

**G. G. De Alba-Pérez de Gracia\***, J. C. Tapia-Picazo, V. M. Lara-Alvarado, A. Bonilla-Petriciolet

Instituto Tecnológico de Aguascalientes

**12:25-12:45 Optimal Design of Living Free Radical Polymerization Tubular Reactors**

**Antonio Flores-Tlacuahuac\***, Angel Zitlalpopoca-Soriano

Departamento de Ingeniería y Ciencias Química

Universidad Iberoamericana, Santa Fe

Departamento de Ingeniería Química, Facultad de Química UNAM

**12:45-13:05 Mathematical Modeling of the Microemulsion Polymerization Using Experimental Measurements and its Derivatives.**

**J. E. López-Aguilar\***, F. López-Serrano.

Facultad de Química. Dpto. de Ing. Química, Universidad Nacional Autónoma de México

**13:05-13:25 Evaluation of the Final Morphology of HIPS Based on the Architecture of the Compatibilizer Graft Copolymer PBd-g-PS Formed in Situ.**

**Carlos de Anda\***, Graciela Morales, José Sosa, Jimmy Mays, and Pablo Acuña

Department Of. Polymer Synthesis, Centro de Investigación en Química Aplicada Research and Technology Center, Total Petrochemicals USA

Department of Chemistry, University of Tennessee, Knoxville.

**13:25-13:45 Influence of the type of butanol on the microemulsion polymerization of vinyl acetate on kinetics, molar masses and particle formation.**

Gladis Y. Cortez<sup>1</sup>, Claudia C. Rivera<sup>1</sup>, Juan R. Herrera<sup>1,2</sup> and **René D. Peralta**<sup>1</sup>

<sup>1</sup> Centro de Investigación en Química Aplicada (CIQA); <sup>2</sup> Centro de Innovación Aplicada en Tecnologías Competitivas

**13:45-14:05 Aqueous Phase Polymerization of Vinyl Acetate: Effect of Surfactant Concentration on Kinetics, Molar Masses and Particle Formation.**

**Hugo Martínez-Gutiérrez\***, Víctor M. Ovando-Medina, Gladis Y. Cortez, René D. Peralta

Centro de Investigación en Química Aplicada (CIQA), Instituto Potosino de Investigación Científica y Tecnológica, Departamento de Ingeniería Química, COARA – Universidad Autónoma de San Luis Potosí

**SESSION PENG\_AM POLYMER ENGINEERING  
WEDNESDAY DECEMBER 10<sup>TH</sup> 10:45-14:05  
ROOM D**

**10:45-11:05 Caracterización de Asfaltos Modificados con Residuos de Uretano en Pruebas de Deformación- Recuperación Elástica.**

**Sergio Alonso Romero\***, Roberto Zitzumbo Guzmán

Investigación en Materiales, CIATEC, A.C.

**11:05-11:25 Predicción de las Propiedades Reológicas de Asfaltos Modificados con Polímero Usando el Modelo de Wagner**

**Blanco R\***, Bonilla J y Hernández-Padrón G

Depto de Ing. Química, Instituto Tecnológico de Estudios Superiores de Monterrey, ITESM.

Centro de Física Aplicada y Tecnología Avanzada, Universidad Nacional Autónoma de México

**11:25-11:45 Failure Mode Analysis in a pull-out model using principal stress directions and the isoclinic fringes,**

**J.M. Vázquez Rodríguez\***, P. J. Herrera-Franco, P.I. González.Chi  
CICY Unidad de Materiales, Universidad Juárez Autónoma de Tabasco

**11:45-12:05 Efecto del tipo de copolímero estireno-butadieno y tipo de resina pegajosa en el desempeño de PSA con base en SIS**

**Vladimir Escobar\***, Hugo Sanjuanero  
División de Ciencias Ambientales, Instituto Potosino de Investigación Científica y Tecnológica, AC (IPICYT)  
Departamento de Ingeniería Química, Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí.

**12:05-12:25 Estudio del Efecto de la Radiación Ultrasónica Sobre Poliolefinas en Solución**

**J. Guillermo Martínez-Colunga\***, Carlos Ávila-Orta, Odilia Pérez-Camacho, J. Alberto Rodríguez-González  
CIQA, Centro de Investigación en Química Aplicada,

**12:25-12:45 Reología extensional y caída de presión en el flujo de soluciones de moléculas lineales tipo Boger a través de una contracción-expansión 2:1:2 mediante Dinámica Molecular.**

G. González González, **J. Castillo Tejas\***, Juan F. J. Alvarado, G. Luna Barcenás y O. Manero  
Facultad de Ciencias Básicas, Ingeniería y Tecnología; Universidad Autónoma de Tlaxcala; Departamento de Ingeniería Química, Instituto Tecnológico de Celaya; Centro de Investigación y Estudios Avanzados (CINVESTAV), Unidad Querétaro; Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México (UNAM)

**12:45-13:05 Temperature and strain effect on the electrical conductivity of CB/SEBS and GP/SEBS composites**

**Iván A. Estrada\***, Alberto Díaz, Monica E. Mendoza, Rigoberto Ibarra

**13:05-13:25 Study Of The Depolymerisation Of Poly (Ethylene Terephthalate) Bottles Wastes Using Different Glycols With And Without Catalyzer.**

Martínez V., N. L.; López R., S.; Estrada M., A.; Herrera R., J. R.\*  
CIATEC, AC.

**13:25-13:45 Desarrollo de materiales híbridos anticorrosivos preparados por el proceso sol-gel**

**G. Hernández-Padrón**  
Centro de Física Aplicada y Tecnología Avanzada, Universidad Nacional Autónoma de México, Juriquilla, Querétaro

**13:45-14:05 Shelf stability of isocyanate-functionalized vinyl acrylic latexes**  
**Esther Treviño**  
CIQA

**SESSION BIO\_PM\_A BIOPOLYMERS**  
**WEDNESDAY DECEMBER 10<sup>TH</sup> 15:40-17:20**  
**ROOM B**

**15:40-16:00 Immobilization of Invertase in Gelatin Hydrogels: Stability and Kinetic Properties (in Spanish).**

**E. P. Segura-Ceniceros\***; Anna Iliná; Ma A. Valdés-Flores; D.S Mendoza-Puente; K. Velázquez-Manzano; R. García-Braham.  
Facultad de Ciencias Químicas de la Universidad Autónoma de Coahuila.

**16:00-16:20 Synthesis and characterization of poly( $\epsilon$ -caprolactone) and copolyesters by catalysis with molybdenum compounds**

**José E. Báez\***, Antonio Martínez-Richa  
Facultad de Química, Universidad de Guanajuato, Noria Alta S/N, 36050 Guanajuato, Gto, México

**16:20-16:40 Concentrating Cellulase Enzymes Using a Temperature-Sensitive Hydrogel**

**Elena Hernández\***, Ignacio Orozco-Avila  
Departamento de Ingeniería Química, Universidad de Guadalajara, Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A. C. (CIATEJ)

**16:40-17:00 Plasma Pyrrole Polymer as Coating for Templates Used in Tissue Engineering.**

**Juan Morales\***, O. Ramírez-Fernández, Atlántida Margarita Raya Rivera, Alberto Parra Barrera, Diego Esquiliano Rendón, Leonardo Acevedo Olvera, Roberto Olayo. Departamento de Física, Universidad Autónoma Metropolitana, Unidad Iztapalapa; Hospital Infantil de México Federico Gómez, Depto. De Urología, Laboratorio de Ingeniería de tejidos.

**17:00-17:20 Lactone Ring-Opening Polymerization Catalyzed by *Yarrowia lipolytica* Lipase: Effects of Solvent, Temperature and Immobilization Matrices on Polymerization Kinetics and Molecular Weight.**

**Karla A. Barrera-Rivera\***, Georgina Sandoval, Arturo Flores-Carreón and Antonio Martínez-Richa.  
Facultad de Química and Instituto de Investigación en Biología Experimental  
Universidad de Guanajuato, Unidad de Biotecnología, Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco (CIATEJ)

**17:20-17:40 Tissue engineering: From the research lab to the patient.**

**Velasquillo Cristina**<sup>1</sup>; Martínez Valentín<sup>1</sup>; Solís Lilia<sup>2</sup>; Neri Rosario<sup>2</sup>; Villalobos Enrique<sup>1</sup>, Lecona Hugo<sup>3</sup> Bahena Leticia<sup>4</sup>; Estrada Eréndira<sup>4</sup>; Villegas Hilda<sup>2</sup>, Lombardero Germán<sup>5</sup>, Ibarra Clemente.

<sup>1</sup>Unidad de Ingeniería de Tejidos, Ter. Cel. y Med. Reg., <sup>2</sup>Unidad de Morfología, <sup>3</sup> Bioterio, <sup>4</sup> Patología, Instituto Nacional de Rehabilitación. <sup>5</sup>Facultad de Medicina Veterinaria y Zootecia. UNAM.

**SESSION SYNT\_PM\_B POLYMER SYNTHESIS  
WEDNESDAY DECEMBER 10<sup>TH</sup> 15:40-18:00  
ROOM C**

**16:00-16:20 Synthesis and characterization of a nitroxide polymer as a cathode-active material for lithium-ion batteries**

Hugo López, Bernardo Frontana, Carlos Frontana, Ignacio González, **Judith Cardoso**\*. Universidad Autónoma Metropolitana-I, IQ, UNAM, .CINVESTAV.

**16:20-16:40 Synthesis and Characterization of High Impact Polystyrene Using a Multifunctional Cyclic Peroxide as the Initiator.**

**Graciela Morales**\*, Pablo Acuña and Ramón Díaz de León

Department of Polymer Synthesis, Centro de Investigación en Química Aplicada

**16:40-17:00 The Use of a Coupling Agent to Obtain Copolymers Derived from Thiol-Ene/cationic Systems.**

**Ricardo Acosta Ortiz**\*, Aida E. García Valdez, M. Lydia Berlanga Duarte, Rodolfo Ovando Flores, Mark D. Soucek.

Centro de Investigación en Química Aplicada

Department of Polymer Engineering, University of Akron.

**17:00-17:20 Functionalization of polymers hydroxyl-terminated using Oxoammonium Bromide Salt. Facile Synthetic Pathway Using Nitroxide Chemistry**

F. Pérez-Rodríguez, **J. Bonilla-Cruz**\*, T. Lara-Ceniceros, E. Saldívar-Guerra, E. Jiménez-Regalado

Centro de Investigación en Química Aplicada (CIQA)

Centro de Investigación en Materiales Avanzados S. C. (CIMAV-Unidad Monterrey)

**17:20-17:40 Synthesis and Evaluation of a Monofunctionalized Spiroorthocarbonate with an Oxetane Group Used as Low Shrinkage Additive in Cationic Photopolymerizations.**

**M. L. Berlanga Duarte**\*; R. Acosta Ortiz; A.E. García Valdez; Amy Grace Savage.

Centro de Investigación en Química Aplicada.