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Microtarget Fabrication for High Power Laser Facilities and Future High Repetition Rate Drivers

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Abstract

An overview will be given of high specification target fabrication techniques based on the work of the Target Fabrication group at the Central Laser Facility in the UK. The extensive range of microtechnologies required for the microfabrication of a range of complex and high specification microtargets will be discussed. Such microtargets enable high power laser experiments at RAL and other international high intensity driver facilities. Operational considerations will also be discussed.

Looking to the future special focus will be given to targetry solutions which are currently being developed for high repetition rate systems. Technologies include MEMS-based fabrication, tape targetry, robotic assembly and high repetition rate, high accuracy microtarget positioning.