

# Advanced Photon and Particle Sources Driven by Multi-PW Lasers for Fundamental Science and Applications

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We will present a review of recent numerical and experimental results on the generation and characterisation of advanced photon and particle sources driven by multi-PW lasers. These include high-energy and high-flux gamma-ray beams, GeV-scale and high-charge electron beams, and positron and muon sources. An outlook on the envisaged applications for fundamental science and practical applications will also be presented.