

Title (en)

AMPLIFIER CHAIN FOR GENERATING HIGH-POWER ULTRASHORT PULSES

Title (de)

VERSTÄRKERKETTE ZUR ERZEUGUNG VON ULTRAKURZEN HOCHLEISTUNGSIMPULSEN

Title (fr)

CHAÎNE AMPLIFICATRICE POUR LA GÉNÉRATION D'IMPULSIONS ULTRACOURTES DE FORTE PUISSANCE

Publication

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Application

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- FR 0116560 A 20011220

Abstract (en)

[origin: WO03055015A1] The invention concerns an amplifier chain for generating high-power ultrashort pulses with a compact stretcher/compressor system. Therefor, the inventive amplifier chain (CPA) comprises a stretcher (STR) designed to temporally stretch an incident pulse of given central wavelength ( $\lambda_0$ ) with in particular a grating-type input dispersive element (GS, GS1), an amplifying medium for amplifying the stretched pulse, and a compressor (CPR) for temporally compressing said amplified pulse. The invention is characterized in that the stretcher input grating is dimensioned to work with an incidence angle ( $\alpha_1$ ) of the incident pulse so that the angle of diffraction ( $\theta_1$ ) at the central wavelength is of the same sign as the angle of incidence relative to the grating normal ( $\Delta_1$ ) and of strictly higher absolute value.

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