

## Preface

The direct transformation of C-H bonds is a fundamental task in organic synthesis, regularly facing reactivity and selectivity problems but simultaneously promising substantial benefits. The intention of this handbook, written by renowned authors who have contributed substantially to this research area, is to present, very concisely within its 66 sections, the whole range of modern methods for C-H-transformation.

Most of the sections follow a general concept and are therefore divided into five parts which cover the most important features of the reaction in focus. "Introduction and Fundamental Examples" gives general information about the reaction, especially the scientific background and related reactions. This part also includes reactions which might be important to understanding although not necessarily of preparative value. "Mechanism" presents current mechanistic considerations, eventually including critical remarks. "Scope and Limitations" concentrates on examples which lead to interesting structures, usually with yields in excess of 50%. "Experimental" presents instructive, comprehensible examples, including work-up procedures. Information about appropriate methods for monitoring the reaction (TLC data or diagnostic NMR spectroscopy) are also given. If a special catalyst is needed, the procedure for its synthesis is also included. "References and Notes", of course, leads to significant publications where further details are available.

You may notice that this preface is as concise as the contents of this handbook. Nevertheless, as editor I should not forget to thank all authors and the team from Wiley-VCH, who made this project possible. The transformation of C-H bonds is certainly one of the most important fields of research in preparative organic chemistry; let us hope this handbook will further motivate research, simultaneously accelerating the change from new developments to established synthetic tools.

Gerald Dyker

Bochum, April 2005

