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Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Rotational spectra -- Chapter 3. Infrared spectra of diatomic molecules -- Chapter 4. Raman spectra -- Chapter 5. Vibrational spectra of polyatomic molecules.
Sommario/riassunto	This book presents detailed aspects of different fields of molecular spectroscopy. It consists of eleven chapters starting from the Born–Oppenheimer approximation and its relevance to various spectra to some topics on nonlinear spectroscopy through rotational, vibrational, Raman, and electronic spectroscopy, group theoretical application, nuclear magnetic resonance, electron spin resonance, nuclear quadrupole resonance, and Mossbauer spectroscopy. The intention is to present a good background of the theoretical aspects of the concerned fields which will help the readers to understand the subject firmly and apply them to their own fields according to their needs. For this purpose, several problems have been worked out to make the

readers understand how the theories are applied in the relevant practical cases. In this book, it is presumed that the readers are well acquainted with the fundamentals of the basic subjects of physics, for example, mathematical methods, classical mechanics, quantum mechanics, statistical mechanics, and electrodynamics. The purpose of writing is not only to bring a wider field in a single book but also to develop the theories starting from the fundamentals and also from the simple to the final forms through fairly elaborate powerful techniques so that the readers become self-sufficient and apply them accordingly. Since this book covers most of the major fields of molecular spectroscopy, it reduces the work of searching several publications and serves the purpose of getting detailed deductive pictures of various aspects of the subject in a single publication.
