

Preface

In the last decade, ionic liquids have moved from relative obscurity to something that most chemists are now very aware of. At present, the interest in ionic liquids shows a continuous increase. On the opposite, ionic liquids are being examined as new components within polymer-based materials for a wide range of applications of advanced materials. For those who are not familiar with ionic liquids and who wish to begin exploring the combination of polymers and ionic liquids as well as the related materials for a given application, it can be a daunting task to become familiar with their properties. The unique set of physico-chemical properties of ionic liquids finely tuned from their chemical structure makes them suitable in numerous applications in polymer science. Ionic liquids represent new media for macromolecular synthesis and modification of polymers and used as solvents for poorly soluble polymers such biopolymers. A special interest to ionic liquids is related to their 'green solvent' character. The ionic liquids are also investigated as additives for designing polymer materials as novel electrolytes in batteries, templates for porous polymers, plasticizers, surfactants in the preparation of functional polymers, etc. Their quite rapid emergence as alternative solvents has involved a fast growing number of examples of application but the understanding and study of their physical properties has lagged behind. A better knowledge for polymer scientists on spe-

cific properties of ionic liquids must be required so that the true potential of ionic liquids in polymer science can be highlighted.

This EUPOC CONFERENCE on September 1–5, 2013 in Gargnano (Italy) was a unique opportunity for merging the expertises from ionic liquids and polymers scientific communities and to provide a forum for discussion of state of the art approaches both in the field of ionic liquids and polymers combined with ILs. The conference has focused on future progress and prospect for applications of ionic liquids in the preparation of functional polymers. The synthesis, the physico-chemical properties and the physical aspects associated with ionic liquids and their combination with polymers as solvents, processing aids, and polymerization media for advanced materials have been covered. The exciting topics (perhaps together with the beauty of the Garde Lake) attracted 92 participants from 22 countries who gave 11 main lectures as well as 38 oral and 34 poster communications. The participants have created not only a fruitful discussion but also in an exciting and enjoyable environment. We wish to express our gratitude to all participants for supporting the meeting, to the organizing committee for their very good job and to the contributors for their carefully prepared papers.

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