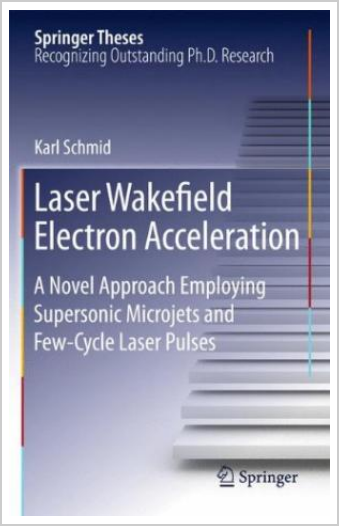

Laser Wakefield Electron Acceleration: A Novel Approach Employing Supersonic Microjets and Few-Cycle Laser Pulses

By Karl Schmid

Springer. Paperback. Condition: New. 185 pages. Dimensions: 9.2in. x 6.2in. x 0.4in.This thesis covers the few-cycle laser-driven acceleration of electrons in a laser-generated plasma. This process, known as laser wakefield acceleration (LWFA), relies on strongly driven plasma waves for the generation of accelerating gradients in thevicinity of several 100 GVm, a value four orders of magnitude larger thanthat attainable by conventional accelerators. This thesis demonstrates that laser pulses with an ultrashort duration of 8 fs and a peak power of 6 TW allowthe production ofelectron energies up to 50 MeV via LWFA. The special properties of laser accelerated electron pulses, namely the ultrashort pulse duration, the high brilliance, and the high charge density, open up new possibilities in many applications of these electron beams. This item ships from multiple locations. Your book may arrive from Roseburg,OR, La Vergne,TN. Paperback.

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