AND OTHER MATERIALS.

A Thesis

presented for the degree of

Doctor of Philosophy in the Faculty of Science

of the

University of Leicester

by

Waduge Sumanasiri Fernando .



Contents.

			pag
Chapter	1.	Introduction .	1
Chapter	2.	Optical properties of crystals .	8
Chapter	3 •	Theory and procedure for vibrational	
		spectroscopy in crystals .	20
Chapter	4 •	Single-crystal vibrational spectra of	
		some halogen-bridged chain complexes	3 7
Chapter	5.	Single-crystal Raman spectra of group	Ĺ
onap ver		hexacarbonyls and their solvent	
		sensitivity studies .	53
		bond at the state of the state	
Chapter	6 .	Single-crystal vibrational spectra of	
		ruthenocene .	81
Chapter	7 •	Single-crystal vibrational spectra of	
		trimeric phosphonitrilic chloride.	105
Chapter	8.	Vibrational spectroscopy of hexamethyl	
		cyclotrisiloxane and silazane .	129
		,	
Chapter	9 •	Vibrational spectroscopy of 2:2:1	
		bicycloheptadiene (norbornadiene) and	
		some of its coordination complexes .	149

Chapter 10. Single-crystal Raman spectroscopy of SbI3.3S8, AsI3.3S8, and CHI3.3S8

168

References are given at the end of each Chapter .