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Abstract:We report on the first Raman laser based on a fluoride glass optical fiber. The Raman fiber laser was pumped by a 9:6 W Tm3+:silica CW fiber laser operating at a wavelength of 1940nm. A maximum output power of 580mW was measured at 2185:1 nm, corresponding to a frequency shift of 579 cm-1 (17:37 THz). We observed a threshold power of 3:8 W and a low power slope efficiency of 29% with respect to the launched pump power. Using those results and the known fiber parameters, we estimated a Raman gain peak value of 3:52 * 10-14 m=W, which is lower than the previously reported values.
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