



TESTare

# Twinning for excellence in **TE**sting new generation PV: Long-term **ST**ability and field **RE**liability

## Consortium



imec



**Call:** HORIZON-WIDERA-2021-ACCESS-03

**Type of action:** HORIZON Coordination and Support Actions

**Project Duration:** 01/01/2023-31/12/2025

**Lead Partner:** University of Cyprus

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## About TESTARE

TESTARE is a Horizon Europe project that aims **to stimulate excellence at the DegradationLab of the University of Cyprus (UCY) in new-generation Photovoltaic (PV) technologies, from the perspective of long-term stability and field reliability testing.**

To this end, UCY is linking with three internationally leading research institutions: **Interuniversity Microelectronics Centre (imec)** in Belgium, **Fraunhofer Institute for Solar Energy Systems ISE (Fraunhofer ISE)** in Germany, and **Ben-Gurion University of the Negev (BGU)** in Israel.

The goal of TESTARE is to improve the research and innovation (R&I) output of the already established DegradationLab (UCY) in this specific scientific domain. The project will achieve this through joint coordination and support actions of the partners, which will include researcher exchanges for training, infrastructure sharing, a joint exploratory research project, organization of joint PhD schools, and training webinars.

Overall, the main beneficiary (UCY) aspires to learn from its twinning partners, but also to jointly gain new scientific knowledge in perovskite PV testing, while addressing critical issues regarding long-term stability and field diagnostics.

## Objectives

1. Increase the high-quality R&I output of DegradationLab, by strengthening its capabilities in human resources and advanced PV metrology.
2. Strengthen the network of DegradationLab with industry and leading partners in the field, resulting in the partner's increased participation in scientific consortia which produce high-quality proposals and projects.
3. Boost the success rate in funding bids for DegradationLab, in the field of PV technology.
4. Establish long-term ties and continue infrastructure-sharing between partners.
5. Contribute to bridging the gap between academia and industry, through building local and global links with businesses or industrial partners.
6. Strengthen links with MENA countries.
7. Strengthen research management and administrative skills of UCY, at institutional level.

## Expected results

- Increased scientific output and visibility of DegradationLab within the perovskite community.
- Enhanced capabilities of UCY researchers for conducting quality measurements, test procedures and data analysis in the field.
- New knowledge on field stability and reliability of perovskites, incl. a large-scale database from 3 sites (CY, IL, DE) on perovskite/silicon module field performances.
- Knowhow transfer on innovation practices, industry-oriented solutions and services, as well as quality management.
- Collaboration with players from whole PV value chain (local, MENA, EU level).
- UCY research management staff upskilling.
- Increased funding bids with R&D/industry.
- Framework for long-term joint actions between UC and partners (joint projects, PhDs, R&D initiatives, infrastructure access, resource-sharing/exchanging, etc).

## Impact

### Scientific:

Improved understanding of long-term outdoor performance and lifetime of perovskite/silicon modules.

Development of appropriate indoor and outdoor protocols for perovskite/silicon assessment.

Potential development of improved dedicated setups and software for novel module characterization.

Advancement of PV research in Cyprus.

### Economic and societal:

Potential commercialization of the perovskite technology.

Highly-skilled researchers from Cyprus and abroad attracted to UCY, creating a critical mass of scientists.

Boost in industry-related employment.

Development of new generation PV technology sector/market, therefore opening of the job market for scientists in the field.

Improvement of the R&I performance indicators of Cyprus.

## Follow our journey



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## Contact us

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