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Diode-pumped continuous Wave Tm:KLu(WO₄)₂ and Tm:KY(WO₄)₂ microchip lasers

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Abstract

© 2016 IEEE. Laser performance of Tm doped KLu(WO₄)₂ and KY(WO₄)₂ crystals was investigated in a microchip cavity configuration with fiber coupled laser diode as a pump source. The highest output power of 1013 mW with 51 % slope efficiency was obtained for Tm:KY(WO₄)₂ crystal. Using Tm:KLu(WO₄)₂ crystal output power of 912 mW and slope efficiency of 38 % were achieved.

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Keywords

diode-pumped lasers, microchip lasers, monoclinic double tungstates, thulium lasers