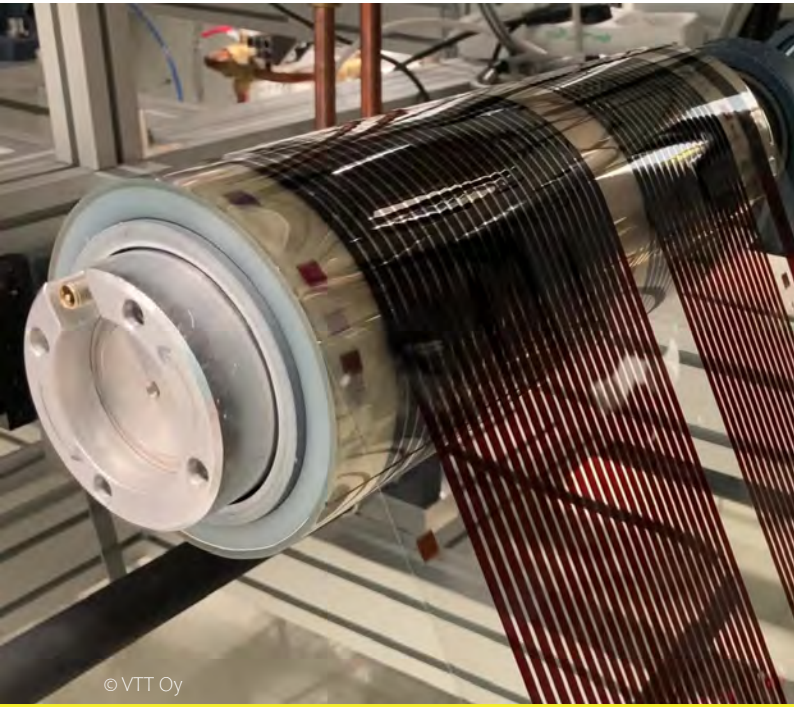
PEARL

Flexible Perovskite Solar Cells
with Carbon Electrodes



The EU-funded project PEARL aims at developing flexible perovskite solar cells with carbon electrodes.

About the project

PEARL – Flexible Perovskite Solar Cells with Carbon Electrodes

Several advantages arise from the incorporation of carbon electrode in the perovskite solar cell (PSC) architecture such as reduced material cost, improved device stability and simplified device fabrication process as well as lower emissions.

Thus, the primary objective of PEARL is to realize flexible perovskite solar cells processed with industrially viable, scalable and environmentally sound methods, showing long term operational stability surpassing the IEC standards, efficiency of > 25%, lowered production costs below 0.3 EUR/Wp and minimal emissions < 0.01 kg CO_2eq/kWh.

To reach these objectives, PEARL is focusing on the development of planar, conventional n-i-p, and further n-i-c, device architectures utilizing low-temperature carbon pastes as the top electrodes aiming to the emerging markets of building integrated photovoltaics (BIPV), vehicle integrated photovoltaics (VIPV) and internet of things (IoT).

Project Partners

- Teknologian Tutkimuskeskus VTT Oy [Coordinator]
- Dycotec Materials LTD
- eni S.p.A.
- Fachhochschule Nordwestschweiz
- Fraunhofer-Institut für Elektronenstrahl- und Plasmatechnik FEP
- Helmholtz-Zentrum für Materialien und Energie GmbH
- Institute of Chemical Research of Catalonia (ICIQ-CERCA)
- Nederlandse Organisatie voor Toegepast Natuurweten-schappelijk Onderzoek TNO
- Saule Spółka Akcyjna
- Universita degli Studi di Roma Tor Vergata

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Contact

Do you have any questions?

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Visit also the LinkedIn page of PEARL!

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