

## Preface

This Symposium had its origins at the 1992 Gordon Research Conference on Reactions and Processes, which had a rather heavy emphasis on the applications of organometallic chemistry in synthesis. In discussions with Professor Harry Wasserman, one of the participants, we concluded that our understanding of metal-mediated reactions had now reached the stage where, guided by new concepts of reactivity and selectivity, one could approach this field with somewhat more sophisticated insight into the bond-making and bond-breaking processes. Harry felt that my own interests and publications in the area of structure and reactivity of polar organometallics well-qualified me to edit a Symposium-in-Print covering this general area, and after some hesitation, I agreed to act as Guest Editor for this collection of papers.

The task to identify a representative choice of leading researchers in the field and to collect a sufficient number of pertinent, though complementary articles turned out to be time-consuming but pleasant. Since the size of this special issue was subject to space restrictions, several authors had to shorten their manuscripts, and they did so in a very obliging manner. In one case the editors did not have the heart to apply page limitations, since the author had informed us that this would be his last scientific contribution.

Initially we had planned to assemble the articles chronologically according to their dates of receipt. (On this basis, the fine contribution of Professor SEEBACH would have been the first, rather than, as now, the last one in this series.) However, we thought that the reader might prefer to be guided by a thematical ordering of the contents. Therefore, this Symposium-in-Print starts with work featuring the *Structure and Mobility* of organometallic species (KNORR, GÜNTHER, REICH, SCHLOSSER), then treats organometallic reactivity in terms of *Intermediates* and *Transition States* (BOCHE, SCHLEYER, MIKAMI, NAKAI, KLUMPP, ASHBY), follows with the possibilities of how to control organometallic reactions, in particular how to instal *Typoselectivity* and *Regioselectivity* (BAILEY, GROVENSTEIN, BEAK, KATRITZKY, YAMAMOTO, MORDINI, CABIDDU), before turning to the problem of *Configurational Stability* of preparatively attractive  $\alpha$ -hetero substituted organometallics (HOFFMANN, DURST, GAWLEY, MEYERS) and ends with efficient methods of *Asymmetric Synthesis* employing organometallic reagents coordinated with chiral auxiliaries (HOPPE, JACKMAN, SEEBACH).

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Manfred Schlosser, Guest Editor