Manufacturing using Advanced Powder Processes

MAPP is the EPSRC Future Manufacturing Hub in Manufacture using Advanced Powder Processes - a £20 million research hub, led by the University of Sheffield. MAPP brings together leading research teams from the Universities of Sheffield, Leeds, Manchester and Oxford, and Imperial College London, together with a founding group of 17 industry partners and the UK’s High Value Manufacturing Catapult.

MAPP’s vision is to deliver on the promise of powder-based manufacturing to provide low energy, low cost, and low waste high value manufacturing routes and products to secure UK manufacturing productivity and growth.

MAPP, together with their partners, have developed an ambitious research programme that spans the fundamentals of powder materials, advanced in-situ process monitoring and characterisation, and new approaches to modelling and control. Researchers are working with industry partners from key UK sectors, including aerospace and energy, and across the full powder processing supply chain.

MAPP’s mission is to work with academic, commercial and innovation partners to drive the research needed to solve many of the fundamental challenges limiting the development and uptake of many powder-based processes. As a recent example, Team GB used the expertise of Sheffield researchers to help develop super lightweight, aerodynamic stem and handlebars for their bicycles, 3D printed at the University of Sheffield for the 2016 Rio Olympics.

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