



49 CODATA / NEWSLETTER

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East-Asian Data Bases

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The Committee on Data for Science and Technology (CODATA) was established in 1966 by the International Council of Scientific Unions.

Working on an interdisciplinary basis, CODATA seeks to improve the quality, reliability, processing, management, and accessibility of data of importance to science and technology.

CODATA has just published two volumes that open the doors to Chinese, Japanese, and Korean databases on scientific and technological subjects. The first is the *Directory of East-Asian Data Sources for Science and Technology* (CODATA Bulletin, Vol. 21, No. 3-4) and the second is *Data Activities and Database Developments in China, Japan, and Korea* (CODATA Special Report No. 12). Both result from the activities of the CODATA Task Group on Data Sources in Far-Eastern Countries (chaired by Professor Jiro Osugi of the Research Institute for Production Development) and the members in this continuing endeavor.

Formidable language problems have restricted knowledge and application of Oriental data banks. The Task Group has broken the language barrier and compiled much information on data sources available and under development. Many data banks—including some on-line—are seen to be accessible in English. As expected, interesting differences exist.

The former volume lists 90 Chinese, 117 Japanese, and 9 Korean databases on-line and otherwise. Data center titles in the respective national alphabetic characters, plus transliterated titles into pin yin—or appropriate phonetics as well as translated in English are indicative of the care taken to make this Directory meaningful to different types of users. In other respects it parallels CODATA Directory. This material is intended for subsequent dissemination in the CODATA Referral Database.

The original sequence of items by subject with cross references together with extensive indexes provides convenient location and retrieval of desired information.

Procurement of this volume most economically—and related CODATA literature—probably merits a subscription to the CODATA Bulletin, but individual volumes may be ordered from Hemisphere (details on pp. 5 & 6).

The latter volume (*Data Activities and Database Developments...*) incorporates the text of a score of oral presentations on the development of the databases in the three Oriental countries of this study. The lectures were delivered by Task Group members and invited speakers during the November 1988 Task Group

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CODATA Supporting Organizations on Increase

CODATA is an international, non-profit, Scientific Committee of ICSU which is concerned with the compilation, management, and dissemination of scientific and technical data. It carries out a variety of activities aimed at improving the quality of data and making data sources more accessible to the scientific and technical community. These include the development of guidelines for storing and presenting numerical data, promotion of new data banks and networks, and many educational activities such as workshops and training courses. Particular attention is given to the data needs of major industries.

In order to strengthen its links with organizations which use numerical scientific and technical data, CODATA has established a class of membership for Supporting Organizations. This is open to both commercial and non-profit organizations, and gives them special access to our publications and activities.

Among the organizations already furthering the endeavors of CODATA to improve the quality and availability of scientific and technological data are the following:

The DOW Chemical Company
Hemisphere Publishing Corporation
International Atomic Energy Agency
National Library of Medicine
National Technical Information Service
Pergamon Press
STATOIL
American Institute of Physics
American Society for Metals
Beilstein Institut
Chemical Abstracts Service
DECHEMA
Fachinformationszentrum Chemie, GmbH
(FIZCHEMIE)
Japan Association for International Chemical
Information (JAICI)
Centre de Documentation de l'Armement
Chemical Industry Institute of Toxicology
Comissao Nacional de Energia Nuclear
Design Institute for Physical Property Data (DIPPR)
Engineering Information, Inc.
International Association for Advancement of High
Pressure Science and Technology (AIRAPT)
International Association on the Properties of Steam
(IAPS)
Office of the Japan Society for CODATA, Japan Society
of Information and Knowledge
Laboratoire Central de la Préfecture de Police
Technical Database Services, Inc.
Toho Kobatake
CERDIC HDB

Meeting on Access to Data

Summary. In response to the recommendation of the 22nd ICSU General Assembly (September 1988), an informal exploratory meeting was held in Paris on 16 June, 1989, to exchange views

on a number of important issues pertaining to access to scientific information and data, many requiring further consideration by ICSU and other international bodies. These concerns focus on national security, on commercial barriers to public access to and free circulation of scientific information and data, on particular concerns of developing country interests, and on bio-ethical concerns.

ICSU has many challenging issues to assess with a view to providing guidance to its community of interests: techniques/technology of information and data storage, processing and distribution, and policy implications; to clarify and define contents of info/data directories for users; to encourage more effective interactions among FAGS, WDCs, CODATA; and to provide a broad based newsletter on the rapidly moving information/data field to ICSU bodies and the scientific community in general. The Executive Board accepted the offer of CODATA to assist ICSU to implement its Resolution Number 8 on Access to Data. The informal meeting involved about 16 CODATA and other ICSU individuals. Only a very brief summary of their deliberations is possible here.

The exchange of views underscored the growing problems and magnitude of data management, the need to learn how to use computerized services which are not considered user-friendly, and sociological and economic factors influencing political leaders as well as users. A key issue pertains to ensuring the understanding that all information has costs; computerized services are perceived as too costly not taking into consideration that printed information and library services have costs which may be indirect or hidden.

The economics of data management involves making the public conscious of real costs. Access and free circulation of data are becoming increasingly complex with respect to raw data (which should be freely available) and processed data (which may have proprietary costs).

There is a favorable movement toward the more liberal transfer of information; yet there are still many barriers. Efforts should be made to convince politicians that information spreads rapidly; restrictions are thus counterproductive and are contrary to ICSU principles.

The meeting recommended that ICSU consider a resolution pertaining to limiting the time delay on availability on scientific information and data developed under commercial arrangements. Scientists and engineers should convince lawyers and management on the value of the free flow of scientific information and data.

It was noted that although computerized information services are becoming cheaper, more comprehensive and of potentially increasing value and importance to developing countries, their problems include hard currency requirements, user training, sensitizing public officials, and establishing an adequate infrastructure (e.g., stable, constant voltage).

The importance to developing countries of PCs and links to networks in contrast to large facilities (mainframes) was stressed. Unesco should be encouraged to intensify training activities and to provide coupons or hard currency requirements.

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Symposium on Spatial Data Handling

The 4th International Symposium on Spatial Data Handling will be held on July 23-27, 1990, at the University of Zurich, Switzerland. As its predecessors this interdisciplinary meeting is sponsored by the Commission on Geographic Information Systems of the International Geographical Union and will emphasize research issues rather than applications. The official language of the meeting will be English. Proceedings of the technical presentations will be published at the time of the conference. Persons interested in the second circular of the conference are requested to communicate with the address below.

The conference will focus on the following topics:

- Algorithms and data models for applications
- Spatial languages and user interfaces
- System design and architectures for data integration
- Amplified intelligence concepts for spatial data handling
- Spatial data handling approaches for alternative system architectures (neural nets, parallel processing)

Inquiries and abstracts should be directed to: Symposium Secretariat, Geographisches Institut, Universität Zürich, Winterthurerstrasse 190, CH-8057 Zürich, Switzerland. Telephone: 0041-1-257 5151; Telefax: 0041-1-257 4004; E-mail: K505820@CZHRZU 1A.bitnet.

Chemical Information Conference

The field of chemistry (embracing areas in pharmacology and patents) has traditionally been in the forefront of information development. Today one sees a rich area of chemical information available via online systems, via optical media such as CD-ROM, and via magnetic diskettes, together with a diverse range of search and retrieval software, structural input and translation software, and chemical database management software.

This is the information area that will be explored at an international level at the Montreux 1989 International Chemical Information Conference, and within its attendant exhibition. The conference and the exhibition will be 26-28 September, 1989, based at the modern Montreux Centre des Congrès beside Lake Geneva, Switzerland.

The conference's final program will contain around 33 papers in the area of chemical, pharmaceutical and patent information, with some papers on theoretical aspects.

Further information may be had from: Montreux Chemical Information Meeting, Montreux Convention Bureau, Rue du Théâtre 5, P. O. Box 97, 1820 Montreux, Switzerland; Tel: +41 (0)21 963 1212; FAX: +41 (0)21 963 2760.



CODATA Calendar

1989

August

9-10 CODATA Referral Data Task Group. Lund, Sweden

September

4-8 CODATA Materials Database Management. Novosibirsk and Moscow, U.S.S.R.

12-13 CODATA Geothermodynamic Table Task Group. Frunze, U.S.S.R.

21-23 CODATA Panel on Complex Data by Parallel and Visual Computing (J. E. Dubois). Paris, France

December

7-8 CODATA Officers' Meeting. Paris, France

1990

March

1-3 CODATA East-Asian Data Sources Task Group. Kyoto, Japan

22-24 CODATA Executive Committee Meeting. Paris, France

July

15-21 12th International CODATA Conference, "Data for Discovery," Columbus, Ohio, U.S.A.

22-23 CODATA General Assembly, Columbus, Ohio, U.S.A.

Meeting on Access to Data

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Developing countries are urged to collect, store, and use their own information for their own needs.

A recommendation that ICSU take steps to formalize COGENE/CODATA/COBIOTECH interactions relative to Human Genome and other biotechnology ethical concerns; to clarify copyright-propietary, public domain issues; and to encourage Unesco to take a lead on ethical issues with respect to the public interest was developed.

The serious problem of direct storage of data in computer files and the subsequent provision of processed information/data without providing limitations and qualifications can lead to dangerous consequences. This common problem of *access to raw data* and providing qualifications on processed data was underscored. It was suggested that ICSU should give further attention to this serious problem.

Nuclear Material Thermochemistry

Thermochemical Data for Reactor Materials and Fission Products presents a collection of critically assessed data of inorganic compounds which are of special interest in nuclear reactor safety studies. Thermodynamic equilibrium calculations are an important and widely used instrument in the understanding of the chemical behaviour and release of fission products in the course of nuclear reactor accidents. The reliability of such calculations is, nevertheless, limited by the availability of accurate input data for relevant compounds.

The present assessment deals with a wide variety of elements and compounds (oxides, hydroxides, iodides, tellurides, alloys, and ternary oxides) relevant to light water and fast nuclear reactors in their condensed and gaseous state, many of which have been evaluated for the first time. Recommended values, obtained from a critical evaluation of the literature, are given in an extensive explanatory text, and compiled in thermochemical tables from 298 to 3000 K. Attention is also given to the crystallographic properties of the condensed phases.

The data book is not only of use in nuclear reactor technology, but to all working in the field of inorganic chemistry. More than 200 data tables are contained in its 800 pages.

It will be published by Elsevier in late 1989. The book's editors are E. H. P. Cordfunke and R. J. M. Konings. Its contributing authors are E. H. P. Cordfunke, R. J. M. Konings, G. Prins, P. E. Potter, and M. H. Rand.

Dialog and Ei Announce Compact Disk

Engineering Information, Inc. ("Ei") and Dialog Information Services, Inc., announced the development of a Compact Disc (CD-ROM) edition of Ei's COMPENDEX PLUS. The announcement was made during the recent National Online Meeting in New York City.

The COMPENDEX PLUS CD-ROM will be available both as a stand-alone CD-ROM product and as part of Ei's Engineering Information Workstation. The stand-alone is due out in September, with the Workstation to follow in first quarter 1990. The Workstation also includes a document-ordering and fulfillment system, using document images and facsimile transmission from Ei's New York offices; and the tables of contents from key engineering publications. COMPENDEX PLUS provides coverage of the world's significant engineering and technical literature. It contains references indexed in the printed Engineering Index and the Engineering Meetings file.

Dialog's OnDisc(tm) retrieval software provides an "Expert Mode" similar to the online Dialog system, as well as a menu-driven "Easy Search" mode for novice users.

The COMPENDEX PLUS file, and its predecessors, COMPENDEX and Ei Engineering Meetings, have been online with Dialog Information Services since 1973 and 1983, respectively.

NEA Thermochemical Data Base Project

The NEA Data Bank project on thermochemistry is concerned with the development of a CODATA-compatible chemical

thermodynamics database for compounds of interest to various areas of nuclear technology--especially to radioactive waste management (e.g., safety analysis of nuclear waste repositories). It involves not only compilation of relevant published thermodynamic data but a critical evaluation on key substances to achieve a *Selected Data Set*.

The significant progress to date is summarized by a set of reports dated March 1, 1989 prepared by H. Wannier and others:

- TDB-0 *The NEA Thermochemical Data Base Project* (11 pp)
- TDB-1 *Guidelines for the Review Procedure and Data Section* (6 pp)
- TDB-2 *Guidelines for the Extrapolation to Zero Ionic Strength* (22 pp)
- TDB-3 *Guidelines for the Assignment of Uncertainties* (14 pp)
- TDB-4 *Guidelines for Temperature Corrections*
- TDB-5 *Standards and Conventions for TDB Publications* (20 pp)

Those interested in further details should contact the OECD Nuclear Energy Data Bank, F-91191 Gif-sur-Yvette, France.

East-Asian Data Bases

(cont'd. from page 1)

sessions in Beijing and highlighted future plans and directions of database evolution. Although distributed within the CODATA family, it has been made available to the international scientific community through three distribution points for a nominal price (cf. under listing on pp. 5 & 6).

The work of the Task Group is being continued to update the *Directory* chapter and to extend its coverage to other East-Asian nations.

"Data Activities and Database Developments in China, Japan, and Korea"

In response to prepublication interest, this *Special Report* is being made available for sale postpaid for only \$32(US), 200 French francs, or 120 Chinese (P.R.) yuan.

The three centers are:

CODATA Secretariat, 51 bd. de Montmorency, 75016 Paris, France;

CODATA Editorial Office, c/o Department of Chemistry, University of Michigan, Ann Arbor, MI 48109-1055, USA; and

Chinese National Committee for CODATA, Attn: Associate Professor Hu Yaru, P. O. Box 2745, Zhongguancun, Beijing, P.R. China.

Remittance with order will expedite dispatch of this volume.

(See Books, pp. 5 & 6, for details.)

Books

Thermochemical Data for Reactor Materials and Fission Products. Editors: E. H. P. Cordfunke and R. J. M. Konings. Contributors: E. H. P. Cordfunke, R. J. M. Konings, G. Prins, P. E. Potter, and M. H. Rand. (a)

Vapor-Liquid Equilibrium Data Collection. Organic Hydroxy Compounds: Alcohols (Supplement 3). (Chemistry Data Series, Vol. I, Part 2e.) J. Gmehling, U. Onken, and J. R. Rarey-Nies. (b)

Heats of Mixing Data Collection. Binary Systems. (Chemistry Data Series, Vol. III, Part 1.) C. Christensen, J. Gmehling, P. Rasmussen, and U. Weidlich. (b)

Heats of Mixing Data Collection. (Chemistry Data Series, Vol. III, Part 2.) C. Christensen, J. Gmehling, P. Rasmussen, and U. Weidlich. (b)

Recommended Data of Selected Compounds and Binary Mixtures. (Chemistry Data Series, Vol. IV, Parts 1 + 2.) K. Stephan and H. Hildwein. (b)

Liquid-Liquid Equilibrium Data Collection. Supplement 1. (Chemistry Data Series, Vol. V, Part 4.) E. A. Macedo and P. Rasmussen. (b)

Solid-Liquid Equilibrium Data Collection. Binary Systems. (Chemistry Data Series, Vol. VIII, Part 1.) H. Knapp, M. Teller, and R. Langhorst. (b)

Online Database Selection: A Users Guide to the Directory of Online Databases. (c)

Solubility Data Series, Vol. 33, Molten Alkali Metal Alkanoates, edited by P. Franzosini. (d)

Solubility Data Series, Vol. 34, 4-Aminobenzenesulfonamides, Part I: Non-cyclic Substituents, edited by A. N. Paruta and R. Piekos. (e)

Solubility Data Series, Vol. 35, 4-Aminobenzenesulfonamides, Part II: 5-Membered Heterocyclic Substituents, edited by A. N. Paruta and R. Piekos. (f)

Solubility Data Series, Vol. 36, 4-Aminobenzenesulfonamides, Part III: 6-Membered Heterocyclic Substituents & Miscellaneous Systems, edited by A. N. Paruta and R. Piekos. (g)

Solubility Data Series, Vol. 37, Hydrocarbons with Water & Seawater, Part I: Hydrocarbons C₅-C₇, edited by D. G. Shaw. (h)

Solubility Data Series, Vol. 38, Hydrocarbons with Water & Seawater, Part II: Hydrocarbons C₈-C₃₆, edited by D. G. Shaw. (i)

Solubility Data Series, Cumulative Index, Volumes 20-38, edited by C. L. Young. (j)

Solubility Data Series, Carbon Monoxide, edited by R. W. Cargill. (k)

Solubility Data Series, Gases in Molten Salts, edited by R. P. T. Tomkins. (l)

Solubility Data Series, Hydrogen Halides in Nonaqueous Solvents, edited by W. Gerrard and P. G. T. Fogg. (m)

Solubility Data Series, Halides, Oxyhalides & Salts of Halogen Complexes of Titanium, Zirconium, Hafnium, Vanadium, Niobium & Tantalum, edited by H. L. Clever, J. Hala and S. A. Johnson. (n)

Solubility Data Series, Alkali Metal Chlorides: Binary Systems with Water & Deuterium Water, edited by R. Cohen-Adad and J. W. Lorimer. (o)

Solubility Data Series, Alkali Metal Perchlorates, edited by C-Y Chan, K. H. Khoo and I. N. Lepeshkov. (p)

Solubility Data Series, Copper, Silver & Gold Halates, edited by H. Miyamoto and M. Salomon. (q)

Solubility Data Series, Intermetallics in Mercury, edited by J. Osteryoung, Z. Galus, and C. Guminski. (r)

CODATA Publications

Directions for International Compatible Environmental Data, Vol. II. Position Papers, CODATA Bulletin, Vol. 21, Numbers 1-2, edited by G. Cynthia Carter. (s)

CODATA Directory of East-Asian Data Sources for Science and Technology, CODATA Bulletin, Vol 21, Numbers 3-4. (t)

Rapporteurs' Reports from the 11th CODATA General Assembly, Karlsruhe, F.R.G., October 1988, CODATA Special Report, No. 11, 1989. (u)

Data Activities and Database Developments in China, Japan, and Korea, CODATA Special Report, No. 12, 1989, edited by Y. Hu and E. F. Westrum, Jr. (v)

(Footnotes for Books and CODATA Publications are on page 6.)

The Materials Database Newsletter of the Task Group on Materials Database Management--a regular quarterly feature of this *Newsletter*--will again be incorporated in the next and subsequent issues.

Footnotes for Books and CODATA Publications

- (a) Elsevier, late 1989. Ca. 800 pp, 200 tables.
- (b) Dechema Publishers: Theodor-Heuss-Allee 25, D-6000 Frankfurt (Main) 97, West Germany.
- (c) Cuadra/Elsevier, 655 Avenue of the Americas, New York, NY 10010. 1989. For ordering information, call (212) 633-3825. \$19.50. This new Cuadra Guide maximizes the potential of their online database searching and is a new, practical and easy-to-use reference book. The guide provides a detailed classification of database subject matter and discusses how the various characteristics and classes of databases can be used to locate just the right one. It also illustrates how searchers can make the most effective use of information available on the various online databases. It includes graphs, tables, and examples to illustrate keypoints and database statistics.
- (d) Pergamon Press, Maxwell House, Fairview Park, Elmsford, NY 10523, August 1988. 380 pp,

50 illus, 300 lit refs, US\$120. ISBN 0 08 082522 X.

- (e) Pergamon Press, August 1988. 372 pp, 30 illus, 300 lit refs, US\$120. ISBN 0 08 030742 6.
- (f) Pergamon Press, August 1988. 369 pp, 80 illus, 300 lit refs, US\$120. ISBN 0 08 034708 8.
- (g) Pergamon Press, November 1988. 552 pp, 51 illus, 200 lit refs, US\$120. ISBN 0 08 034710 X.
- (h) Pergamon Press, November 1988. 548 pp, 30 illus, 400 lit refs, US\$120. ISBN 0 08 029215 1.
- (i) Pergamon Press, November 1988. 582 pp, 25 illus, 320 lit refs, US\$120. ISBN 0 08 030737 X.
- (j) Pergamon Press, 1989. 400 pp, US\$85. ISBN 0 08 037205 8.
- (k) Pergamon Press, 1989. 300 pp, US\$85. ISBN 0 08 030733 7.
- (l) Pergamon Press, 1989. 450 pp, US\$85. ISBN 0 08 030735 3.
- (m) Pergamon Press, 1989. 500 pp, US\$85. ISBN 0 08 023925 0.

- (n) Pergamon Press, 1989. 359 pp, US\$85. ISBN 0 08 036239 7.
- (o) Pergamon Press, 1989. 330 pp, US\$85. ISBN 0 08 023918 8.
- (p) Pergamon Press, 1989. 350 pp, US\$85. ISBN 0 08 037207 4.
- (q) Pergamon Press, 1989. 330 pp, US\$85. ISBN 0 08 029208 9.
- (r) Pergamon Press, 1989. 350 pp, US\$85. ISBN 0 08 037206 6.
- (s) CODATA Bulletin, 1989. xi + 217 pp, Hemisphere Publishing Corp., 79 Madison Ave., New York, NY 10016. US\$66.
- (t) CODATA Bulletin, 1989. xxii + 218 pp, Hemisphere Publishing Corp., New York, in press. US\$33.
- (u) CODATA Special Report, 1989. viii + 24 pp, CODATA Secretariat, Paris. \$US5.
- (v) CODATA Special Report, 1989. 152 pp, CODATA Secretariat, Paris. US\$32.

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