PERSI-PV

Funding: 70.000 euros

Funding Agency: University of Cyprus

Partners:

The **Catalan Institute of Nanoscience and Nanotechnology** (ICN2), **Max-Planck Institute for the Science of Light (MPL)**

Dates: 1/9/2020-1/9/2022

Description:

Improving the performance of photovoltaic devices is key to increasing their competitiveness against conventional sources of energy. New and emerging technologies such as perovskites and perovskite on silicon tandems attracted significant attention the last years due to their high efficiencies in combination with low manufacturing costs. Yet, there is an important challenge that remains to be addressed by the scientific community and this concerns the performance reliability of such perovskite single and perovskite tandems. The proposed work aims to characterize **perovskites and perovskite/Silicon tandem solar cells** of different structural characteristics using indoor and outdoor testing techniques towards the improvement of their efficiency and most importantly their stability. For this work, three testing labs in the University of Cyprus (UCY), the **PV Technology Laboratory** (Department of Electrical and Computer Engineering**)**, the **Laboratory of Ultrafast Science** (Department of Physics) and **Laboratory of Molecular Spectroscopy** (Department of Chemistry) joins forces with two excellent foreign research institutions, the **Catalan Institute of Nanoscience and Nanotechnology** (ICN2) and the **Max-Planck Institute for the Science of Light (MPL)** in order to achieve the accurate characterization of such technology cells through the use of conventional and advanced **optoelectronic** methods as well as with other **microscopic-spectroscopic** techniques for structural analysis. In the framework of the project, transfer of knowledge and training will be provided at the post-doctoral researcher by the ICN2 regarding the fabrication of perovskite solar cells and materials synthesis.