

1. Record Nr.	UNINA9911019818103321
Autore	McCreery Richard L
Titolo	Raman spectroscopy for chemical analysis // by Richard L. McCreery
Pubbl/distr/stampa	New York, : John Wiley & Sons, 2000
ISBN	9786610252749 9781280252747 128025274X 9780470349533 0470349530 9780471231875 0471231878 9780471721642 0471721646
Descrizione fisica	1 online resource (451 p.)
Collana	Chemical analysis ; ; v. 157
Disciplina	543.08584 543/.08584
Soggetti	Raman spectroscopy Analytical chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Wiley-Interscience publication.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Raman Spectroscopy for Chemical Analysis; CONTENTS; PREFACE; ACKNOWLEDGMENTS; LIST OF SYMBOLS; CUMULATIVE LISTING OF VOLUMES IN SERIES; CHAPTER 1 INTRODUCTION AND SCOPE; 1.1. History Preceding 1986; 1.2. Technological Advances; 1.3. Comparison to FTIR and NIR Absorption; 1.4. Overview of the Book; CHAPTER 2 MAGNITUDE OF RAMAN SCATTERING; 2.1. Theoretical Overview; 2.2. Definition of Raman Cross Section; 2.3. Magnitude of Raman Cross Sections; 2.4. Raman Scattering Intensity; CHAPTER 3 COLLECTION AND DETECTION OF RAMAN SCATTERING; 3.1. Signal Magnitude and Collection Function 3.2. Instrumental Variables Comprising the Collection Function 3.3. Spectrometer Response Function; 3.4. Multiplex and Multichannel Spectrometers; CHAPTER 4 SIGNAL-TO-NOISE IN RAMAN

SPECTROSCOPY; 4.1. Definition and Measurement of SNR; 4.2. Noise Sources; 4.3. Signal-to-Noise Ratio Expressions; 4.4. SNR Figure of Merit; 4.5. SNR and Detection Limits; 4.6. SNR for Multiplex Spectrometers; CHAPTER 5 INSTRUMENTATION OVERVIEW AND SPECTROMETER PERFORMANCE; 5.1. Major Spectrometer Components; 5.2. Laser Wavelength; 5.3. Dispersive vs. Nondispersive Spectrometers; 5.4. Performance Criteria
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Sommario/riassunto

Owing to its unique combination of high information content and ease of use, Raman spectroscopy, which uses different vibrational energy levels to excite molecules (as opposed to light spectra), has attracted much attention over the past fifteen years. This book covers all aspects of modern Raman spectroscopy, including its growing use in both the laboratory and industrial analysis.

2. Record Nr.	UNINA9910265658103321
Titolo	Information and computer security
Pubbl/distr/stampa	Bingley : , : Emerald, , 2015-
ISSN	2056-497X
Soggetti	Computer security Data transmission systems - Security measures Periodicals.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico
Note generali	Refereed/Peer-reviewed