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PROCEEDING ABSTRACT

International Conference Sensor, Sensor System, and Actuator

"Sensor And Sensor System Technology Development For Renewable Energy,
Maritime, And Technology Product For A Better Life"

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Comparative Continuous Wave (CW) Laser Diode Pumped of Nd³⁺:YVO₄ and Nd³⁺ YAG Crystals at 1.06 μ m emission laser

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EXTENDED ABSTRACT

A laser diode with continuous wave (CW) condition is demonstrated as photo pumped of Nd³⁺:YVO₄ and Nd³⁺ YAG crystals laser. The laser emission was obtained at 1064 nm wavelength (4F_{3/2} 4I_{11/2} transitions) for 1.0 wt.% and 1.1 wt.% Nd³⁺ ion in YVO₄ and YAG crystals respectively. The performances of the laser were observed under the 805 nm wavelength of laser diode end-pumped. The maximum average output power can be obtained by 190 mW absorption pump power. We observe that laser emission intensity and output power of Nd:YVO₄ crystal were higher than Nd:YAG crystal, correspond to the increase of slope efficiency.

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