

Series Editor: John M. Walker

Immobilization of Enzymes and Cells

Second Edition

Edited by

Jose M. Guisan*Institute of Catalysis, CSIC, Campus UAM-Cantoblanco, Madrid, Spain***From Reviews of the First Edition...**

"...enables researchers to rapidly enter the world of immobilization...an excellent reference work that will have long lasting value." —*QUARTERLY REVIEW OF BIOLOGY*

"...one of the most comprehensive collections of immobilization methodologies...[will] find extensive use as a methodology/reference text in any biotechnology-based laboratory." —*MICROBIOLOGY TODAY*

"...a valuable tool for researchers in the many areas requiring enzyme and cell immobilizations."
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"...an ideal reference book to have around the laboratory." —*TRENDS IN CELL BIOLOGY*

"...a worthwhile addition to any research library...especially useful for anyone involved in preparative isolations or needing immobilized reagents for specific research applications."

—*DOODY'S HEALTH SCIENCES BOOK REVIEW JOURNAL*

"...the coverage of the various techniques is excellent..." —*THE ANALYST*

The continuing rapid progress in work designed to improve the functional properties of enzymes and cells as industrial catalysts has led to this revised, updated, and expanded new edition of the warmly received initial edition of *Immobilization of Enzymes and Cells*. This long-awaited second edition contains new and simplified protocols useful for industrial applications, novel techniques that will prove useful now or in the near future, and protocols for the preparation of immobilized derivatives suitable for a wide variety of nonconventional reaction media. The authors also offer tools for the development of new immobilization techniques, methods for preparing immobilized derivatives for therapeutic and industrial use, and new chemical reactors designed to overcome the limitations of immobilized derivatives. The emphasis is on improving enzyme and cell properties via very simple immobilization protocols, along with the development of new and better methods. The protocols follow the successful *Methods in Biotechnology*™ series format, each offering step-by-step laboratory instructions, an introduction outlining the principles behind the technique, lists of the necessary equipment and reagents, and tips on troubleshooting and avoiding known pitfalls.

Innovative and highly practical, *Immobilization of Enzymes and Cells, Second Edition*, affords biochemists, biotechnologists, and biochemical engineers a practical review of all the latest methods and tools—as well as optimized conventional techniques—needed to carry out successful research involving immobilizing enzymes and cells.

Features

- Simple protocols for the immobilization of enzymes and cells in industrial applications
- New strategies to improve enzyme and cell properties via very simple immobilization protocols
- Novel immobilization techniques suitable for use now or in the near future
- New chemical reactors that overcome the limitations of immobilized derivatives
- Successful therapeutic and industrial applications of immobilized derivatives

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IMMOBILIZATION OF ENZYMES AND CELLS
SECOND EDITION
ISBN: 1-58829-290-8 E-ISBN: 1-59745-053-7
humanapress.com

ISBN 1-58829-290-8



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