

Preface

The series of International Symposia on Solubility Phenomena and Related Equilibrium Processes (ISSP) brings together chemists from a wide range of fields where solubility plays an important role. This variety was well reflected at the 12th ISSP where the plenary and invited lectures included: gas solubilities (Maurer) and gas hydrates (Sloan); solubility limitations to lithium–air batteries (Salomon); studies of solubilities at high pressures (Sawamura); solubility considerations in radioactive waste management (Wanner); kinetics of precipitation and dissolution in hydrothermal systems (Wesolowski); crystal growth and dissolution processes (Koutsoukos); and preferential crystallization (König). Those presented here illustrate this breadth of subject matter and highlight the combination of fundamental and applied research that characterizes this field.

A tradition has developed in the ISSP series of holding a workshop on one topic of particular interest, in parallel with the scientific program. This year's workshop related to the current state of thermodynamic databases that could be used in understanding and predicting the properties of complex systems, for example, those encountered in constructing waste management facilities. A paper summarizing the workshop discussions is included in this compilation.

The series of Solubility Phenomena grew out of the work of the IUPAC Solubility Data Commission and has been continued through the auspices of IUPAC's Subcommittee on Solubility and Equilibrium Data. The first in this biennial series of meetings was held in 1984 at the University of Western Ontario, and, while subsequent meetings have commonly been held in North America (Newark and Troy) or Europe (Guildford, Moscow, Leoben, Varna, and Aveiro), meetings in Buenos Aires, Hammamet, and Niigata have ensured that all continents have hosted these enjoyable meetings.

The ISSPs are consistently friendly and interesting meetings that bring together scientists and friends from many fields and all parts of the world. The 12th ISSP, held from 23 to 28 July, was entirely in keeping with this tradition with over 100 participants from 30 countries converging on the charming town of Frieberg in Saxony where traditional German hospitality combined with the weather to make a memorable meeting.

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