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Nota di contenuto	Front matter -- Contents -- Acknowledgments -- Chapter One. Introduction -- Chapter Two. Units and Geometry -- Chapter Three. Emission -- Chapter Four. Absorption -- Chapter Five. Scattering -- Chapter Six. Scattering with Interference -- Chapter Seven. Fluorescence -- Chapter Eight. Polarization -- Chapter Nine. Measuring Light -- Chapter Ten. What Is Light, Really? -- Appendix A. Converting Spectral Irradiance to Lux -- Appendix B. Calculating the Absorbance Spectrum of a Visual Pigment -- Appendix C. Refractive Indices of Common Substances -- Appendix D. Optical Properties of Very Clear Water -- Appendix E. Optical Properties of Natural Waters -- Appendix F. Useful Formulas -- Appendix G. Equipment and Software Suppliers -- Bibliography -- Index
Sommario/riassunto	"Optics--a field of physics focusing on the study of light--is also central to many areas of biology, including vision, ecology, botany, animal behavior, neurobiology, and molecular biology. The Optics of Life introduces the fundamentals of optics to biologists and non-physicists, giving them the tools they need to successfully incorporate optical measurements and principles into their research. S��enke

Johnsen starts with the basics, describing the properties of light and the units and geometry of measurement. He then explores how light is created and propagates and how it interacts with matter, covering topics such as absorption, scattering, fluorescence, and polarization. Johnsen also provides a tutorial on how to measure light as well as an informative discussion of quantum mechanics. The Optics of Life features a host of examples drawn from nature and everyday life, and several appendixes that offer further practical guidance for researchers. This concise book uses a minimum of equations and jargon, explaining the basic physics of light in a succinct and lively manner. It is the essential primer for working biologists and for anyone seeking an accessible introduction to optics"--
