

<<生物技术概论>>

图书基本信息

书名：<<生物技术概论>>

13位ISBN编号：9787030352392

10位ISBN编号：7030352394

出版时间：2012-8

出版时间：科学出版社

作者：王武 编

页数：356

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>

## <<生物技术概论>>

### 内容概要

《双语教材：生物技术概论》参考国内外学科进展，结合多年教学实践过程中积累的教学资源，针对工科为主的生物工程学科特点，选择贴近生物技术产业的科技基础内容，构成了由基因工程、细胞工程、酶工程，发酵工程四个板块（篇）组成的内容体系，每篇再以章、节、小节对有关内容进行阐述。

讲义中还配有图表、附录、题库、电子教材、网站等有助于学生理解和应用的信息内容和形式；形成了立体化的教学资源。

## 书籍目录

Preface  
 Part I Gene Cloning  
 Chapter 1 Introduction to Gene Cloning  
 1.1 Brief Overview  
 1.2 Historical Events  
 1.3 Significance and Alertness  
 Chapter 2 Gene and Genome  
 2.1 Discovery of Hereditary Factor  
 2.2 Basic Knowledge of Gene  
 2.3 Sequence Signals Involved with Gene Expression  
 2.4 About Genomic and Metagenomic Studies  
 Chapter 3 Basic Techniques for Experiments with DNA  
 3.1 Enzymatic Tools for Gene Manipulation  
 3.2 Oligonucleotide Tools  
 3.3 DNA Purification  
 3.4 Electrophoresis  
 3.5 In Vitro Synthesis of DNA  
 3.6 DNA Sequencing  
 3.7 Macromolecular Hybridization and Blotting  
 3.8 PCR Techniques  
 Chapter 4 Cloning Procedure  
 4.1 Basic Procedure of Cloning  
 4.2 Selection of Cloning Vector  
 4.3 Preparation of Donor DNA  
 4.4 Joining of Donor and Vector by Ligation  
 4.5 Selection Host Cell  
 4.6 Introduction of Recombinant DNA into Host Cells  
 4.7 Selection, Screening and Subcloning  
 4.8 Derivative Technology Based on Cloning  
 Chapter 5 Application and Impacts  
 5.1 Initiation of Recombinant DNA Industry  
 5.2 General Aspects of Application  
 5.3 Contribution and Impact  
 Part II Cell Engineering  
 Chapter 6 Introduction on Cell Engineering  
 6.1 Brief Overview  
 6.2 Essentials of Cell Engineering  
 6.3 Progress Clues  
 Chapter 7 Cell Fusion and Hybridization  
 7.1 General Aspects  
 7.2 Protoplast Technique  
 7.3 Basic Methods of Cell Fusion  
 7.4 Fusant Screening  
 7.5 Application of Cell Fusion  
 Chapter 8 Plant Tissue and Cell Culture  
 8.1 Plant Tissue Culture System  
 8.2 Gene Transfer to Plants  
 8.3 Artificial Seeds and Virusfree Plants  
 Chapter 9 Animal Tissue and Cell Culture  
 9.1 Establishment of Animal Tissue Culture System  
 9.2 Gene Transfer to Animal Cell  
 9.3 Animal Hybrids and Hybridoma  
 9.4 Approaches of Stem Cell Research  
 Chapter 10 Application Examples from Cell Engineering  
 10.1 Bioproducts from Cell Engineering  
 10.2 Breeding of New Agronomic Varieties  
 10.3 Transgenic Animals as Models for Medical Research  
 Part III Enzyme Technology  
 Chapter 11 Fundamental Nature of Enzyme  
 11.1 Definition, Basic Nature and Classification of Enzyme  
 11.2 Determination of Enzyme Activities  
 11.3 Factors Affecting Enzyme Activity  
 11.4 Resources of Enzyme  
 11.5 Uses of Enzyme  
 Chapter 12 Enzyme Biosynthesis and Products  
 12.1 Biorenewable Resources of Enzyme  
 12.2 About Enzyme Synthesis  
 12.3 Enzyme Fermentation and Products  
 Chapter 13 Enzyme Recovery & Purification  
 13.1 Pretreatment of Crude Enzyme Sample  
 13.2 Removing of Impurities and, Sample Concentration  
 13.3 Chromatographic Separation  
 13.4 Polishing of Enzyme  
 13.5 Rational Formulation of Final Enzyme Products  
 Chapter 14 Enzymatic Conveyance  
 14.1 Enzymatic Conveyance  
 14.2 Immobilization of Enzyme and Cells  
 14.3 Enzymatic conveyance in nonaqueous Phase  
 Chapter 15 New Approaches of Enzyme Technology  
 15.1 Modification on Enzymes  
 15.2 Enzyme Carrier for Immobilization  
 15.3 Enzyme Inhibitor  
 15.4 Ribozyme ( Nonprotein Enzymes )  
 Part IV Industrial Fermentation  
 Chapter 16 Principles of Fermentation  
 16.1 Fermentation Principles  
 16.2 Fermentation Products and Application  
 16.3 Benefits from the Fermentation Industry  
 Chapter 17 Industrial Microorganisms  
 17.1 Types and Characteristics of Industrial Microorganisms  
 17.2 Breeding of Industrial Strain  
 17.3 Industrial Microbial Growth and Culture Media  
 17.4 Inoculation of Industrial Strain  
 17.5 Preservation of Industrial Strain  
 Chapter 18 Microbial Metabolism and Fermentation Kinetics  
 18.1 Metabolism Related to Basic Pathway  
 18.2 Metabolic Regulation and Control  
 18.3 Stoichiometry of Fermentation Process  
 18.4 Fermentation Kinetics  
 Chapter 19 Bioreactor and Auxiliary Equipments  
 19.1 Structure and Function of Bioreactor  
 19.2 Auxiliary Equipment  
 19.3 Probes and Sensors  
 Chapter 20 Fermentation Downstream Technology  
 20.1 General Aspects  
 20.2 Harvest and Pretreatment  
 20.3 Isolation and Purification  
 20.4 Product Polishing  
 20.5 Waste Treatment and Cleaner Production  
 Chapter 21 Progress in Fermentation Engineering  
 21.1 Approaches of Upstream Technology  
 21.2 Process Optimization  
 21.3 Development of Downstream Technology  
 Appendix  
 Terms Translation  
 Related Nobel Laureates  
 Further Reading  
 后记

<<生物技术概论>>

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>