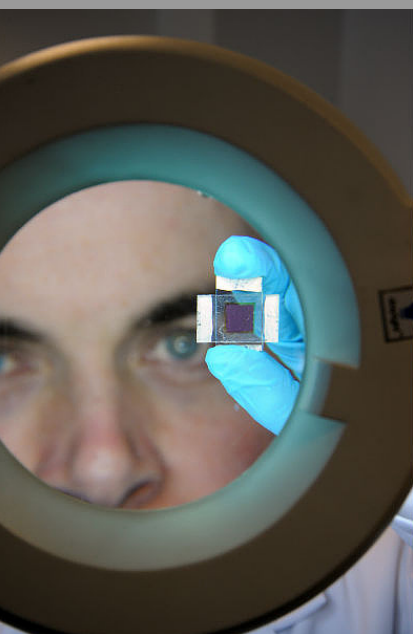


specific[®]

Buildings as power stations

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People think that innovation is some kind of linear process in which you pass a baton to the next person. We see it differently.”

*Prof Dave Worsley,
Research Director*



Revolutionary. World class. Unique. What's happening here at SPECIFIC is paving the way for a brand new global approach to solar energy capture and consumption.

Six years ago a team of research scientists at Swansea University set upon an idea. They had spent the best part of two decades working very successfully with international paint companies to develop long-lasting coatings for buildings. Led by Professor Dave Worsley, a specialist in solar energy conversion, the group began looking at optimising buildings to make use of their exposure to the sun. The researchers found that by applying solar coatings to roofs and walls these exteriors could become active, generating power and channeling it into storage for later use.

The SPECIFIC project was born: an academic and industrial consortium led by Swansea University with Tata Steel as its main industrial partner and with funding from EPSRC, Innovate UK (then the Technology Strategy Board) and the Welsh Government.

In 2010 the team of six set up its innovation centre in Port Talbot. Now home to 130 research students, projects managers, business development specialists and architects as well as senior scientists from SPECIFIC's three project partners Tata Steel, NSG Pilkington and BASF, the centre makes for a vibrant base in which ideas are shared, tested, scaled up and developed into cutting-edge technologies. Inside is all the office, meeting and breakout space needed to facilitate collaboration between academics and industrialists.

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*There isn't
another place in
the world where
you can coat
sheet, coil, plastic,
steel and glass all
under one roof.*

*With our new
continuous
coating line we
are really able
to drive
development of
coating
techniques.*”

*Dr Eifion Jewell,
Senior Technology
Transfer Fellow*



And what really makes SPECIFIC stand out from other innovation centres is its fully-equipped laboratory and £6 million pilot production plant where concepts can be brought to life on small scales, modified and manufactured to the point of market readiness.

The working relationships here are strong, mutually beneficial and the result of close connections nurtured by Swansea University over many years. SPECIFIC has built on this by attracting interest from universities all over the UK. Imperial College London and the universities of Bangor, Bath, Bristol, Cardiff, Sheffield, Manchester, Loughborough and Glyndŵr are developing ideas and products using the resources and facilities at SPECIFIC's headquarters. They're providing valued input into the "buildings as power stations" concept, helping drive the work towards fruition.

Large-scale adoption of the technologies being developed at SPECIFIC is expected to begin in the next 10 to 15 years. In the meantime the team is busy mixing and matching its deliverables, producing smaller-scale advancements which deliver value to its industrial partners as well as progressing the longer-term projects. SPECIFIC's first spinout company, BIPVCo, has just launched with a range of integrated photovoltaic roof panels. The commercialisation of other SPECIFIC products will follow.

This staged development and release of new technology means that there is a constant buzz at this innovation centre. There's always something new on the cards, an appetite for discovery and the commitment to carry ideas through. Here's where concepts are transferred from the scientist's notebook to the real world; where true innovation is inspired, and where it begins to make its mark.