

RESEARCH EXPERIENCE

University of Oxford, Department of Chemistry Marie-Curie fellow; Diffuse scattering, with Prof. Andrew L. Goodwin	2025 – present
Weizmann Institute of Science, Faculty of Chemistry PhD candidate; Raman spectroscopy, with Prof. Omer Yaffe	2018 – 2024
Tel Aviv University, Physics Department MSc thesis; Quantum measurement, with Prof. Lev Vaidman	2014 – 2017
Hebrew University, Fritz Habber Center for Molecular Dynamics Research assistant; Computational biomechanics, with Dr. Assaf Zimmel	2010 – 2011

EDUCATION

PhD, Physics Weizmann Institute of Science, Israel	Grade: 94.8 (1 st tier)	2018 – 2023
MSc, Physics, Condensed Matter Program Tel Aviv University, Israel	Grade: 90 (cum laude)	2014 – 2017
Teachers' Diploma Training for Academics David Yellin College of Education	Grade: 96.03	2011 – 2013
BSc, Physics & Cognitive Science The Hebrew University of Jerusalem Israel	Grade: 89.21	2008 – 2011

COMMUNITY OUTREACH

Teaching physics in Ort's Arab school for science and engineering, Lod, Israel	2018 – 2023
Instructor in the Davidson institute of science education, Rehovot, Israel	2018 – 2022
Tour guide and curriculum developer in the Jerusalem science museum, Israel	2013 – 2014
9th grade physics teacher in Mae Boyer high-school, Jerusalem, Israel	2013 – 2014
Tutoring math & physics in Hillel - a nonprofit for underprivileged young adults	2013 – 2016

ACADEMIC TEACHING

University of Oxford - Tutoring Quantum Chemistry & Condensed Matter Physics	2024 – 2025
Weizmann Institute of Science - Lecturer in "Optics" graduate course	2019 – 2021
Tel Aviv University - Physics lab instructor and "Intro to physics" courses lecturer	2013 – 2017

NOTABLE AWARDS

Marie Skłodowska-Curie Postdoctoral fellowship, University of Oxford, UK	2025 – 2027
Junior Research Fellowship – Corpus Christi College, University of Oxford, UK	2025 – 2027
Full PhD and MSc living stipends for high admission criteria	2015 – 2023
Exchange program for outstanding students, Yonsei university, Seoul, South, Korea	2011

LEADERSHIP & ACADEMIC CITIZENSHIP

Peer review – papers reviewed for *PCCP*, *Nano letters* & *PRR*

Organizational – laser safety officer, Chemistry seminars and MSc symposium coordinator

Conferences – presented in various international conferences: MRS, APS, DPG, IPS

Mentoring – 3 BSc students, 7 MSc students

Invited talk – Fritz Haber seminar series, Hebrew University 2024

PUBLICATION LIST

[Phonon-Phonon Interactions and Incipient Dynamic Reordering in Monoclinic BiVO₄](#)

M. Menahem, [...], N. Benshalom, O. Yaffe

The Journal of Physical Chemistry Letters, under review (2026)

[Ab initio theory of the non-resonant Raman effect in crystals at finite temperature in comparison to experiment: The examples of GaN and BaZrS₃](#)

F. Knoop, N. Benshalom, [...], Olle Hellman

arXiv (2025)

[Is Ortho-Terphenyl a Rigid Glass Former?](#)

J. Kölbel, [...], N. Benshalom, D. M. Mittleman

The Journal of Physical Chemistry Letters, 15, 27, 7020–7027 (2024)

[Phonon-phonon interactions in the polarization dependence of Raman scattering](#)

N. Benshalom*, M. Asher*, [...], O. Yaffe

Journal of Physical Chemistry C 127 36, 18099-18106 (2023)

[The disorder origin of Raman scattering in perovskites single crystals](#)

M. Menahem*, N. Benshalom*, [...], O. Yaffe

Physical Review Materials 7, 044602 (2023)

[Dielectric response of rock-salt crystals at finite temperatures from first principles](#)

N. Benshalom, [...], O. Yaffe, and O. Hellman

Physical Review Materials 6, 033607 (2022)

[Dynamic disorder in Bi sub-lattice of \$\delta\$ -Bi₂O₃](#)

R. Sharma, N. Benshalom, [...], R. Korobko

arXiv (2022)

[Universality of local weak interactions and its application for interferometric alignment](#)

Dziewior*, L. Knips*, [...], N. Benshalom, L. Vaidman

PNAS 116 (8), 2881-2890 (2019)