

ARIEH WARSHEL

Nobel Laureate Chemistry 2013
Member of the National Academy of Sciences
Fellow of the Royal Society of Chemistry
Distinguished Professor of Chemistry and Biochemistry
Full member of the USC Norris Cancer Center

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Profile

A pioneer for the development of key methods and concepts to study functional properties of biological macromolecules through microscopic computer simulation techniques. Nobel laureate for the "development of multiscale simulation methodology".

Education

BSc. in <i>Chemistry</i> ; graduated " <i>Summa Cum Laude</i> " <i>The Technion (Israel Institute of Technology)</i> , Haifa, Israel	1962-1966
MSc. in <i>Chemical Physics</i> <i>The Weizmann Institute of Science</i> , Rehovot, Israel	1966-1967
PhD. in <i>Chemical Physics</i> ; (Advisor: <i>S. Lifson</i>) <i>The Weizmann Institute of Science</i> , Rehovot, Israel	1967-1969

Professional Positions

Research Fellow , <i>Department of Chemistry, Harvard University</i> Cambridge, MA, USA	1970-1972
Research Associate , <i>Weizmann Institute of Science</i> , Rehovot, Israel	1972-1973
Senior Scientist , <i>Weizmann Institute of Science</i> Rehovot, Israel	1973-1977
EMBO Visiting Scientist , <i>MRC Laboratory of Molecular Biology</i> Cambridge, UK	1974-1976
Assistant Professor of Chemistry, <i>University of Southern California</i> Los Angeles, CA, USA	1976-1978
Associate Professor ,	

<i>Weizmann Institute of Science</i> Rehovot, Israel	1977-1978
Associate Professor of Chemistry, <i>University of Southern California</i> Los Angeles, CA, USA	1979-1984
Professor of Chemistry, <i>University of Southern California</i> Los Angeles, CA, USA	1984
Professor of Chemistry and Biochemistry, <i>University of Southern California</i> Los Angeles, CA, USA	1991
Full Member at the USC Norris Cancer Center, <i>University of Southern California</i> Los Angeles, CA, USA	2004
Visiting Professor, <i>Royal Institute of Technology</i> Stockholm, Sweden	Spring 2006
Distinguished Professor of Chemistry and Biochemistry, <i>University of Southern California</i> Los Angeles, CA, USA	2011-
Dana and David Dornsife Chair in Chemistry, <i>University of Southern California</i> Los Angeles, CA, USA	2014-

*Honors,
Awards
and
Fellowships*

Technion Award for " <i>best 3rd year student in Chemistry</i> "	1965
BSc. with <i>Summa Cum Laude</i>	1966
Mifal-Hapays Prize	1969
EMBO Fellowship to <i>MRC Laboratory of Molecular Biology</i>	1975-1976
Alfred P. Sloan Fellowship	1978-1980
USC Associates Award for Creativity in Research	1981
EMBO Senior Fellowship to <i>the Weizmann Institute of Science</i>	1981-1982
USC Faculty Recognition Award	1992
Annual Award of the International Society of Quantum Biology and Pharmacology	1993
Elected Fellow of the Biophysical Society	2000
Tolman Medal	2003
President's Award for Computational Biology from the ISQBP	2006

Elected fellow of the Royal Society of Chemistry (FRSC)	2008
Molecular Frontiers Symposium, Royal Academy of Science, Stockholm	2008
Elected Member of the National Academy of Sciences of the USA	2009
Distinguished Professor of Chemistry and Biochemistry, <i>University of Southern California</i>	2011
RSC Soft Matter and Biophysical Chemistry Award	2012
Elected Fellow of the AAAS	2012
The Nobel Prize in Chemistry	2013
The Founders Award of the Biophysical Society	2014
Elected Honorary Fellow of the Royal Society of Chemistry (HonFRSC)	2014
The 2013 Israel Chemical Society Gold Medal	2014
Doctor of Philosophy, <i>Honoris Causa</i>, <i>Bar Ilan University</i>	May 2014
Honorary Doctor of Al-Farabi Kazakh National University	2014
Honorable Professor of the Kazakh National Agrarian University	2014
The Jubilee Medal “80 years of Al-Farabi Kazakh University” <i>Almaty</i>	2014

*Keynote
lectures*

The Inaugural Becton Dickinson Memorial Lecture , Duke University <i>"How do enzymes really work"</i>	1991
The Brown and Williamson Scholar Lectures,i University of Louisville <i>"How do enzymes really work"</i> and <i>"Computer simulations of the dynamics of biological processes"</i>	2002
The Habermann Lecture, Marquette University <i>"Computer simulations of biological processes: Towards quantitative structure-function correlation in biology"</i>	2003
3rd Chinese Theoretical and Computational Chemistry Conference, <i>Keynote speaker</i> <i>"Computer simulation of the function of biological molecules"</i>	2005
The 2006 Presidents Award Lecture: ISQBP President's meeting <i>"Computer simulations of the function of biological molecules: What has been accomplished and where are we going ?"</i>	2006
Molecular Frontiers Symposium Royal Swedish Academy of Science, Stockholm	2008

The CUSO Lecture Series , Switzerland <i>"Frontiers in Biophysical Simulations"</i>	2009
The Lifson Memorial Lecture Weizmann Institute of Science <i>"Computer simulations of the functions of biological systems: What has been accomplished and where are we going ?"</i>	2010
The Chevy Goldstein Distinguished Lecture in Chemistry Cal Poly Pomona <i>"Electrostatic basis of biological functions"</i>	2010
Distinguished Lecture in Computational Biology UC Irvine <i>"Advances in modeling of biological functions"</i>	2012
RSC Award in Soft Matter and Biophysical Chemistry Lecture Tour Newcastle, Sheffield, Bath <i>"Advances in modeling of biological functions"</i>	2012
Opening Lecture in Modeling Interaction in Biomolecules VI Mariánské Lázně, Czech Republic <i>"Multiscale Modeling of the Function of Biological Systems"</i>	2013
Nobel Lecture Stockholm, Sweden <i>"Computer Simulations of Biological Functions; From Enzymes to Molecular Machines"</i>	2013
Opening Lecture, Federation of Israeli Experimental Biology (ILANIT) Eilat, Israel <i>"Multiscale Modeling of Complex Biological Systems and Processes"</i>	2014

Review Committees (2001 - current)	<i>Special review of theoretical chemists from Sweden for a senior position</i>	2001
	<i>Study section of theoretical chemistry in Sweden</i>	2002
	<i>Search for a chair in Computational Biophysics in Denmark</i>	2003
	<i>NIH Special emphasis panel for a program on ikb/NF kB recognition</i>	2004
	<i>NIH study section for National Centers for Biocomputing</i>	2004
	<i>NIH study section for National Centers for Biocomputing</i>	2005
	<i>NIH study section ZRG1 BCMB-Q (90)</i>	2006
	<i>European Review Panel</i>	2008-2013
	<i>NAS Review committee of molecular dynamics proposals</i>	2010-2012

Publication Summary	<i>Total number of publications: 504 (as of 01-24-2014)</i>
	<i>Citations without self-citations: 29985 (as of 01-24-2014)</i>

Arieh Warshel's Hirsch Index: 100 (as of 01-24-2014)

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