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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.



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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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