

## Special issue on Chemical Crystallography

### Foreword

Crystallography has played a leading role in the development of chemistry ever since the discovery of X-ray diffraction of crystals by Max von Laue in 1912 and application of this phenomenon to crystal structure determination by W. H. Bragg and W. L. Bragg a year later. The impact of these discoveries was extraordinary. Suddenly, chemists knew that sodium chloride consists of discrete  $\text{Na}^+$  and  $\text{Cl}^-$  ions rather than molecules of NaCl, and that the benzene ring is flat with the C–C bond lengths equal. Crystallography continued to establish itself as the surest method of structure determination of organic, inorganic and organometallic compounds over the decades. It is accurate, swift and inexpensive, accounting for its great popularity. Initially, chemists were interested in determining the structure and stereochemistry of isolated molecules. Later, attention shifted to examining patterns of molecules, held together by intermolecular interactions, the most important of which is hydrogen bonding. Packing patterns came to be analysed by examination of crystal structures of entire families of compounds. This was done experimentally and also with the use of crystallographic databases. In turn, this led to the establishment of the subject of crystal engineering which now covers organic molecular solids and metal organic framework (MOF) compounds. Today, crystal engineering is moving from structure design to property design.

The Indian contribution to structural chemistry has been impressive in recent times and I am glad to note that Prof. Moorthy and Prof. Murugavel have assembled here a collection of interesting contributions from several groups. It is important that Indian researchers publish good papers in Indian journals. In the end, the quality of any journal reflects the state of research in the country of publication. It is to be hoped that the rapidly increasing quality of structural chemistry in India will be conveyed into the impact and outreach of Indian chemistry journals such as this one.

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