Structured in three parts this manual recollects efficient organocatalytic transformations around clear principles that meet actual standard in asymmetric synthesis. Chapters were written by acknowledged leaders of the organocatalysis field, and are presented in a concise way. Volume 1: Privileged Catalysts gives insight to readers to the continuously increasing variety of catalysts, and the relatively complex interactions that make organocatalytic reactions selective. An appendix recollects catalyst structures with the adequate cross-references. Volume 2: Activations covers the fundamental activation types (non-covalent and covalent activations) and helps understanding the importance of physical parameters, and in particular, the role of water, that influences reactivity and selectivity. Volume 3: Reactions and Applications highlights transformations by reaction types. The final part of this volume is dedicated to application in multistep synthesis and industrial applications.

Considering the ever increasing interest in the organocatalysis field, the book aims addressing to a large audience: to academic, and, industrial researchers, students and teachers who are interested in synthetic organic chemistry at advanced level. This book provides non-specialists with an introduction to the topic as well as serving as a valuable source for newcomers and researchers searching for an up-to-date and comprehensive overview of this promising area of synthetic organic chemistry.
ABOUT THE AUTHOR

Peter I. Dalko studied chemistry at the Budapest Technical University (Hungary) and graduated from Paris XI University (France) under the supervision of the late Stephan D. Géro. After undertaking postdoctoral researches with the late Sir Derek H. Barton at TAMU (USA) and Yoshito Kishi at Harvard University he is now a Research Director at the French Scientific Research Council (CNRS) at the Medical Faculty of the Sorbonne Paris Cité (France). His research is focused on total synthesis of structurally complex natural products, development of organocatalytic reactions for synthesis and developing microand nanoscale technologies for biomedical researches.

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