



Eco Design

TANDEM PEROVSKITE TECHNOLOGY

Eco-design via LCA: The key toward sustainable Tandem Perovskite Technologies

Thursday 10 October 2024| Chambéry – France

In person event

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Program and event summary

9h30-10h	Welcome and reception
10h00 – 10h30	Introduction : Eco-design via LCA in EU Projects (Nouha GAZBOUR, CEA)
10h30 – 10h45	SUPERTANDEM Project : Shaping Tomorrow: Life Cycle Insights in Tandem Perovskite Technology (Lukasz PRZYPIS, SAULE)
10h45 – 11h00	NEXUS Project :Tandem PK Solar's circular economy perspective (Dirk HENGEVOSS, FHNW)
11h00– 11h15	DIAMOND Project : Comparative sustainability analysis of thermoplastic and glass frit encapsulation for perovskite modules (Markus KOLSTADT, Fraunhofer ISE)
11h15 – 11h30	VALHALLA Project : LCA for perovskite PV at low TRL (Kan Afzal Peerukhan, Université de Liège)
11h30 – 11h45	TRIUMPH Project : Environmental Impact Assessment of Precursor Material Production – A Comparative Study of Information Sources (Alejandra GALARZA, IPVF)
11h45 – 12h00	PEPPERONI Project : Life Cycle Assessment of Perovskite/Silicon Tandem PV Module: A Cradle-to-Gate Analysis (Roberto MAGNIFICO, BRGM)
12h00 – 12h15	PEARL Project : Flexible PK Solar's circular economy perspective (Dirk HENGEVOSS, FHNW)
12h15 – 12h30	VIPERLAB Project : Environmental impact assessment of new perovskite-based technologies in the EU project VIPERLAB (Dilara Subasi Öztürk, Fraunhofer ISE)
12h30– 14h	Lunch for in person participants
14h – 14h30	ETIP presentation (Delfina MUNOZ, CEA)
14h30-16h30	Interactive discussion : workgroup (Nouha GAZBOUR, CEA and Lukasz PRZYPIS, SAULE) <ul style="list-style-type: none">• How you can ensure a sustainable end of life of the tandem perovskite technologies?• How we can apply the 3R of Eco-design via LCA?
16h30-16H45	Coffee Break
16h45-17h00	Restitution of the work groups and Conclusion State, limitations and perspectives (Béatrice DREVET, CEA)



Co-funded by the European Union

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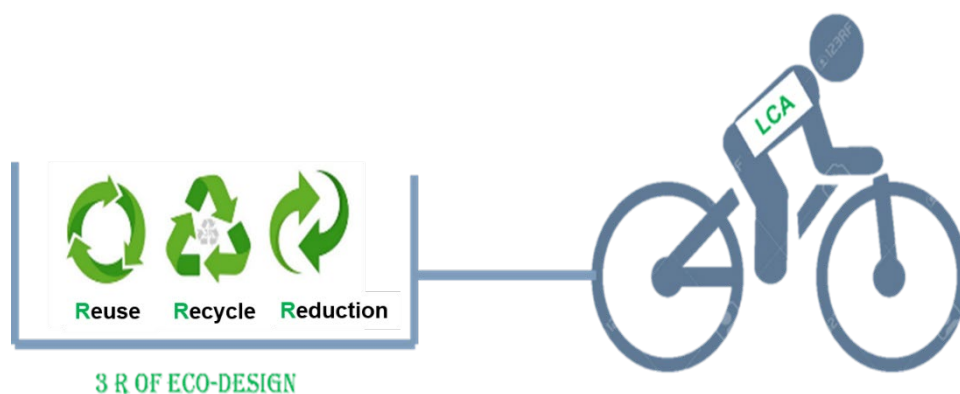
Adopting an eco-design approach to the technology development has become one of the pillars of R&D activities in the photovoltaic field. Eco-design is an overall approach that aims to reduce a product's environmental impact throughout its life cycle.

The eco-design from the early design process may be **governed** by the 3Rs, namely Reduce, Reuse, and Recycle and **be driven** by Life Cycle Assessment (LCA), known as the most reliable tool today.

However, LCA is still an excellent tool but it is highly dependent on the scope of the study, data quality and analysis method. It is therefore mandatory that the PV community develop a new and common approach to evaluate and compare the environmental impact for emerging technologies to anticipate environmental issues and guide technological choices from the early design process. This approach needs to be beyond the carbon footprint and to include all the lifecycle stages and all the environmental criteria (resources depletion, recyclability ...) in the decision-making.

The European project SUPERTANDEM is organizing a workshop to discuss the eco-design approaches adopted for the all tandem perovskite technologies and propose a harmonization between and common approach for this emerging technology. The event will present an overview of the European projects conducting an eco-design approach for tandem PV technology.

During a roundtable discussion, experts will discuss together with policy makers the harmonization of the approach develop a new and common approach to assess the design and recycling of tandem perovskite technology.



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