

A Ce: LiCAF UV laser pumped by an intracavity frequency-doubled radiation at 532 nm

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Abstract

We examine here the lasing conditions of a Ce: LiCAF laser crystal placed intracavity with a BBO nonlinear crystal and pumped longitudinally throughout an input dichroic mirror by the 532 nm radiation of a frequency-doubled diode-pumped Nd: YAG laser. The comparison with the results obtained with an off-axis configuration shows lower laser slope efficiencies but similar laser performance in terms of threshold absorbed pump fluences (around 200 mJ/cm²). A model based on revisited spectroscopic parameters is developed to account for these laser performance.

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