

Efficient laser pumping of a Co:MgF₂ crystal by radiation with the wavelength 1.3 μm

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Abstract

A Co:MgF₂ crystal laser was pumped with radiation ($\lambda = 1.35 \mu\text{m}$) from a neodymium glass laser. This resulted in generation of radiation of 1.6 J energy with a quantum efficiency of 67%. The Co:MgF₂ crystal could thus be used for efficient conversion of $\lambda = 1.3 \mu\text{m}$ laser beams, such as those from iodine photodissociation and chemical oxygen-iodine lasers.

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