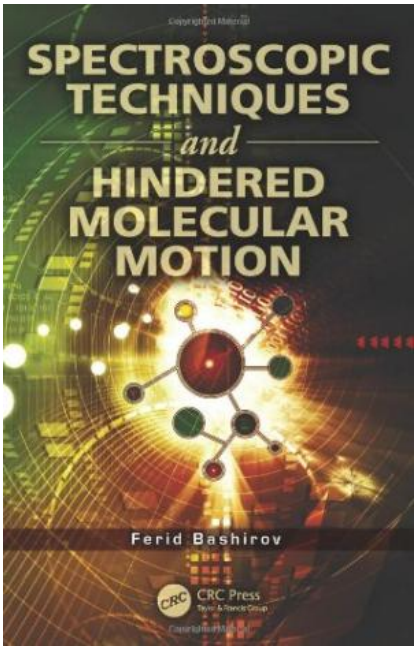

Spectroscopic Techniques and Hindered Molecular Motion

By Ferid Bashirov

CRC Press. Hardcover. Book Condition: New. Hardcover. 161 pages. Dimensions: 9.2in. x 6.1in. x 0.6in.Spectroscopic Techniques and Hindered Molecular Motion presents a united, theoretical approach to studying classical local thermal motion of small molecules and molecular fragments in crystals by spectroscopic techniques. Mono- and polycrystalline case studies demonstrate performance validity. The book focuses on small molecules and molecular fragments, such as N2, HCl, CO2, CH4, H2O, NH4, BeF4, NH3, CH2, CH3, C6H6, SF6, and other symmetrical atomic formations, which exhibit local hindered motion in molecular condensed media: molecular and ionic crystals, molecular liquids, liquid crystals, polymeric solids, and biological objects. It reviews the state of studying the hindered molecular motion (HMM) phenomenon and the experimental works on the basis of the latest theoretical research. Case Studies Physical models of hindered molecular motion General solution of the stochastic problem for the hindered molecular motion in crystals Formulae of the angular autocorrelation function symmetrized on the crystallographic point symmetry groups Formulae of the spectral line shapes concerning the dielectric, infrared, Raman, nuclear magnetic relaxation, and neutron scattering spectroscopy in the presence of the hindered molecular motion Experimental probation of the theoretical outcomes Proton relaxation in three-atomic molecular fragments undergoing axial symmetry hindered...

Reviews

Extensive guideline! Its this kind of very good study. It really is full of knowledge and wisdom I discovered this book from my i and dad encouraged this publication to understand.

-- ***Mr. Jerry Littel***

A must buy book if you need to adding benefit. It can be rally interesting throgh looking at period of time. Its been designed in an remarkably simple way and it is only after i finished reading this publication by which in fact altered me, modify the way i believe.

-- ***Ms. Julie Huels***