

Domino Reactions in Organic Synthesis, by L. F. Tietze, G. Brasche, and K. M. Gericke, Wiley-VCH: Weinheim, 2006, 617 pp., hardcover, €159, ISBN 3-527-29060-5

'Domino reactions' are transformations of two or more bond-forming reactions under identical reaction conditions in which the latter transformations take place at the functionalities obtained in the former bond-forming reaction. As the formation of molecular skeletons lies at the heart of organic synthesis, this efficient strategy has been a field of enormous activity over the last decade. L. F. Tietze, who is not only a pioneer but also one of the most active researchers in this field, and two graduate students have undertaken the enormous task of describing the state of the art of this discipline. To make it short, the authors have achieved this goal masterfully.

One problem the authors faced was the enormous amount of material they had to cover. Even the more than 1000 references and 600 pages of this book are not sufficient to allow a comprehensive review of the subject. The authors therefore decided to focus on work published during the last decade (literature is covered up to early 2006) without neglecting classical work that was published earlier. The chosen examples are instructive and representative, and are depicted in more than 770 schemes; this makes the book browsable and very readable. The material is organized by using the mechanism of the first bond-forming reaction for the classification of the domino reactions,

leading to the main chapters of the book about (1) cationic, (2) anionic, (3) radical, (4) pericyclic, (5) photochemical, (6) transition-metal-mediated, (7) oxidative/reductive, and (8) enzymatic initiation of a domino process. After a short presentation of multi-component reactions, the book is concluded by a chapter about special techniques in domino reactions, discussing the use of high-pressure conditions, microwave heating, solvent-free conditions, or the application in solid-phase synthesis.

It has become quite rare that a book covering a vast body of material is written by a single group of three authors. The advantage of such an effort can be seen in this book: no overlap between chapters, and the style and quality of the chapters are consistent throughout the book, which contains almost no typographical errors.

In summary, this reviewer thinks that *Domino Reactions in Organic Synthesis* provides an excellent overview of the important strategy of domino reactions. Every chemistry library should contain this book so that every organic chemist can use it as a source of reference and inspiration.

Rolf Breinbauer, Institute of Organic Chemistry, University of Leipzig, Germany