

January 4, 2018

Dear ICS members,

It is my pleasure to announce that the winner of the 2017 ICS-Uri Golik Prize for an Excellent Graduate Student is **Ms. Elena Meirzadeh** of the Department of Materials and Interfaces at the Weizmann Institute of Science.

Elena Meirzadeh was born in Iran in 1989 and immigrated to Israel in 2000. She received her B.Sc. in Chemistry from the Hebrew University of Jerusalem (2008-2011), started her M.Sc. studies in the Weizmann Institute (2011) under the supervision of Profs. Igor Lubomirsky and Meir Lahav, and later switched to a direct Ph.D. track. Her thesis topic is "The Beauty of Imperfections – Studied in Molecular Crystals by Pyroelectricity".



Ms. Elena Meirzadeh
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Elena studies how defects and deviations from symmetry influence the macroscopic properties of crystals. She uses electrical measurement techniques, such as pyroelectricity and impedance spectroscopy, to improve fundamental understanding of crystal structure, function and growth. Pyroelectricity is the ability of polar materials to develop surface charge with temperature. By improving the current measurement techniques she increased the sensitivity of this analytical method. Consequently, by detecting pyroelectricity from near surface polar layers of centrosymmetric crystals she provided support for a non-classical crystal growth mechanism. For example, she discovered that certain solvents, which are used for growing crystals, are incorporated within the bulk of the crystals. These findings shed light on how different solvents induce crystallization of metastable polymorphs. Moreover, she was able to determine the structure of doped polar domains at the molecular level, at concentrations as low as <0.5%, by combining pyroelectric measurements with dispersion-corrected DFT, MD simulations and Neutron diffraction at different temperatures.

Elena has published her work in high profile journals, including *Angew. Chem.*, *PNAS*, *JACS*, *Acc. Chem. Res.*, *APL Materials*, *Ferroelectrics*, and *Nature Communications*. She was an invited speaker at the 2017 Gordon Conference on Crystal Growth & Assembly, received the Intel-IVS 2016 award, the Best Oral Contribution Award in the 2016 MRS meeting, the Lodovico prize for the most dynamic student at the International School of Crystallography, and the Otto Schwarz Memorial Graduate Scholarship.

This is the first time that the ICS-Uri Golik Prize is being awarded. The award ceremony will take place during the first day of the 83rd ICS Annual Meeting on February 13, 2018.

Congratulations to Elena for her achievements!




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