



Advances in High-Intensity Lasers and Their Applications

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Message from the Guest Editor

This Special Issue is dedicated to new developments in the field of high-energy ultrashort laser pulses and their applications in laser–plasma physics. Topics can cover the application, generation, amplification, compression, and characterization of ultrashort laser pulses, as well as laser–matter interaction and laser-assisted inertial fusion. The scientific community urgently demands new laser concepts that allow higher repetition rates and thus higher average laser powers, offering the possibility to achieve even more accurate experimental results. Moreover, the application of high-intensity laser sources requires sophisticated pulse diagnostics using novel methods. In particular, the generation of secondary radiation sources, such as laser-driven FELs or laser-accelerated particle beams, is reviewed.

Keywords

ultrashort laser pulses; laser pulse metrology; active laser stabilization; pulse compression; pulse contrast improvement; high-energy frequency conversion; high-peak-power laser applications; laser–plasma interaction; laser particle acceleration; secondary source generation





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Message from the Editor-in-Chief

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