

WEBINAR AGENDA

Title: TESTARE 3rd Scientific Seminar – Long-term outdoor stability of perovskite-based photovoltaics

Project task: 2.4 - Workshops and Webinars

Date: Thursday, November 13th, 2025, 14:00 – 15:35 (CET)

Institution Organizer/Host: Fraunhofer ISE

Location: Online event – TEAMS – **Register beforehand** [here](#) to get access to the webinar and receive the connection details.

14:00	14:05	0:05	Welcome <i>Welcome by Maria Hadjipanayi – Project Coordinator (University of Cyprus)</i>
14:05	14:25	0:20	Analysis of degradation-induced metastabilities in perovskite cells exposed outdoors. <i>Jonathan Parion (IMEC)</i>
14:25	14:45	0:20	Outdoor stability study of 4-terminal perovskite-silicon tandem modules and their single junction counterparts <i>Markus Kohlstaedt (Fraunhofer ISE)</i>
14:45	15:05	0:20	Outdoor study of perovskite mini-modules in the Negev desert: Preliminary results and open questions <i>Aregay Teklay (Ben Gurion University)</i>
15:05	15:25	0:20	Questions/Open discussion and Closing Remarks

Abstract:

This third edition of our webinar series will focus on recent findings from the TESTARE research project regarding the stability and degradation mechanisms of perovskite solar cells (PSCs) under outdoor conditions. Three speakers will present their research on key topics, including the analysis of degradation-induced metastabilities in PSCs, the outdoor stability of 4-terminal perovskite-silicon tandem modules compared to their single junction counterparts, and a continuous study of the stability of perovskite solar cells in desert environments. Given the increasing interest in perovskite solar cells due to their high efficiency and cost-effective manufacturing, it is essential to address the challenges associated with their outdoor performance. This webinar aims to provide a comprehensive understanding of the mechanisms that contribute to the degradation of these devices in real-world settings, as well as insights into their long-term reliability. Attendees will gain valuable knowledge from the presented research, which seeks to advance the commercial viability of perovskite photovoltaics.



Short bios:



Jonathan Parion is a PhD student at imec, the University of Hasselt and the University of Ghent, Belgium. He has obtained in 2022 a master's in electrical engineering science from the UCLouvain, Belgium. His current work focuses primarily on advanced characterization and modeling to understand the physical and electrical origin of metastabilities in perovskite solar devices.



Markus Kohlstädt is a project manager and senior scientist at Fraunhofer Institute for Solar Energy (ISE) and the Freiburg Materials Research Center (FMF) of University of Freiburg. He studied Chemistry and was awarded a PhD by University of Freiburg in 2009. By now, he has more than 15 years experience in in the fabrication and characterization of Organic and Perovskite solar cells and modules, with focus on cell stack development and upscaling. In 2022, he was appointed leader of the team “Thin-Film Perovskite Photovoltaics” at Fraunhofer ISE.



Aregay Teklay Kiday is currently pursuing his Master's degree in the Department of Solar Energy and Environmental Physics at Ben-Gurion University of the Negev, under the supervision of Prof. Eugene A. Katz. His research focuses on outdoor performance studies of perovskite solar energy materials and developing efficient perovskite solar cells suited for space applications under concentrated light.

Project Background:

[TESTARE](#) is a Horizon Europe project that aims to stimulate excellence at the University of Cyprus (UCY) in the topic of new-generation PV technologies from the perspective of long-term stability and field reliability testing. In particular, the project aims to improve the R&I capabilities of the DegradationLab, a new research strategic unit of UCY which focuses on the study of degradation of new and emerging PV devices. To this end, UCY links with internationally leading research institutions, namely Interuniversity Microelectronics Centre (imec), Fraunhofer Institute for Solar Energy Systems (Fraunhofer), and Ben-Gurion University of the Negev (BGU). The project targets to improve the R&I output of UCY in the defined domain, and among others to boost its success rate in funding bids, enhance its visibility, and strengthen industry and MENA links.

TESTARE is funded by the European Union (Grant agreement number 101079488). Views and opinions expressed here are however those of the author(s) and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

