



# TESTARE

NEWSLETTER #2 MAY 2025

## Twinning for excellence in TEsting new generation PV: Long-term STAbility and field RELiability

*Dear Readers,*

*It is our pleasure to welcome you to the 2nd edition of the TESTARE project Newsletter! As we continue to push the boundaries of scientific research and technological advancement, we are thrilled to share with you the significant achievements and latest activities that have taken place. This edition highlights our collective efforts, collaborative spirit, and the groundbreaking work that sets the stage for future innovations in the field of new generation PV technologies. Join us as we delve into the exciting world of TESTARE and explore the impactful strides we have made together.*

*If you would like to keep up to date with all the latest developments and our next steps in TESTARE, you can also follow us on:*



project's website



Facebook



LinkedIn



X

*Kind Regards,*

*Dr. Maria Hadjipanayi (Project Coordinator)  
on behalf of the TESTARE Consortium*



University  
of Cyprus

imec



Fraunhofer  
ISE



Ben-Gurion University  
of the Negev



Funded by  
the European Union

Coordinated by



University  
of Cyprus

# About TESTARE

Duration  
3 years

Budget  
€1,499,999

4  
Partner Labs

TESTARE is a Horizon Europe project that aims to primarily 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 research and innovation (R&I) capabilities of the DegradationLab, a new research strategic unit of the UCY which focuses on the study of degradation and failures of new and emerging solar PV devices.

To this end, UCY will link effectively with internationally leading research institutions, namely Interuniversity Microelectronics Centre (IMEC) in Belgium, Fraunhofer Institute for Solar Energy Systems (Fraunhofer) in Germany, and Ben-Gurion University of the Negev (BGU) in Israel.

Essentially the project targets to improve the R&I output of the DegradationLab in the defined domain, boost its success rate in research funding bids, enhance its reputation and visibility, develop long-term ties with the advanced partners, strengthen links with industry and with (Middle East and North Africa) MENA countries, as well as contribute to enhancing research management and administration capabilities at UCY towards making more sustainable its overall research ecosystem.

To achieve these targets joint activities between the twinning partners are foreseen including researcher exchanges, trainings, infrastructure sharing, a joint exploratory research project, PhD schools, webinars, networking, etc. TESTARE started on 01/01/2023 and is running for three years.

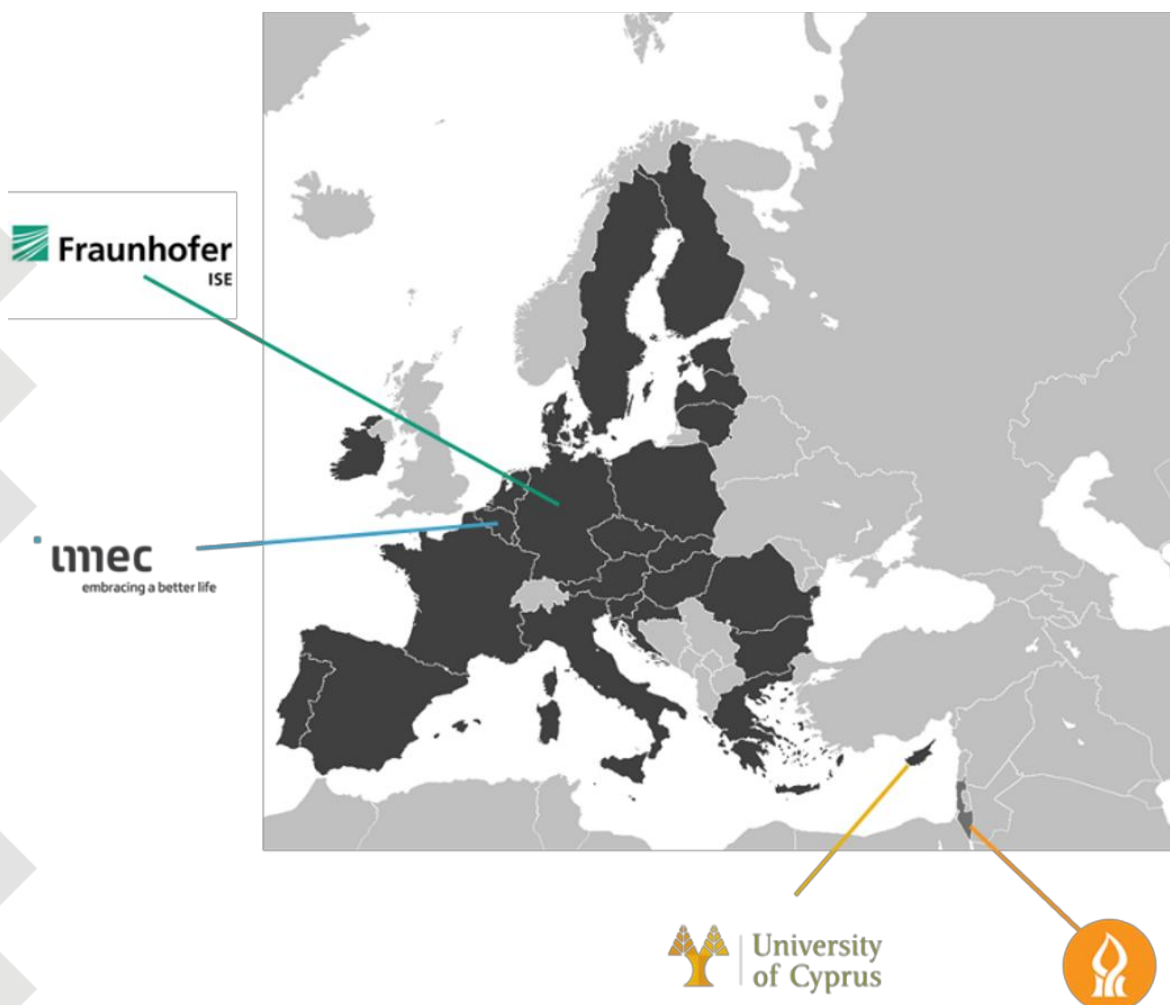
# Objectives

- To enhance the quality of and increase the R&I output of the DegradationLab by strengthening its capabilities in human resources and advanced PV metrology.
- To strengthen the reputation and networking capabilities of DegradationLab by introducing it to key players allowing for the participation in scientific consortia for high-quality R&I proposals and projects.
- To boost success rate in funding in the field submitted by the DegradationLab.
- To have long-term ties and infrastructure-sharing between partners.
- To contribute to bridging the academia-industry gap through building local and global links with businesses / industry.
- To strengthen links to MENA countries.
- To strengthen research management and administrative skills of UCY.

Overall, the aim will be to achieve all the above through gaining new scientific knowledge in perovskite PV particularly on testing and aging novel perovskite/silicon PV modules, developing appropriate indoor and outdoor measurement protocols, and addressing critical issues regarding their long-term stability and field diagnostics.

## Project consortium

The project consortium comprises of four partners, working towards the goals of TESTARE project. The University of Cyprus (coordinator) is joined by three advanced partners from Europe and Israel (imec, Fraunhofer ISE and BGU), with the objective to enhance the capabilities of the DegradationLab team of UCY. An additional objective of TESTARE is to build an inclusive research environment, where gender and overall diversity is prevalent.



# Project news

## Where you may have seen us



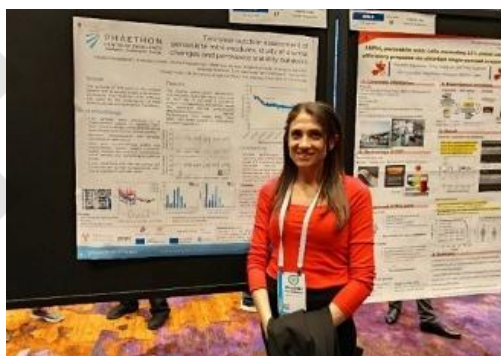
February–June 2024

The UCY TESTARE team initiated one-one interactions with local Cypriot industry in Cyprus, namely the Cyprus Research and Innovation Centre (CYRIC), eBOS, IQ3SOLAR, ASBIS, Embio Diagnostics. The target was to discuss collaboration possibilities and topics of common interest. These were found to be IoT applications of perovskites, BIPV applications, and predictive performance ratio modelling for perovskite PV.



13–15 May 2024

Participation in the 16th International Conference on Hybrid and Organic Photovoltaics (HOPV) in Valencia, Spain. Dr. Peraticos delivered an oral presentation on the “Evolution of hysteresis index based on two-year outdoor testing”, discussing work performed in the field of Perovskite technology by the TESTARE Project.



09–14 June 2024

Dr. Vasiliki Paraskeva from the TESTARE team of the University of Cyprus, participated in the 52nd IEEE Photovoltaic Specialists Conference (IEEE PVSC), Seattle, USA. Dr. Paraskeva delivered a poster presentation on the “Two-year outdoor assessment of perovskite mini-modules: study of diurnal changes and stability outdoors”, as part of the networking and dissemination activities of the TESTARE Project at the Perovskite and Organic Materials and Solar Cells section of the 52nd IEEE PVSC.



TESTARE at European Researcher's Night 2024  
“MISSION POSSIBLE”



27 September 2024:

The TESTARE Project team of the University of Cyprus, participated in the European Researchers' Night which took place at the Cyprus State Fair on 27 September 2024, Nicosia, Cyprus. Organized by the Research and Innovation Foundation, the event aimed to engage both young and old in celebrating science, research, and innovation!



# Project news

## Where you may have seen us

23-27 September 2024

TESTARE was represented by a team of researchers at the 41st European Photovoltaic Solar Energy Conference and Exhibition (EUPVSEC), Vienna, Austria. New research results from TESTARE were presented by imec (Dr. Aranzazu Aguirre) and UCY (Dr. Matthew Norton). The TESTARE was also represented by Dr Maria Hadjipanayi at the parallel networking event titled "Perovskite Network Event: Current Experiences in Characterisation and Indoor/Outdoor Testing of Varied Perovskite Cells and Mini-Modules", which was organized jointly by a number of Horizon Europe perovskite projects including VALHALLA, TESTARE, Viperlab project, NEXUS, TRIUMPH, and others.



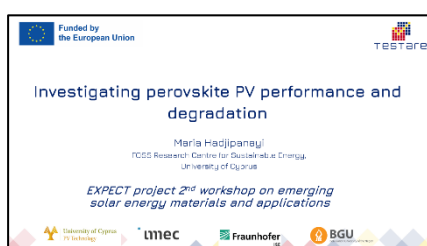
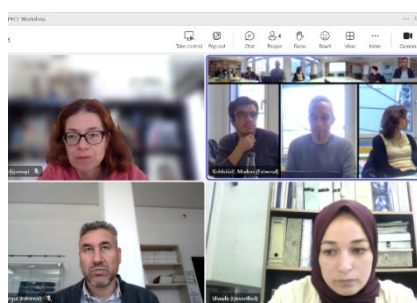
04-08 November 2024

The TESTARE team of the University of Cyprus hosted in Cyprus Jonathan Parion, a PhD student from imec as part of the 4th exchange and training of the project. Jonathan joined us to work on the outdoor degradation of perovskite solar cells. This exchange enabled to strengthen the collaboration between the two partners of the TESTARE project, gathered to perform common characterization activities under the bright sun of Cyprus!



07-08 November 2024

Dr. Hadjipanayi represented TESTARE in the 2nd scientific networking workshop of the EXPECT project (bilateral Germany-Tunisia projects) organized by Fraunhofer ISE and participated by the EXPECT project consortium (including the Research and Technologies Centre of Energy (CRTE) from Tunisia). This activity was aligned with the networking activities of TESTARE particularly the ones targeting to boost interaction and promote collaboration with MENA countries.



# Project news

## Where you may have seen us

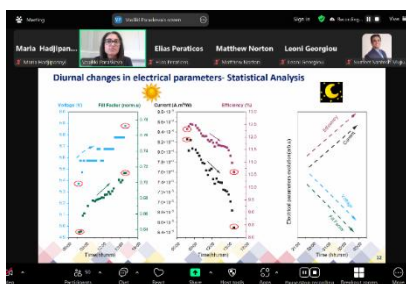
18-19 November 2024

The TESTARE consortium organised the (hybrid) 1st Research Management Workshop on 'Sharing good practices for EU project management' in Nicosia, Cyprus, in the framework of project task "Boosting research management and administration for a healthy research ecosystem at UCY". The overall aim was to contribute to the development of skills and tools for effective EU project management for the participants, and particularly the Widening partner University of Cyprus. This workshop brought together speakers from the TESTARE advanced partners, IMEC and Fraunhofer ISE, as well as other experienced project managers and consultants from projects [TRIUMPH](#), [APPROACH](#), and [Twin2Expand](#), namely speakers from Politecnico di Torino, FORTH, PNO Consultants, VAMK and UPOL, to engage in the exchange of experiences and practical tips on research project management.



02-06 December 2024

TESTARE's 5th research exchange and training activity took place in imec, Belgium. Dr. Vasiliki Paraskeva was hosted by imec and was trained on the topic 'Thermal cycling and capacitance-voltage measurements training of perovskite and perovskite/Si tandem mini-modules'.



9 December 2024

TESTARE offered the 2nd scientific webinar titled 'Optimizing Protocols, Characterization, and Modelling Towards the Commercialization of Perovskite Solar Devices'. The webinar was delivered by UCY speakers, Dr. Elias Peraticos, Dr. Vasiliki Paraskeva, and Dr. Andreas Livera. There were 52 participants and a vibrant Q&A session followed the three presentations.



3-7 March 2025

The TESTARE partners (UCY, Fraunhofer ISE, Ben Gurion University of the Negev, and IMEC) co-organised the 2-day RECIPE Symposium on "Reliability and Circularity of Perovskite-Based Photovoltaics", as part of the Materials for Sustainable Development Conference (MATSUS 2025), which took place between in Seville, Spain.

## Publications

Check out our ACS Energy Letters [publication](#) on long-term outdoor stability of imec perovskite mini-modules. These were evaluated over two years in real-world conditions in Cyprus (power efficiency retention of 78 percent after one year). These findings are among the first real-world results to address the stability issues that currently hinder perovskite PV from commercialization.

## Upcoming activities

[FuturePV workshop, 20-22 May 2025, Nicosia, Cyprus](#)

TESTARE project is organizing in Cyprus the workshop titled "Future-Proofing Perovskite PV: Innovations in Upscaling, Reliability, and Circularity ([FuturePV](#))". The event is now a joint initiative between 14 European perovskite research projects, namely: TESTARE, LAPERITIVO, DIAMOND, PERSEUS, SMARTLINE-PV, TRIUMPH, SUPERTANDEM, LUMINOSITY, APOLLO, PEARL, CIRCULAR-PV, SOLMATES, NEXUS, and PHOENIX. FuturePV workshop aspires to bring together the perovskite scientific community and industry to discuss latest developments in the field and allow for impactful networking as well.

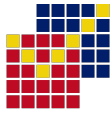


[TESTARE 2nd PhD school at ISOS-16 \(imec, Belgium\), 29 September – 01 October 2025](#)

The 2nd PhD school of TESTARE will be combined with ISOS-16 in IMEC, Belgium. Stay tuned!







TESTARE

## Stay connected

If you are interested in learning more about the project or for potential collaborations,

Visit our website:



Follow us on social media: @Testareproject



Or get in touch via email:

[hadjipanayi.maria@ucy.ac.cy](mailto:hadjipanayi.maria@ucy.ac.cy)



Funded by  
the European Union

### Acknowledgement

TESTARE is funded by the European Union (Grant agreement number 101079488). Views and opinions expressed are however those of the author(s) only 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.

