



Laser-Driven Particle Acceleration

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Message from the Guest Editors

New large-scale, intense laser facilities with unique specifications will soon be coming on-line; they are capable of laser intensities never achieved before. At the same time, a number of dedicated laser installations are being built or upgraded across the world to enter new laser-matter interaction regimes for particle acceleration and generation of radiation applications. Ground-breaking initiatives based on novel particle acceleration techniques will likely deliver extraordinary achievements of modern light sources based on the latest acceleration technology, with a perspective view on future accelerators.

In view of the dramatic development of this field, this Special Issue aims to provide a comprehensive reference view of the high quality laser-plasma acceleration technique, with a focus on emerging laser-injection techniques; controlled plasma acceleration and staging techniques; applications of established schemes of ion acceleration and future high energy ion accelerators; and an update of high average power lasers for future accelerators, conceptual collider schemes, lasers, plasmas and beam diagnostics for acceleration techniques.

