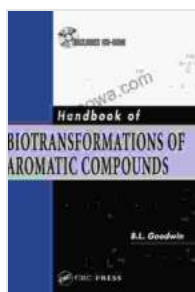


Unlock the Secrets of Aromatic Compound Biotransformations with Our Comprehensive Handbook

Aromatic compounds are ubiquitous in nature and play vital roles in various biological processes. Biotransformations, the enzymatic conversion of these compounds, offer a powerful tool for understanding their metabolism, detoxification, and synthesis. The Handbook of Biotransformations of Aromatic Compounds provides an encyclopedic reference on this topic, covering the latest advancements and applications.



Handbook of Biotransformations of Aromatic Compounds by B.L. Goodwin

★★★★☆ 4.2 out of 5

Language : English

File size : 21367 KB

Print length : 2128 pages

Screen Reader : Supported

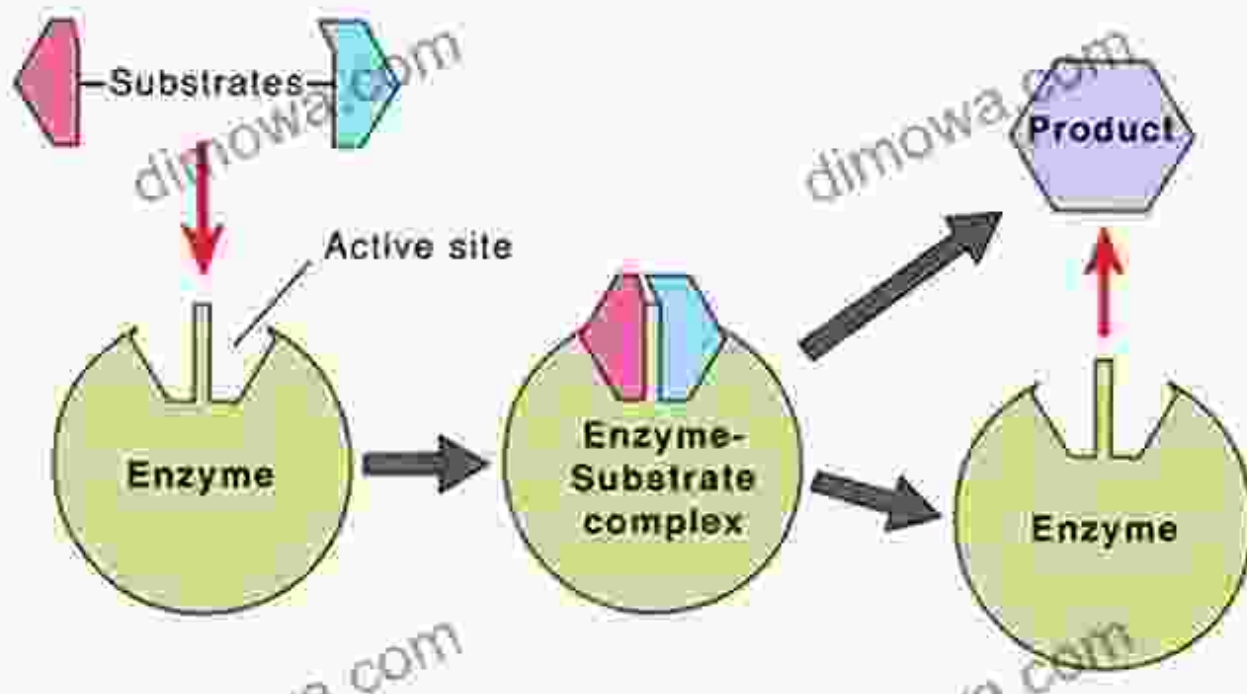


Delving into the Mechanisms of Biotransformations

The handbook delves into the intricate mechanisms of enzymatic transformations of aromatic compounds. It explores the different types of enzymes involved, including cytochrome P450s, flavin-containing monooxygenases, and peroxidases. Detailed explanations of the enzymatic reactions provide a comprehensive understanding of the fundamental principles governing biotransformations.

How do Enzymes Work

© Science Photo



Exploring the Metabolic Fates of Aromatic Compounds

The handbook offers insights into the metabolic fates of aromatic compounds after they undergo biotransformations. It describes the various intermediates and products formed, including phenols, catechols, and quinones. Detailed discussions on the factors influencing the metabolic pathways provide valuable information for researchers and practitioners.

Table 1: Summary of metabolic fates of aromatic compounds

Compound	Metabolic Fates
Benzene	Phenol, catechol, hydroquinone
Naphthalene	1-naphthol, 2-naphthol, 1,4-naphthoquinone

Harnessing Biotransformations for Industrial Applications

The handbook highlights the practical applications of biotransformations in various industries. It discusses the use of biotransformations for the production of pharmaceuticals, fragrances, flavors, and fine chemicals. Detailed case studies illustrate real-world examples of how biotransformations are leveraged to improve product quality, enhance efficiency, and reduce environmental impact.

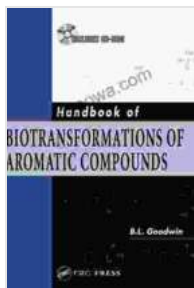
- **Pharmaceutical Industry:** Production of chiral intermediates and active drug metabolites.
- **Fragrance Industry:** Creation of unique scents and aroma profiles.
- **Flavor Industry:** Development of natural and artificial flavors.
- **Fine Chemical Industry:** Synthesis of valuable intermediates and specialty products.

Advancing Environmental Remediation through Biotransformations

The handbook explores the role of biotransformations in environmental remediation. It explains how microorganisms and enzymes can be used to degrade and detoxify aromatic pollutants. Case studies demonstrate successful applications of biotransformations for cleaning up contaminated soil, water, and air.

The Handbook of Biotransformations of Aromatic Compounds is an indispensable resource for researchers, scientists, and practitioners working in the fields of biochemistry, organic chemistry, environmental science, and biotechnology. Its comprehensive coverage, detailed

explanations, and practical applications make it an invaluable tool for understanding and utilizing the power of biotransformations.



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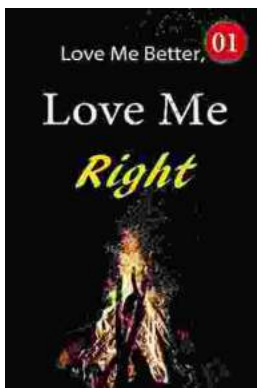
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