

Title (en)
LASER SYSTEM WITH NONLINEAR COMPRESSION

Title (de)
LASERSYSTEM MIT NICHTLINEARER KOMPRESSION

Title (fr)
SYSTÈME LASER À COMPRESSION NON LINÉAIRE

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Application
EP 11719463 A 20110413

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Abstract (en)
[origin: WO2011128087A2] The invention relates to a laser system comprising a passively Q-switched laser (1), a spectrally widening element (2) and a compression element (4). Laser systems of this type are used for generating ultra-short laser pulses. The systems known in the prior art, mode-coupled solid-state lasers, make it possible to generate laser pulses in the sub 10 ps range only with complicated and alignment-sensitive free-beam structures. Therefore, it is an object of the invention to provide a laser system which generates pulse durations of less than 10 ps and at the same time is simple and compact to produce. In order to achieve this object, the invention proposes that the passively Q-switched laser (1) has a longitudinally monomode output radiation, which is spectrally widened by means of the spectrally widening element (3) by self-phase modulation and is temporally compressed by the compression element (4).

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See references of WO 2011128087A2

Citation (examination)

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- B. BRAUN, F. X. KAERTNER, G. ZHANG, M. MOSER, U. KELLER: "58-ps passively Q-switched diode-pumped microchip laser", OPTIC LETTERS, vol. 22, no. 6, 1997, pages 381 - 383, XP000690332

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