

YITZHAK APELOIG**Curriculum Vitae****Personal Data**

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Place and Date of Birth: Bucharra, Russia - 1.9.1944

Immigration to Israel: 1.9.1947

Family Status: Married to Zipora Zaltzberg + 2 children: Shai (1971) and Noa (1975).

Present Employment

*Distinguished University Professor and incumbent of the Nahum Guzik Distinguished Academic Chair,
Technion - Israel Institute of Technology, Haifa, Israel.*

At the Technion since 1976, Professor of Chemistry since 1988, Chair in Chemistry since 1993,
Distinguished University Professor since 2011. Distinguished Professor Academic Chair since 2015.

Dean of the Faculty of Chemistry 1995 – 1999.

President of the Technion – Israel Institute of Technology, 2001-2009

Education

B.Sc. - Chemistry and Physics (Summa Cum Laude),
Hebrew University, Jerusalem, Israel 1964-1967

M.Sc. - Chemistry (Summa Cum Laude), Hebrew University, Jerusalem, Israel.
Mentor: Zvi Rappoport 1967-1969

Ph.D. - Chemistry (Summa Cum Laude), Hebrew University, Jerusalem, Israel
Mentor: Zvi Rappoport 1969-1974

Post Doctoral - With Paul v. Ragué Schleyer, Princeton University, Princeton, NJ, USA,
Close collaboration with John A. Pople, Carnegie-Mellon University, Pittsburgh, PA, USA 1974-1976

Sabbatical - With Roald Hoffmann, Cornell University, Ithaca, NY, USA 1983-1984

Academic Appointments (Israel)

Research Associate, Hebrew University, Jerusalem, Israel 1967-1974

Lecturer, Technion, Haifa, Israel 1976-1979

Senior Lecturer, Technion, Haifa, Israel 1979-1983

Associate Professor, Technion, Haifa, Israel 1983-1988

Professor, Technion, Haifa, Israel 1988-present

Distinguished Professor, Technion, Haifa, Israel 2011-
present

Joseph Israel Freund Chair in Chemistry, Technion, Haifa, Israel 1993-2015

Co-Director, Lise Meitner Minerva Center for Computational Quantum Chemistry 1997-
2017

Nahum Guzik Distinguished Academic Chair 2015 – present

Visiting Academic Appointments

Research Fellow, Princeton University, Princeton, NJ, USA 1974-1976
 Visiting DAAD Fellow, Universität Erlangen-Nürnberg,
 Erlangen, W. Germany Summers 1979, 1985, 1992
 Visiting Lecturer, Tel Aviv University, Israel 1983, 1986
 Visiting Professor, Cornell University, Ithaca, NY, USA 1983-1984
 Visiting DAAD Professor, Technische Universität Berlin Summers 1985, 1991
 Visiting JSPS Professor, Kyushu University, Japan Summer 1991
 Visiting Alexander von Humboldt Professor, Technische Universität Berlin 3-9/1994, Summer 1997
 Visiting Alexander von Humboldt Professor, Universität Ulm Summer 1997
 Visiting JSPS Professor, Tohoku University, Sendai, Japan Spring 1999
 Visiting Professor, University of Utah, Salt Lake City, USA Summer 2000
 Visiting JSPS Professor, Tsukuba University, Tsukuba, Japan Spring 2010
 Visiting Alexander von Humboldt Professor, Technische Universität (TU) Berlin Summer 2010
 Visiting Professor, University of Utah, Salt Lake City, USA Spring 2011
 Visiting Alexander von Humboldt Professor, TU Berlin 9-10/2017; 9/2018; 9-10/ 2019; 9-10/2020

Prizes, Awards, Honors and Research Fellowships

Annual Prize for Distinction in Chemistry Studies, Hebrew University, Jerusalem, Israel 1965-1967
 The Prize for Distinguished Student of the Dean of the Faculty of Sciences,
 Hebrew University, Jerusalem, Israel 1971
 The Yashinski Prize for Distinguished Ph.D. Thesis 1974
 Bat-Sheba de Rothschild Fellow 1977-1978
 DAAD (Deutscher Akademischer Austauschdienst) Fellowship 1979
 DAAD (Deutscher Akademischer Austauschdienst) Visiting Professor 1985, 1991
 The Louis Klein Visiting Professorship in Australian Universities 1986
 Distinguished Teacher Award by the Technion Student Association 1986, 1993, 1997
 Technion Award for Academic Excellence, Technion (The New England-Taub Prize) 1988
 The Henri Gutwirth Prize for Excellence in Research, Technion 1991, 1993
 Included in "Who's Who in Science and Engineering", Beginning Second Edition 1993
 Included in the "International Who's Who of Contemporary Achievement",
 Beginning Third Edition 1993
 Incumbent of a Chair in Chemistry 1993
 Israel-Italy National Council for Research and Development, Senior Scientist Exchange Fellow 1993
 Alexander von Humboldt - Lise Meitner Senior Research Award 1994-1999, 2010, 2017-2018, 2020
 Granted a Minerva Center in Computational Quantum Chemistry 1996

Japan Society for the Promotion of Science (JSPS), Senior Visiting Professor Award	1991, 1999, 2010
C. A Coulson Lecturer, University of Georgia, Athens, USA	2002
<i>The Israel Chemical Society Prize for the Outstanding Scientist</i>	2002
<i>Honorary Doctorate of Science, Technische Universität Berlin, Germany</i>	2006
<i>Wacker Silicone Award</i>	2007
Honorary Member, Academia de Ciencias, Mexico	2008
A Special Issue of <i>Chemistry - A European Journal</i> in honor of Yitzhak Apeloig 65 th birthday	2009
Fellow, American Association for the Advancement of Sciences	2009
<i>American Chemical Society Frederic Stanley Kipping Award in Silicon Chemistry</i>	2010
<i>American Academy of Arts and Sciences, Foreign Honorary Member</i>	2010
Endowed Apeloig Visiting Lectuership, established by the American Technion Society	2010
<i>Order of Merit (First Degree) of the President of the Federal Republic of Germany</i>	2011
Distinguished Ruder Boskovic Lecturer, Roder Boskovic Institute, Zagreb, Croatia	2011
Member of the International Advisory Board of the Alexander von Humboldt Foundation	2014 - present
<i>Academia Europaea- The Academy of Europe, Member</i>	2016
<i>Israel Chemical Society Gold Medal</i>	2017
Honorary Citizenship of the City of Haifa ("Yakir Haifa")	2018

Plenary and Invited Lectures in International Conferences

Professor Apeloig has delivered more than 100 plenary and invited lectures in scientific conferences around the world. *The full list of lectures in conferences can be found in his list of publications.*

In addition, Professor Apeloig has presented nearly 200 seminars in universities, research institutes and industry worldwide, and his students and coworkers have presented in conferences more than 300 posters on the group's research.

Editorship

a. Books

Editor (jointly with S.S. Shaik), <i>Israel Journal of Chemistry</i> , Special Issue on: "Application of Theory to Organic and Organometallic Molecules", 23 , 1-150.	1983
Editor (jointly with S.S. Shaik), <i>Israel Journal of Chemistry</i> , Special Issue honoring J.A. Pople, 1992 Laureate of the Wolf Prize in Chemistry, 33 (2 parts), 241- 475.	1993
Editor (jointly with M. Karni), special Issue on "Theory and Modelling in Chemistry" <i>Journal of Molecular Structure, Theochem.</i> , Vol. 398-399 (582 pages).	1997
Editor (jointly with Z. Rappoport), "The Chemistry of Organic Silicon Compounds". Vol.2,	

- John Wiley, (3 books, 2758 pages). 1998
- Editor (jointly with Z. Rappoport), "The Chemistry of Organic Silicon Compounds", Vol.3,
John Wiley (1148 pages). 2001
- Editor (jointly with M. Karni and H. Matsumoto), special issue of "Silicon Chemistry in honor
of M. Kira", *Silicon Chemistry*, **3**,103-217. 2006

b. Editorial Advisory Boards

- Journal of the Chemical Society – Perkin Transaction 2 1993 – 2001
- Progress in Physical Organic Chemistry 1997 – 2001
- Journal of Computational Chemistry 1998 – present
- Silicon Chemistry 2001- 2012
- Theoretical Chemical Accounts 2001 – 2012
- Molecules 1999 – present
- Israel Journal of Chemistry 1986 – 1990; 2010- present
- Journal of the American Chemical Society 2010- present

Professional Activities

a. International

- Member of the International Union of Pure and Applied Chemistry (IUPAC)
Commission on "Guidelines for the Presentation of Quantum Mechanical and
Computation Data in Organic Chemistry" 1986 – 1990
- Chairman of the Organizing Committee of the 10th IUPAC Conference on
Physical Organic Chemistry, held at the Technion, Haifa, Israel, August 1990
- Member of the Organizing Committee of the Joint Meeting of the Royal
Society of Chemistry and the Israel Chemical Society, Durham, England. 1991 – 1992
- Member of the Organizing Committee of the International Conference on
Selected New Trends of Theoretical Organic Chemistry, Anapa, USSR 1991 – 1992
- Member of the International Committee of the European Symposia on
Organic Chemistry (ESOC) 1988 – 2000
- Member of the International Union of Pure and Applied Chemistry (IUPAC)
Commission on "Terminology for Theoretical Organic Chemistry" 1991 – 1998
- Co-Chairman of the 5th International Conference of the World Association
of Theoretically Oriented Chemists, (WATOC), 7-12 July, 1996, Jerusalem, Israel 1996
- Member, Scientific Evaluation Committee of the Austrian Academy of Sciences 1996 – 1998
- Member of the Organizing Committee of the Italian-Israeli Conference on
Physical Organic Chemistry, Mahale Hachamisha, Israel June 1998

Chairman of the Symposium on Frontiers in Electronic Structure Calculations, 13-14 December, 1998, Technion, Haifa, Israel.	1998
Member of the International Advisory Board of the International Symposium on Organosilicon Chemistry	1992 – present
Member of the International Scientific Committee of the Federation of the European Chemical Societies (EuCheMS) on Computational Chemistry	1996 – present
Member of the Scientific Board of the World Association of Theoretically Oriented Chemists (WATOC)	1996 – 2005; 2008 - present
Co-Director, Lise Meitner - Minerva Center for Computational Quantum Chemistry	1996 – 2017
Member of the International Advisory Board of the European Silicon Days Conference	1999 - present
Member of the International Scientific Committee of the IUPAC Conference on Physical Organic Chemistry	2002 – present
Among the founders of the Malta Conferences on Science in the Middle East aimed to create Arab- Israeli scientific collaborations. Participated in most bi-annual conferences since 2003	
Member, Division of Computational Chemistry of the EU Chemical Societies	2004 – present
Chairman of the Schulich Symposium on Frontiers in Computational Chemistry- Bridging Chemistry and Biology, 7-8, December 2009, Technion, Haifa, Israel	2009
Co-Chair, Lise Meitner Center Golden Symposium, 12 February, 2017, HU, Jerusalem	2017
Co-chair, Israel-Japan Conference on Molecular Catalysis, 3-5 November, 2019, Technion, Haifa	2019
Member, International Advisory Board of the Journal of the American Chemical Society	2013-present
Member, International Advisory Board of the Alexander von Humboldt Foundation	2014 - 2020

b. Refereeing

Regular referee for international journals such as: Science, Nature, Nature Chemistry, JACS, JOC, JPC, Angewandte Chemie, European Journal of Chemistry, Chem. Sci., J. Computational Chemistry, Tetrahedron, Tetrahedron Letters, etc.

Regular referee of grant applications of various national and international grant agencies.

c. National

President of Technion 2001-2009

Member of the organizing committee of several meetings of the Israel Chemical Society

Member of the Grants Committees of several Foundations including the Israel Ministry of Science; the Israel Science Foundation; the US-Israel Binational Science Foundation; the Israel-German Binational Foundation

Chairman of University Presidents Association 2004, 2009

Member of the Shochat national committee “on the future of higher education in Israel” 2007

Chairman of a National Committee of the Israel Academy of Science on “Alternatives Energy Sources for Transportation” 2010

Member of an advisory committee to Minister of Defense, Israel	2010 -2016
Member of a Committee on “National Security Needs”	2011- 2017
Scientific Board of the Erenst & Bonnie Beutler research Program, Rambam Hospital	2014- 2018
Member of the Executive committee of Israel Technion Society	2001- present
Chairman of the Board of Trustees of the Samson- Prime Minister Prize on Fuel Alternatives for transportation	2013- present
Member of the Managing Board and of the Scientific Advisory Board of Migal Research Institute (Kiryat Shmoneh)	2013- present
Chairman of the Board of Trustees of the Azrieli College of Engineering, Jerusalem present	2017-

d. Technion

President of Technion 2001-2009

Chairmanships and memberships of many academic and administrative committees, including the Technion’s acadmice Senate (2001-2009).

Member of the Technion International Board of Governors	2001-present
Chairman of the Harvey Prize Council	2001-2009
Member of the Harvey Prize Council	2013- 2019
Member of Technion’s “100 Club”	2001-present
Board member, Technion Sport Complex	2015-present
Chairman of the Harvey Prize Selection committee	2020

Membership in Professional Associations

- Israel Chemical Society
- American Chemical Society
- Royal Society of Chemistry
- World Association of Theoretically Oriented Chemists (WATOC).
- American Association for the Advancement of Science
- Academia Europaea- The Academy of Europe, Member

Research Interests

Organosilicon chemistry: multiple bonds to silicon; reactive intermediates, such as: silylenes, silyl anions, radicals and cations; polysilanes; reaction mechanisms.

Computational quantum chemistry: application of theory to organic and inorganic chemistry; molecular modelling.

Physical organic chemistry: organic reaction mechanisms; reactive intermediates, in particular carbenium ions; strained molecules.

Supervision of Students and Postdoctoral Fellows

Yitzhak Apeloig was the research supervisor for some 30 graduate students and 20 postdoctoral scholars.

Current group: 3 senior reseachers + 2 PhD students + 2 undergraduates.

Research Funding

Total research funding – more than \$13 million

Average research funding over the last 10 years of about \$200,000 / year.

Current Research Funding

1. Israel Science Foundation (2013-2018) - \$40,000 / year.
2. US-Israel Binational Science Foundations (2014-2018) - \$30,000 / year.
3. Lise Meitner Minerva Center for Computational Quantum Chemistry– about \$60,000 (until 2017)
4. German- Israeli Project (DIP) (2012-2018)- about \$60000/ year.
5. German-Israel Foundation (GIF) (2015-2018) – about \$40,000/year
6. Intel Cooperation (2017 -2020) - \$80,000/year
7. Kamin project, Israel Innovation Authority (2020-2021) – 330 NIS/year