catalysts

IMPACT FACTOR 3.9

CITESCORE 6.3

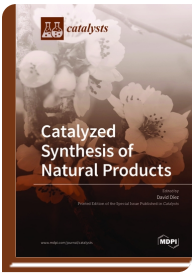
Special Issue Reprint

Catalyzed Synthesis of Natural Products

www.mdpi.com/books/reprint/1898

Edited by
David Díez

ISBN 978-3-03921-948-3 (Softback)
ISBN 978-3-03921-949-0 (PDF)



Natural products have been a source of inspiration for chemists and chemical biologists for many years, and have a special relevance in the chemical space. In recent years, several novel synthetic strategies have appeared, such as diversity-oriented synthesis (DOS), biological-oriented synthesis (BiOS), and function-oriented synthesis (FOS), for accessing complex and functionally diverse molecules. In this manner, the synthesis of natural products has evolved towards simpler and ecological methods using biotransformation, combinatorial chemistry, or organocatalysts. In this issue, Prof. Chojnacka shows demonstrates the use of immobilized lipases as catalysts to aid in the synthesis of phosphatidylcholine enriched with myristic acid. Profs. Vila and Pedro used catalysts derived from (S)-mandelic acid to achieve the catalytic enantioselective addition of dimethylzinc to isatins. Prof. Diez shows the possibility of the obtention of 7,8-carvone epoxides in a diastereoselective manner using proline, quinidine, and diphenylprolinol as organocatalysts. A cheap, simple, clean, and scalable method involves the use of deep eutectic mixtures as reaction media, and Profs. Alonso and Guillena describe the use of this methodology for the enantioselective, organocatalyzed α-amination of 1,3-dicarbonyl compounds. Biotransformations have been one of the methodologies for more efficient synthesis of natural products. Prof. Wu transforms ergostane triterpenoid antcin K using Psychrobacillus sp. Ak 187. Finally, Prof. Kovayashi reviews the total synthesis and biological evaluation of phaeosphaerides. The reader, through this issue, could gain an idea of the new directions that the synthesis of natural products using catalysts will have in the years to come.

MDPI

Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/1898

MDPI Books

Publishing Open Access Books & Series

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.

Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.

Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.

High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.

High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).

Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG
St. Alban-Anlage 66
4052 Basel
Switzerland
Tel: +41 61 683 77 34
www.mdpi.com/books
books@mdpi.com