

<<生物工程学 Biotechnology>>

图书基本信息

书名：<<生物工程学 Biotechnology>>

13位ISBN编号：9780521449113

10位ISBN编号：0521449111

出版时间：1996-3

出版人：北京科文图书业信息技术有限公司

作者：Smith, John E.

页数：236

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<生物工艺学 Biotechnology>>

内容概要

Biotechnology concerns the practical application of organisms or their components. Historically, biotechnology was an art, involved in the production of wines, beers and cheeses. Nowadays it involves a series of advanced technologies spanning biology, chemistry, and process engineering. In recent years innovations involving genetic engineering have had a major impact on biotechnology. Its applications are diverse, including the production of new drugs, transgenic organisms and biological fuels, gene therapy and clearing up pollution. John Smith, writing in a readily accessible way, describes the history, techniques and applications of biotechnology as well as discussing the ethical issues raised by this modern science. The third edition of this successful book has nearly doubled in size to take account of recent advances. It is important reading for anyone, from school onwards, interested in this field.

<<生物工程学 Biotechnology>>

书籍目录

General preface to the series Preface to the third edition 1 An introduction to biotechnology 1 . 1
 What is biotechnology 1 . 2 Biotechnology——an interdisciplinary pursuit 1 . 3 Biotechnology——
 a three-component central core 1 . 4 Product safety 1 . 5 Public perception of biotechnology 1 . 6
 Biotechnology and the developing world 2 Substrates for biotechnology 2 . 1 Abiomass strategy 2 . 2 Natural
 raw materials 2 . 3 Availability of by-products 2 . 4 Chemical and petrochemical feedstocks 2 . 5
 Raw materials and the future of biotechnology 3 Genetics and biotechnology 3 . 1 Introduction 3 . 2
 Industrial genetics 3 . 3 Protoplast and cell fusion technologies 3 . 4 Genetic engineering 3 . 5
 Potential laboratory biohazards of genetic engineering 3 . 6 The polymerase chain reaction 4 Bioprocess
 / fermentation technology 4 . 1 Introduction 4 . 2 Principles of microbial growth 4 . 3 The stirred reactor
 / fermenter 4 . 4 Scale-up 4 . 5 Media design for fermentation processes 4 . 6 Solid substrate fermentation 4
 . 7 Technology of mammalian and plant cell culture 4 . 8 Downstream processing 5 Enzyme technology 5 . 1
 The nature of enzymes 5 . 2 The application of enzymes 5 . 3 Genetic engineering and protein engineering of
 enzymes 5 . 4 The technology of enzyme production 5 . 5 Immobilised enzymes 6 Biological fuel generation 6
 . 1 Photosynthesis—the ultimate energy resource 6 . 2 Sources of biomass 6 . 3 Ethanol from biomass 6 . 4
 Methane from biomass 6 . 5 Hydrogen 7 Single cell protein 7 . 1 The need for protein 7 . 2
 Acceptability and toxicology of SCP 7 . 3 SCP derived from high energy sources 7 . 4 SCP from waste 7 . 5
 SCP from agricultural crops 7 . 6 SCP from algae 7 . 7 The economic implications of SCP 8 Biotechnology and
 medicine 8 . 1 Introduction 8 . 2 Pharmaceuticals and biopharmaceuticals 8 . 3 Antibiotics 8 . 4
 Vaccines and monoclonal antibodies 8 . 5 Biopharmaceuticals 8 . 6 Gene therapy 9 . environmental
 biotechnology 10 . biotechnology in the agricultural and forestry industries 11 . food and beverage
 biotechnology 12 . protection of biotechnological inventions 13 . safety in biotechnology 14 . genetic
 engineering-safety, social, moral and ethical considerations 15 . conclusions Glossary Further reading Index

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>