

Spectroscopy and laser performance of in-band pumped Er:LLF and Er:YLF crystals

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Abstract

© 2016 IEEE. Spectroscopic properties and continuous-wave laser performance of in-band pumped Er:LiLuF₄ and Er:LiYF₄ crystals were investigated. For Er:LiLuF₄ crystal maximum slope efficiency of 44 % was obtained at 1609 nm wavelength. Er:LiYF₄ crystal laser operation was demonstrated for the first time under in-band pumping. Output power of 58 mW and slope efficiency of 21 % at 1606 nm were achieved.

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Keywords

erbium, fluorides, in-band pumping, laser, solid-state