

-SUPPORTING INFORMATION-

**Mesoporous Carbon Nanospheres Deposited onto D-shaped Fibers for
Femtosecond Pulses Generation**

Fang Wang,^a Hua Zhou,^a Nan Li,^a Jiaying Liu,^a Daguang Li,^a Zhe Kang,^{a, b} Zhixu Jia,^a Zhen-an Qiao,^a
Weiping Qin,^a Guanshi Qin*^a

^a State Key Laboratory on Integrated Optoelectronics, College of Electronic Science and Engineering;

State Key Laboratory of Inorganic Synthesis and Preparation Chemistry, College of Chemistry, Jilin

University, Changchun 130012, China

^b Changchun Observatory, National Astronomical Observatories, CAS, Changchun 130117, China.

Supplementary Figures

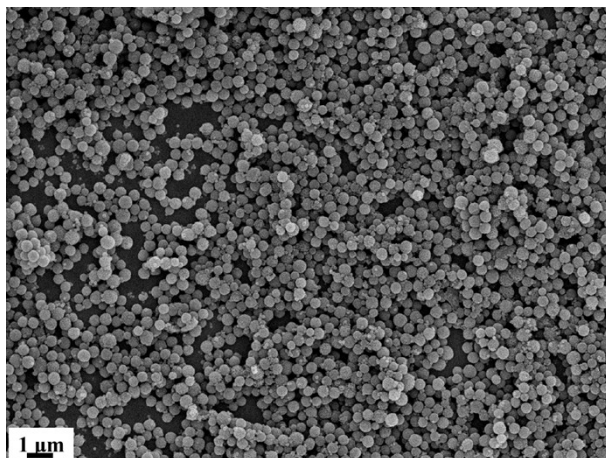


Figure S1. Typical scanning electron microscopy (SEM) image of mesoporous carbon nanospheres (MCNs)

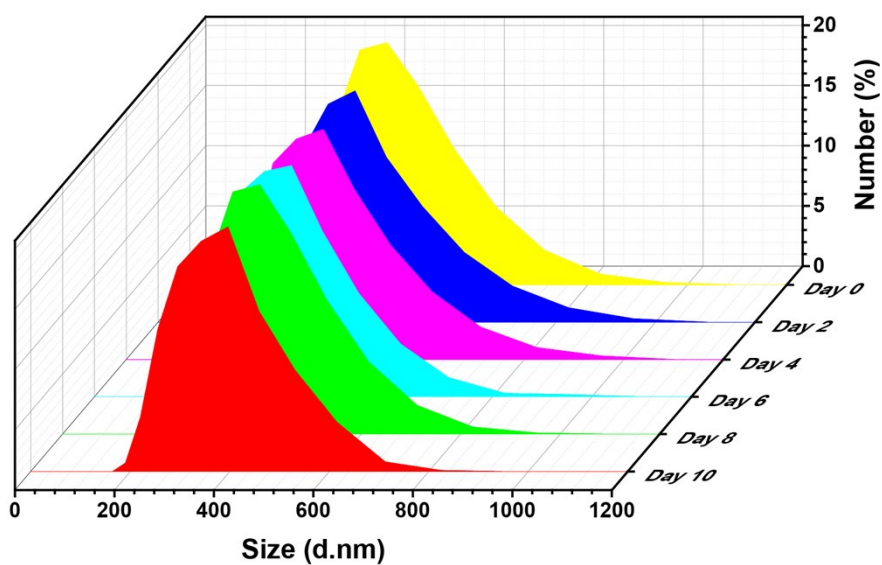


Figure S2. Hydrodynamic diameter of the MCNs in aqueous suspension over 10 days

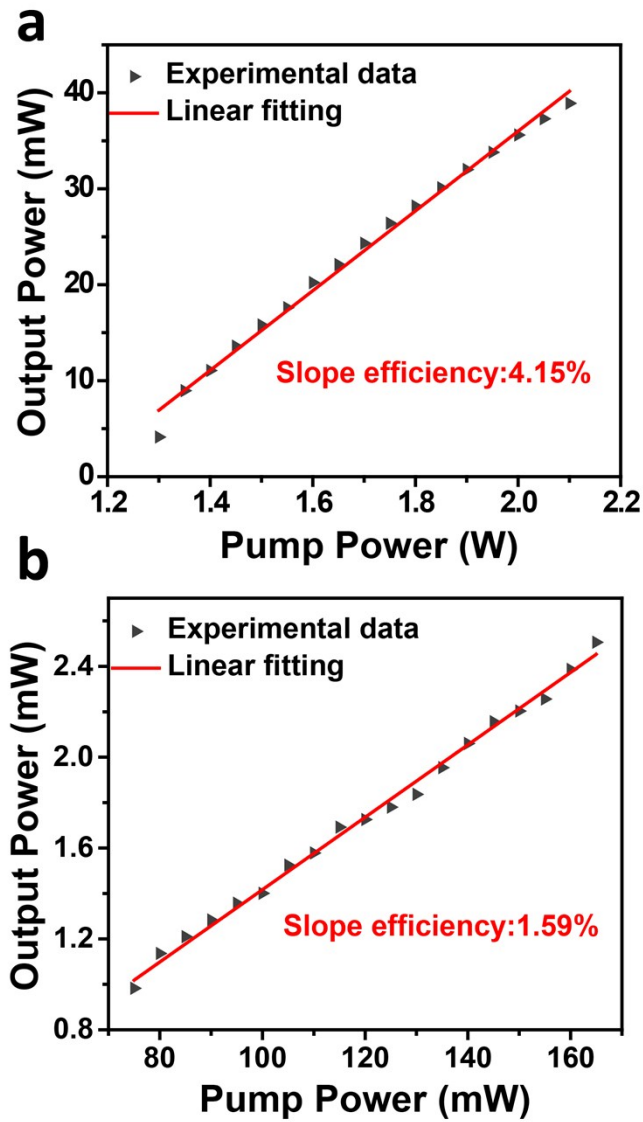


Figure S3. (a) Output power of the mode-locked Tm³⁺-doped fiber laser as a function of the pump power. (b) Output power of the mode-locked Er³⁺-doped fiber laser as a function of the pump power.

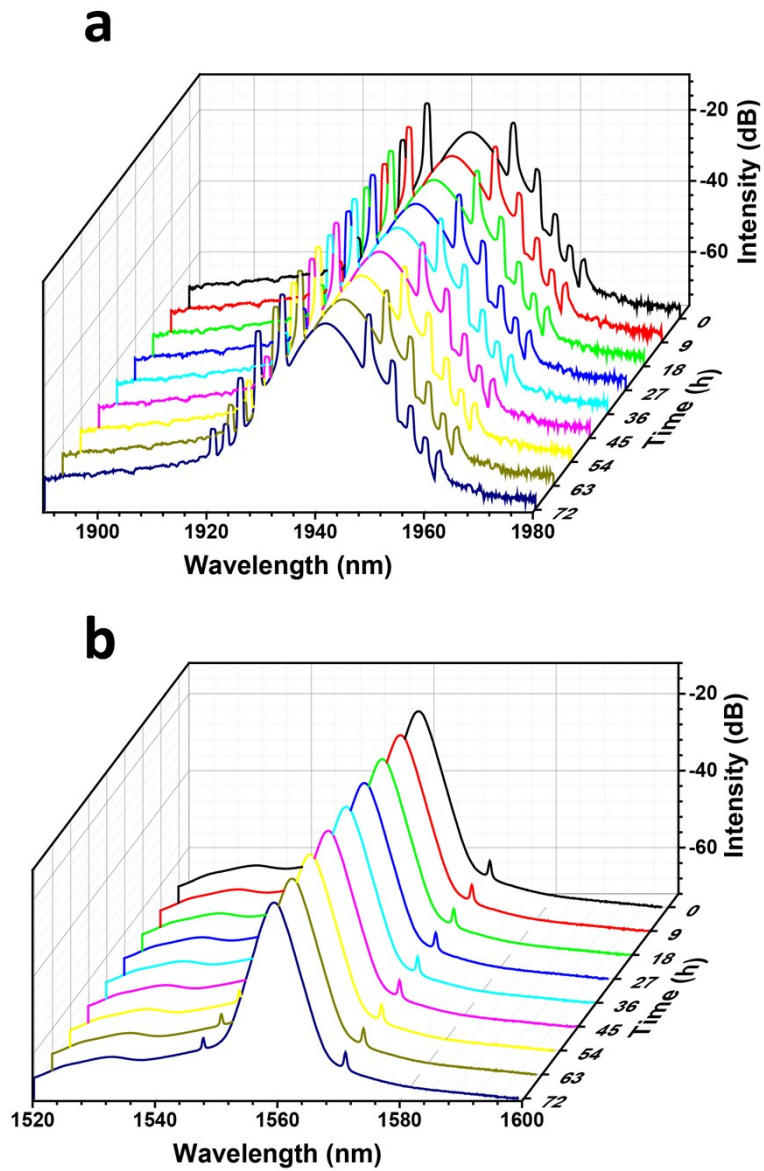


Figure S4. Time-dependent emission spectra of the mode-locked lasers at (a) 2 and (b) 1.56 μm measured at 9 h interval, respectively.

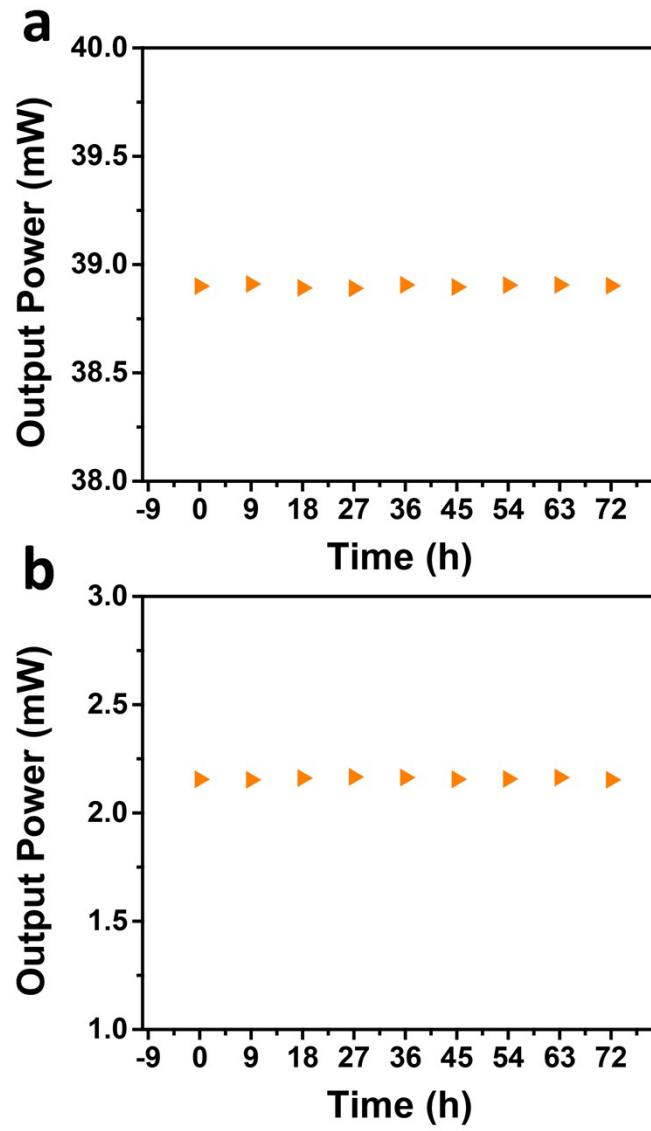


Figure S5. Output power of the mode-locked lasers at 2 and 1.56 μm for the pump power of 2.1 W and 150 mW at 9 h interval, respectively.

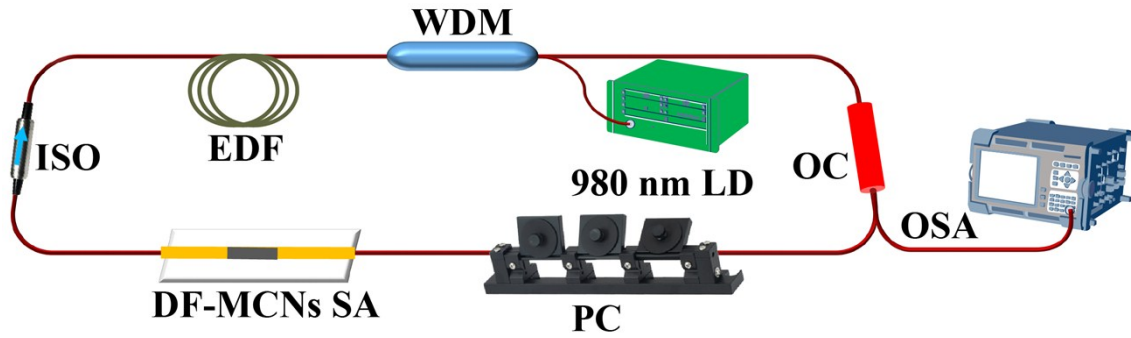


Figure S6. Experimental setup of the Er³⁺-doped fiber laser ring cavity.

The pump light was a 980nm laser diode (LD), which would be launched into the cavity through a 980/1550 nm wavelength-division multiplexing (WDM) coupler. A 20cm-long Er³⁺-doped fiber (EDF) was utilized as the gain medium. An isolator (ISO) was added to avoid any harmful feedbacks. A polarization controller (PC) was put in the cavity for the optimum polarization state. The 10 dB optical coupler (OC) was adopted to output 10% of the laser and the rest continued propagating in the cavity. The DF-MCNs SA was integrated into the fiber cavity. The output end of the 10 dB OC was connected to an optical spectrum analyzer (OSA) to present the laser spectrum.