



Yizhak Marcus

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Curriculum Vitae

Name: Marcus, Yizhak

Date of Birth: 17 March 1931

Place of Birth: Kolberg, Germany

Family Status: married

Academic Background:

1949-1949, Hebrew University of Jerusalem, M.Sc. in chemistry and physics.

1953-1956, Hebrew University of Jerusalem/Weizmann Institute of Science, Ph.D. in chemistry (coordination chemistry in solution).

1956-1958, postdoctoral fellow at Royal Institute of Technology, Stockholm and at the Massachusetts Institute of Technology.

Employment:

1952-1965, Soreq Nuclear Research Center, advancing from research chemist through Head of Radiochemistry Dept. to Director of Chemistry.

1965-date, Hebrew University of Jerusalem, Professor of Chemistry (1965-1973, Head of Dept. of Inorganic & Analytical Chemistry, 1973-1975 Associate Dean of Studies, Faculty of Science), 1999- Professor Emeritus.

Visiting Professorships:

1967 Middle East Technical University, Ankara (Turkey)

1970-1971, Purdue University, Lafayette, IN, USA.

1971-76 Kernforschungszentrum Karlsruhe.

1972 University of Freiburg, Germany

1973 University of Heidelberg, Germany

1975 Tokyo Institute of Technology, Tokyo, Japan.

1980-1982 Gmelin Institute, Frankfurt, Germany.

1985, 1999 University of Surrey, Guildford, UK.

1986-1987 University of California at Irvine, Irvine, CA, USA.

1988 Technical University München.

1990, 1991 Max Planck Institut für Biophysikalische Chemie, Göttingen.

1993 University of Leicester, Leicester, UK.

1993-1994, 1998-1999, 2001 Murdoch University, Murdoch, WA, Ausatralia.

2001 Institut fuer Nukleare Entsorgung, INE, Karlsruhe, Germany

Awards:

1971 Senior Alexander von Humboldt Fellowship, made use of intermittently 1971-1991.

1985 R. Freund award for popular scientific writing.

1992 N.S. Kurnakov medal for physicochemical analysis of the Russian academy of

Sciences

1993 Royal Society Visiting Research Professorship at Leicester University.

1998 Royal Society of Chemistry, International Authors Grant

2014 Carl Hansen Award, Soc. Chem. Indust. London + DECHEMA, Frankfurt

Research Grants:

1975-1977, The system: long chain amine and phosphoric acid. Israel Chemicals, Ltd.

1975-1978, Extraction of potassium chloride with crown ethers. Israel Chemicals, Ltd.

1978-1980, Ionic dissociation of aqueous hydrobromic acid. Israel Chemicals, Ltd.

1979-1980, Phase diagram and vapor pressures of Dead Sea brines. Dead Sea Works, Ltd.

1979-1981, Energetics of solute distribution between liquids. Israel-USA Binational Science Foundation.

1979-1980, Storage of solar energy in salt hydrates at elevated temperatures. Wolfson Research Foundation.

1981-1983, Water structure making and breaking effects of ions. Schoenbrunn Foundation.

1985-1988, Linear solvation energy relationships of ions. Israel-USA Binational Science Foundation.

1988-1990, Preferential solvation in binary solvent mixtures. Land Niedersachsen, Germany.

1992-1995, Reversible oxygen carriers based on metal-ligand complexes in solution. Ministries of Science and Technology and of Immigrant Absorption.

1995-1998, Spectroscopy and hydrogen bonding in alcohols and polyols. Ministries of Science and Technology and of Immigrant Absorption.

1998-2001, Studies of supercritical aqueous solutions. INTAS - together with researchers from Russia, Greece and Germany.

2001-2005, Heat storage in phase changing salt hydrates at elevated temperatures. Ministry of Science, Israel and Forschungszentrum Jülich, Germany

International Activities:

International Union of Pure and Applied Chemistry (IUPAC):

1963-1979 member of IUPAC Commission V.5, Equilibrium Data (chairman 1965-1969)

1979-1987 member of IUPAC Commission V.3, Electroanalytical Chemistry.

1983-1991 member of the IUPAC Analytical Chemistry Division Committee.

1991-1999 member of the IUPAC Commission on the Teaching of Chemistry.

1978-1999 Representative of Israel as observer, and from 1995 full member, Federation of European Chemical Societies (FECS), Task-group for Analytical

Chemistry (TAC):

Organization of International Conferences:

1968 Co-chairman, International Conference on Coordination Chemistry (10th ICC), Haifa and Jerusalem (including 5th ISEC (solvent extraction) in Jerusalem).

1975 Chairman, IUPAC Congress, Jerusalem.

1980 Chairman, EUCHEM International Conference on Molten Salts, Dead Sea.

1985-1993 Member, International Steering Committee of the International

- Conferences on Solution Chemistry
1989 Chairman, International Conference on Solution Chemistry (20th ICSC), Jerusalem.
1993-2002 Member, International Steering Committee of the International Conferences on Solvent Extraction Chemistry (ISEC)
1992-2012 Member, International Advisory Board of the Eurasia Conferences on Chemical Sciences
2006- Member, International Organizing and Scientific Committee of the International Symposia on Solubility Phenomena
2015 Member, International Advisory Board, International Conferences on Chemical Thermodynamics in Russia

Membership of Scientific Journals Advisory Boards

- 1965-1975 Israel Journal of Chemistry
1966-1974 Radiochimica Acta
1974-1979 Analytical Letters
1974-1988 Journal of Chromatography
1979-1988 Analisis
1972- Reviews of Analytical Chemistry
1982-1993 Reactive Polymers
1990-1998 Journal of the Chemical Society, Faraday Transactions
2005- Journal of Solution Chemistry
2009- Journal of Molecular Liquids

Educational Activities:

Taught courses on radiochemistry, inorganic energetics, thermodynamics, coordination chemistry.

Supervised the theses of 11 M. Sc. Students, 17 Ph. D. students, and directed and advised 12 post-doctoral fellows.

Research Areas and Expertise:

Solution chemistry: solvation of ions and non-electrolytes, binary solvent mixtures, concentrated electrolyte solutions, molten salts, solubilities.

Thermodynamics: properties of gaseous ions, properties of liquids, molten salts, supercritical fluids.

Coordination chemistry: complexation in solutions, hydrometallurgical processes involving ion exchange or solvent extraction.

Publications:

Authored (co-authored) nine books (one translated into Japanese).

Published 360 papers in refereed journals as well as extended abstracts in published conference proceedings.

Published 20 chapters in multi-author books.

Edited (co-edited) some 17 books and several conference proceedings.

Presented over 120 papers at international conferences, many of which as invited/ plenary lectures.