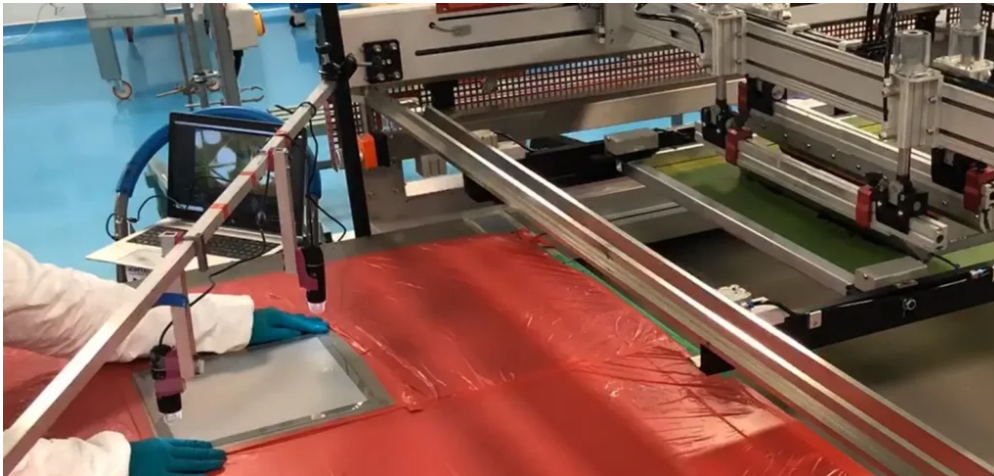


Swansea University-Led Consortium Secures £3M to Establish Sustainable Perovskite Solar Module Manufacturing in Africa

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A new Swansea University-led project, REACH-PSM (Resilient Renewable Energy Access Through Community-Driven Holistic Development in Perovskite Solar Module Manufacturing), has been awarded £3 million to develop and manufacture sustainable perovskite solar modules (PSM) in Africa. The initiative aims to empower local communities and drive sustainable energy solutions across the continent.

REACH-PSM, funded by the UKRI Ayrton Challenge Programme, will establish Africa's first full-scale demonstration of next-generation solar manufacturing. This collaborative project brings together universities, businesses, and local communities in Nigeria, Rwanda, Kenya, and South Africa.

Building upon existing Swansea University programs like TEA@SUNRISE and the UNESCO Chair in Sustainable Energy Technologies, REACH-PSM will focus on developing efficient end-of-life treatment for solar modules, minimizing waste and maximizing material circularity through reuse, refurbishment, and recycling. The project will implement a new manufacturing process designed for a circular economy from its inception.

Professor Matthew Davies, Principal Investigator of REACH-PSM, stated, "Through REACH-PSM, we are uniting world-class expertise in sustainable materials, photovoltaic technology, and local manufacturing to transform energy access and resilience across Africa. Our focus on locally sourced and produced perovskite modules, designed for efficient end-of-life processes, aims to empower communities and accelerate a more equitable, low-carbon energy future."

Perovskite solar cells, a rapidly advancing solar technology, offer potential for lower-cost, lower-energy manufacturing compared to traditional silicon cells, with the added benefit of utilizing more sustainable

materials and processes. This technology presents a resilient and adaptable energy solution for regions facing energy access challenges.

With over 500 million people in Africa lacking electricity, REACH-PSM aims to leverage local PSM manufacturing to enhance social welfare and foster new, clean economic growth.

Frances Wood, UKRI International Director, emphasized, “The Ayrton Challenge Programme showcases the transformative power of research and innovation in addressing critical global issues. These projects demonstrate how equitable, interdisciplinary collaboration can deliver sustainable and inclusive energy solutions for all.”