Organic Process Research & Development

Book Review

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Catalysis

Catalysis. Edited by Matthias Beller, Albert Renken, Rutger A. van Santen. Wiley-VCH: Weinheim. 2012. 642 + xxii pp. £47.50. ISBN 978-3-527-32349-4.

Process chemists should, in principle, value a single-volume book on catalysis, from principles to applications, covering heterogeneous and homogeneous catalysis as well as biocatalysis. However, the emphasis of many of the chapters of this book is on heterogeneous catalysis with a focus towards petrochemicals; thus, less than half the book will be of interest to most *Org. Process Res. Dev.* (OPRD) readers.

Process chemists working in the fine and speciality chemicals/pharmaceuticals areas will find something of interest in Part III, "Industrial Catalytic Conversions", especially in the chapters on Carbonylation (Beller), Biocatalytic Processes (Bornscheuer), and Catalytic Selective Oxidation (Cavani), as well as in the earlier chapters where Beller (Homogeneous Catalysis) and Bornscheuer (Biocatalysis) have excellent chapters relating to the Part II theme of "The Chemistry of Catalytic Processes".

Most process chemists in industry purchase their catalysts, and so the section on "Catalyst Synthesis and Methods", whilst interesting, is not so relevant. Similarly the section on "Characterisation Methods" will be of less interest, although the chapter on "*In-situ* Techniques for Homogeneous Catalysis" is more directly applicaable to process chemistry.

Process engineers will relish the section on "Catalytic Reactor Engineering", which contains only one long chapter with the same name.

Overall, this is a useful book for process chemists with the reservation that modern carbon−carbon bond-forming catalytic reactions (Buchwald−Hartwig, Suzuki−Miyaura, Heck, etc.) are not covered. The emphasis is definitely towards heterogeneous catalysis.

Trevor Laird, Editor

AUTHOR INFORMATION

Notes

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