

# HIT - HOLON INSTITUTE OF TECHNOLOGY

Date: 21 September 2023

Name BORIS FAINBERG Ph.D. 307109090  
(first) (last) (acad. degree) No. id. card

Faculty Faculty of Sciences Department Sciences

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Date/place of birth 1946 U.S.S.R. Date of arrival in Israel 14.1.1991.  
(date) (country)

ZAHAL, (Israeli) Military Service - -  
dates (enlisted) (discharged)

Marital Status Married No. of children one

## A. EDUCATION

Period of Study (dates)	Name of University (including city and country if not in Israel)	Subject	Degree or Professional Licence	Date of Award
1963-69	Leningrad Institute of Precise Mechanics and Optics, Leningrad, USSR	Quantum Electronics, Electrooptics	M.Sc.	1969
1971-75	S.I. Vavilov State Optical Institute, Leningrad, USSR	Nonlinear Optics	Ph.D.	1977

Title of Master's Thesis: Q-switch modulator for investigations of pulse ruby laser

Name of Supervisors: Prof. S.F. Sharlay

Title of Doctoral Dissertation: Theoretical studies of the effects of relaxation interactions on the absorption and emission of quantum systems in strong electromagnetic field

Names of Supervisors: Prof. P.P. Pavinsky

## B. FURTHER STUDIES

Period of Study (dates)	Name of University (including city and country if not in Israel)	Subject	Degree or Professional Licence	Date of Award
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**C. ACADEMIC AND PROFESSIONAL EXPERIENCE**

<b>Period (dates)</b>	<b>Name of Institution (city, country)</b>	<b>Department</b>	<b>Rank/Function</b>
1969-71	S.I. Vavilov State Optical Institute, Leningrad, USSR	Spectrometry	Research-probationer
1971-87	S.I. Vavilov State Optical Institute, Leningrad, USSR	Spectroscopy	Junior Research Associate
1987-90	S.I. Vavilov State Optical Institute, Leningrad, USSR	Spectroscopy	Senior Research Associate
1989-90	S.I. Vavilov State Optical Institute, Leningrad, USSR	Spectroscopy	Associate Professor
1991-98	Tel-Aviv University, Tel-Aviv, Israel	Chemistry	Senior Scientist
2000-present	Tel-Aviv University, Tel-Aviv, Israel	Chemistry	Visiting Professor
2016	ITMO University, St. Petersburg, Russia	International Laboratory of Nonlinear Optical Informatics	Research Professor
<b>1994-present</b>	<b>HIT - Holon Institute of Technology, Holon, Israel</b>	<b>Faculty of Sciences/ Dept. of Sciences</b>	
		<b><u>Rank</u></b>	
	1994-97	Adjunct Lecturer	
	1998-10.2003	Associate Professor	
	<b>10.2003</b>	<b>Full Professor (with tenure)</b>	
		<b><u>Function</u></b>	
	1999-2001	Dean of Research	

**D. PROFESSIONAL AND PUBLIC ACTIVITIES**

<b>Period (dates)</b>	<b>Name of Institution/Conference/ Journal/Exhibitions/Projects (city, country)</b>	<b>Occasion</b>
1982	The All-Union Symposium "Physics and Chemistry of Polymethin Dyes", Kiev, USSR	Invited Lecture
1990	The II USSR-USA Workshop "Linear and Nonlinear Laser Interactions and Molecular Dynamics", Moscow-Leningrad, USSR	Invited Lecture and Member of Organizing Committee
1992	The 2nd French-Israeli Symposium on Nonlinear Optics, Port Barcares, France	Invited Lecture

**D. PROFESSIONAL AND PUBLIC ACTIVITIES, contd.**

<b>Period (dates)</b>	<b>Name of Institution/Conference/ Journal/Exhibitions/Projects (city, country)</b>	<b>Occasion</b>
1997	The Czech-Israeli-German Symposium “Dynamical Processes in Condensed Molecular Systems”, Prague, Czech Republic	Invited Lecture
1997	Institute of Physics and Chemistry of Materials, CNRS, Strasbourg, France	Short-term Visiting Professor on invitation with financial support
1999	International Research Workshop on Diffusion Assisted Reactions, Weizmann Institute of Science, Rehovot, Israel	Invited Lecture
1999	The Polish-Israeli-German Symposium “Dynamical Processes in Condensed Molecular Systems”, Cracow, Poland	Invited Lecture
1999	Nara Institute of Science and Technology, Nara, Japan	Short-term Visiting Professor on invitation with financial support
2000	Department of Chemistry, University of Illinois, Urbana, USA	Short-term Visiting Professor on invitation with financial support
2000	Institute of Atomic and Molecular Science, Academia Sinica, Taipei, Taiwan, Republic of China	Visiting Professor on invitation with financial support (September-October)
2001	Institute of Physics and Chemistry of Materials, CNRS, Strasbourg, France	Visiting Professor on invitation with financial support (September-October)
2002	Institute of Physics and Chemistry of Materials, CNRS, Strasbourg, France	Visiting Professor on invitation with financial support (September-October)
2002	International Symposium “Dynamical Processes in Condensed Molecular Systems”, Israel	Member of Organizing Committee (postponed due to the situation in Israel)
2003	Humboldt University of Berlin, Institute of Physics, Berlin, Germany	Visiting Professor (February-May)
2003	Sfb 450 Workshop “Analysis and Control of Ultrafast Photoinduced Reactions”, Berlin, Germany	Invited Lecture: “Theory of coherent population transfer in dissipative systems”
2004	4th Workshop on Diffusion Assisted Reactions, Leibnitz, Austria	Invited Lecture
2004	Holon Workshop on Radiationless and Laser-controlled Transitions, Israel	Conference Organizer
2007	9th French-Israeli Symposium on Nonlinear and Quantum Optics (FRISNO 9), Les Houches, France, 11-16 February 2007	Session Chairman
2007	University of Augsburg, Institute for Physics, Augsburg, Germany	Visiting Professor – Sabbatical (November-December)

**D. PROFESSIONAL AND PUBLIC ACTIVITIES, contd.**

<b>Period (dates)</b>	<b>Name of Institution/Conference/ Journal/Exhibitions/Projects (city, country)</b>	<b>Occasion</b>
2009	International Conference on Transport and Optical Properties of Nanomaterials, Allahabad, India, 5-8 January 2009	Invited Lecture: "Exciton- and light-induced current in molecular nanojunctions"
2011	International Conference on Frontier Topics in Nanostructures and Condensed Matter Theory, London, Ontario, Canada, 9-11 March 2011	Invited Lecture: "Coherent charge transport through molecular nanojunctions: 'exciton blocking' and interplay between 'exciton' and Coulomb blocking in the wire"
2011	12th International Conference Electronic and Related Properties of Organic Systems (ERPOS-12), Vilnius, Lithuania, 11-13 July 2011	Invited Lecture: "Local field optical control of charge transport in molecular tunneling nanojunctions"
2011	Northwestern University, Chemistry Department, Evanston, IL, USA	Visiting Professor – Sabbatical (September)
2012	Northwestern University, Chemistry Department, Evanston, IL, USA	Visiting Professor (July-August)
2013	International Conference and Exhibition on Lasers, Optics & Photonics, San Antonio, Texas, USA, 2013	Invited Lecture: Plasmon-exciton excitations and Coulomb blocking in nanojunctions"; Member of Organizing Committee; Session Chairman
2013	International Symposium "Fundamentals of Laser Assisted Micro- and Nanotechnologies" (FLAMN-13), St. Petersburg, Russia, 2013	Invited Lecture: "Photon assisted tunneling in molecular nanojunctions with semiconductor and graphene contacts
2013	International Conference on Nanomaterials (ICN 2013), London, Ontario, Canada, 2013	Invited Lecture: "Photon assisted current in molecular nanojunctions with novel types of contacts"; Session Chairman
2013	SPIE Conference – Optics and Photonics 2013: Organic Photonics and Electronics, San Diego, CA, USA, 25-29 August 2013	Session Chairman
2014	International Conference Laser Optics 2014, St. Petersburg, Russia, 30 June-4 July 2014	Invited Lecture: "Coherent laser control of current via molecular nanojunctions with semiconductor and graphene contacts"
2014	International Conference and Exhibition on Lasers, Optics & Photonics, Philadelphia, USA, 2014	Member of Organizing Committee
2015	The 45th Winter Colloquium on Physics of Quantum Electronics (PQE-2015), Snowbird, Utah, USA	Invited Lecture: "Photon- and plasmon-assisted tunneling through conduction junctions with graphene electrodes"
2015	Conference "Nanotechnology from Academia to Industry", HIT, Holon, Israel, 19 April 2015	Invited Lecture: "Graphene nanojunctions and metamaterials"

**D. PROFESSIONAL AND PUBLIC ACTIVITIES, contd.**

<b>Period (dates)</b>	<b>Name of Institution/Conference/ Journal/Exhibitions/Projects (city, country)</b>	<b>Occasion</b>
2015	International Workshop "Nonlinear Photonics: Theory, Materials, Applications, St. Petersburg, Russia, 29 June-2 July 2015	Invited Lecture: "Non-linear organic plasmonics
2015	COST - European Cooperation in Science and Technology	Representative of Israel in the COST Action MP1403: Nanoscale Quantum Optics"
2016	17th International Conference "Laser Optics 2016", St. Petersburg, Russia, 27 June-1 July 2016	Invited Lecture: "Nonlinear regime of surface polaritons in organic materials"; Session Chairman
2017	SPIE Conference – Organic Photonics + Electronics 2017, San Diego, CA, USA, 6-10 August 2017	Invited Lecture: "Light-induced 'plasmonic' properties of organic materials: Surface polaritons, bistability and switching waves"
2018	International Conference "Nanotechnology from Academia to Industry", HIT, Holon, Israel, 6 May 2018	Member of Organizing Committee and Plenary Session Chairman
2018	18th International Conference "Laser Optics 2016", St. Petersburg, Russia, 3-8 June 2018	Invited Lecture: "Exciton-polaritons and switching waves in organic photonics"
2018	META'18 – The 9th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Marseille, France, 24 June-1 July 2018	Invited Lecture: "Frenkel Exciton-Polaritons in Organic Photonics"
2019	FLAMN-19 – International Conference "Fundamentals of Laser Assisted Micro-&Nanotechnologies", St.-Petersburg, Russia, 30 June – 4 July 2019	Invited Lecture: "Electron-Vibrational Interactions in Molecular Aggregates: from Exciton Absorption and Luminescence to Exciton-Polaritons in Nanofibers and Switching Waves"
2019	NANOP2019 - International Conference "Nanophotonics and Micro/Nano Optics 2019", Munich, Germany, 4-6 September 2019	Session Chair
2019	"Integrated Biophotonics" Israeli-Italian Workshop, Holon, Israel October 31, 2019	Invited Lecture: "Theory of Long-Range Fluorescence Propagation in Fiber Structures of Different Origin"
2020	"Peptide Nanophotonics: Physics and Applications" 2-nd Binational Israeli-	Invited Lecture: "From active to passive beta-sheets: polariton

	Italian Workshop (ZOOM mode) Holon, Israel, October 21, 2020	luminescence”
2022	5 <sup>th</sup> International Symposium "Nanotechnology from Academia to Industry", HIT, Holon, Israel, August 24- 25 <sup>th</sup> , 2022	Member of Organizing Committee and Plenary Session Chairman
2023	6 <sup>th</sup> International Symposium "Nanotechnology from Academia to Industry", HIT, Holon, Israel, June 14-15 <sup>th</sup> 2023	Member of Organizing Committee and Session Chairman

### **E. ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS**

<b>Year</b>	<b>Name of Meeting (city, country)</b>
1971	The XVII All-Union Congress on Spectroscopy, Minsk, USSR
1971	The VII Ural Conference on Spectroscopy, Sverdlovsk, USSR
1972	The VI All-Union Conference on Nonlinear Optics, Minsk, USSR
1974	The X Scientific and Technical Conference of Young Specialists, Leningrad, USSR
1975	The I All-Union Conference on Raman Scattering Spectroscopy, Kiev, USSR
1975	The All-Union Conference "Lasers on the Basis of Complex Organic Compounds", Minsk, USSR
1979	The XXVI All-Union Conference on Luminescence, Samarkand, USSR

- 1980 The III All-Union Conference “Lasers on the Basis of Complex Organic Compounds”, Uzhgorod, USSR
- 1981 The All-Union Conference on Luminescence devoted to the 90th Anniversary of Academician S.I. Vavilov, Leningrad, USSR
- 1981 The All-Union Symposium, “Dynamics of Elementary Atomic-Molecular Processes”, Chernogolovka, USSR (*Poster Presentation*)
- 1982 The VI Symposium on Intermolecular Interaction and Molecular Conformations, Vilnius, USSR
- 1982 The All-Union Conference on Molecular Luminescence and its Applications, Kharkov, USSR
- 1982 The XI All-Union Conference on Coherent and Nonlinear Optics, Yerevan, USSR
- 1983 The Conference on Raman Scattering Spectroscopy, Krasnoyarsk, USSR
- 1983 The III International Symposium “Ultrafast Phenomena in Spectroscopy”, Minsk, USSR

**E. Active participation in scientific meetings, contd.**

<b>Year</b>	<b>Name of Meeting (city, country)</b>
1985	The All-Union Conference on Photochemistry, Suzdal, USSR
1985	The XII All-Union Conference on Coherent and Nonlinear Optics, Moscow, USSR
1987	The V International Symposium "Ultrafast Phenomena in Spectroscopy", Vilnius, USSR
1987	The All-Union Conference "Luminescence of Molecules and Crystals", Tallinn, USSR
1988	The III All-Union School on Picosecond Technique, Yerevan, USSR
1988	The XX All-Union Congress on Spectroscopy, Kiev, USSR
1988	The III All-Union Conference "Theoretical and Applied Optics", Leningrad, USSR
1989	The VI Internal Symposium "Ultrafast Phenomena in Spectroscopy", Neubrandenburg, Germany
1989	The X International Symposium on the Jahn-Teller Effect, Kishinev, USSR
1990	The VI All-Union Conference "Optics of Lasers", Leningrad, USSR
1990	The X International Vavilov Conference on Nonlinear Optics, Novosibirsk, USSR ( <i>Oral Presentation; Poster Presentation</i> )
1992	The 57th Congress of Israel Chemical Society, Haifa, Israel
1993	The 2nd Israeli International Conference on "High Tc Superconductivity", Eilat, Israel
1993	International Conference on Luminescence and Optical Spectroscopy of Condensed Matter, Storrs, USA
1994	The 3rd French-Israeli Symposium on Nonlinear Optics, Dead Sea, Israel
1994	The European Molecular Liquids Group Annual Meeting "Ultrafast Phenomena in Liquids and Glasses", Zakopane, Poland
1995	The Austrian-Israeli-German Symposium "Dynamical Processes in Condensed Molecular Systems", Baden, Austria
1995	The 54th International Meeting "Fast Elementary Processes in Chemical and Biological Systems", Lille, France
1995	The 2nd International Conference on Photo-Excited Processes and Applications, Jerusalem, Israel
1996	The 4th French-Israeli Symposium on Nonlinear Optics, Les Arcs, France
1996	The European Quantum Electronics Conference (EQEC '96), Hamburg, Germany
1997	The 25th International Conference on Solution Chemistry, Vichy, France.
1997	The Symposium on "Coherent Chemistry and Physics: Prospects for the Present and Future", Rehovot, Israel ( <i>Poster Presentation</i> )
1998	The 5th French-Israeli Symposium on Nonlinear and Quantum Optics, Eilat, Israel
1998	Bat Sheva Seminar on Light Induced Reactions in Condensed Phases, Dead Sea, Israel <i>Poster Presentation: "Populations of molecules in solution on high-power chirped ultrashort pulses excitation"</i>
1998	The 11th International Conference on Ultrafast Phenomena, Garmisch-Partenkirchen, Germany
1998	The European Quantum Electronics Conference (EQEC '98), Glasgow, Scotland, UK
1999	International Conference on Luminescence and Optical Spectroscopy of Condensed Matter, Osaka, Japan
1999	XI International Symposium "Ultrafast Phenomena in Spectroscopy", Taipei, Taiwan, ROC



**E. Active participation in scientific meetings, contd.**

<b>Year</b>	<b>Name of Meeting (city, country)</b>
2000	The 6th French-Israeli Symposium on Nonlinear and Quantum Optics, Les Houches, France
2000	The XIIth International Conference on Ultrafast Phenomena, Charleston, South Carolina, USA
2001	The 2001 Quantum Electronics and Laser Science Conference, Baltimore, USA
2002	International Conference on Luminescence and Optical Spectroscopy of Condensed Matter (ICL'02), Budapest, Hungary
2003	The 7th European/French-Israeli Symposium on Nonlinear and Quantum Optics, Les Houches, France
2003	6th International Conference on Femtochemistry (FEMTOCHEMISTRY VI), Paris, France
2004	Conference of European Science Foundation Femtochemistry & Femtobiology (ULTRA) Program, Pécs, Hungary
2004	The 14th International Conference on Ultrafast Phenomena, Niigata, Japan
2005	The 8th European/French-Israeli Symposium on Nonlinear and Quantum Optics, Ein-Bokek, Israel
2005	7th International Conference on Femtochemistry (FEMTOCHEMISTRY VII), Washington, DC, USA
2005	Gordon Research Conference on Quantum Control of Light and Matter, Waterville, ME, USA
2005	Frontiers in Optics 2005, The 89th Annual Meeting of the Optical Society of America, Tucson, Arizona, USA
2006	European Conference of Nonlinear Optical Spectroscopy (ECONOS 2006), Smolenice, Slovak Republic, 9-11 April 2006 <i>Oral Presentation: "Ultrafast chirped pulse control of many-body systems in semiconductors: Theory versus experiment"</i> (B.D. Fainberg, B. Levinsky, V.A. Gorbunov)
2006	15th International Conference on Ultrafast Phenomena, Pacific Grove, CA, USA, 31 July-4 August 2006 <i>Poster Presentation: "Adiabatic passage in the presence of excited-state absorption and two-exciton processes"</i> (B.D. Fainberg, V.A. Gorbunov)
2007	9th French-Israeli Symposium on Nonlinear and Quantum Optics (FRISNO 9), Les Houches, France, 11-16 February 2007 <i>Poster Presentation: "Chirped pulse control of many-body systems in semiconductors: Theory, experiment and prospects"</i> (B.D. Fainberg, B. Levinsky, V.A. Gorbunov)
2007	The OSA Topical Conference on Nanophotonics (NANO), Hangzhou, P.R. China, 18-21 June 2007 <i>Oral Presentation: "Optical control of current in molecular nanojunctions"</i> (B.D. Fainberg, B. Levinsky, V.A. Gorbunov)

**E. Active participation in scientific meetings, contd.**

<b>Year</b>	<b>Name of Meeting (city, country)</b>
2007	Gordon Research Conference on Quantum Control of Light & Matter, Newport, RI, USA, 12-17 August 2007
2008	International Conference Laser Optics 2008, St. Petersburg, Russia, 23-28 June 2008 <i>Oral Presentation: "Optical control of charge transport through quantum-dot and molecular tunneling nanojunctions"</i> (B.D. Fainberg, A. Nitzan)
2008	Third International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA08), Edmonton, Alberta, Canada, 20-25 July 2008 <i>Oral Presentation: "Optical control of current in quantum-dot and molecular tunneling nanojunctions"</i> (B.D. Fainberg, A. Nitzan)
2008	The 6th International Conference on Photonics, Devices and Systems, Prague, Czech Republic, 27-28 August 2008 <i>Oral Presentation: "Light-induced charge transport through quantum-dot and molecular-tunneling nanojunctions"</i> (B.D. Fainberg, A. Nitzan)
2009	Gordon Research Conference on Quantum Control of Light & Matter, South Hadley, MA, USA, 2-7 August 2009
2010	International Conference on Molecular Electronics, Emmetten, Switzerland, 5-9 January 2010 <i>Oral Presentation: "Effects of energy transfer in molecular bridge on current through molecular nanojunctions"</i> (B. Fainberg, G. Li, A. Nitzan, P. Hanggi, S. Kohler)
2010	International Conference on Excitonic and Photonic Processes in Condensed and Nano Materials (9th EXCON), Brisbane, Queensland, Australia, 11-16 July 2010 <i>Oral Presentation: "Exciton effects in molecular bridge on current through molecular nanojunctions"</i> (B.D. Fainberg, G. Li, A. Nitzan)
2011	SPIE Conference – Plasmonics: Metallic Nanostructures and Their Optical Properties IX, San Diego, CA, USA, 21-25 August 2011 <i>Oral Presentation: "Theory of energy transfer interactions near sphere and nanoshells based plasmonic nanostructures"</i> (M.S. Shishodia, B.D. Fainberg, A. Nitzan)
2012	77th Annual Meeting of the Israel Chemical Society, Ramat Gan, Israel, 7-8 February 2012 <i>Poster Presentation: "Exciton effects on current through molecular nanojunctions: Compensation of coulomb blocking"</i> (M.S. Shishodia, B.D. Fainberg, A. Nitzan)
2012	Fifth International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA 12), Nara, Japan, 3-7 June 2012 <i>Oral Presentation: "Photoinduced current in molecular conduction junctions with semiconductor contacts"</i> (B.D. Fainberg, T Seideman)
2012	Dwek School on Nanoplasmonics, Rehovot, Israel, 9-13 December 2012

**E. Active participation in scientific meetings, contd.**

<b>Year</b>	<b>Name of Meeting (city, country)</b>
2013	4th International Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2013), Seefeld, Tirol, Austria, 3-6 January 2013 <i>Oral Presentation:</i> "Coulomb blocking and exciton-plasmon effects in nanojunctions" (A. White, M. Galperin, B.D. Fainberg) <i>Poster Presentation:</i> "Photon assisted current in molecular conduction nanojunctions with novel types of contacts made of semiconductor and graphene" (B.D. Fainberg, T. Seideman)
2013	International Conference on Coherent and Nonlinear Optics (ICONO 2013), Moscow, Russia, 18-22 June 2013 (oral)
2013	SPIE Conference - Optics + Photonics 2013, San Diego, CA, USA, 25-29 August 2013 <i>Oral Presentations:</i> "Coherent control of photocurrent in molecular nanojunctions with graphene contacts" (B.D. Fainberg) "Collective plasmon-exciton excitations and Coulomb blocking in nanojunctions" (B.D. Fainberg, A.J. White, M. Galperin, B. Apter)
2014	Graphene 2014, Toulouse, France, 6-9 May 2014 <i>Poster Presentation:</i> "Photon-assisted tunneling through molecular conduction junctions with graphene electrodes" (B.D. Fainberg)
2014	Sixth International Conference on Optical, Optoelectronic and Photonic Materials (ICOOPMA 2014), Leeds, UK, 27 July-1 August 2014 <i>Oral Presentation:</i> "Photon-assisted tunneling through molecular conduction junctions with graphene electrodes" (B.D. Fainberg)
2014	Metamaterials: Fundamentals and Applications 2014, SPIE Optics + Photonics, San Diego, CA, USA, 17-21 August 2014 <i>Oral Presentation:</i> "Non-steady-state organic plasmonics and its application to optical control of Coulomb blocking in nanojunctions" (B.D. Fainberg, A.J. White, M. Galperin)
2015	Meeting of the COST Action "Nanoscale Quantum Optics", Barcelona, Spain, 14-15 September 2015 (oral presentation)
2016	META '16 – The 7th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Malaga, Spain, 25-28 July 2016 (oral presentation)
2017	The 6th International Topical Meeting on Nanophotonics and Metamaterials (NANOMETA), Seefeld, Tirol, Austria, 4-7 January 2017
2017	NanoPortugal 2017, Porto, Portugal, 1-3 February 2017 (oral presentation)
2018	Meeting and Workshop of the COST Action "Nanoscale Quantum Optics", Prague, Czech Republic, 13-16 February 2018
2019	NANOP2019 - International Conference "Nanophotonics and Micro/Nano Optics 2019", Munich, Germany, 4-6 September 2019 (oral presentation)
2021	Photonics in Chemical Physics, AIP, sponsored by Chemical Physics Review, September 26-28, Virtual Conference, 2021
2021	NANO.IL.2021 - International Conference " Nano Israel", Jerusalem, Israel, 4-6 October 2021

- 2021 Presentations of the Cooperation Projects granted by Ariel University and HIT, Ariel, Israel, October 4, 2021
- 2022 SPIE Photonics Europe 2022, Strasbourg, France, April 3 – 7, 2022 (oral presentation)
- 2022 2022 Photonics & Electromagnetics Research Symposium (PIERS), Hangzhou, China, April 25–28, 2022 (oral presentation, ZOOM mode).
- 2022 Emerging trends in many-body cavity quantum electrodynamics, Condensed Matter Division (CMD29), Manchester, UK, 21-26 August, 2022 (oral presentation, ZOOM mode).
- 2023 META 2023 – The 13th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Paris, France, July 18 - 21, 2023 (oral presentation)

**F. ACADEMIC AND PROFESSIONAL AWARDS**

(prizes, fellowships, grants, scholarships, etc.)

<b>Year</b>	<b>Name of Institution (city, country )</b>	<b>Occasion</b>
1991-94	Ministry of Science and Technology, Israel	Grant – principal investigator “Laser induced grating spectroscopy of high-temperature superconductors”

**E. Academic and professional awards, contd.**

(prizes, fellowships, grants, scholarships, etc.)

<b>Year</b>	<b>Name of Institution (city, country )</b>	<b>Occasion</b>
1992-94	Inter University Commission, Israel), Tel-Aviv University	Grant of the Wolfson Foundation "Ultrafast solvation dynamics"
1995-99	Ministry of Absorption, Inter University Commission, Israel	"GILEADI" Program
1999-2014	Ministry of Absorption, Inter University Commission, Israel	"KAMEA" Program
2001-02	French Ministry of Foreign Affairs and Israel Ministry of Science	Grant of the French-Israeli Scientific and Technical Cooperation Program Arc-EN- Ciel-Keshet - principal investigator "Study of wave packet motion in molecules coupled with a dissipative environment: Experimental and theoretical investigation with ultrashort laser pulses"
2000-04	The Israel Science Foundation (Academy of Science)	Grant – principal investigator (4 years) "Theoretical and experimental study of the interaction of intense ultrashort chirped pulses with molecules in solution"
2006-2007	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and creativity
2007	The Cluster "Nanosystems Initiative Munich (NIM)", Germany	The German Excellence Initiative
2008-2009	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and creativity
2008-2010	Russian Foundation for Basic Research and Israel Ministry of Science, Culture and Sport	Grant – principal investigator "Nanosolitons in molecular J-aggregates offering promise for information recording and processing"
2009-2010	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and creativity
2009-2014	United States-Israel Binational Science Foundation (BSF)	Grant – principal investigator "Optical response of current carrying molecular junctions based on many-body description"
2010-2011	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and creativity
2011-2012	HIT – Holon Institute of Technology, Holon, Israel	Outstanding researcher
2012	Northwestern-Tel-Aviv University – Exchange program	Northwestern travel grant
2012-2013	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and creativity

**E. Academic and professional awards, contd.**

(prizes, fellowships, grants, scholarships, etc.)

<b>Year</b>	<b>Name of Institution (city, country )</b>	<b>Occasion</b>
2013-2014	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research/ creativity, teaching, and contribution to the community
2014	Israel Ministry of Absorption	Award for leadership in science
2014-2015	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and contribution to the institute and the community
2015-2016	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and contribution to the institute and the community
2016-2017	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and contribution to the institute and the community
2017-2018	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and contribution to the institute and the community
2018-2021	Israel Ministry of Science & Technology	Grant - PI "Multifunctional light theranostic nanoprobe devices" (2,500,000 NIS) P. Ginzburg, G. Rosenman (Tel-Aviv University); B. Fainberg, B. Apter, A. Handelman (HIT)
2019-2021	Ariel University (AU), HIT	Grant for cooperation between AU and HIT – PI “Investigation and Development of Plasmonic and Exciton-Polariton Systems with Topology-protected States”, Yu. Gorodetski (AU), B. Fainberg (HIT)
2019-2020	HIT – Holon Institute of Technology, Holon, Israel	Award for distinction in research and contribution to the institute and the community

**G. MEMBERSHIP IN PROFESSIONAL SOCIETIES**

<b>Year</b>	<b>Society (country)</b>
1989-1991	Physical Society, Russia
1992-present	Israel Chemical Society
2005-present	The Optical Society of America (OSA), USA
2013-present	SPIE

**H. STUDENTS SUPERVISED BY CANDIDATE****POST DOCTORATE FELLOWS**

M. Shishodia (2010-2011, together with A. Nitzan, Tel Aviv University); G. Li (2011-2013, together with T. Seideman, North Western University, Evanston, IL); V. Osipov (2019 – 2021).

**H1. DOCTORAL STUDENTS**

<i>Year</i>	<i>Name of Student</i>	<i>Title of Thesis</i>	<i>Name of Academic Institution</i>
1989-90	V.N. Nazarov	Vibrational relaxation effects on phase modulation and generation of ultrafast pulses in dye solutions	S.I. Vavilov State Optical Institute, Leningrad, USSR

**H2. M.A./M.Sc. STUDENTS**

<i>Year</i>	<i>Name of Student</i>	<i>Title of Thesis</i>	<i>Name of Academic Institution</i>
2018	Guy Dantes	Long-range surface polaritons in organic materials	<b>HIT</b>

**H3. STUDENTS/GRADUATE STUDENTS SUPERVISED BY CANDIDATE**

**HIT – Holon Institute of Technology does not currently have an accreditation for granting research theses (M.Sc.) or Dissertation (Ph.D.) degrees**

<i>Year</i>	<i>Name of Student</i>	<i>Academic Degree</i>	<i>Title of Final Project</i>	<i>Name of Academic Institution</i>
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## **PUBLICATIONS**

### **C. REFEREED ARTICLES**

1. B.D. Fainberg, B.A. Kiselev  
“Laser absorption analysis of strongly absorbing materials”  
Optics & Spectroscopy, 30(1), 1971 (page 87)
2. B.A. Kiselev, B.D. Fainberg  
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#### **D. CHAPTERS IN BOOKS**

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Pacific Grove, CA, USA, 31 July-4 August 2006 (poster)
72. B.D. Fainberg, B. Levinsky, V.A. Gorbunov  
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73. B.D. Fainberg, M. Jouravlev and A. Nitzan  
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Hangzhou, P.R. China, 18-21 June, 2007 (p. 57) (oral presentation)
74. B.D. Fainberg and A. Nitzan  
"Optical Control of Charge Transport through Quantum-Dot and Molecular Tunnelling Nanojunctions",  
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75. B.D. Fainberg, A. Nitzan  
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Edmonton, Alberta, Canada, 20-25 July 2008 (oral)
76. B.D. Fainberg, A. Nitzan  
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The 6th Int'l. Conf. on Photonics, Devices and Systems  
Prague, Czech Republic, 27-29 August 2008 (oral)
77. B. Fainberg, G. Li, A. Nitzan, P. Hanggi, S. Kohler  
"Effects of energy transfer in molecular bridge on current through molecular nanojunctions"  
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Emmetten, Switzerland, 5-9 January 2010 (oral)
78. B.D. Fainberg, G. Li, A. Nitzan  
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Int'l. Conf. on Excitonic and Photonic Processes in Condensed and Nano Materials (9th EXCON)  
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Int'l. Conf. on Frontier Topics in Nanostructures and Condensed Matter Theory (NCMT-2011)  
London, Ontario, Canada, 9-11 March 2011 (invited lecture)
80. B. Fainberg, M. Sukharev, T-H. Park, M. Galperin  
"Local field optical control of charge transport in molecular tunneling nanojunctions"  
12th Int'l. Conf. Electronic and Related Properties of Organic Systems (ERPOS-12)  
Vilnius, Lithuania, 11-13 July 2011 (invited lecture)
81. M. S. Shishodia, B. D. Fainberg, A. Nitzan, and G. Li  
"Theory of energy transfer interactions near sphere and nanoshell based plasmonic nanostructures",  
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82. B.D. Fainberg, G. Li, M.S. Shishodia, A. Nitzan, M.A. Ranter  
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77th Annual Meeting of the Israel Chemical Society  
Ramat Gan, Israel, 7-8 February 2012 **[poster]**
83. B.D. Fainberg, T. Seideman  
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Fifth Int'l. Conf. on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA12)  
Nara, Japan, 3-7 June 2012 (page 131)
84. A. White, M. Galperin, B.D. Fainberg  
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4th Int'l. Topical Meeting on Nanophotonics and Metamaterials (NANOMETA 2013)  
Seefeld, Tirol, Austria, 3-6 January 2013 **[oral SUN 3o.2]**
85. B.D. Fainberg, T. Seideman  
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Seefeld, Tirol, Austria, 3-6 January 2013 **[poster SAT5f.18]**
86. B.D Fainberg, B. Apter, A. White, M. Galperin  
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87. B.D Fainberg, T. Seideman  
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St. Petersburg, Russia, 24-28 June 2013, (page 104) **[invited]**

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J. Physical Chemistry & Biophysics, 3 (5), 2013 (page 84) **[invited]**
89. A. White, M. Galperin, B. Apter, B.D. Fainberg  
"Non-Markovian theory of collective plasmon-molecule excitations in nanojunctions  
combined with classical electrodynamic simulations"  
SPIE Conf. on "Optical Processes in Organic Materials and Nanostructures II"  
San Diego, USA, August 25-29, 2013, (8827-14) (oral)
90. B. D. Fainberg  
"Coherent control of photocurrent in molecular nanojunctions with graphene contacts"  
SPIE Conf. on "Carbon Nanotubes, Graphene, and Associated Devices VI"  
San Diego, USA, August 25-29, 2013 (8814-29) (oral)
91. B.D. Fainberg  
"Photon assisted current in molecular nanojunctions with novel types of contacts  
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London, Ontario, Canada, 12-16 August 2013, (page 32) **[invited]**
92. B.D. Fainberg  
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Int'l. Conf. Graphene 2014, Toulouse, France, 6-9 May 2014 **[poster]**
93. B.D Fainberg  
"Coherent laser control of current via molecular nano-junctions with semiconductor  
and graphene contacts"  
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St. Petersburg, Russia, 30 June-1 July 2014 **[invited]**
94. B.D Fainberg  
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Leeds, UK, 27 July-1 August (page 50) **[oral]**
95. B. D. Fainberg, A.J. White, M. Galperin  
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Coulomb blocking in nanojunctions"  
SPIE Conf. on "Metamaterials, Metadevices, and Metasystems 2014"  
San Diego, USA, August 17-21, 2014 (9160-43) **[oral]**
96. B. D. Fainberg  
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St. Petersburg, Russia, 29 June-2 July 2015 (page 34) **[invited]**
98. B. D. Fainberg, G. Li  
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Proc. 17th Int'l. Conf. "Laser Optics 2016"  
St. Petersburg, Russia, 27 June-1 July 2016 (page R8-30) **[invited]**
99. B. Fainberg, G. Li  
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Proc. 7th Int'l. Conf. on Metamaterials, Photonic Crystals and Plasmonics "META'16"  
Malaga, Spain, 25-28 July 2016 (page 385) (oral)
100. B. Fainberg, N. Rosanov, N. Veretenov  
"Light-induced 'plasmonic' properties of organic materials: Bistability, surface (exciton) polaritons and transverse structures in bistable organic thin films"  
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101. B.D. Fainberg, N.N. Rosanov, N.A. Veretenov  
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Laser Optics (LO), 2018 International Conference, 2018 (page R8-30)  
St. Petersburg, Russia, 3-8 June 2018 **[invited]**
104. B. D. Fainberg  
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Marseille, France, 24 June-1 July 2018 (page 38) **[invited]**
105. B. D. Fainberg, N.N. Rosanov, N.A. Veretenov  
"Electron-Vibrational Interactions in Molecular Aggregates: from Exciton Absorption and Luminescence to Exciton-Polaritons in Nanofibers and Switching Waves"  
Symposium Abstract book of Int'l. Symp. "Fundamentals of Laser Assisted Micro- and Nanotechnologies" (FLAMN-19) St. Petersburg, Russia, 30 June – 4 July 2019, (page 75) **[invited]**
106. B. D. Fainberg, B. Apter, G. Rosenman

"Electron-Vibrational Interactions in Molecular Aggregates: from Exciton Absorption and Luminescence to Exciton-Polaritons Dispersion and Fluorescence in Nanofibers"

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107. B. Apter, B.D. Fainberg, A. Handelman, I. Lapsker, A. Accardo, C. Diaferia, G. Morelli, G. Rosenman

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