

ENZYME KINETICS

CATALYSIS & CONTROL:

A REFERENCE OF THEORY AND BEST-PRACTICE METHODS

Enzyme Kinetics: Catalysis & Control presents and explains the principles and best-practice techniques that have allowed enzyme science to flourish for over a century. To foster fullest participation of molecular life scientists, chemists, physicists, and engineers, this reference develops essential topics in chemical kinetics, active-site chemistry, enzyme assay techniques, and inhibitor design. Citing over 2600 classic and contemporary publications, this reference focuses on steady-state and transient-state approaches. With first-ever chapters on single-molecule enzyme kinetics and biological force generation, **Enzyme Kinetics: Catalysis & Control** is the most comprehensive and up-to-date, single-volume enzyme resource for graduate students and advanced researchers in biochemistry, chemistry, molecular biology, biotechnology, pharmacology, plant sciences, and chemical engineering.

Dr. Daniel L. Purich is Professor of Biochemistry & Molecular Biology in the University of Florida College of Medicine. A specialist in enzyme kinetics and mechanoenzymes, he has published over 160 papers, chapters, and review articles on the mechanisms of action of enzymes, microtubules, and actin filaments. In addition to nearly four decades of teaching enzyme kinetic principles at the University of California Santa Barbara and the University of Florida, Purich has presented short courses on enzyme kinetics at universities and pharmaceutical firms throughout the U.S and Europe. He also served on the editorial boards of *Journal of Biological Chemistry* and *Archives of Biochemistry and Biophysics*, on the NIH Biochemistry Study Section, and as a founding member of the NIH Physical Biochemistry Study Section. He edited the six-volume *Enzyme Kinetics & Mechanism* treatise in the *Methods in Enzymology* series, three editions of *Contemporary Enzyme Kinetics & Mechanism* (1983; 1996; 2010), as well as three volumes of *Advances in Enzymology*. Purich was also lead author of *The Handbook of Biochemical Kinetics* and *The Enzyme Reference*.



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