

**THE METALLOCENE AND SINGLE-SITE CATALYST SHORT COURSE:  
FROM FUNDAMENTALS TO "POST METALLOCENE" SYSTEMS  
May 12, 2004 ♦ Omni Houston Hotel ♦ Houston, TX USA**

## **Agenda**

- 8:00-8:30 am**      **REGISTRATION AND MORNING COFFEE**
- 8:30-10:00 am**    **INTRODUCTORY REMARKS**  
**SECTION I: Basic Principles of Olefin Polymerization**  
♦ Ziegler-Natta Olefin Polymerization  
♦ Metallocene Catalysts  
**SECTION II: Metallocene Chemistry: General Aspects**  
♦ Structures of Metallocene Complexes  
♦ Reactivity of Zirconocene Complexes
- 10:00-10:30 am**    **COFFEE BREAK**
- 10:30-12:00 noon**   **SECTION III: Development of Metallocene Catalysts**  
♦ Titanocene and Lanthanide Catalysts  
♦ Zirconocene Catalysts  
♦ Catalyst Activation  
♦ Active Site Structure: Key Requirements and Implications  
**SECTION IV: Reaction Mechanisms of Metallocene Catalysts**  
♦ Chain Growth, Chain Transfer and Termination  
♦ Model Studies
- 12:00-1:00 pm**     **GROUP LUNCHEON**
- 1:00-2:30 pm**      **SECTION V: Applications of Metallocene Catalysts**  
♦ Metallocene Polymers: HDPE, LLDPE, PP, PS, New Polymers  
♦ Comparison of Single-Site and Multi-Site Catalysts  
**SECTION VI: Post Metallocene Single-Site Catalysts**  
♦ New Activators  
♦ Amide-Based Ti and Zr Catalysts  
♦ FI Catalysts  
♦ Living Olefin Polymerization  
♦ Key Design Issues for Late Metal Catalysts  
♦ Di-imine Ni and Pd Catalysts  
♦ Pyridine-Bis-Imine Fe and Co Catalysts  
♦ New Catalysts Derived from SHOP Systems
- 2:30-3:00 pm**      **COFFEE BREAK**
- 3:00-4:15 pm**      **SECTION VII: Future Challenges and Trends in Single-Site Catalysis**  
♦ Cocatalysts, Activators and Anions  
♦ Polar Monomers: Toward Functionalized Polyolefins  
♦ Functionalized Polynorbornenes  
♦ Ethylene-Acrylate Copolymerization  
♦ Prospects for Vinyl Halides, Vinyl Acetate and other Polar Monomers  
♦ General Strategies for Catalyst Design and Development
- 4:15-4:30 pm**      **CONCLUDING REMARKS**