From Biosynthesis to Total Synthesis: Strategies and Tactics for Natural Products
Alexandros L. Zografos


DESCRIPTION

Focusing on biosynthesis, this book provides readers with approaches and methodologies for modern organic synthesis. By discussing major biosynthetic pathways and their chemical reactions, transformations, and natural products applications; it links biosynthetic mechanisms and more efficient total synthesis.

• Describes four major biosynthetic pathways (acetate, mevalonate, shikimic acid, and mixed pathways and alkaloids) and their related mechanisms
• Covers reactions, tactics, and strategies for chemical transformations, linking biosynthetic processes and total synthesis
• Includes strategies for optimal synthetic plans and introduces a modern molecular approach to natural product synthesis and applications
• Acts as a key reference for industry and academic readers looking to advance knowledge in classical total synthesis, organic synthesis, and future directions in the field

ABOUT THE AUTHOR

Alexandros L. Zografos graduated as a chemist from the National and Kapodistrian University of Athens, Greece. After earning his PhD in 2001 at the National Technical University of Athens, he pursued his postdoctoral studies with Prof. Phil Baran at
the Scripps Research Institute and Prof. Scott Snyder at Columbia University before he moved back to Greece to work as a
senior researcher at the National and Kapodistrian University of Athens and NCRS Demokritos Institute. In 2009, he began his
independent career at the Aristotle University of Thessaloniki, Greece, where he is currently an assistant professor of organic
chemistry. His group is working on divergent total synthesis of complex natural products and on the development of novel CH
activation reactions.

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