

"The enzyme is a classic but very important material that everybody in the field of biology, medicinal chemistry, biotechnology, and medicine must be familiar with. It is the extreme feature of protein that works in the cells. This concise book covers classic and modern enzymology and, therefore, is an excellent guide for those who possess the basic knowledge of chemistry and want to proceed to advanced courses."

Prof. Takeshi Nishino
University of Tokyo, Japan

"This carefully written book provides very useful information on enzymes and will immensely benefit not only undergraduate and graduate students but also researchers interested in enzymes."

Dr. Hitoshi Nakamoto
Saitama University, Japan

For a long time, enzymes have been studied by measuring their activity, which has led to the advancement of "enzyme kinetics." In recent years, the mechanism of enzyme reaction has been explained in detail on the basis of the 3D structure. Genetic engineering and the 3D structural analysis of enzymes contribute to these advancements in enzymology. This book starts with an introduction to various enzymes to show how interesting enzymes are, which is followed by historical kinetic studies on enzymes and the overall and rapid-reaction kinetics. The subsequent topics describe the basics of protein structure, the control of enzyme activity, and the purification of enzymes. A case on the kinetic and structural studies of L-phenylalanine oxidase is also presented. There are many good books on enzyme kinetics, but few describe their kinetic and structural aspects. This book deals with both and contains many references that can be good sources for further reading. It is handy and is especially helpful for beginners. A number of figures, including some with stereo expression, facilitate observing the 3D structure of enzymes.



Haruo Suzuki is professor emeritus at Kitasato University, Tokyo, Japan, a councilor of the Japanese Biochemical Society, and a member of the Japan Society for Bioscience Biotechnology and Agrochemistry. A biochemist, he graduated from the Department of Chemistry, Tokyo Metropolitan University, in 1966 and received his DSc from the Division of Biophysics and Biochemistry, the Graduate School of Science, University of Tokyo, in 1971. He worked as a postdoctoral fellow in the Department of Pathology, University of California at San Diego, from 1971 to 1973. He worked at the Institute for Developmental Research, Aichi Prefectural Colony, Japan, from 1973 to 1978, Kitasato University School of Medicine, Japan, from 1978 to 1994, and Kitasato University School of Science from 1994 to 2007. Prof. Suzuki's research interests focus on the computer analysis (QM/MD) of enzyme catalysis.



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