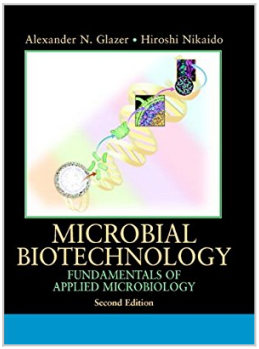

Microbial Biotechnology: Fundamentals of Applied Microbiology

By Alexander N. Glazer, Hiroshi Nikaido

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido

Knowledge in microbiology is growing exponentially through the determination of genomic sequences of hundreds of microorganisms and the invention of new technologies such as genomics, transcriptomics, and proteomics, to deal with this avalanche of information. These genomic data are now exploited in thousands of applications, ranging from those in medicine, agriculture, organic chemistry, public health, biomass conversion, to biomining. Microbial Biotechnology. Fundamentals of Applied Microbiology focuses on uses of major societal importance, enabling an in-depth analysis of these critically important applications. Some, such as wastewater treatment, have changed only modestly over time, others, such as directed molecular evolution, or 'green' chemistry, are as current as today's headlines. This fully revised second edition provides an exciting interdisciplinary journey through the rapidly changing landscape of discovery in microbial biotechnology. An ideal text for courses in applied microbiology and biotechnology courses, this book will also serve as an invaluable overview of recent advances in this field for professional life scientists and for the diverse community of other professionals with interests in biotechnology.

Microbial Biotechnology: Fundamentals of Applied Microbiology

By Alexander N. Glazer, Hiroshi Nikaido

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido

Knowledge in microbiology is growing exponentially through the determination of genomic sequences of hundreds of microorganisms and the invention of new technologies such as genomics, transcriptomics, and proteomics, to deal with this avalanche of information. These genomic data are now exploited in thousands of applications, ranging from those in medicine, agriculture, organic chemistry, public health, biomass conversion, to biomining. Microbial Biotechnology. Fundamentals of Applied Microbiology focuses on uses of major societal importance, enabling an in-depth analysis of these critically important applications. Some, such as wastewater treatment, have changed only modestly over time, others, such as directed molecular evolution, or 'green' chemistry, are as current as today's headlines. This fully revised second edition provides an exciting interdisciplinary journey through the rapidly changing landscape of discovery in microbial biotechnology. An ideal text for courses in applied microbiology and biotechnology courses, this book will also serve as an invaluable overview of recent advances in this field for professional life scientists and for the diverse community of other professionals with interests in biotechnology.

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido Bibliography

- Sales Rank: #2567987 in eBooks
- Published on: 2007-10-01
- Released on: 2007-10-01
- Format: Kindle eBook

Editorial Review

Review
"A wonderful text for modern day study of microbes and their fantastic activities. It brings together so many aspects of microbes including their diversity, metabolism, genetics, etc., etc., etc. I wish I had such a book at my side when I was a student. The text will bring the wonders of microbiology to the student in a way that he/she will never forget."
PROFESSOR ARNOLD L. DEMAIN
Founder of Fermentation Microbiology Dept.,Merck & Co., Inc.;
Formerly Professor of Industrial Microbiology, MIT;
Past President,Society for Industrial Microbiology

"The second edition of Glazer and Nikaido's Microbial Biotechnology provides an essential intellectual link between the breakthroughs of the last ten years in our understanding of the fundamental processes that drive microbial function and the application of this knowledge to the technological challenges faced by society. The book is unique in the clarity with which specific industrial problems are delineated and in the cogent description of how current technology provides solutions. The range of subjects covered in this volume is astounding. They extend from microbial metabolites, antibiotics and polymers to recombinant vaccine production and enzyme and metabolic engineering. The basic scientific principles involved in associated areas, from microbial genetics to transgenic plant production and the world of 'Omics are presented in a straight forward manner so that a reader with some general biology background can grasp the the concepts and their application. In addition enough details and useful references are provided to engage the most sophisticated reader. Microbial Biotechnology fills the void generated by the absence of a suitable scientifically sophisticated text for an advanced undergraduate or graduate course in Biotechnology. It will also be a required addition to the library of all of those associated with industrial microbiology and the biotechnology and pharmaceutical industries including the research workers, patent lawyers, regulatory agents and even an occasional venture capitalist."
MELVIN I. SIMON
Biaggini Professor of Biology, California Institute of Technology;
Founder of the microbial biotechnology company Diversa

"Microbial Biotechnology comprehensively covers both the basics and complexities of the microbial world as it applies to biotechnology. Having the biochemical structures in place along with descriptive paragraphs of microbial facts is an added value in teaching students the amazing and wonderful capabilities of these invisible strangers and friends. From microbial diversity to recombinant and synthetic vaccines to primary and secondary metabolites to environmental applications, Microbial Biotechnology embraces the reader with both the primary foundations of microbiology to the latest advanced microbial methods being practiced in laboratories around the world. Reading the book reminded me as to why I became a applied microbiologist in the first place."
JENNIE HUNTER-CEVERA
President University of Maryland Biotechnology Institute;
Past President, Society for Industrial Microbiology

"The application of science to practical problems of humanity has at times been approached with an air of apology. No longer. Biotechnology, especially of the microbiological variety is so closely linked to its scientific roots as to make for a seamless continuum. Nowhere is this more vividly demonstrated than in the

second edition of Microbial Biotechnology, written by two leading scientists who have made stellar contributions to microbiology and biochemistry. This book, based on their authoritative insights and experience, unites the "bio" and "technology" in a masterful way. This is what we expected from the update of a classic in its field."
MOSELIO SCHAECHTER
Distinguished Professor, Emeritus,
Tufts University School of Medicine;
Past President, American Society for Microbiology

"Microbial Biotechnology is engrossing to read, and will be appreciated by anyone wishing to better understand the diverse means by which microbes are being exploited to solve biomedical, food, energy, and environmental problems."
K.A. Newman, Choice Magazine

About the Author
Alexander N. Glazer is professor of the graduate school in the Department of Molecular and Cell Biology at the University of California, Berkeley.

Hiroshi Nikaido is professor of Biochemistry & Molecular Biology in the Department of Molecular and Cell Biology at the University of California, Berkeley.

Users Review

From reader reviews:

Gary Lane:

What do you think of book? It is just for students since they are still students or the idea for all people in the world, the particular best subject for that? Just simply you can be answered for that issue above. Every person has several personality and hobby per other. Don't to be pushed someone or something that they don't want do that. You must know how great along with important the book Microbial Biotechnology: Fundamentals of Applied Microbiology. All type of book can you see on many sources. You can look for the internet options or other social media.

Suzanne Jensen:

The actual book Microbial Biotechnology: Fundamentals of Applied Microbiology has a lot associated with on it. So when you read this book you can get a lot of help. The book was written by the very famous author. This articles author makes some research before write this book. This particular book very easy to read you can obtain the point easily after reading this article book.

Dawn Hicks:

Playing with family inside a park, coming to see the water world or hanging out with friends is thing that usually you may have done when you have spare time, then why you don't try point that really opposite from that. One particular activity that make you not sense tired but still relaxing, trilling like on roller coaster you already been ride on and with addition of information. Even you love Microbial Biotechnology:

Fundamentals of Applied Microbiology, you could enjoy both. It is excellent combination right, you still would like to miss it? What kind of hang type is it? Oh seriously its mind hangout folks. What? Still don't obtain it, oh come on its referred to as reading friends.

Karen Lheureux:

Does one one of the book lovers? If yes, do you ever feeling doubt if you are in the book store? Attempt to pick one book that you just dont know the inside because don't evaluate book by its include may doesn't work the following is difficult job because you are afraid that the inside maybe not while fantastic as in the outside search likes. Maybe you answer might be Microbial Biotechnology: Fundamentals of Applied Microbiology why because the great cover that make you consider in regards to the content will not disappoint an individual. The inside or content will be fantastic as the outside as well as cover. Your reading 6th sense will directly assist you to pick up this book.

Read Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido for online ebook

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido books to read online.

Online Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido ebook PDF download

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido Doc

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido Mobipocket

Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido EPub

YK6HSWT0GUO: Microbial Biotechnology: Fundamentals of Applied Microbiology By Alexander N. Glazer, Hiroshi Nikaido