Stereoselective Biocatalysis



Ramesh N. Patel

Stereoselective Biocatalysis

Andreas S. Bommarius, Bettina R. Riebel-Bommarius

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aims to make the concept accessible and appealing to graduate students researchers and young organic chemists seeking to incorporate hydrolases in their stereoselective synthesis endeavors Handbook of Chiral Chemicals David Ager, 2005-10-21 As pharmaceutical companies look to develop single enantiomers as drug candidates chemists are increasingly faced with the problems associated with this subclass of organic synthesis The Handbook of Chiral Chemicals Second Edition highlights the problems associated with the production of chiral compounds on a commercial scale The handbook fir Homogeneous Catalysis with Organometallic Compounds Boy Cornils, Wolfgang A. Herrmann, Matthias Beller, Rocco Paciello, 2017-12-26 The completely revised third edition of this four volume classic is fully updated and now includes such topics as as CH activation and multicomponent reactions It describes the most important reaction types new methods and recent developments in catalysis The internationally renowned editors and a plethora of international authors including Nobel laureate R Noyori guarantee high quality content throughout the book A must read for everyone in academia and industry working in this field Biocatalysts and Enzyme Technology Klaus Buchholz, Volker Kasche, Uwe Theo Bornscheuer, 2012-12-21 This second edition of a bestselling textbook offers an instructive and comprehensive overview of our current knowledge of biocatalysis and enzyme technology. The book now contains about 40% more printed content Three chapters are completely new while the others have been thoroughly updated and a section with problems and solutions as well as new case studies have been added Following an introduction to the history of enzyme applications the text goes on to cover in depth enzyme mechanisms and kinetics production recovery characterization and design by protein engineering The authors treat a broad range of applications of soluble and immobilized biocatalysts including wholecell systems the use of non aqueous reaction systems applications in organic synthesis bioreactor design and reaction engineering Methods to estimate the sustainability important internet resources and their evaluation and legislation concerning the use of biocatalysts are also covered Handbook of Industrial Mycology Zhigiang An, 2004-08-30 Several excellent books have been published that address one or more aspects of the diverse field of industrial mycology but none of them cover the entire process of fungal bioactive metabolites discovery Until now The Handbook of Industrial Mycology provides in one volume an overview of recent developments in industrial mycology with emphasis on the discovery of bioactive metabolites and most importantly their underlying biology and genetics Two additional features distinguish this book from other books in the field 1 most chapters are prepared using experimental data to illustrate theories and 2 the authors provide methodologies and experimental protocols in their chapters Presenting a comprehensive overview of recent advances the book provides a framework of basic methods tools and organizational principles for channeling fungal germplasm into the academic pharmaceutical and enzyme discovery laboratories It covers the complex range of processes involved in the discovery characterization and profiling of bioactive fungal metabolites The book includes examples of several recently marketed fungal metabolites and explores the impact of fungi on applications in the pharmaceutical food and beverage agricultural and

agrochemical industries Enzyme Catalysis in Organic Synthesis, 3 Volume Set Karlheinz Drauz, Harald Gröger, Oliver May, 2012-03-26 This comprehensive three volume set is the standard reference in the field of organic synthesis catalysis and biocatalysis Edited by a highly experienced and highly knowledgeable team with a tremendous amount of experience in this field and its applications this edition retains the successful concept of past editions while the contents are very much focused on new developments in the field All the techniques described are directly transferable from the lab to the industrial scale making for a very application oriented approach A must for all chemists and biotechnologists **Asymmetric Organic** Synthesis with Enzymes Vicente Gotor, Ignacio Alfonso, Eduardo García-Urdiales, 2008-03-31 Perfect for biochemists synthetic and organic chemists this book covers all important reactions including C C coupling reactions oxidation reactions and many more Divided into two parts the first section on methodology presents new innovative methods for enzymatic catalysis optimization including such new trends as medium engineering directed evolution and computer aided prediction of enantioselectivity. The second and main section deals with applications to synthesis showing important reaction types and their applications Only those reactions with very high selectivity are presented allowing readers to improve their own reaction vields Biocatalysis Andreas S. Bommarius, Bettina R. Riebel-Bommarius, 2007-02-27 The whole range of biocatalysis from a firm grounding in theoretical concepts to in depth coverage of practical applications and future perspectives The book not only covers reactions products and processes with and from biological catalysts but also the process of designing and improving such biocatalysts One unique feature is that the fields of chemistry biology and bioengineering receive equal attention thus addressing practitioners and students from all three areas

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