



## Preface

# Organometallic chemistry in ionic liquids

During the last decade ionic liquids have emerged as highly useful solvents in chemistry with large potential for industrial use. Ionic liquids show excellent dissolution properties for organic and organometallic compounds as well as for inorganic salts. Furthermore, the fact that ionic liquids have no measurable vapor pressure, show high thermal stability, and are nonflammable, makes them highly attractive as green solvents. The present special issue on “Organometallic Chemistry in Ionic Liquids” describes the use and highlights the advantages of ionic liquids as solvents for organometallic reactions and metal-catalyzed transformations.

The papers published in this issue reflect some of the current trends in this exciting area. For example, transition metal catalysts (organometallic catalysts) can be entrapped or “immobilized” in an ionic liquid and after extraction of the organic product the ionic liquid containing the catalyst can be reused. Recycling of the metal catalysts in this way is demonstrated in several of the papers. Many of the metal-mediated reactions may be quite different when run in an ionic liquid compared to running them in a typical organic

solvent and lead to faster and more efficient reactions. This aspect is discussed in some of the papers. The successful use of ionic liquids as solvents in a number of metal-catalyzed reactions as well as in the study of fundamental organometallic reactions (ligand substitution, oxidative addition) is an important part of this special issue.

We hope that the reader will enjoy the present selection of papers from this important and rapidly growing area.

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