ORGANOMETALLIC AND COORDINATION CHEMISTRY OF THE MAIN GROUP AND RARE EARTH ELEMENTS

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SUMMARY

This thesis presents a series of publications relating predominantly to the organometallic, organoamido and coordination chemistry of the main group and rare earth elements as well as some supramolecular chemistry involving crown ethers and oxonium ions. Investigations have concentrated on new synthetic approaches to rare earth and main group organoamido, organometallic and aryloxo compounds and their characterisation. The chemistry of crown ethers has been thoroughly explored, particular with relevance to that involving oxonium ions and a wide variety of metal ion. Supramolecular research has mainly involved studies of hydrogen bonded species in the solid state. Particular emphasis on the characterization has involved X-ray crystallography and the structural elucidation of the compounds in the solid. Systematic studies of rare earth, bismuth and HX salts of amines have been also performed.

This thesis contains no material which has been submitted for a degree in any University by the author or other person, except where due reference is made in the text.

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