CHEMISTRY

This best-selling text returns in an updated second edition, designed for a one-semester physical chemistry course tailored to life sciences majors. *Physical Chemistry for the Biosciences* has been carefully revised to meet the needs and interests of students with only basic knowledge of differential and integral calculus, providing a deeper understanding of physical chemistry as it relates to fascinating biological phenomena. The text emphasizes conceptual understanding over mathematical or experimental details and connects concepts to key topics in biological science.

Premedical students will find this text foundational for further studies in biochemistry, neuroscience, pharmacology, and physiology in medical school. For those intending to pursue graduate study in biosciences, it offers a solid introduction to advanced biophysical chemistry.

Major changes to the new edition include:

- Expanded discussion of intermolecular forces
- Comprehensive coverage of protein and nucleic acid structure, equipping students with the background to fully understand the biological applications of thermodynamics and kinetics presented later in the book
- Enhanced descriptions of biological examples, such as protein misfolding diseases, photosynthesis, and vision.

About the Authors

Charles "Chip" Lovett grew up in Long Island, New York and began his college career studying architecture. After an eight-year hiatus from college that included work as a portrait artist, truck driver, and auto mechanic, he returned to college and took his first chemistry course at the age of 26. He received his B.S. and M.S. in chemistry from California State Polytechnic University at Pomona and his Ph.D. in biochemistry from Cornell University. In 1985, Lovett joined the chemistry department at Williams College, where he taught a wide variety of courses, including biophysical chemistry, physical chemistry, biochemistry, and enzyme kinetics and reactions mechanisms. His research at Williams focused on the bacterial SOS DNA repair system and involved more than 300 Williams College students. He also directed and taught in summer science programs for elementary school students and entering Williams College students from backgrounds traditionally underrepresented in the sciences. He and colleague Raymond Chang wrote a stripped-down textbook for first-time chemistry students entitled *Understanding Chemistry*. For relaxation, he plays the guitar and the piano and enjoys skiing, sailing, motorcycling, and running marathons.

Raymond Chang was born in Hong Kong and grew up in Shanghai and Hong Kong, China. He received his B.Sc. in chemistry from London University, England and his Ph.D. in physical chemistry from Yale University. After doing postdoctoral research at Washington University and teaching for a year at Hunter College of the City University of New York, he joined the chemistry department at Williams College. Chang served on the American Chemical Society Examination Committee and the Graduate Record Examination (GRE) Committee. He has also served as editor of *The Chemical Educator* and has authored books on general chemistry and spectroscopy.

Cover design by G.I. McGrew

A University Science Book

The MIT Press
Massachusetts Institute of Technology
Cambridge, Massachusetts 02142
mitpress.mit.edu

US $149.00 / CAN $194.00
ISBN 978-1-940380-39-1
59999
9 781940 380391