Self-Q-switched Er-Yb double clad fiber laser with dual wavelength or tunable single wavelength operation by a Sagnac interferometer

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Abstract

We report a self-Q-switched Erbium-Ytterbium-doped double cladding fiber ring laser with dual wavelength or tunable single wavelength operations. A Sagnac interferometer with a high birefringence fiber in the loop was used for the wavelength tuning of the single line operation and cavity loss adjustment for dual wavelength laser operation. Single wavelength laser operation for a pump power of 421 mW tunable in a range of 1561.4 nm to 1569.8 nm and dual wavelength laser operation at 1561.1 nm and 1571.4 nm with equal output powers are presented.