

## Preface

The last decades have witnessed significant progress in the chemistry of inorganic ring, chain, and cage systems. New compounds with novel bonding arrangements, unprecedented structures, and unusual reactivities have been prepared comprising in many cases systems which have previously been regarded impossible. These kinds of developments extend the existing theories on molecular structures and bonding, and also facilitate the development of new chemistry with industrial importance.

Like in all fields of chemistry, the driving force in the fundamental research of inorganic ring systems arises from demands of materials science to develop new innovative functionalities. As a result, materials based on such compounds find applications in electric conductors and semi-conductors, insulators, coatings, ceramics, catalysts, nanotubes, polymers, and thin films that all play a significant role in modern chemistry. The increased understanding of the properties and structures of different species can also be utilized in environmental chemistry.

The 11th International Symposium on Inorganic Ring Systems (IRIS-11) was held in Oulu, Finland on 30.7.2006–4.8.2006. Whereas the IRIS series of symposia has traditionally been concerned with main group chemistry and has brought together scientists involved both in fundamental and applied research in this discipline, in IRIS-11 the transition metal complexes and organometallic compounds also played a major role. The overall theme of IRIS-11 was ‘Inorganic Rings, Chains, and Cages: From Fundamental Research to Applications’. The major sub-themes were: (1) syntheses of inorganic rings, chains, and cages; (2) structure and reactivity; (3) computational chemistry; (4) cyclic radicals; (5) transition metal rings and clus-

ters; (6) precursor chemistry; and (7) implications to materials science.

The 172 active participants came from 17 countries and included both experimental and theoretical chemists. The majority came from Germany, United Kingdom, and Canada, which alone covered more than 50% of the participants. The scientific program consisted of eight plenary lectures, twelve invited session lectures, 60 oral contributions, and 56 poster presentations.

The first IRIS symposium was organized 30 years ago in Madrid, Spain. Since then, the conferences have been held in Göttingen (Germany, 1978), Graz (Austria, 1981), Paris (France, 1985), Amherst (USA, 1988), Berlin (Germany, 1991), Banff (Canada, 1994), Loughborough (UK, 1997), Saarbrücken (Germany, 2000), Burlington (USA, 2003), and in Oulu (Finland, 2006). IRIS-12 will take place in Goa, India in 2009.

This special issue in *Journal of Organometallic Chemistry* is based on papers that were presented in the oral program of IRIS-11. The submitted papers comprise original research work, reviews, or perspectives on recent development in special fields of chemistry. I thank everybody, who contributed to the special issue as well as to the scientifically very rewarding IRIS-11.

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