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New all-solid-state tunable UV Ce³⁺, Yb³⁺:LiY_{0.4}Lu_{0.6}F₄ laser

Nurtdinova L., Semashko V., Akhtyamov O., Korableva S., Marisov M.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Here we report laser test results of the new UV solid-state active medium based on a Ce³⁺, Yb³⁺:LiY_{0.4}Lu_{0.6}F₄ mixed crystal pumped by radiation from Ce:LiCAF laser. The 10-Hz pulse repetition rate Ce³⁺, Yb³⁺:LiY_{0.4}Lu_{0.6}F₄ laser yielded a maximum output power of 0.25 mJ at 311nm in non-optimized non-selective resonator with a maximal slope efficiency of 13%. Tunability from 304 to 332 nm was achieved in the selective single-prism resonator. © 2012 Pleiades Publishing, Ltd.

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