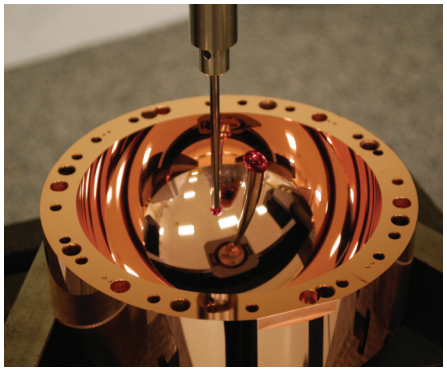
PERFECT SURFACES PAVE THE WAY FOR UK MANUFACTURING

IMPACT!



↗ £4.5m

UPS2 secured a £4.5m contract to manufacture mirrors for the European Southern Observatory's new telescope in Chile.

'Ultra Precision Surfaces' are considered perfect at near atomic level. They are pivotal to a wide range of next generation products in areas such as healthcare, renewable power generation and display technology.

Led by Cranfield University and supported by EPSRC, UPS2 is a world-class research centre in this field. It is landing major international manufacturing contracts and giving UK firms a competitive edge.

IMPACT ON INNOVATIVE MANUFACTURING

- The UPS2 centre is helping to create a new 'extra large telescope' at the European Southern Observatory in Chile – a contract worth more than £4m has been secured with the prospect of up to £100m of business thereafter.
- The centre is working with the UK manufacturing companies to drive forward innovative products in areas such as aerospace and medical device fabrication.
- It is helping to train the next generation of Ultra Precision Surfaces engineers.

Creating a world-leading centre

Professor Paul Shore and his colleagues at Cranfield University, supported by EPSRC, have established an internationally respected Ultra Precision and Structured Surfaces facility.

In 2004, the team secured Research Councils' funding to build its ultra precision surfaces capability. This work created significant industrial interest and the EPSRC-funded Integrated Knowledge Centre – called UPS2 – was established in 2007.

By the end of that year, the collaborating team (including University College London and University of Cambridge) had secured their first major international contract; to make seven mirror segments for the proposed European Southern Observatory extra large telescope. The contract, led by Optropreneurs Ltd, is worth €5m (around £4.5m).

UPS2 is also involved in other manufacturing sectors. It makes ultra precise micro-textured rolls for producing optical film used in next generation displays and solar concentrators. These are significant growth sectors. Displays are now widely used and new 3D technologies are starting to emerge. The centre opened its surface structuring laboratory in October of 2008. By January 2009, it had delivered its first large-scale roll and is now working on contracts for UK and US organisations.

Supporting UK manufacturing

UPS2 is supporting UK companies in the aerospace and medical device fabrication sectors. The centre is also training people in ultra precision technologies and in 2008 all of its students were funded by British manufacturing organisations.

"My experience, after working within industry for most of my career, is that the UK Research Councils have provided excellent funding mechanisms to allow an internationally credible UK ultra precision laboratory to be established," said Professor Shore.

"In less than six years the Research Councils, after 'seed funding' from the DTI, have helped us move from a £30,000 six-month manufacturing study into a national laboratory which now has multi-million pound international contracts."

For more information about EPSRC and the impact it is making visit www.impactworld.org.uk

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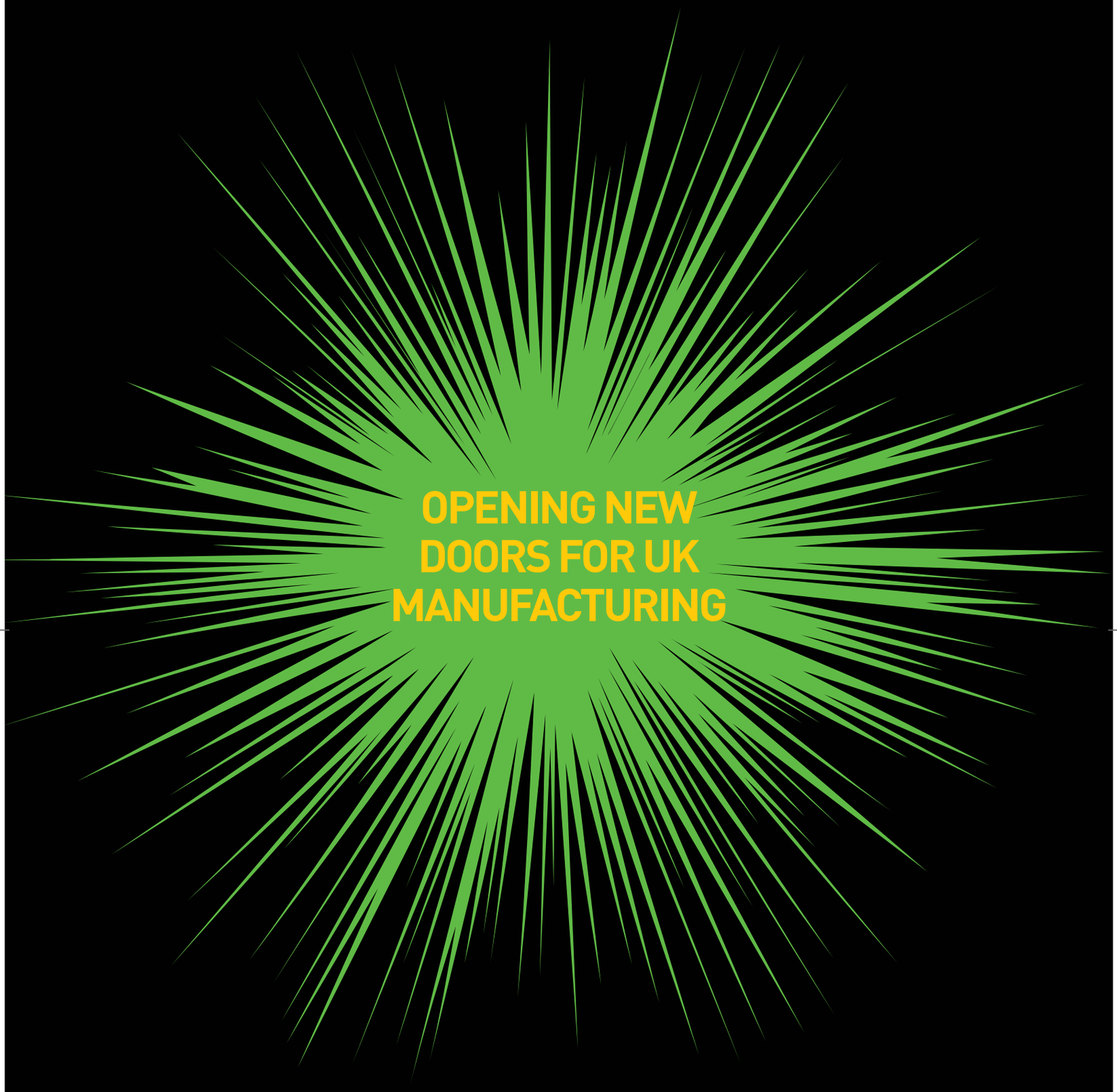

OPENING NEW DOORS FOR UK MANUFACTURING

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