

Preface

The intent of this edition is to provide an up-to-date account of the recent development in the fast-growing field of bioelectrochemistry. Significant methodological advances in studies of model biomembranes supported at electrode surfaces provided new tools for drug screening, detection of proteins, and electrochemical DNA screening. Significant progress in the understanding of the enzymatic reactions at electrode surfaces lead to development of biofuel cells. The knowledge of membrane and cell electroporation by high electric fields finds application in tumor therapy. This volume reviews the progress in bioelectrochemical science with a particular emphasis on the recent methodological developments and new applications of biochemistry for analytical detection, in medicine, and for energy conversion in biofuel cells. The volume should be of interest to students and researchers working in several fields such as electrochemistry, biochemistry, and analytical and medicinal chemistry. Each chapter provides sufficient background material so that it can be read by a non-specialist and specialist alike.

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