151. Title: Generation of wakefields and terahertz radiation in laser-magnetized plasma interaction
Author: Jha, P; Saroch, A; Mishra, RK
Source: EPL
Volume:94
Issue:1
Pages: 15001
Publication year: 2011
Document type:Journal article (JA)
Abstract: Analytical study of terahertz (THz) radiation generation due to wakefields produced by propagation of short laser pulses in magnetized, homogeneous plasma, in the mildly relativistic regime has been presented. The uniform magnetic field is applied along a direction perpendicular to the electric vector as well as the propagation direction of the laser field. A perturbative technique is used to obtain electric and magnetic wakefields generated within and behind the laser pulse. It is seen that the coupling of the slow velocities with the transverse magnetic field leads to on-axis THz radiation generation.