grams; for constructing such diagrams, we need to understand not only the qualitative nature of phase equilibria of aqueous proteins but also the quantitative intermolecular forces between proteins in solution. Some examples are given to show how aqueous protein-protein forces can be calculated or measured to yield a potential of mean force and how that potential is then used along with a statistical thermodynamic model to establish liquid-liquid and liquid-crystal equilibria. Such equilibria are useful not only for separation processes but also for understanding diseases like Alzheimer's, cataracts, and sickle-cell anemia that appear to be caused by protein agglomeration.


cheme.berkeley.edu/people/faculty/prausnitz/prausnitz.html

The Rossini Lecture—A Brief History

In recognition of the contributions of Prof. F. D. Rossini to the work of the IUPAC Commission on Thermodynamics and Thermochemistry during his 39-year membership (1934–1973), the Commission decided, in 1973, to institute a "Rossini Lecture," to be given during the IUPAC International Conferences on Chemical Thermodynamics. The first lecture was given by Prof. Rossini himself at the Fourth Conference held in August 1975 in Montpellier, France. Rossini lecturers were appointed by the Commission on Thermodynamics until 2002, but, as a result of the restructuring of IUPAC, they will be elected in the future by the Board of Directors of the newly established International Association of Chemical Thermodynamics. The text of these lectures is published in *Pure and Applied Chemistry* (see table) and in the *Journal of Chemical Thermodynamics* (see table).

Freedom of Access to Primary Experimental Data

For science to progress it is critical that research results are disseminated as widely as possible, and in particular that primary experimental data are freely available in perpetuity. In 1998, as a result of concern amongst the scientific community over this issue, the International Council for Science (ICSU) set up an Inter-Union Bioinformatics Group (IUBG) to consider this and related matters, with particular emphasis on bioinformatics. The issue of free access is particularly relevant now in relation to the availability of data from genomic and proteomic studies.

Rossini Lectures, 1975-2003

1975	**Frederick D. Rossini** Montpellier, France, 26-30 Aug 1975 *JCT* 1976, **8**, 803-834
1977	**Henry A. Skinner** Ronneby, Sweden, 23-26 Aug 1977 *JCT* 1978, **10**, 309-320
1980	**Stig A. Sunner** Merseburg, Germany, 26-29 Aug 1980 (died before his Lecture)
1982	**Edgar F. Westrum** (University of Michigan, USA) London, UK, 6-10 Sep 1982 *PAC* 1983, **55**(3), 539-551; *JCT* 1983, **15**, 305-325.
1984	**Maxwell L. McGlashan** (University College, London, UK) ICCT, Hamilton, Ontario, Canada, 13-17 Aug 1984 *PAC* 1985, **57**(1), 89-103; *JCT* 1985, **17**, 301-319.
1986	**Ernst-Ulrich Franck** (Universität Karlsruhe, Germany) 9th ICCT, Lisbon, Portugal, 14-18 Jul 1986 *PAC* 1987, **59**(1), 25-34; *JCT* 1987, **19**, 225-242
1988	**Kenneth S. Pitzer** (UC Berkeley, CA, USA) 10th ICCT, Prague, Czechoslovakia, 29 Aug — 3 Sep 1988 *PAC* 1989, **61**(6) p. 979-988; *JCT* 1989, **21**, 1-17
1990	**Gerhard M. Schneider** (Ruhr-Universität Bochum, Germany) 11th ICCT, Como, Italy, 26-31 Aug 1990 *PAC* 1991, **63**(10), 1313-1326; *JCT* 1991, **23**, 301-326.
1992	**John S. Rowlinson** (Oxford, UK) 12th ICCT, Snowbird, Utah, USA, 16-21 Aug 1992 *PAC* 1993, **65**(5), 873-882; *JCT* 1993, **25**, 449-461.
1994	**Hendrick C. Van Ness** (Renseelaer Polytechnic Institute, Troy, NY, USA) 13th ICCT, Clermont-Ferrand, France, 17-22 Jul 1994 *PAC* 1995, **67**(6), 859-872; *JCT* 1995, **25-27**, 113-134.
1996	**Robert A. Alberty** (MIT, Cambridge, MA, USA) 14th ICCT, Toyonaka, Osaka, Japan, 25-30 Aug 1996 *PAC* 1997, **69**(11), 2221-2230; *JCT* 1997, **29**, 501-516.
1998	**Stanley I. Sandler** (University of Delaware, Newark, DE, USA) 15th ICCT, Porto, Portugal, 26 Jul - 1 Aug 1998 *PAC* 1999, **71**(7), 1167-1181; *JCT* 1999, **31**, 3-25.
2000	**William A. Wakeham** (University of Southampton, UK) 16th ICCT, Halifax, Nova Scotia, Canada, 6-11 Aug 2000 *JCT* 2001, **33**, 1623-1642; *PAC* 2000, **72**(10) includes other presentations pp. 1799-2082.
2002	**John M. Prausnitz** (UC Berkeley, CA, USA) 17th ICCT, Rostock, Germany, 28 Jul - 2 Aug 2002

The purpose of the group was defined as follows:

- to monitor worldwide developments in bioinformatics
- to take measures as required to ensure and facilitate inter-process communication, such as standardization of data formats
- to act when the continuity or reliability of key informatics providers is endangered
- to act when the free access to data in the public domain is endangered
- to catalyze actions by the appropriate authorities in areas of the world where Internet access to servers and data providers is technically inadequate
- to organize relevant educational activities

IUBG released a report in May 2002, endorsed by ICSU in September 2002, covering many of the above topics. It is available at <md.chem.rug.nl/~berends/IUBG-FinalReport.html>. The report contains a number of statements and recommendations aimed at international unions, scientific societies, funding agencies, legislators, for-profit organizations, publishers and authors, committees for nomenclature and standardization, and educational institutions.

Please direct questions or comments to Alan McNaught <adm@rsc.org>, IUPAC representative on the IUBG.

www.iupac.org/news/archives/2002/IUBG-report.html

Maintaining the Permanent Availability of the Digital Records of Science

A Statement by the International Council for Scientific and Technical Information

Following are excerpts from the ICSTI's statement on preserving digital information released in December 2002:

"Despite the growing efforts of many of the varied stakeholders involved in generating, organizing, and providing access to scientific information and data, much of it in digital form is still at risk of being lost to future generations.

The same can be said of the digital data collected over the past 40 years. Data from the Viking mission to Mars is just one example of expensively gathered, important information that has already been lost.

More needs to be done as a matter of urgency to put in place systematic structures which can ensure the long-term availability of the records of science to all who need them, bearing in mind the special difficulties that developing countries have in accessing digital publications."

The ICSTI document describes succinctly the nature of the problem and who can solve it and concludes with the following recommendations:

"ICSTI urges the International Council for Science and its scientific unions to:

- Undertake for each of the scientific disciplines a high-level audit of digital preservation policies and practices that are now in place (ICSTI welcomes the lead taken by IUPAP in proposing a system to monitor electronic publishing and preservation practices in pure and applied physics.)
- Work with the other key stakeholders in defining user requirements for archives.

Because scientific information and data generation has a national as well as an international dimension;

- It urges the National Academies to sponsor similar audits on a national basis.
- It recommends that all agencies funding scientific research should formulate and publish policies on the preservation of the research they fund.

ICSTI recommends that all scientists undertaking research should bear in mind the importance of the long-term preservation of the data and information they generate and adopt such standards as are recommended to facilitate this."

Please address questions and comments to Wendy A. Warr <wendy@warr.com>, IUPAC representative on the ICSTI.

www.icsti.org/advocacy_statement.html