

CURRICULUM VITAE

ALEXANDER BURCAT

- 1938 - October 6, Born in Bucuresti, Roumania
- 1950 - Immigrated to Israel.
- 1957 - 1960 - Served in the Israeli Air Force
- 1966 - Married + 3 children

DEGREES

- 1963 - B.Sc. Chemistry and Physics, The Hebrew University, Jerusalem.
- 1965 - M.Sc. Inorganic and Analytical Chemistry, The Hebrew University, Jerusalem.
- 1969 - Ph.D. Physical Chemistry, The Hebrew University, Jerusalem.

ACADEMIC APPOINTMENTS

- 1971 - Present Faculty of Aerospace Engineering, Technion-I.I.T., Haifa
- 1975 - Received tenure at Technion, I.I.T as Senior Lecturer.
- 1988 - Promoted to Associate Professor.

PROFESSIONAL EXPERIENCE

- 2006 Summer Visiting Professor at DLR- Verbrennungstechnik, Stuttgart, Germany.
- 2004-5 Visiting Scholar, at Argonne National Labs. Chemistry Division. Chicago IL.
- 2003- Sept. Summer Visiting Scientist at Argonne National Labs. Chicago IL.
- 2001 - Jan.- Sept. Visiting Professor, Chemistry Dept. Louisiana State University, Baton-Rouge, La.
- 1997 - Lawrence Livermore National Laboratory - Summer Visiting Scientist, Livermore California.
- 1991 - Centre Nationale de Recherche Scientifique CNRS - Summer Visiting Scientist, Orleans, France.
- 1989 - NRC-NASA Summer Visiting Senior Research Associate, NASA Lewis Research Center, Cleveland, Ohio.
- 1983 - 1984-NRC-NASA Visiting Senior Research Associate, NASA Lewis Research Center, Cleveland, Ohio.
- 1978 - Aug.-Sept. Visiting Professor, Escuela de Quimica, Universidad de Costa Rica, San Jose, Costa Rica.
- 1978 - July - Visiting Scientist, Dept. of Mechanical Engineering, University of California, Berkeley, California.
- 1977 - 1978 - Visiting Professor, Dept. of Chemical Engineering, Louisiana State University, Baton Rouge, La.
- 1971 - Visiting Research Scientist, Department of Chemistry, Wright State University, Dayton, Ohio.
- 1971 - 1969- Visiting Research Scientist, Aerospace Res. Labs. Wright-Patterson AFB, Ohio.
- 1968 - Appointed as Instructor in the Dept. of Inorganic Chemistry at The Hebrew University

of Jerusalem.
1965 - 1968 - Assistant in the Dept. of Inorganic Chemistry, at The Hebrew University of Jerusalem.

TEACHING EXPERIENCE

- 2002 - 2003 Jet-Engines I
2001 - Combustion and Chemical Kinetics of Combustion; Dept of Chemistry. Louisiana State University, Baton Rouge, La.
1986 - 91 - Introduction to Computers and FORTRAN.
1986 Mólolecular Thermodynamics.
1978 - Aug.-Sept. - The Chemistry of Combustion and Energy Processes, Escuela de Quimica, Universidad de Costa Rica (in Spanish).
1977 - 1978 - Thermodynamics; Department of Chemical Engineering, Louisiana State University, Baton Rouge, La.
1971 - Present: Teaching:
1. Fundamentals of Combustion in the Faculty of Aerospace Engineering, Technion.
2. Fourth Year Seminar, in the Faculty of Aerospace Engineering, Technion..
3. Engineering Laboratory, in the Faculty of Aerospace Engineering, Technion..

1971 - Teaching Instrumental Chemistry in BOSMAT, Technion's School for Technicians.
1969 - Teaching Basic Chemistry at School of Chemical Technicians, Beer-Sheva, sponsored by the Department of Labor.
1964 - 1969 - Served as teaching assistant at the Hebrew University of Jerusalem, teaching in Inorganic, Analytical and Physical Chemistry Laboratories.

RESEARCH EXPERIENCE

- 1963 - 1965 - Research on kinetics of decomposition of Salts. M.Sc. thesis.
1965 - 1969 - Research on kinetics of gas phase reactions in a Shock-Tube. Ph.D. thesis.
1969 - 1971 - Research as Post doctoral fellow at Aerospace Research Laboratories , Wright-Patterson Air Force Base, Ohio, on combustion kinetics.
- 1971 - Research as Visiting Research Scientist at Wright State University , on gas reaction kinetics.
1971 - Present - Research in the field of combustion kinetics, explosion and detonation processes in gases, chemical lasers, decomposition of solids and high temperature chemical kinetics.
1977- Present - Calculations of thermodynamic properties of substances and radicals, combustion kinetics of coal fuels, detonations.
1982- 1988 - Use of Microcomputers in the Scientific Environment.
1997 - Ab-initio calculations of molecules and radicals.
2001- Incineration of Wastes.
2003-2006 Calculation of Thermodynamic Properties of Pure Chemical Substances and Radicals. Active Thermochemical Tables.

TECHNION ACTIVITIES

1. Deputy Head of Aeronautical Research Center (1.7.1987-15.10.1990)
2. Chairman of Aerospace Safety Committee(1.1.74-1.1.76), (15.10.78-1.1.83), (1.9.86-1.1.87)
3. In charge of laboratory of shock-tubes and laser (1.7.75-1.1.77) (1.10.84 – present).
4. Technion's representative in the editorial board of LADAAT (1975-1990).
5. In charge of the microcomputer farm at the Aeronautical Eng. Dept. (1984-1988)
6. Founder and Chairman of the Technion Computer Communication Interest Group. (1992-1994).
7. Chairman of the program Committee of the 33 Israel Annual Conference on Aeronautics and Astronautics (February 1993).

PUBLIC PROFESSIONAL ACTIVITIES

1. Secretary of the Israeli Combustion Institute Section (also for the 19th International Symposium held in Haifa, 1982).(1980 – 1988).
2. Chairman of the Israeli Combustion Institute Section (1988 – 1992).
3. Founder of the first Bulletin Board Service (BBS) in Israel, with the aim to promote Telecommunication Devices for the Deaf (TDD) (1984).
4. Member of the Israeli CODATA Committee (1990-
5. Member of the Safety Committee of the Israeli Defense Ministry. (1994-
6. Member of the International IUPAC task group to establish thermodynamic values for radicals (2000-2006).

MEMBERSHIP IN ASSOCIATIONS

1. Member of the Combustion Institute, Pittsburgh, Pennsylvania.
Chairman of the Israeli Section (Israeli Combustion Society). 1988 - 1991
2. Member of the Israel Chemical Society.

GRADUATE STUDENTS

1. Eidelman, Shmuel, completed M.Sc. Degree 1974-75. Thesis entitled: "The Problem of a Strong Point Explosion in a Combustible Two-Phase Medium".
2. Eidelman, Shmuel, completed D.Sc. Degree 1976-79. Thesis entitled: "The Problem of Explosion in a Two-Phase Combustible Medium".
3. Hasson, Abraham, completed D.Sc. Degree 1976-1981. Thesis entitled: "Experimental Investigation of DDT and Detonation Characteristics of Fuel-Oxygen Mixtures".
4. Giora Segev, D.Sc. student 1986-1988. Subject: Explosive Foams.
5. Mark Leibman, M.Sc. student 1992.
6. Michael Dvinyaninov, post-doctoral fellow, 1991-1994.
7. Doron Shlitner completed M.Eng. Degree 1995-97. Work entitled: "Pyrotechnical Grenades for Fire Extinguishing in Aircrafts."
8. Irena Aleiev, PhD student together with Prof. Itzhak Oref. 2002-2003. Subject: Combustion of wastes.