CONTENTS

Acknowledgement

Preface

List of Publications

Abbreviations used

Chapter

1 Introduction 1-36

2 Infrared and Polarized Raman Spectra of Tetramethyl Ammonium Cerium (III) Bis (Sulphate) Trihydrate 37-52

3 Vibrational Spectra of \([Ni(C_2H_5NO_2)(H_2O)_3]SO_4.H_2O\) and Spermine\(_{3x3}\) CuSO_4.nH_2O 53-79

4 Vibrational Spectra of Mono, Di and Tri Methyl Ammonium Double Sulphates of Rare Earths Pr, Nd, Ho and Eu 80-104

5 IR and Raman Spectra of three Novel Potassium Zirconium Fluorine Sulphates 105-121

6 Raman and IR Spectra of two Corrosion Products on Zinc NaZn_4Cl(OH)_6SO_4.6H_2O and Zn_4Cl_2(OH)_4SO_4.5H_2O 122-135

7 Infrared and Polarized Raman Spectra of Pr(BrO_3)_3 9H_2O 136-154

8 Vibrational Spectroscopic Studies of Hg(OH)BrO_3 and Ni(BrO_3)_2 6H_2O 155-172

9 Characterisation of a Submandibular Sialolith Resected from the Wharton’s Duct. 173-184