

30. Title: Tunable THz frequency difference from a diode-pumped dual-wavelength Yb³⁺:KGd(WO₄)₂ laser with chirped volume Bragg gratings

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Abstract: We have demonstrated a simple and compact tunable dual-wavelength Yb³⁺:KGd(WO₄)₂ (Yb:KGW) laser. The laser is diode pumped through an optical bifurcated fiber and an adjustable beamsplitter. Thanks to two transversally chirped volume Bragg gratings (TCVBG) used as output couplers, the frequency difference between the two collinear waves is continuously tunable from 0 up to 7.8 THz with 110 GHz bandwidth. The frequency range is only limited by non optimized optical components and not by the principle of functioning.