Title (en)

SHORT PULSE LASER SYSTEM

Title (de)

KURZPULS-LASERSYSTEM

Title (fr)

SYSTÈME DE LASER À IMPULSIONS COURTES

Publication

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Application

EP 21736977 A 20210614

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Abstract (en)

[origin: WO2021254963A1] The invention relates to an optical system having: a laser source (1), which generates pulsed laser radiation consisting of a temporal sequence of laser pulses in an input laser beam (EL); a splitting element (2) which is situated downstream of the laser source (1) in the beam path and splits the laser pulses into laser pulse replicates which are spatially and/or temporally separate from one another; a combining element (4) which is situated downstream of the splitting element (2) in the beam path and superimposes the laser pulse replicates in a laser pulse in an output laser beam. The problem addressed by the invention is that of providing an optical system which is improved in relation to the prior art. The intention is for the optical system to be able to generate high-power laser pulses which are particularly short and thus have a wide spectral width. According to the invention, at least one multipass cell (3) is arranged in the beam path between the splitting element (2) and the combining element (4), through which multipass cell the laser pulse replicates propagate, wherein the multipass cell (3) contains a medium in which the laser pulse replicates undergo non-linear spectral broadening.

IPC 8 full level

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