

## Contents

Introduction to Theoretical Infrared Spectroscopy <i>by Herman A. Szymanski</i>	1
How Group Frequencies Are Assigned <i>by Herman A. Szymanski and Lowell Karre</i>	7
Infrared Spectra Correlation of Plastics and Resins <i>by Abram Davis</i>	17
Introduction to Inorganic Infrared Spectroscopy <i>by John R. Ferraro</i>	35
Interpretation of the Infrared Spectra of Inorganic Molecules <i>by John R. Ferraro</i>	53
Infrared Instrumentation — Past, Present, and Future: A General Survey <i>by Martin H. Gurley, III</i>	63
High-Resolution Instrumentation: Advantages and Applications <i>by Charles D. Kennedy</i>	73
A New Double-Beam Far-Infrared Spectrophotometer <i>by R. E. Anacreon, C. C. Helms, and E. H. Siegler</i>	87
Far-Infrared Spectrometry <i>by F. F. Bentley</i>	99
Applications of the Far-Infrared Region Beyond 35 Microns <i>by John R. Ferraro</i>	115
Some Studies with Far-Infrared Spectroscopy <i>by Herman A. Szymanski</i>	121
Absolute Intensities of Vibrational Absorption Bands <i>by William J. Driscoll</i>	125

Sampling for Spectrophotometry with Special Reference to the Use of the Potassium Bromide Disk Technique <i>by Sister Miriam Michael Stimson, O.P.</i>	143
Infrared Quantitative Analysis: General Comments on Instrumental Conditions for Quantitative Analysis <i>by Lewis E. Tufts and Abram Davis</i>	151
Industrial Quantitative Infrared Analysis <i>by A. S. Ayers</i>	167
Applications of Raman Spectroscopy <i>by John R. Ferraro</i>	173
Raman Spectroscopy at Canisius College <i>by Herman A. Szymanski</i>	183
Group Theory <i>by Joseph Ziomek</i>	187
Analytical Applications of Ultraviolet, Visible, and Near-Infrared Absorption Spectrophotometry <i>by Robert G. White</i>	237
Integration of Nuclear Magnetic Resonance Spectroscopy with an Infrared Spectroscopy Laboratory <i>by Herman A. Szymanski</i>	355
Bibliography of Infrared Spectrophotometry and Raman Spectra <i>by Austin V. Signeur</i>	379
Appendix	435