Aziridines and Epoxides in Organic Synthesis
Andrei K. Yudin (Editor)

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DESCRIPTION

Aziridines and epoxides are among the most widely used intermediates in organic synthesis, acting as precursors to complex molecules due to the strains incorporated in their skeletons. Besides their importance as reactive intermediates, many biologically active compounds also contain these three-membered rings.

Filling a gap in the literature, this clearly structured book presents the much needed information in a compact and concise way. The renowned editor has succeeded in gathering together excellent authors to cover synthesis, applications, and the biological aspects in equal depth.

Divided roughly equally between aziridines and epoxides, the twelve chapters discuss:

* Synthesis of aziridines
* Nucleophilic ring-opening of aziridines and epoxides
* Organic synthesis with aziridine building blocks
* Vinyl aziridines in organic synthesis
* Diastereoselective aziridination reagents
* Synthetic aspects of aziridinomitocene chemistry
* Biosynthesis of biologically important aziridines
* Organic catalysis of epoxide and aziridine ring formation

* Metal-mediated synthesis of epoxides

* Asymmetric epoxide ring opening chemistry

* Epoxides in complex molecule synthesis

* Biological activity of epoxide-containing molecules

A high-quality reference manual for academic and industrial chemists alike.

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⚠️ ABOUT THE AUTHOR

Professor Andrei K. Yudin obtained his PhD degree at the University of Southern California under the direction of Professors G. K. Surya Prakash and George A. Olah. He then took up a post-doctoral position in the laboratory of Professor K. Barry Sharpless at the Scripps Research Institute. In 1998, he started his independent career at the University of Toronto. His research interests are in transition metal catalysis, development of novel synthetic methods, and synthesis of complex heterocycles of biological significance.

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