

Proceedings - 2016 International Conference Laser Optics, LO 2016, 2016, pages R13

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

Kurilchik S., Gorbachenya K., Kisel V., Kuleshov N., Nizamutdinov A., Korableva S., Semashko V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

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.

<http://dx.doi.org/10.1109/LO.2016.7549624>

Keywords

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