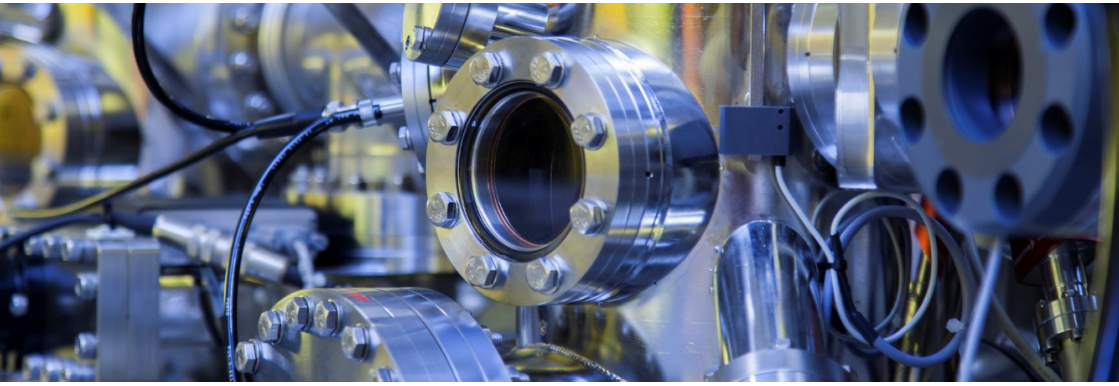
ENERGY EFFICIENT ICT

UNIVERSITY OF CAMBRIDGE

AIDING THE DEVELOPMENT OF TRANSPARENT SOLAR CELLS

Access to the Royce Ambient Processing Cluster Tool has enabled Polysolar to develop new devices and attract further funding for research into new transparent solar devices.



Through providing an SME with world-leading access to facilities and expertise, Royce has enabled significant research into the development of new ways to capture solar energy, supporting the UK's commitment to the zero carbon transition.

ROYCE ACCELERATOR TOKEN FUNDING

Henry Royce Institute researchers at the University of Cambridge have been working with Polysolar to develop new large-scale transparent solar-power (photo-voltaic, or PV) devices. Leveraging Royce Accelerator Token funding to access Royce's Ambient Processing Cluster Tool, Polysolar worked with technical researchers to develop new PV fabrication methodologies and to identify the deposition infrastructure required for scale-up and manufacture.

Polysolar's preliminary work - supported by Royce Accelerator Token funding – formed the grounds for a £15k SuperSolar Hub grant which enabled Polysolar to carry out a further 40 days of research on the Cluster Tool.

ROYCE SUPPORT

By supporting the initial development work through equipment access and funding, Royce has facilitated further investment in OPV devices that will play a key role in decarbonising heat and transport in the UK by 2050. Furthermore, as a result of this collaboration Royce has secured an agreement that will allow devices produced during Polysolar's development process to be made available for further academic research.

"Access to the Royce centre facilities has been invaluable to Polysolar for the development of transparent organic photovoltaic (OPV) for Building Integrated applications through use of facilities and expertise. The cluster tool at the Maxwell centre Cambridge has allowed Polysolar to realise its research ambitions of transparency in OPV using the latest materials and techniques, on top of this the collaboration has raised the profile of the project to enable further funding from Supergen Supersolar. Polysolar is encouraged to continue collaboration with the centre due to excellent technical capabilities and their relationships with the wider scientific community."

Martyn Rush AMRSC | R&D Manager
Polysolar

THE ROYCE AMBIENT PROCESSING CLUSTER TOOL

The Royce Ambient Processing Cluster Tool provides the ideal range of equipment and environment for photovoltaic device fabrication, fulfilling a national need within the field of organic photo-voltaics (OPVs) fabrication, deposition, packaging, and testing. The Cluster Tool comprises of a custom-built glovebox that integrates into one common inert atmosphere different vacuum and liquid-based deposition technologies for a wide range of functional materials. With ten modules that are interconnected by a semi-automated inert atmosphere transfer system, this tool facilitates the combining of different materials from both wet and vacuum processes into functional architectures.

HENRY ROYCE INSTITUTE

Polysolar

Visit www.royce.ac.uk/impact to read more impact case studies from the Henry Royce Institute