

## Editorial

This special issue of the *Journal Organometallic Chemistry* covers the topic of “*Frontiers of Organometallic Catalysis in Olefin Polymerization*”. It is dedicated to Hans Brintzinger on the occasion of his 60th birthday to whom former students, friends and colleagues wish to convey sincere congratulations through their contributions.

Hans Brintzinger was born in Jena, Germany, in 1935. After studying chemistry in Tübingen, Germany and Basel, Switzerland, he received his Ph.D. with Hans Erlenmeyer (Basel) in 1960. He continued his academic career at Basel, where he finished his “Habilitation” in 1964. From 1965–1972 Hans Brintzinger held faculty positions in the Department of Chemistry at the University of Michigan in Ann Arbor, USA. There he pursued research interests in ferredoxin, metallocene and N<sub>2</sub> fixation chemistry. In 1972 he accepted an appointment as full professor of chemistry at the University of Konstanz, Germany. He was awarded the Alfred P. Sloan fellowship (1973–1974) and the Karl-Heinz Beckurts Prize (1991).

Hans Brintzinger’s organometallic research played a part in the intriguing development towards the preparation of stereoregular polyolefin materials. After Karl Ziegler’s pioneering discovery of the transition metal catalyzed ethylene polymerization in 1955 and shortly after Giulio Natta’s invention of the stereospecific poly-

merization of  $\alpha$ -olefins, the metallocene-based catalysis of such reactions marked another important milestone in this evolutionary process. Sinn and Kaminsky’s discovery of methylalumoxane (MAO) as cocatalyst for polymerizations with metallocenes then provided homogeneous catalysis with activities comparable to the heterogeneous systems. Around the same time in Brintzinger’s group, access to the chiral ethylene-bridged zirconocenes ethylenebis(indenyl) and ethylenebis(tetrahydroindenyl)zirconocene was found. In collaboration with Walter Kaminsky, catalytic systems of these compounds and MAO were shown to afford highly isotactic polymers from propene. The exceedingly high activity and stereoregularity had a tremendous impact on research in academia as well as in industry. In the search for more efficient catalysts new research was stimulated, which provided a detailed insight into stereospecific polymerization.

Nowadays, we are even witnessing the industrial realization of this process. This issue “*Frontiers of Organometallic Catalysis in Olefin Polymerization*” shows the current status of research in this area.

Thanks to Hans Brintzinger, the “father” of *ansa* metallocene polymerization catalysts, for his outstanding contribution to this field of research.

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