**Supplementary Information**

All fiber ultrafast laser generating gigahertz pulse based on a hybrid plasmonic microfiber resonator

Zi-xuan Ding1, Zi-nan Huang2, Ye Chen1, Cheng-bo Mou2, \*, Yan-qing Lu1, \* and Fei Xu1, \*

1College of Engineering and Applied Sciences, Nanjing University, Nanjing 210093, China

2Key Laboratory of Specialty Fiber Optics and Optical Access Networks Shanghai, Shanghai University, Shanghai 200072, China

\*feixu@nju.edu.cn, mouc1@shu.edu.cn and yqlu@nju.edu.cn

**Characterization of samples in Fig. 4.** After the solidification of PDMS, the optical properties of the stable HPMKR sample were measured and recorded as reference for later experiments. Here, the transmission spectra, FSR, Q-factor, insertion loss, and PDL at 1550 nm of each sample used in Fig. 4 are provided in Supplementary Fig. 1 and Supplementary Table 1.



**Supplementary Figure 1 | Transmission spectra of samples in Fig. 4.** The sequence letters here correspond to those in Fig. 4

**Supplementary Table 1 | Optical characterization of samples in Fig. 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | FSR/ nm | Q-factor | Insertion loss/ dB | PDL/ dB |
| a | 0.33 | 20,685 | 4.55 | 8.10 |
| b | 0.45 | 34,793 | 4.58 | 3.53 |
| c | 0.81 | 6,144 | 1.71 | 6.98 |
| d | 1.16 | 5,981 | 7.43 | 5.16 |