

## ***Stereoselective Synthesis***

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### **Editorial Description**

As the pace of chemical research accelerates, the need for reference works also increases, but individual volumes need to be lean, timely, up to date, readily available, and focus on the high-impact chemistry that is shaping the future of the science. The *Science of Synthesis* Reference Library is designed to fill this need. To achieve the speed required and still provide an authoritative coverage of topical areas, (1) the Volume Editor of each individual volume is a leader in the field, (2) each volume is designed modularly, presenting a self-consistent overview of a specific topic, (3) the authors make a critical selection of the most significant work reported in a given area, (4) the publishing house keeps a tight production schedule to guarantee timely publication. The goal for each volume is two years from start to publication.

*Stereoselective Synthesis* is the first set in the *Science of Synthesis* Reference Library. A major global challenge to chemistry in the 21st Century is the development of more efficient and environmentally friendly methods for the preparation of chiral compounds. Chiral organic molecules are essential for modern medicine and in many other areas that serve the basis for our welfare.

*Stereoselective Synthesis* is a major reference work that critically reviews the status of the field and serves as the foundation for future research to solve the many challenges that still lie ahead. In the tradition of the classical Houben-Weyl E21, *Stereoselective Synthesis*, which covered mainly stoichiometric methods up to the early 90s, the new *Stereoselective Synthesis* presents the state of the art, including catalytic methods and presenting overviews by experts in the field. Typical or general experimental procedures for the best methods are included.

*Stereoselective Synthesis* is published in book and electronic form. The latter is based on and coupled to the *Science of Synthesis* online electronic version and makes use of the latest developments in information technology. It is equipped with a powerful and user-friendly information retrieval system to allow for substructure, exact structure, and reaction searches.

The organization of *Stereoselective Synthesis* is based on synthetic methods, which are arranged according to the type of reaction. This differs from and complements the organization of *Science of Synthesis*, which is based on product structure. Each chapter covers a specific methodology, so that the hierarchy of the work is kept as flat as possible.

It is not the aim of this work to comprehensively present all synthetic methods; a selection has been made by the editors of those methods that are most significant for modern stereoselective synthesis. For a comprehensive treatment of all synthetic methods, *Science of Synthesis, Houben-Weyl Methods of Molecular Transformations* is recommended. Likewise, the examples given for each method will be selected by the authors to illustrate the scope and limitations of the method in question. It is beyond the scope of any modern reference work to present an exhaustive coverage of all examples of any given method; indeed, the value added of all volumes in the *Science of Synthesis* Reference Library is the critical and authoritative selection of the most significant methods from the vast sea of the chemical literature.

The efforts to find the perfect chemical reactions that meet the stringent requirements for a sustainable global society are still in their infancy. The aim of *Stereoselective Synthesis* is help further that process.