1. Record Nr. UNINA9910459685103321

Autore	Larkin Peter (Peter J.)
Titolo	Infrared and raman spectroscopy [[electronic resource]] : principles and spectral interpretation / / Peter Larkin
Pubbl/distr/stampa	Amsterdam [Netherlands] ; ; Boston, : Elsevier, 2011
ISBN	1-4933-0127-6 1-283-11412-7 0-12-387018-6
Descrizione fisica	1 online resource (239 p.)
Disciplina	535/.8/42
Soggetti	Infrared spectroscopy Raman spectroscopy Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1. Introduction - Infrared and Raman Spectroscopy 2. Basic Principles Electromagnetic Radiation 3. Instrumentation and Sampling Methods Dispersive Systems 4. Environmental Dependence of Vibrational Spectra 5. Origin of Group Frequencies 6. Generalized Infrared and Raman Spectra 7. General Outline for IR and Raman Spectral Interpretation. 8. 108 illustrated and interpreted IR and Raman Spectra 9. 44 Unknown IR and Raman Spectra with answer key.
Sommario/riassunto	"Infrared and Raman Spectroscopy: Principles and Spectral Interpretation explains the background, core principles and tests the readers understanding of the important techniques of Infrared and Raman Spectroscopy. These techniques are used by chemists, environmental scientists, forensic scientists etc to identify unknown chemicals. In the case of an organic chemist these tools are part of an armory of techniques that enable them to conclusively prove what compound they have made, which is essential for those being used in medical applications. The book reviews basic principles, instrumentation, sampling methods, quantitative analysis, origin of group frequencies and qualitative interpretation using generalized

Infrared (IR) and Raman spectra. An extensive use of graphics is used to describe the basic principles of vibrational spectroscopy and the origins of group frequencies, with over 100 fully interpreted FT-IR and FT-Raman spectra included and indexed to the relevant qualitative interpretation chapter. A final chapter with forty four unknown spectra and with a corresponding answer key is included to test the readers understanding. Tables of frequencies (peaks) for both infrared and Raman spectra are provided at key points in the book and will act as a useful reference resource for those involve interpreting spectra. This book provides a solid introduction to vibrational spectroscopy with an emphasis placed upon developing critical interpretation skills. Ideal for those using and analyzing IR and Raman spectra in their laboratories as well as those using the techniques in the field"--