Topics editor, Professor James R. Bull. For more information on the special topics project, go to <http://www.iupac.org/publications/ci/2000/july/special_topics_project.html>.

www.iupac.org/publications/pac/2001/7312/index.html

Handbook of Pharmaceutical Salts: Properties, Selection, and Use

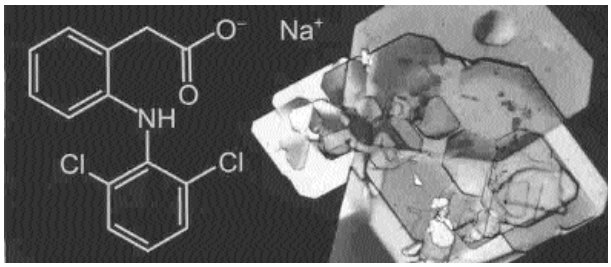
P. H. Stahl and G. Wermuth (editors)
Verlag Helvetica Chimica Acta, Zürich, 2002.
(ISBN 3-906390-26-8)

Because an estimated half of all drug molecules used in medicine are administered as salts, the selection of a suitable salt for a drug candidate is recognized as an essential step in the preclinical phase of drug development. Surprisingly, however, the scientific literature on this topic is rather limited and scattered throughout numerous journals and patents. The majority of medicinal chemists in the pharmaceutical industry whose primary focus is the design and synthesis of novel compounds as future drugs are organic chemists for whom salt formation is often a marginal activity restricted to the short-term objective of obtaining crystalline material. Because a comprehensive resource that addresses the preparation, selection, and use of pharmaceutically active salts has not been available, these scientists may forego the opportunities for increased efficacy and improved drug delivery provided by selection of an optimal salt.

To fill this gap in the pharmaceutical bibliography, an international team of 17 authors from academia and pharmaceutical industry contribute to this volume and present the necessary theoretical foundations as well as a wealth of detailed practical experience in the choice of pharmaceutically active salts. Altogether, the contributions in this book reflect the multidisciplinary nature of the science involved in selection of suitable salt forms for new drug products. The editors have taken care to address every conceivable aspect of the preparation of pharmaceutical salts.

This book is destined to be an essential reference for students of medicinal and pharmaceutical chemistry, and an indispensable handbook for research-and-development chemists, analytical chemists, biologists, development pharmacists, regulatory and patent specialists, and medicinal scientists engaged in preclinical development of drugs. This comprehensive up-to-date guide will be an instructive companion for all scientists involved in research and development of drugs and, in particular, of pharmaceutical dosage forms.

This reference is the result of an IUPAC project chaired by Prof. Camille G. Wermuth, the former president of IUPAC's Chemistry and Human Health Division.

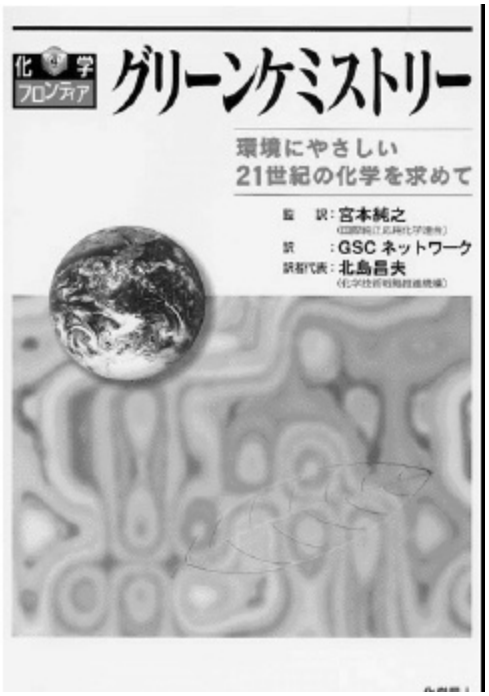


www.iupac.org/publications/books/author/wermuth02.html

Green Chemistry—the Japanese translation of the special topic issue of *Pure and Applied Chemistry* (Vol. 72, No. 7, 2000)

Translation coordinated by Junshi Miyamoto (2001).
(ISBN 4-7598-0734-9)

The original publication and its translation are to promote and disseminate awareness of environmentally compatible synthetic pathways (green chemistry) throughout the academic and industrial scientific research community. In 1999 an IUPAC project was initiated to publish a Symposium-in-Print on Green Chemistry, and to compile a collection of expert reviews on aspects of the topic, underpinned by an introductory account of the evolution



of the project, its rationale, and its interfaces with complementary initiatives and organisations.

This volume represents the culmination of that undertaking. The introductory overview gives a detailed account of the role and interest of IUPAC in promoting this initiative and provides an account of the historical emergence of the concept. This is followed by a synoptic preamble, in which the content and purpose of individual reviews in the issue are summarized. The Symposium-in-Print captures the current status of the discipline and projects the boundless opportunities and challenges confronting contemporary organic synthesis and its practice in a changing world, increasingly sensitized to the finite bounds of natural resources and the vulnerability of the biosphere. The issue offers evidence that current problems are being addressed and can be solved, and engenders expectations that future problems can be anticipated and prevented.


www.iupac.org/publications/pac/2000/7207/japanese_title.html
www.iupac.org/publications/pac/2000/7207/index.html

Polymer Characterization and Materials Science

R. D. Sanderson and H. Pasch
Macromolecular Symposia, Vol. 178.
Wiley-VCH, 2002, pp. 1–181.
(ISBN 3-527-30468-1)

This volume contains selected papers presented at the UNESCO School and IUPAC Conference on Macromolecules and Materials Science, held in Stellenbosh, South Africa, in April 2001. World authorities in various fields of macromolecular science were invited to give tutorials at the UNESCO School and informative plenaries at the conference. The exposure to new ideas and advanced concepts in macromolecular science is of great importance for South African students and senior staff alike. It is particularly valuable that with the support of UNESCO, generous concessions can be made for attendees from disadvantaged communities and from countries with emerging technologies.

The 4th UNESCO School and IUPAC Conference focused on polymer characterization, new polymer architectures and nanomaterials. Abridged versions of a number of papers are compiled to create the present volume of *Macromolecular Symposia.* The content of the papers is also available in the Virtual Teaching Encyclopaedia which contains papers from previous UNESCO conferences as well <www.sun.ac.za/unesco/unesco.htm>.


www.iupac.org/publications/macro/2002/178_preface.html

Non-Metals in Liquid Alkali Metals

Hans Ulrich Borgstedt and Cezary Guminski
IUPAC-NIST Solubility Data Series. 75.
Journal of Physical and Chemical Reference Data, Vol. 30, No. 4, pp. 835–1158, 2001.

All available solubility data of nonmetallic elements and some of their compounds in the five liquid alkali metal solvents (Li, Na, K, Rb, and Cs) are collected and compiled. Original publications with reliable data and information on the methods used to generate them are reported in individual compilations. When numerical data are not given in a publication, the data are often read out from figures and converted into numerical data by the compilers. The precision of this procedure is indicated in the compilations under estimated error. Evaluated solubility data are tabulated at the end of the critical evaluations: if there is agreement of at least two independent studies within the experimental error, the solubility values are assigned to the "recommended" category. Values are assigned as "tentative" if only one reliable result was reported, or if the mean value of two or more reliable studies was outside the error limits. In the tabulation, three, two, or one significant figures are assigned for respective precisions that are better than ±1% and ±10% and worse than ±10%. If necessary, the solubilities are recalculated into mol %.

The completeness of this investigation of the literature has been confirmed and extended by studying several reviews dealing with the solution chemistry of substances in the alkali metals. Solubility data are sometimes measured under parameters, which are not standard conditions of such measurements. Frequently measurements are performed under constrained pressure. The solubility of noble gases or other gases, which do not form compounds with the alkali metals, depends on the gas pressures. This dependency is documented in the data sheets.


www.iupac.org/publications/sds/2001/75_abstract.html
www.iupac.org/projects/2001/2001-034-1-500.html

Heat Capacity of Liquids: Critical Review and Recommended Values

Milan Zábranský, Vlastimil Ruzicka, Jr., and Eugene S. Domalski
Journal of Physical and Chemical Reference Data, 30, No. 5, pp. 1199–1689, 2001.

A study was carried out in which new experimental data on heat capacities of pure liquid organic and some inorganic compounds were compiled and critically evaluated. The study also provided recommended values. Compounds included in the compilation have a melting point below 573 K. The bulk of the compiled data cover