

**FACTBOX1: Manufacture using Advanced Powder Processes (MAPP) research hub**

MAPP will develop and translate academic research into new developments for manufacturers in areas such as aerospace, energy, and healthcare.

It will focus on developing new powder-based manufacturing processes that provide low energy, low cost and low waste manufacturing routes and products for UK industry.

MAPP, which will be part of the Henry Royce Institute – the UK’s leading centre for advanced materials research and commercialisation – will play a crucial role in unlocking the potential to use advanced powders in manufacturing processes.

Manchester will be leading the advanced in situ characterisation activity of the scheme, headed by **Professor Peter Lee** from the **University’s School of Materials**. In support of this work, the Manchester team will have access to UK-based specialist facilities, including [Diamond Light Source](#), [ISIS Neutron Source](#) and the [Central Laser Facilities](#).

Professor Lee said: “The potential for using advanced powders in the next generation of manufacturing processes is huge, from additive manufacturing where components are 3D printed to individual specifications to making more efficient batteries.

“However, the industrial uptake of many of these novel processes has been slowed by both scientific and engineering challenges.”

Professor Lee explained that MAPP will work with the UK Industry and the High Value Manufacturing Catapult – a centre which helps businesses develop exciting new ideas – to perform fundamental research and translate it into engineering solutions that will help transformational technologies deliver in the real world.

MAPP brings together expertise from five leading universities – Sheffield, who are leading the overall project, Manchester, Leeds, Oxford and Imperial College London - supported by 17 industry partners and six centres in the UK’s High Value Manufacturing Catapult.