Ultrashort pulse laser generation in ring-type EDFL using carbon-nanotube saturable absorber

ABSTRACT

This study investigates the capability of an ultrashort pulse laser in a ring cavity of erbium-doped fiber laser (EDFL). Generation of pulses was performed by inserting a carbon-nanotube saturable absorber in this EDFL. Mode-locked laser was achieved with an average power of 20mW and a peak power of 3.37kW. Pulse duration laser of 9S0fs with repetition rate of 6.24MHz was obtained at 3dB bandwidth of 3.6Snm. Higher power with better pulse duration can be achieved by optimizing the cavity length.