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Large-Area Perovskite Solar Module Manufacturing with High
Efficiency, Long-Term Stability and Low Environmental Impact
(Acronym: LAPERITIVO)



LAPERITIVO – Report

D8.1 – Quality assurance and gender dimension report

Grant Agreement n°101147311



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About LAPERITIVO

In recent years, organometal halide perovskite-based photovoltaics (PV) have attracted great interest for their high-power conversion efficiency at low manufacturing cost. Presently, East Asia especially China and North America are rapidly ramping up towards mass production of perovskite PV. More efforts are urgently needed for perovskite PV upscaling in Europe. LAPERITIVO focuses on the development of large-area stable perovskite solar modules, using processes with high manufacturability. Efficiency targets are 22% and 20% for 900 cm² opaque and semi-transparent (with >95% bifaciality) modules, respectively. Key research activities include the deposition of high-quality perovskite films as well as contacting layers over large substrate area using industrially viable techniques. Indoor and outdoor field tests, in line with International Electrotechnical Commission (IEC) standards, will be performed to monitor module reliability. Safety, circularity, and sustainability will be assessed to demonstrate products with minimized environmental impact. The developed semi-transparent modules will be applied to perovskite/silicon four-terminal tandem modules and also to Agrivoltaics. Design of perovskite PV pilot line of 200 MW and production capacity of 5 GW in Europe will also be explored. The well-balanced consortium consists of 20 complementary partners including 8 European leading research institutes/universities (IMEC, UNITOV, EMPA, Fraunhofer ISE, IPVF, CNRS, CSEM, Hellenic Mediterranean University), 1 African research institute (Green Energy Park, Morocco), 5 small and medium-sized enterprises (Becquerel Institute, Becquerel Institute France, Becquerel Institute Spain, Dynameo, TSE Troller, SmartGreenScans, BeDimensional), and 6 big companies (Pilkington Technology Management Limited (PTML), Singulus Technologies, Voltec Solar, Engie, TotalEnergies, EDF). In this way, the project aims to establish the pathway to open the era of manufacturing perovskite-based next-generation PV products in Europe.

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Abbreviations and acronyms list

Abbreviation	Meaning	Abbreviation	Meaning
MS	Microsoft		
GA	Grant Agreement		
EC	European Commission		

1. Publishable Summary

This report outlines the key procedures and organisational responsibilities implemented to ensure the quality and integrity of deliverables produced under the Grant Agreement with the European Commission. It details the adoption of a standardised Word template, the use of clear naming conventions, and the necessity of document version tracking via the MS Teams site. The collaborative drafting process between Lead Authors and Co-Authors is described, alongside the system of independent review by at least two Task Reviewers and the oversight provided by WP Leaders acting as Quality Assurance Managers. Furthermore, emphasis is placed on proactive planning and strict adherence to established procedures in order to maintain consistency and high standards throughout the project outputs.

The project actively promotes gender equality and inclusivity, ensuring that perovskite PV technology is developed to benefit all, regardless of background or identity. Employment and recruitment processes across all partners are designed to be free from gender bias, with significant female leadership already demonstrated—women lead four of the eight work packages. Laboratory and fabrication facilities at partner sites (IMEC, IPVF, Fraunhofer, BeDimensional) are accessible and user-friendly for all genders and physical sizes.