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Nota di contenuto	Chapter 1. Introduction to enzyme technology -- Chapter 2. Enzyme structure and function -- Chapter 3. Enzyme modelling: from the sequence to the substrate complex -- Chapter 4. Enzyme kinetics -- Chapter 5. Enzyme reactors and process control -- Chapter 6. Enzyme identification and screening: activity-based methods -- Chapter 7. Bioinformatic methods for enzyme identification -- Chapter 8. Optimization of enzymes -- Chapter 9. Enzyme production -- Chapter 10. Enzyme purification -- Chapter 11. Enzyme immobilization -- Chapter 12. Enzymatic reactions in unusual reaction media -- Chapter 13. Principles of applied biocatalysis -- Chapter 14. Enzymes in the chemical and pharmaceutical industry -- Chapter 15. Enzymes for the degradation of biomass -- Chapter 16. Enzymes in food production -- Chapter 17. Enzymes in detergents and cleaning agents -- Chapter 18. Enzymes and biosensor technology -- Chapter 19. Therapeutic enzymes -- Chapter 20. Enzymes in molecular biotechnology.

This interdisciplinary textbook provides an easy-to-understand and highly topical introduction to all the specialist areas of modern enzyme technology. In the first part of this three-part textbook, the reader is introduced to the fundamentals of enzyme structure, reaction mechanisms, enzyme kinetics, enzyme modeling, and process control. In the second part, methods for finding, expressing, optimizing, purifying, immobilizing, and using enzymes in unusual reaction media are presented. In the third part, leading experts use examples to describe current applications of enzymes in the chemical and pharmaceutical industries, for biomass degradation, food production and processing, as additives in detergents and cleaning agents, for constructing biosensors, and as therapeutics. Students of bachelor and master programs in biology, chemistry, biochemistry, and bioprocess engineering will gain up-to-date access to practical applications and developing industries. However, the fluent writing style makes the work suitable for all readers, who want to gain an easy-to-understand insight into the production and application of enzymes. This book is a translation of an original German edition. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation.
