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Title: Berlin PV Flexible Module Project

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Why is flexible thin-film PV important?

The developed technologies boost the power output of flexible thin-film PV, paving the way for the uptake of long awaited applications such as integrated PV. By exploiting already existing surfaces for solar energy generation, land-use conflicts will be minimized and the total costs for PV can be reduced.

Can flexible perovskite-CIGS thin-film solar cells boost efficiency?

SOLMATES researchers aim to boost efficiency by making flexible perovskite-CIGS thin-film solar devices. In the realm of perovskite-silicon tandem solar cells, a few prominent research institutions including HZB have recorded efficiencies exceeding 30%. Such high efficiency, however, has never been achieved with flexible solar cells.

What is a solmates encapsulated monolithic interconnected tandem thin-film module?

SolMates will demonstrate a 100 cm<sup>2</sup>; flexible, lightweight, durable, encapsulated monolithic interconnected tandem thin-film module with more than 25%.

What's new in module production?

In module production, we are focusing on new topologies such as matrix shingling, which achieves particularly aesthetic results in combination with our MorphoColor<sup>®</sup> technology. We are also conducting research on tandem modules that allow the highest module efficiencies in fixed installations or in concentrating tracking systems.

By combining advanced strategies for materials properties management, with customized modules design in a circular economy approach, two types of products will be developed ...

Forschungsprojekt SOL MATES aims to provide technology for lightweight, flexible and high efficiency PV modules, suitable for use in decentralized energy systems, in agricultural, ...

Embrace the future of photovoltaics with our flexible solar modules, designed to meet the demands of contemporary building ...

We are developing the next generations of sustainable silicon solar cells and modules, along the entire value chain and from proof-of-concept to ...

Embrace the future of photovoltaics with our flexible solar modules, designed to meet the demands of contemporary building structures while delivering reliable and efficient ...

We are developing the next generations of sustainable silicon solar cells and modules, along the entire value chain and from proof-of-concept to industry-ready pilot technology.

Ongoing shifts in tariffs and policy (AD/CVD, IRA/FEOC, UFLPA etc.) create changes in supply chains. Recent trend shows a measurable rise in identified in-factory PV module defects, ...

As global demand for sustainable energy surges, Berlin emerges as a hub for innovative flexible photovoltaic panel manufacturers. These ultra-thin, bendable solar solutions are redefining ...

SolMates aims to provide a novel industrial, scalable technology for producing flexible, durable, made-to-measure, two-terminal CIGSe/perovskite multijunction thin-film PV ...

In the future, the general production system should enable the production of geometry- and material-flexible solar modules within the scope of sensor integrations, the use ...

A consortium entitled &quot;Scalable High-power Output and Low-Cost MAde-to-measure Tandem Solar Modules Enabling Specialized PV Applications&quot; (SOLMATES) was ...

A European project aims to develop flexible tandem perovskite-CIGS solar technology to make 25%-efficient 100 cm<sup>2</sup> ...

A European project aims to develop flexible tandem perovskite-CIGS solar technology to make 25%-efficient 100 cm<sup>2</sup> modules with a variety of substrates for ...

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