

# **“Advances in Polyolefins” Workshop Final Program**

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## **SUNDAY, SEPTEMBER 28**

6:30 –9:30 p.m. Welcoming Reception

## **MONDAY, SEPTEMBER 29**

8:00 a.m. Introduction, Overview and Objectives of the Workshop  
James E. McGrath and Thomas L. Hanlon

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### **INVITED LECTURE SESSION I**

Emory A. Ford, Millennium Petrochemicals, Inc., Discussion Leader

8:30 a.m. “Progress in Polyolefins Through Catalysis” (1)  
J.J. O’Malley, Exxon Corporation, Baytown, TX

9:15 a.m. “Olefin Polymerizations Using Pd(II)- and Ni(II)-Based Catalysts” (2)  
Maurice Brookhart, University of North Carolina, at Chapel Hill

10:00 a.m. BREAK

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### **INVITED LECTURE SESSION II**

Pamela Auburn, Chevron Chemical, Discussion Leader

10:15 a.m. “Copolymer Composition and Phase Structure of Polyolefin Copolymers:  
A Two Decade Review” (3)  
Fran M. Mirabella, Millennium Petrochemicals, Inc., Morris, IL

11:00 a.m. “Property Development in the Polyolefins by Solid State Drawing” (4)  
Stathis (A.E.) Zachariades, Polteco, Hayward, CA

12:00 p.m. LUNCH

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### **INVITED LECTURE SESSION III**

Brian Goodall, BFGoodrich, Discussion Leader

1:00 p.m. “Mechanisms of Stereocontrol in Isospecific and Syndiospecific Polymerizations  
of Propylene” (5)  
John E. Bercaw, CalTech, Pasadena, CA

1:45 p.m. “Designer Polyolefins: Control of Sequence Distribution Through Metallocene  
Catalysis” (6)  
Robert Waymouth, Stanford University, Stanford, CA

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### **INVITED LECTURE SESSION IV**

Maurice Brookhart, UNC Chapel Hill, Discussion Leader

2:30 p.m. “Effects of Stereospecificity and Regiospecificity in Propene Polymerization with  
MgCl<sub>2</sub>-Supported Catalysts” (7)  
John C. Chadwick, Montell Polyolefins, Ferrara, Italy

3:15 p.m. BREAK

- 3:30 p.m. "New Nickel and Palladium Catalysts for the Addition Polymerization of Norbornenes: Mechanism and Polymer Tacticity" (8)  
Brian Goodall, B.F. Goodrich, Brecksville, OH
- 4:15 p.m. "Metallocene Catalysts for 1,3-Diene Polymerization" (9)  
Lido Porri, Milan Polytechnic, Milan, Italy
- 5:00 p.m. Social Hour, Sponsored by Albemarle Corporation  
Dinner on your own

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**TUESDAY, SEPTEMBER 30**

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**INVITED LECTURE SESSION V**

Peter McKenzie, Eastman Chemical, Discussion Leader

- 8:00 a.m. "INSITE™ Catalyst Structure/Property Relationships for Olefin Polymerization" (10)  
Peter Nickias, Dow Chemical Company, Midland, MI
- 8:45 a.m. "Poly(cyclopentene): A New Processible High-Melting Polyolefin Made from Nickel and Palladium Catalysts" (11)  
S.J. McLain, DuPont Central R&D, Wilmington, DE

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**INVITED LECTURE SESSION VI**

James E. McGrath, Virginia Tech, Discussion Leader

- 9:30 a.m. "Recent Advances in Propylene Polymerization Catalysis: A Comparison of Progress in the Development of Ziegler-Natta and Metallocene Catalysts" (12)  
Roland Hingmann, BASF-AG, Polymer Research Division, Ludwigshafen, Germany
- 10:15 a.m. BREAK
- 10:30 a.m. "Processing/Structure/Property Studies of High Density Polyethylene Tubular Films: Effect of Molecular Weight Distribution" (13)  
Garth Wilkes, Virginia Tech, Blacksburg, VA
- 11:15 p.m. "Further Refinement of the Self-Consistent Model for the Dependence of Polyethylene Elastic Constants Upon Density" (14)  
Jay Janzen, Phillips Petroleum Co. Research Center, Bartlesville, OK
- 12:00 p.m. LUNCH

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**INVITED LECTURE SESSION VII**

Günther Schweier, BASF, Discussion Leader

- 1:00 p.m. "New Developments in Stabilizers for Polyolefins" (15)  
Rick King, CIBA Specialty Chemicals Corporation, Tarrytown, NY
- 1:45 p.m. "Characterization of Polyolefins Using High Temperature Gel Permeation Chromatography (GPC)" (16)  
Elizabeth Meehan, Polymer Labs, Ltd., Church Stretton, United Kingdom
- 2:30 p.m. "Tear Resistance of Polyolefin Films" (17)  
Fran Mirabella, Millennium Petrochemical Co., Morris, IL
- 3:15 p.m. BREAK

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**INVITED LECTURE SESSION VIII**

Garth Wilkes, Virginia Tech, Discussion Leader

- 3:30 p.m. "EPDM Production by Gas Phase Processes" (18)  
Kevin Cann, Union Carbide, Bound Brook, NJ
- 4:15 p.m. "Fracture Resistance and Long-Term Durability in Polyethylene Film and Pipe Materials" (19)  
Walter Bradley, Texas A&M University, College Station, TX
- 5:00 p.m. "Spectra® ECPE Fiber Applications" (20)  
Raymond H. Glaser, Riber Technology, Allied Signal Inc., Petersburg, VA
- 6:00 p.m. Reception and Poster Session (abstracts found beginning page 32)
- 7:30 p.m. BANQUET  
Guest Speaker, Dr. Kenneth B. Sinclair, Sinclair Technology Associates

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**WEDNESDAY, OCTOBER 1**

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**CONTRIBUTED PAPER LECTURE SESSION**

Pal Arjunan, Exxon Chemical Company, Discussion Leader

- 8:00 a.m. "Synthesis and Reactivity of Pentafluorophenyl-Substituted Metallocene Olefin Polymerization Catalysts" (22)  
Paul Deck, Virginia Tech, Blacksburg, VA
- 8:30 a.m. "Sequence Distributions vs. Catalyst Site Behavior of *In Situ* Blends of Polypropylene and Poly(ethylene-co-propylene)" (23)  
Jim Randall, Baytown Polymers Center, Exxon Chemical Co., Baytown, TX
- 9:00 a.m. "Advantaged Polyethylene Product Design for Technology Licensing" (25)  
George N. Foster, Polymers R&D, Univation Technologies, Bound Brook, NJ
- 9:30 a.m. "New Developments in the Characterization of Phase Morphology and Melting in Low to Very Low Density Metallocene Ethylene Copolymers Using WAXD and SAXS" (26)  
Kenneth Monar, Ph.D. Candidate, University of Tennessee at Knoxville
- 10:00 a.m. BREAK
- 10:15 a.m. "Characterization of Methylaluminumoxanes and Determination of Trimethylaluminum by Proton NMR" (27)  
Don Imhoff, Albemarle Corporation, Baton Rouge, LA
- 10:45 a.m. "Surface Observation of Ziegler Catalysts for the Characterization of the States of Titanium Species" (28)  
Hideharu Mori, JAIST, Ishikawa, Japan
- 11:15 a.m. "Non-Metallocene Catalysts for the Copolymerization of Ethylene with Styrene" (29)  
Jun Okuda, Johannes Gutenberg University, Mainz, Germany
- 11:45 a.m. "Key Developments that Influenced Polypropylene's Growth in Textile Products" (30)  
Richard G. Mansfield, R.G. Mansfield and Associates, Wilton, CT
- 12:45 p.m. CLOSING REMARKS