Measurement of the Thermodynamic Properties of Single Phases, Vol. VI

A. Goodwin, K. N. Marsh, and W. A. Wakeham
Elsevier, 2003
ISBN 0-444-50931-3

The editors of this volume were assigned the task of assembling an international team of distinguished experimentalists to describe current techniques for measuring the thermodynamic quantities of single phases, consisting of both pure fluids and compositionally complex mixtures, over a wide range of conditions. The resulting volume contains a valuable summary of a large variety of experimental techniques applicable over a wide range of thermodynamic states, with an emphasis on the precision and accuracy of the results obtained. Those interested in the art of measurements, and in particular engaged in the measurement of thermodynamic properties, will find this material invaluable for the guidance it provides towards the development of new and more accurate techniques. Readers will find that the text has a strong practical bias and includes both detailed working equations and figures for the experimental methods. The volume addresses a general audience of academics, graduate students and industrial readers, and is the most comprehensive text in this field since the publication of *Experimental Thermodynamics Volume II* in 1975.

www.iupac.org/publications/books/author/goodwin.html

Progress in Polymer Science and Technology

Mao Xu (ed.)
Macromolecular Symposia, Vol. 195
Wiley-VCH, 2003, pp. 1–327
ISBN 3-527-30699-4

This issue contains some of the plenary lectures and invited lectures presented at the 2002 IUPAC World Polymer Congress (The 39th International Symposium on Macromolecules) held in Beijing, China, from 7–12 July 2002. Around 1300 attendees from 44 countries actively participated in the various activities of the Congress, which was organized by the Polymer Division of the Chinese Chemical Society.

The scientific program of the Congress involved plenary sessions and the following scientific sessions:

- polymer synthesis and reactions
- structure and properties of polymers
- macromolecular architecture
- polymer blends and composites
- functional polymers
- bio-related and medical polymers
- polymers and environment
- polymer engineering and processing

The conference covered all the main fields of polymer science and technology. There were a total of 1072 papers delivered, including 380 oral and 692 poster presentations.

www.iupac.org/publications/macro/2003/195_preface.html

Solubility Equilibria—in Honor of Heinz Gamsjäger

Monatshefte für Chemie/Chemical Monthly,
Vol 134, No. 5, pp. 619–790, 2003

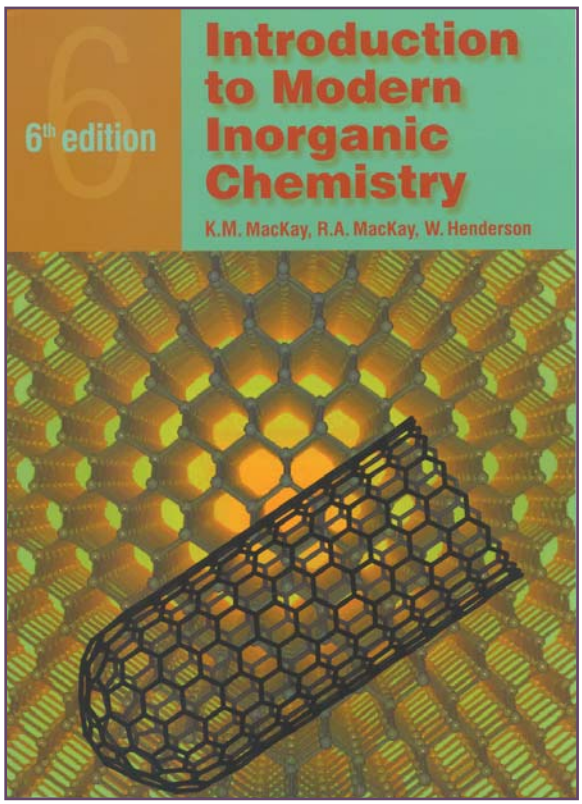
To honor Professor Heinz Gamsjäger, chairman of the IUPAC Subcommittee on Solubility and Equilibrium Data (SSED), on the occasion of his seventieth birthday, *Monatshefte für Chemie/Chemical Monthly* published a special issue on "Solubility Equilibria," edited by Erich Königsberger. The authors of the contributions to this special issue have served for many years on the IUPAC Commission on Solubility Data (now SSED) and edited and contributed to numerous volumes of the IUPAC-NIST Solubility Data Series (SDS).

In the preface to the special issue, Mark Salomon, editor in chief of SDS, gives an overview of Heinz Gamsjäger's scientific career from 1956, when he was awarded an M.Sc. degree (Dipl.-Ing. Technical Chemistry) by the Technical University Graz, until the present as an emeritus professor of physical chemistry at the University of Leoben, Austria, and chairman of SSED.

Gamsjäger was never one to rest; he was a visiting professor at many foreign universities, and in 1981 he was also an advisor to the Japan Society for the

Promotion of Science Fellowship for Research in Japan. He has served on the editorial board of *Monatshefte für Chemie/Chemical Monthly* since 1998, and on the editorial board of the IUPAC-NIST Solubility Data Series since 1994. Gamsjäger has also been a major driving force in the IUPAC Solubility Data Project since 1990 serving as Secretary of IUPAC Commission V.8 on Solubility Data from 1994 to 2000, and as Chairman of SSED from 2001 to the present. In his capacity as a member of IUPAC Commission and SSED, Gamsjäger has provided guidance, kind criticism, and friendship to his colleagues on SSED and has been instrumental in coordinating the efforts of over 100 distinguished scientists worldwide who are active in the work of SSED.

The papers published in this special issue of *Monatshefte* represent contributions from Professor Gamsjäger's close friends and colleagues on SSED. The scope and creativity of these contributions are a tribute to his influence and interaction with his colleagues. The scientific topics cover a variety of solubility phenomena, including general aspects of gas-liquid solubilities (P. G. T. Fogg), gas-liquid and liquid-liquid solubilities of chloromethanes in water (H. L. Clever), and mutual water-hydrocarbon solubilities (A. Maczynski *et al.*). Solid-liquid solubility studies include double salt formation in ternary transition metal-alkali metal halide systems (Chr. Balarew and S. Tepavitcharova), solubilities in ternary aqueous systems involving Cu(II) (L. V. Chernykh *et al.*) and magnesium salts (F. Bousmina *et al.*), the crystallisation and phase stability of calcium sulfate based salts (D. Freyer and W. Voigt), and a new evaluation of the solubility constants of the three calcium carbonate polymorphs (A. De Visscher and J. Vanderdeelen). Other reviews deal with solubilities in mixed solvents of silver halides (W. E. Waghorne) and alkali metal fluorides (G. Senanayake and G. Hefter) and with solubility phenomena in ternary water-salt systems under sub- and supercritical conditions (V. Valyashko and M. Urusova). Solid-liquid solubilities also extend to lanthanide chlorides in molten alkali metal chlorides (M. Gaune-Escard and L. Rycerz), environmental aspects of Pb(II) arsenate stabilities (M. C. F. Magalhães and M. C. M. Silva), and an application of solubility measurements to medicine (G. Sadovska *et al.*).



Introduction to Modern Inorganic Chemistry

K. M. MacKay, R. A. MacKay and W. Henderson
Nelson Thornes, 6th edition, 2002.
ISBN 0 7487 6420 8

reviewed by Bernard Meunier

It's always a pleasure to have a look at a new edition of a popular (inorganic) chemistry textbook: What has been done to make it better? Has it been made more attractive? These are two key questions for teachers who are facing a new generation of students. How can one teach these young people who have been trained mainly by videos and partially by reading books? Well, if you are looking for an attractive and comprehensive book for teaching inorganic chemistry, then you will be highly interested in this the sixth edition of *Introduction to Modern Inorganic Chemistry* by Ken MacKay, his wife Ann, and Bill Henderson.

What is attractive about this book? First, it provides an exhaustive overview of the fundamental bases of inorganic chemistry. Second, boxes located in the margins or in the middle of pages provide