

Sociedad Polimérica de México, A.C.

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

SUNDAY DECEMBER 7TH

**SESSION POLYOLEFINS
SUNDAY DECEMBER 7TH, 15:00-20:00
BIG ROOM**

POF-009

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

POF-003

15:30-16:00 Homogeneous and Heterogeneous Ethylene Polymerization with the Aluminohydride of Zirconocene $\text{SiMe}_3\text{Cp}_2\text{ZrHAlH}_4$ 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

POF-001

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

POF-002

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

POF-009

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

Josef Schroer

Chemspeed Technologies

POF-008

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

Wei quing Weng*, Brendan Rodgers, Robert N Webb, Benjamin S. Hsiao.

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

POF-004

18:30-19:00 Catalysts for UHMWPE

R.L. Jones* and M. Armoush

DSM PTG, Berkeley, CA

POF-005

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

Rodolfo Flores

Pemex Petroquímica, Coatzacoalcos Veracruz

POF-007

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

Javier Revilla-Vázquez

CID-Kuo

COCKTAIL-OPENING
SUNDAY DECEMBER 7TH, 20:00-21:30
BIG ROOM

MONDAY DECEMBER 8TH

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

SYN2-001

8:00-8:30 Precision Polyolefins

K B Wagener

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

SYN2-002

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

Krzysztof Matyjaszewski

Carnegie Mellon University,
Center for Macromolecular Engineering

SYN2-003

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

Marc A. Hillmyer

University of Minnesota

SYN2-007

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.

SYN2-005

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

SYN2-006

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

SYN2-004

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

SYN2-008

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

Kenneth J. Wynne

Virginia Commonwealth University
kjwynne@vcu.edu

SYN2-009

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

SYN2-010

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

¹ C. Aguilar Lugo, ² R. Le Lagadec, ¹ S. Lopez Morales, ¹ G.

Cedillo Valverde and ¹ **L. Alexandrova**

¹ Instituto Investigaciones en Materiales, ² Instituto de Química, Universidad Nacional Autónoma de México

SYN2-011

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

SYN2-012

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

Nikos Hadjichristidis,

Department of Chemistry, University of Athens, Greece

SYN2-013

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

Christopher K. Ober

Materials Science & Engineering

Cornell University

SYN2-014

17:00-17:30 Modified Acrylic Bone Cements

Eduardo Mendizábal

Universidad de Guadalajara

SYN2-015

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 8TH 8:00-12:30
ROOM B**

BLOC2-001

8:00-8:30 Periodic and Tunable Structures Derived from Functional Block Copolymers via ATRP

Lynn Loo

Princeton University

BLOC2-002

8:30-9:00 The use of the RAFT-technique for the preparation of temperature/pH sensitive polymers in different architectures

A. Licea-Claverie*, 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,

BLOC2-003

9:00-9:30 Nanostructure – electrical properties relationships in π electron systems based on self-assembling block copolymers and conducting polymers

Tomasz Kowalewski

Department of Chemistry

Carnegie Mellon Univ

BLOC2-004

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

BLOC2-005

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

BLOC2-006

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

BLOC2-007

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.

BLOC2-008

12:00-12:30 Graft Polymerization of Methyl Methacrylate on Keratin Biofibers.

Martínez-Hernández A. L*., Velasco-Santos C.

Ingeniería en Materiales, Departamento de Metal-Mecánica, Instituto Tecnológico de Querétaro

SESSION MEMBRANES

MONDAY DECEMBER 8TH 12:30-14:00 & 16:00-18:00

ROOM B

MEMB2-001

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

Anita J. Hill

CSIRO Materials Science and Engineering

MEMB2-002

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

James E. McGrath

Chemistry and Macromolecules and Interfaces Institute

Virginia Tech

MEMB2-003

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

MEMB2-008

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

Ingo Pinnau¹, Sylvie Thomas¹, Michael D. Guiver², Naiying Du²

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

MEMB2-004

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

MEMB2-005

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

Benny Freeman

University of Texas at Austin

MEMB2-006

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

Manuel Aguilar

CICY, Centro de Investigación Científica de Yucatán

MEMB2-007

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

Ángel Marcos^{*1,3}, Ángel E. Lozano^{1,3}, José G. de la Campa^{1,3}, Javier de Abajo^{1,3}, Alberto Tena^{2,3}, Laura Palacio^{2,3}, Pedro Prádanos^{2,3}, Antonio Hernández^{2,3},

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

Membrane Research and Technology

Menlo Park CA

POSTER SESSION

MONDAY DECEMBER 8TH 18:30-20:00

BIG ROOM

TUESDAY DECEMBER 9TH

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

BIO2-001

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

BIO2-002

8:30-9:00 Polypeptide materials for biomedical applications

Timothy Deming

University of California at Los Angeles

BIO2-003

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

BIO2-004

9:30-10:00 Capturing Protein Activity in Simple Polymers

Gregory N. Tew

Polymer Science and Engineering

University of Massachusetts, Amherst

BIO2-005

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

BIO2-006

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

BIO2-007

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

BIO2-008

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

Kathryn Uhrich

Rutgers University, Dept. of Chemistry, Piscataway, NJ

BIO2-016

12:30-13:00 Plasma-Enhanced Synthesis of Nanoparticles: Potential for Immuno-Therapy

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

BIO2-009

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

BIO2-010

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

14:00-16:00 LUNCH

BIO2-011

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

Patricia Heiden

Michigan Technological University

BIO2-012

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

BIO2-013

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

BIO2-014

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

¹Karla A. Barrera-Rivera, ^{1,2}Arturo Flores-Carreón and Antonio Martínez-Richa^{1*}

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

BIO2-015

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

Roberto Olayo

Departamento de Física, Universidad Autónoma Metropolitana, Unidad Iztapalapa

**SESSION OPTOELECTRONICS
TUESDAY DECEMBER 9TH 8:00-12:30
ROOM B**

OPT2-001

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)

OPT2-002

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

OPT2-003

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

Evgen Prokhorov

CINVESTAV Querétaro

OPT2-004

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

Seth Marder / Steve Barlow

Georgia Institute of Technology

OPT2-005

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

OPT2-006

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

Dennis Smith

Clemson University

11:00-11:30 COFFEE BREAK

OPT2-007

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.

OPT2-008

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 9TH 12:30:14:00 & 16:00-18:30
ROOM B**

NAN2-001

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

Ramanan Krishnamoorti

University of Houston

NAN2-002

13:00-13:30 Electrically Responsive Polymer Nanocomposites

Richard A. Vaia

Nanostructured and Biological Materials Branch AFRL/RXBN

NAN2-008

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

NAN2-003

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

Octavio Manero

Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México

NAN2-005

16:30-17:00 Nanocomposites involving Polymer Blend Matrices

Lloyd Robeson

NAN2-006

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

NAN2-007

17:30-18:00 Applications of Nanomaterials in the Automotive Industry

Will Rodgers

General Motors

NAN2-004

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 9TH 18:30-20:00

BIG ROOM

GALA DINNER

TUESDAY DECEMBER 9TH 20:45

BIG ROOM

WEDNESDAY DECEMBER 10TH

**FORUM ACADEMIA-INDUSTRY COOPERATION
WEDNESDAY DECEMBER 10TH 8:00-10:30**

PANEL: Kris Matyjaszewski (Carnegie Mellon University), Benny Freeman (University of Texas at Austin), Isabel Sáenz (CIP-COMEX), Juan Méndez (CIQA), Jesús González (CIMAV). Presiding: Leopoldo Rodríguez (FUMEC-ADIAT)

10:30-10:45 COFFEE BREAK

**PARALLEL DISCUSSION GROUPS
WEDNESDAY DECEMBER 10TH 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 10TH 10:45-13:45
ROOM B**

NAN-001

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.,

NAN-002

11:05-11:25 Epoxy Polymer Nanocomposites Based on Keratin Modified Carbon Nanotubes.

Velasco-Santos C*, Martínez-Hernández A. L., Rivera-Armenta J.L.
Instituto Tecnológico de Querétaro; Instituto Tecnológico de Ciudad Madero.

NAN-003

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.

NAN-009

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.

NAN-006

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.

NAN-007

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

Yadira I. Vega-Cantú.
IPICYT.

NAN-008

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

ROOM B

NAN-005

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.

NAN-010

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 10TH 10:45-14:05

ROOM C

PRE-001

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

PRE-002

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

PRE-003

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

PRE-004

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

Jorge Herrera-Ordóñez*, Shirley Carro, Lorena Fariás-Cepeda

Dpto. de Procesos de Polimerización, Centro de Investigación en Química Aplicada

(CIQA) Facultad de Ciencias Básicas, Ingeniería y Tecnología, Universidad Autónoma de Tlaxcala

PRE-005

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

PRE-006

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

Antonio Flores-Tlacuahuac*, Angel Zitlalpopoca-Soriano

Departamento de Ingeniería y Ciencias Químicas

Universidad Iberoamericana, Santa Fe

Departamento de Ingeniería Química, Facultad de Química UNAM

PRE-007

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

PRE-008

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.

PRE-009

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. Cortez¹, Claudia C. Rivera¹, Juan R. Herrera^{1,2} and René D. Peralta¹

¹ Centro de Investigación en Química Aplicada (CIQA); ² Centro de Innovación Aplicada en Tecnologías Competitivas,

PRE-010

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 10TH 10:45-14:05
ROOM D**

PENG-001

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.

PENG-002

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

PENG-003

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

PENG-004

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.

PENG-005

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,

PENG-006

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 Barcenas 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)

PENG-007

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

PENG-008

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.

PENG-009

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

PENG-010

13:45-14:05 Shelf stability of isocyanate-functionalized vinyl acrylic latexes

Esther Treviño

CIQA

**SESSION BIO_PM_A BIOPOLYMERS
WEDNESDAY DECEMBER 10TH 15:40-17:20
ROOM B**

BIO-001

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.

BIO-007

16:00-16:20 Synthesis and characterization of poly(ϵ -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

BIO-003

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)

BIO-004

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.

BIO-005

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)

BIO-002

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

Velasquillo Cristina¹; Martínez Valentín¹; Solís Lilia ²; Neri Rosario²; Villalobos Enrique¹, Lecona Hugo³ Bahena Leticia⁴; Estrada Eréndira⁴; Villegas Hilda ², Lombardero Germán⁵, Ibarra Clemente.

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

**SESSION SYNT_PM_B
POLYMER SYNTHESIS
WEDNESDAY DECEMBER 10TH 15:40-18:00
ROOM C**

SYN-002

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.

SYN-003

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

SYN-004

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.

SYN-005

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. Saldivar-Guerra, E. Jiménez-Regalado

Centro de Investigación en Química Aplicada (CIQA)

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

SYN-007

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.

ABSTRACTS