Title:
Sensor Coating Systems' researcher wins Royal Commission of 1851 award

The Royal Commission of Exhibition 1851 has awarded Marta Ferran Marqués with prestigious "Industrial Fellowship" award. Marta works at Sensor Coating Systems as a materials engineer. The Industrial Fellowship is a scheme conducted by the Royal Commission for the Exhibition of 1851 to annually award a three-year research scholarship to approximately eight "young scientists or engineers of exceptional promise". The fellowship is open to all nationalities and fields of science, including physical or biological sciences, mathematics, applied science, and any branch of engineering.

The fellowship can be held anywhere in the United Kingdom. This important award comes along with a scholarship which will give Marta the opportunity to work at SCS and simultaneously complete a PhD course at a higher education institution in the UK. The event, which took place at Imperial College London, saw 12 promising students awarded out of a large number of applicants.

Marta Ferran Marqués is fully employed by Sensor Coating Systems (SCS). She is a nanomaterial scientist graduated from the Autonomous University of Barcelona, she is now doing a PhD at the Cranfield University. At SCS, Marta works on improving the Thermal History Coating, a heat-sensitive luminescent coating that can sense temperatures of up to 1,500°C or beyond, which will be the first ever post operation surface temperature measurement technique to measure at this elevated range. Understanding how heat is distributed in such a harsh environment is important to endure engines perform at their highest capability and at greater efficiency, but at the same time maintaining reliability.

Currently, the Thermal History Technology is used in a temperature range between 150°C and 1,400°C. Marta's research will increase the maximum temperature range up to 1,500°C or beyond. Such improvement will lead to more applications in the automotive, aerospace and power generation industries.

Dr Jörg Feist, Managing Director at Sensor Coating Systems said about the Award Ceremony: "We are absolutely delighted to welcome Marta into our team. Given our good experience with Royal Commission Fellows in the past, I have no doubt that Marta will thrive in our business!"

About SCS

Sensor Coating System Limited (SCS) spun out of Southside Thermal Sciences an Imperial College London spin-out and is privately funded. SCS pioneers sensor technology based on luminescence materials for engineering applications in demanding environments. Its award-winning technology (e.g. British Engineering Excellence Award, Royal Society of Chemistry Award) enables accurate

temperature detection, corrosion and erosion monitoring and lifetime predictions and, in doing so, assists in optimising the operation of machinery, lowering fuel costs and maintaining material integrity. SCS has relocated from Imperial College to Dagenham East, London, in 2016. The larger facilities support the company's growth in the aerospace, power generation and automotive sector for an international customer base.

About Thermal History Technology

The Thermal History Technology is a unique luminescence-based sensing technology which enables engineers to record past temperatures on inaccessible components. The temperature measurement capability reaches from around 150°C to 1400°C. This makes the technology very useful for the evaluation and design of mission-critical components in harsh environments such as a gas turbine or internal combustion engines.

The materials used in the Thermal History Technology have innate luminescence which permanently changes due to thermal exposure allowing the temperature to be measured by non-destructive excitation and detection of the luminescence light. The measurement device can be scanned across the surface to produce an accurate thermal profile of the surface. The materials are deposited using techniques pioneered for the most challenging applications and can survive for a long duration under high thermal and mechanical loads, offering both short- and long-term measurement of thermal characteristics.

About Royal Commission for Exhibition 1851

The Royal Commission for the Exhibition of 1851 is an institution founded in 1850 to administer the international exhibition of 1851, officially called the Great Exhibition of the Works of Industry of all Nations. The Great Exhibition was held in The Crystal Palace in London, England, the enormous building was designed by Joseph Paxton for the Exhibition and construction was supervised by William Cubitt using a cast iron space frame for the glass panes, with wooden beams for flooring.

The founding President of the Commission was Prince Albert of Saxe-Coburg and Gotha and its chief administrator was Henry Cole. The current president is Anne, Princess Royal.

About Cranfield University

Cranfield University is a British postgraduate and research-based public university specialising in science, engineering, technology and management. It contains two campuses: the main campus is at Cranfield, Bedfordshire, and the second is at the Defence Academy of the United Kingdom at Shrivenham, southwest Oxfordshire. The main campus is unique in the United Kingdom and Europe for having a semi-operational airport (Cranfield Airport) on campus. Cranfield University owns and operates the airport. The airport facilities are used by Cranfield University's own aircraft in the course of aerospace teaching and research.