Combinatorial Chemistry – From Theory to Application (Methods and Principles in Medicinal Chemistry, Vol. 26), 2nd edition, by W. Bannwarth and B. Hinzen, Wiley-VCH: Weinheim, **2006**, 672 pp., hardcover, 169 €, ISBN 3-527-30693-5

Combinatorial chemistry has undergone a dramatic development over the last 15 years. Once hyped as the solution to most problems in drug discovery, the field has consolidated over the years and it is now pragmatically regarded as a useful tool in medicinal chemistry. W. Bannwarth and B. Hinzen have now edited a revised edition of the classic monograph about combinatorial chemistry in the same book series from the year 2000, and have again been successful in recruiting eminent scientists from industry and academia as contributing chapter authors.

The larger part of the book deals with various aspects of the synthesis of compound libraries, using both solution-phase and solid-phase techniques. Each of these chapters is well-written and informs competently about the aspects of high-throughput purification, linkers, cyclorelease in Solid-Phase Organic Synthesis (SPOS), the use of polymer-supported reagents, and automation in combinatorial and parallel synthesis. The chapters about C–C-bond-

forming reactions and heterocyclic synthesis in SPOS stand out by their scope, depth of information, and well-structured presentation of the contents.

The chapter I enjoyed reading most was the contribution by A. Dominik about 'Computer-Assisted Library Design', in which even the layman can understand which strategies can be used to describe the diversity of library and optimize the design of a library for its structural and physicochemical properties. The book closes with an instructive review of the most important assays for high-throughput screening in drug discovery. All chapters cover the literature up to the year 2004.

As for any, this book is not free from errors, but it seems that this book uniquely has assembled most typing errors in the forward by the volume editors, in which I have counted more than 35 typos on only four pages!

In summary, the reviewer recommends this book to anyone who is interested in combinatorial chemistry or in the screening of small molecules in drug discovery.

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