

The final properties and applications of polyolefins are determined by their microstructures. This statement can be made for any polymer, but it is even more relevant for polyolefins since they are composed of such simple building blocks. Therefore, it is no surprise that the study of polyolefin microstructure has always been an essential part of catalyst research, process troubleshooting and optimization, and product development. In addition to conventional Ziegler-Natta polyolefins, which already have rather intricate microstructures, there is a rapidly growing interest in producing polyolefins with increasingly more complex molecular architectures, using combinations of single and multiple-site catalysts and/or polymerization processes with two or more reactors operated in series at different conditions. Recent examples are linear-block and branch-block copolymers with elastomeric properties, copolymers with long chain branches made by one or more single-site catalysts, and bimodal resins made in tandem or multizone reactor processes. The increasing sophistication of catalyst systems and polymerization processes can only be fully realized in practice if efficient and easy to use polyolefin characterization techniques are available. The First International Conference on Polyolefin Characterization (ICPC) was organized to fill this important industrial and academic need, providing a discussion forum on the characterization and fractionation techniques of polyolefins.

The first ICPC took place in Houston, TX, from October 16 to 18, 2006. One hundred and seven participants from 18 different countries attended the conference: 65 from the industry, 24 from academia, and 18 from vendor companies. The strong participation from the polymer manufacturing industry from North America, Europe and Asia shows the industrial relevance and need of such a conference. In addition, a one-day course on polyolefin characterization techniques was offered before the beginning of the conference for those participants interested in an update on the principles of gel permeation chromatography (GPC), temperature rising elution fractionation (TREF), and crystallization analysis fractionation (CRYSTAF).

The oral presentations given during the 1st ICPC were divided according to main topic areas into Separation and Fractionation, High Throughput, Thermal and Crystallinity Analysis, Spectroscopy, and Rheology. In addition to the oral presentations, 29 posters were displayed.

We intend to continue organizing the ICPC biannually, alternating between North American and European locations. The 2nd ICPC will take place in September 2008 (exact dates are still to be defined) in Valencia, Spain. Readers interested in being included in the conference's mailing list are welcome to send us their requests by e-mail to raquel.ubeda@icpc-conference.org

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