

Introduction to Infrared and Raman Spectroscopy, Third Edition

By Norman B. Colthup, Lawrence H. Daly, Stephen E. Wiberley

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Now in its third edition, this classic text covers many aspects of infrared and Raman spectroscopy that are critical to the chemist doing structural or compositional analysis. This work includes practical and theoretical approaches to spectral interpretation as well as a discussion of experimental techniques. Emphasis is given to group frequencies, which are studied in detailed discussions, extensive tables, and over 600 carefully chosen and interpreted spectral examples. Also featured is a unique treatment of group frequencies that stresses their mechanical origin. This qualitative approach to vibrational analysis helps to simplify spectral interpretation.
Additional topics include basic instrumental components and sampling techniques, quantitative analysis, Raman polarization data, infrared gas contours, and polarized IR studies, among others.

- Focuses on group frequency correlations and how to use them in spectral interpretation
- Revised and updated by a pioneer in the field, Norman Colthup, who for thirty years has served as an expert lecturer for the Fisk Infrared Institute
- Explores new group frequency studies in aromatics, alkanes and olefins, among others
- Includes completely updated section on instrumentation

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Editorial Review

Review

"This book is indeed a classic, very useful, and well worth updating." --**Clara D. Craver, President, CHEMIR LABORATORIES**

"The primary objective of this book is to convey the rules and correlations to the novice and to those of us who have an occasional need for interpreting spectra. However, it is also an excellent reference for those more experienced in interpretation....The newest edition contains some useful improvements over the earlier ones....The emphasis is still on IR; however, Raman plays a larger role and some nice examples are presented....I have emphasized the spectral interpretation aspects of the book, but it contains much more. In fact, it has all of the ingredients for an excellent introductory text on IR (and Raman) spectroscopy....This book should be on the desk of every spectroscopist and everyone involved with IR and Raman spectra of organic molecules. In addition, it is a great starting place for anyone interested in learning about vibrational spectroscopy." --***ANALYTICAL CHEMISTY***

"This is a current and relevant text dealing with the very important field of spectral correlation methods in vibrational spectroscopy. The quality of this text is not surprising, since Norm Colthup is the father of this field. At American Cyanamid, he did much of the basic work correlating infrared frequencies with functional groups, and he remains the most expert person I know in the interpretation of infrared spectra." --**Robert G. Messerschmidt, President, CONNECTICUT INSTRUMENT CORPORATION**

"The third edition of *Introduction to Infrared and Raman Spectroscopy***,** like the two previous editions, is a book that every vibrational spectroscopist should have as a reference." --***SPECTROSCOPY***

From the Back Cover
This desk reference, necessary for every practicing spectroscopist, represents the first definitive book written specifically to integrate knowledge about group frequencies in infrared as well as Raman spectra. In addition to detailing characteristic group frequencies of compounds from a comprehensive assortment of categories, the book includes a collection of spectra and a literature search conducted to verify existing correlations and to determine ways to enhance correlations between vibrational frequencies and molecular structure. Particular attention has been given to the correlation between Raman characteristic frequencies and molecular structure. Displaying infrared and Raman spectra and listing frequencies along with succinct, descriptive text, this handbook will provide a much needed reference for practicing vibrational spectroscopists in academia and industry.

Users Review

From reader reviews:

Melinda Kendall:

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