AN INTRODUCTION TO THE PHYSICAL PRINCIPLES OF SPECTROSCOPY AND THEIR APPLICATIONS TO THE BIOLOGICAL SCIENCES

Advances in such fields as proteomics and genomics place new demands on students and professionals to be able to apply quantitative concepts to the biological phenomena that they are studying. *Spectroscopy for the Biological Sciences* provides students and professionals with a working knowledge of the physical chemical aspects of spectroscopy, along with their applications to important biological problems.

Designed as a companion to Professor Hammes's *Thermodynamics and Kinetics for the Biological Sciences*, this approachable yet thorough text covers the basic principles of spectroscopy, including:

- Fundamentals of spectroscopy
- Electronic spectra
- Circular dichroism and optical rotary dispersion
- Vibration in macromolecules (IR, Raman, etc.)
- Magnetic resonance
- X-ray crystallography
- Mass spectrometry

With a minimum of mathematics and a strong focus on applications to biology, this book will prepare current and future professionals to better understand the quantitative interpretation of biological phenomena and to utilize these tools in their work.

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