

# LASER SOURCES OF ULTRARELATIVISTIC ELECTRONS AND RADIATION FOR HIGH ENERGY DENSITY RESEARCH

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In view of current and future experiments, various methods of laser electron acceleration in plasma are discussed. In particular, the efficient generation of relativistic electrons with energies of tens of MeV in a plasma of near critical electron density has been demonstrated. The characteristics of accelerated electrons are analyzed depending on the laser and target parameters. Bright sources of radiation generated by intense currents of accelerated relativistic electrons are discussed for diagnostics in high energy density research.