
Volume Editor's Preface

During the planning of this volume of **Science of Synthesis** on boron chemistry, more and more virtual sections (finally 41) and pages became necessary, and it became evident that boron had become an essential element in modern synthetic chemistry. Originally, Roland Köster, the editor of the three most valuable **Houben-Weyl** volumes on “Organoborverbindungen”, had already planned an additional section on synthetic applications in 1982. It took more than 22 years to plan an entirely new volume on this particular topic, by now in the new series of **Science of Synthesis**. The authors originate from many different countries and research fields, thus representing the modern scientific community. In this way, it was possible to report on a large number of classical and actual synthetic developments, as well as potential applications, and to cover a broad field of topics ranging from asymmetric catalysis, over stereoselective syntheses of biologically active compounds, to polymeric organic materials with nonlinear optical properties. We have, however, excluded two special sections: methyleneboranes and small ring boranes. The chemistry and properties of these classes of compounds deserve much interest in terms of chemical bonding and new mechanistical reaction paths; however, synthetic applications are not foreseeable.

A large section was devoted to trialkylboranes, and this section was chosen as a key part for the description of the selective conversion of carbon–boron bonds, in order to keep a collection of related synthetic methods together and therefore make it easier to find and compare these methods. Analogous to **Houben-Weyl**, **Science of Synthesis** is also “product based”. This means that both reactive intermediates and catalysts are treated in the “applications in organic synthesis” parts of all sections. Additionally, all authors have in general tried to present a practical and reliable collection of symmetric and asymmetric variants of synthetic methods.

After most of the authors had already signed, I was grateful to Don Matteson for joining me as a co-editor when the workload was increasing. I would like to thank Roland Köster for his encouragement and confidence in continuing and extending his original work and – last but not least – his valuable, enormous collection of articles on boron chemistry. I would also like to thank Guido F. Herrmann and Fiona Shortt de Hernandez for their assistance during the development stages of the volume, and especially Karen Muirhead and Leigh Murray for their professional, efficient and friendly assistance, especially during the last critical weeks. My thanks are extended to my research group for reading early drafts of the chapters and tolerating my absence from their labs as well as my continuously closed door. Finally I am really grateful for the acceptance of my family for my almost complete absence in the Harz mountains during the week and on many weekends over a long time period. Being published on December 23, this volume will remain as a great memory and a lasting Christmas present for me.

Volume Editor

Dieter E. Kaufmann

Clausthal, December 2004