



LUMINOSITY

LARGE AREA UNIFORM INDUSTRY COMPATIBLE PEROVSKITE SOLAR CELL TECHNOLOGY

LUMINOSITY is an industry-driven project aimed at leveraging flexible perovskite solar cell technology to commercially relevant production scales using established industrial processes.

AIMS

- use industrially proven roll-to-roll (R2R) processing methods
- target photovoltaic module power conversion efficiency of $>20\%$ at an area of $>900\text{ cm}^2$
- close the efficiency gap between lab-scale and fab-scale processed devices
- bring technology readiness level up to 7

OUTCOMES

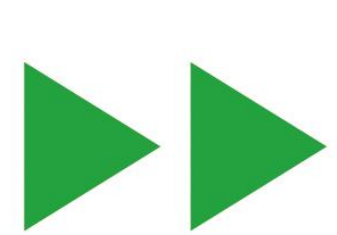
- R2R produced, flexible single-junction perovskite PV modules processed on an aluminium foil
- operational stability >20 years that rivals the lifetime of current commercial thin film PV technologies
- economically and environmentally feasible modules



Principal advantages of LUMINOSITY technology and the prototype R2R coated layers on flexible FTO foil to produce the envisioned product.

LUMINOSITY has partnered with **Hasselt University** to ensure the production of economically viable and sustainable flexible perovskite modules. The **Environmental Economics (EEC)** research group, part of the **CMK research institute**, specializes in techno-economic and life cycle assessments of clean technologies.

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UHASSELT

TASKS

- assess the economic & environmental performance of R2R-manufactured flexible large-area perovskite solar modules
- quantify how ecodesign choices impact manufacturing costs and GHG emissions

MISSION

To contribute to the continued existence of a European PV manufacturing industry by providing advice to make next-generation photovoltaics cost-competitive & eco-friendly.

Want to find out more? Visit www.luminosity-project.eu



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