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Title: Dual-frequency picosecond optical parametric generator pumped by a Nd-doped vanadate bounce laser

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Abstract: Dual-frequency MHz-repetition 1.5- $\mu$ m optical parametric generation is demonstrated from a tandem system pumped by a picosecond Nd:YVO<sub>4</sub> bounce laser. An average power of 1.0 W is obtained over the range 1571–1630 nm, corresponding to an optical-optical conversion efficiency and slope efficiency of 16% and 23%, respectively. Terahertz-wave with a frequency of 3.2 THz is also generated from the system in combination with an organic nonlinear DAST crystal.