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BOOK REVIEW

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Book Review of Catalytic Asymmetric Synthesis. Third Edition

Catalytic Asymmetric Synthesis. Third Edition. Edited by Iwao Ojima. Wiley, Hoboken, NJ. 2010. xvii + 998 pp. 16 × 24 cm. ISBN 978-0-470-17577-4. $175.00.

In Catalytic Asymmetric Synthesis, Third Edition, the editor has coordinated another improvement onto an old favorite. Again, he gathers into one title the insights from numerous leaders in the field of asymmetric catalysis. This work represents more than an updated version of the older editions; there is substantive new content although the presentations maintain a tutorial style which was attractive in prior editions. Chapter authors generally present background information suitable to introduce the topic to someone at the level of a graduate student who has passed some advanced organic synthesis coursework. Then they proceed to discuss pertinent older examples and latest developments without attempting to be exhaustive.

There are 19 chapters in this volume, each devoted to a particular class of reaction to which asymmetric catalysis has been applied. Many subject areas overlap with prior editions, for example, Asymmetric Synthesis through C−H Activation (Chapter 4), Enantioselective Allylic Substitutions (Chapter 8B), and Asymmetric Amplification and Autocatalysis (Chapter 10), but some of these chapters have new authors lending a different perspective. All chapters extensively reference newer literature emerging since the prior edition. In addition, some subject areas that have not been addressed in prior editions are added here. These include chapters devoted to timely topics such as asymmetric catalysis in nonconventional media (Chapter 1), asymmetric iminium- and enamine-mediated organocatalysis (Chapter 2A), and the application of chiral Brønsted acids to enantioselective synthesis (Chapter 3).

This is a well-prepared monograph that offers practical entries to the current literature for students or practitioners seeking a foundation in a particular area of asymmetric catalysis to support proposals or projects. For specialists in one or more areas of asymmetric catalysis, this book will also provide new perspectives on the longer-term growth of the broader field of enantioselective synthesis. Thus, the book has broad appeal; it should be useful for chemists at all levels, from graduate students and academic instructors to senior scientists and principal investigators.

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