

June 2021: 254 x 178: 400pp 150 illustrations

Hb: 978-0-367-40888-6 | £120.00 eBook: 978-0-367-82241-5

#### **TABLE OF CONTENTS:**

1. Introduction. 2. Development of Industrial Strain, Medium Characteristics and Biochemical Pathways. 3. Stoichiometry of Bioprocesses, chemical Reaction Kinetics and Chemical Reactor Analysis. 4. Enzymatic Reaction Kinetics and Immobilization Techniques. 5. Life Cycle of the Microbial Cell, Microbial Growth Kinetics, Product Formation and Substrate Degradation. 6. Overview of the Fermenter, Flow Diagrams and Pumps and Valves Used in Fermentation Industries. 7. Air Sterilizer, Medium Sterilizer, Aseptic Transfer of Inoculum and Medium. 8. Downstream Processing; Solid-liquid Separators, Evaporator, Crystallizer, Liquid-liquid Extraction, Distillation, Chromatography. 9. Ethanol Fermentation, Brewing Industry, Wine Industry and Vinegar Production. 10. Citric Acid Production, Lactic Acid Production and Glutamic Acid Production. 11. Penicillin, Cephalosporin, and Streptomycin Production. 12. Single Cell Protein Production (Baker's Yeast, Fodder Yeast, Spirulina, Etc.). 13. Alpha Amylase Production, Protease Production, and High Fructose Corn Syrup Production. 14. Amino Acid Production (L-lysine, L-glutamic Acid), Vitamin Production (B2, B12, L-ascorbic Acid). 15. Cheese Production. 16. Biodiesel and Butanol Production. 17. Biopesticides and Biopolymers Production. 18. Vaccines, Hepatitis B and Insulin Production. 19. Microbial Leaching of Metals. 20. Aerobic Effluent Treatment Process, Biohythane Process and Biofertilizer

### **New from CRC Press!**

# Industrial Biotechnology

**Debabrata Das**, Indian Institute of Technology, Kharagpur and **Soumya Pandit**, Sarada University, Greater Noida, India

This book offers a comprehensive overview of biochemical processes, technologies, and practical applications of industrial biotechnology. The work comprises chapters that discuss medium preparation, inoculum preparation using industrial strain and upstream processing, various fermentation processes, and physico-chemical separation processes for the purification of products and packaging. It features case studies of a variety of biochemical production processes. The text is aimed at advanced students, industrial practitioners, and researchers in biotechnology, food engineering, chemical engineering, and environmental engineering.

# 20% Discount Available - enter the code FLR40 at checkout\*

Hb: 978-0-367-40888-6 | £96.00

\* Offer cannot be used in conjunction with any other offer or discount and only applies to books purchased directly via our website.

For more details, or to request a copy for review, please contact: Allison Shatkin, Senior Publisher - Engineering, 15618438407, Allison. Shatkin@taylorandfrancis.com



For more information visit: www.crcpress.com/9780367408886

# **Discover More at**

## www.crcpress.com



- Related titles, tables of contents, and new and forthcoming publications
- Book reviews by industry influencers and thought leaders
- Our Featured Authors community with detailed author bios, news about their work, and the latest research













Go to www.crcpress.com for detailed information on every book.





Premium Science, Technology, and Medical eBook Collections

### www.CRCnetBASE.com

e-reference@taylorandfrancis.com 1-888-318-2367

### **Custom Publishing**



Contact Special Sales for bulk purchase and custom publishing opportunities.

specialsales@taylorandfrancis.com

### **Book Orders**

Book orders can be placed online at www.crcpress.com, with the Taylor & Francis Customer Services Department, or placed via the appropriate overseas sales agent.

US, Canada, and South America

Toll Free: 1-888-318-2367 Overseas: 1-859-727-5000

Email: orders@crcpress.com

**UK/Rest of World** 

+44 (0) 1235 400 524

Email: book.orders@tandf.co.uk

FREE Standard Shipping • www.crcpress.com