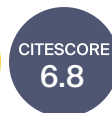




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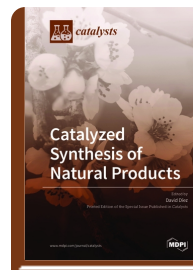
## Catalyzed Synthesis of Natural Products

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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. Díez 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  $\alpha$ -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.



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