Supplementary Information

One-pot preparation of thin nanoporous copper foils with enhanced light absorption and SERS properties

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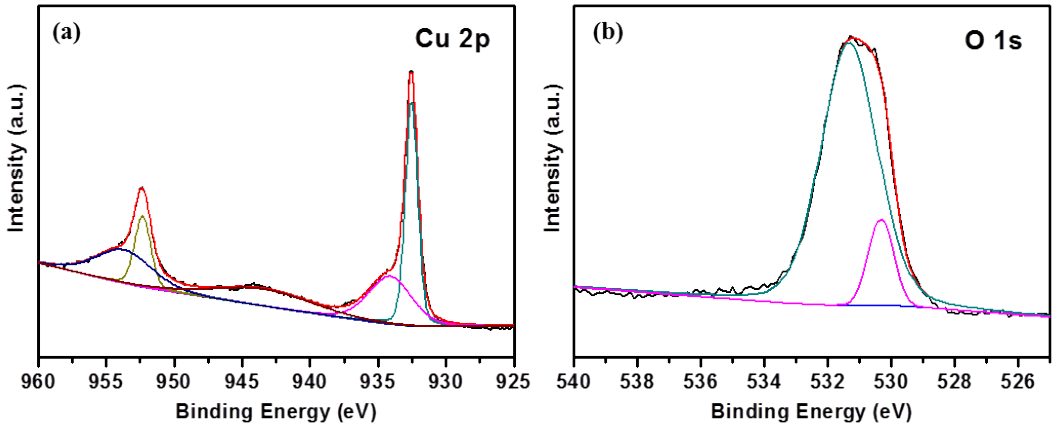

Fig. S1 XPS spectra of NPCFs: (a) Cu 2*p*; (b) O 1*s*. (The NPCFs have been exposed in atmosphere for 3 days)

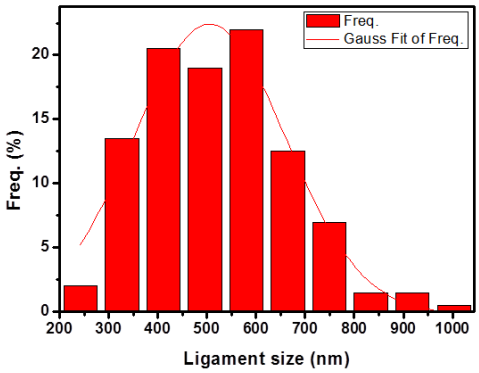

Fig. S2 Ligament size distribution of NPCFs (for ~200 positions).

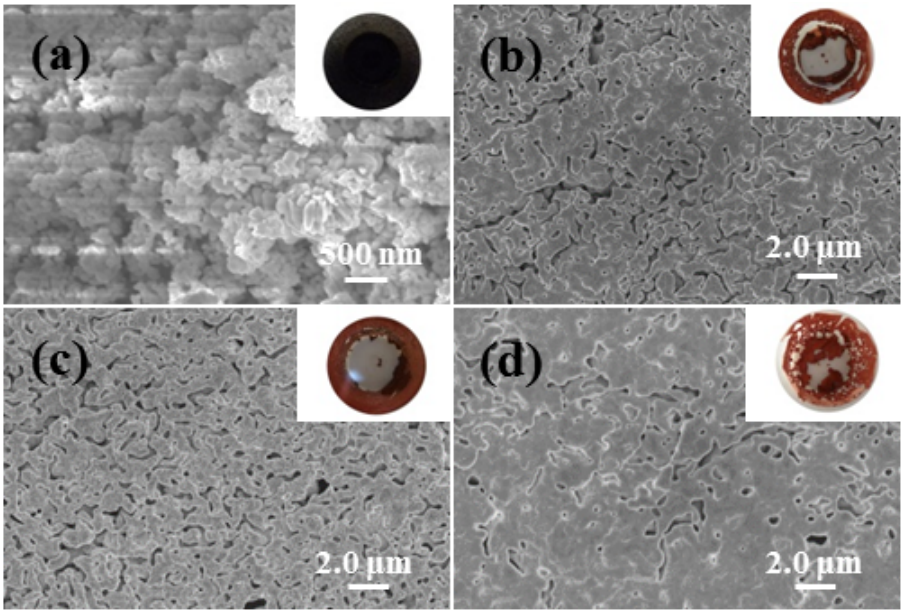

Fig. S3 SEM images of the samples synthesized at the reaction temperature of (a) 120, (b) 140, (c) 160, and (d) 200 °C. The insets show the corresponding digital images of originally grown samples on the inwall of Teflon autoclave. (The reaction time and amount of EG are 12 h and 5 mL, respectively.)

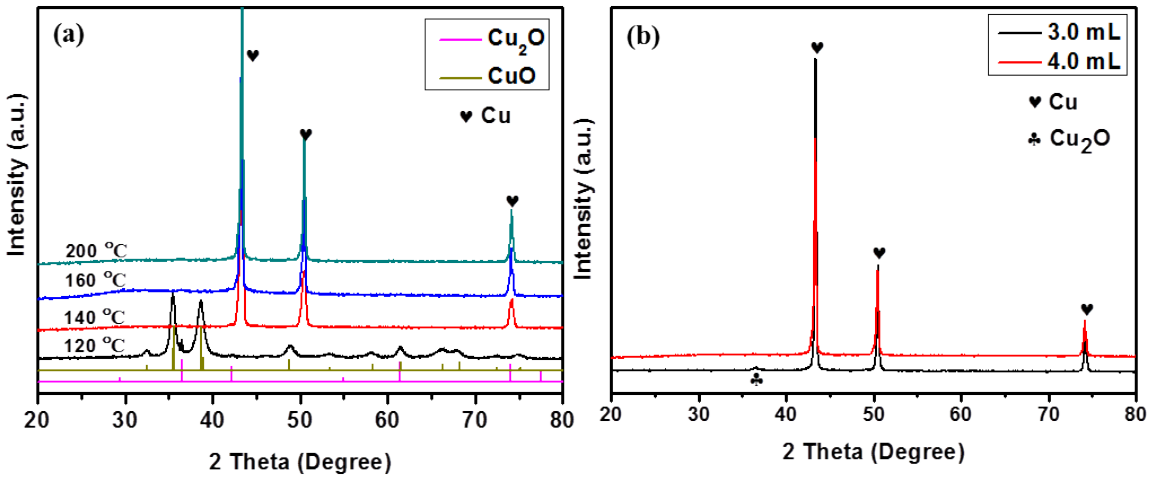

Fig. S4 XRD patterns of the samples synthesized (a) at different temperatures and (b) amount of EG.

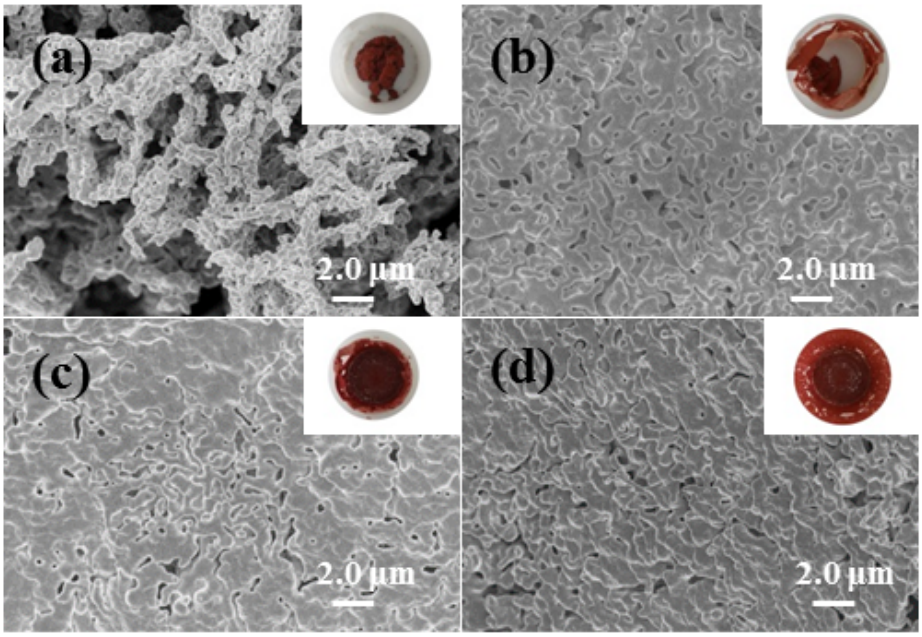

Fig. S5 SEM images of the synthesized samples with the EG of (a) 3 , (b) 4, (c) 7, (d) 10 mL. The insets show the corresponding digital images of originally grown samples on the inwall of Teflon autoclave (except for (a)). (The reaction temperature and time are 200 °C and 12 h, respectively.)

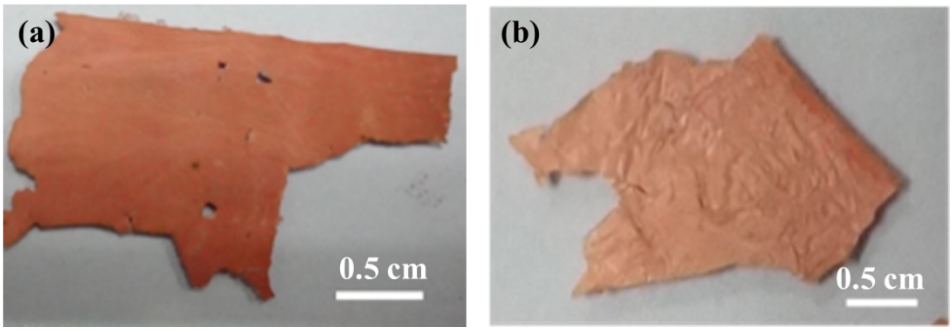

Fig. S6 Digital images of the (a) rough and (b) smooth sides of NPCFs.

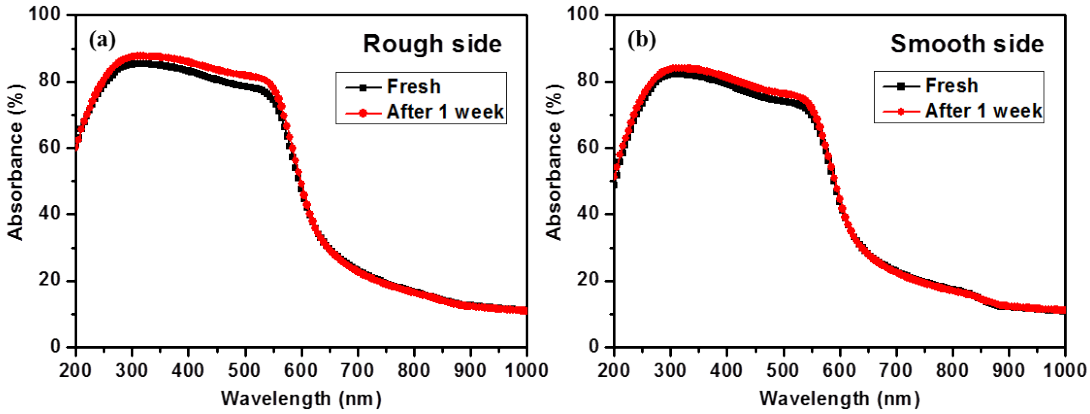

Fig. S7 UV-vis-NIR absorption spectra of NPCFs before and after being exposed in air for about 1 week: (a) the rough side, (b) the smooth side.

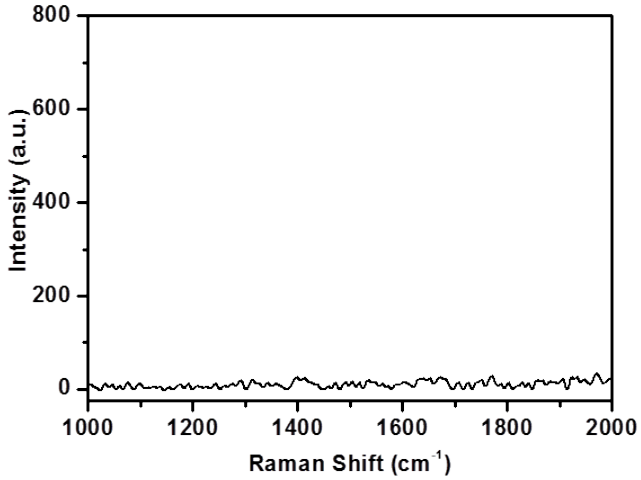

Fig. S8 Raman spectra of NPCFs substrate.

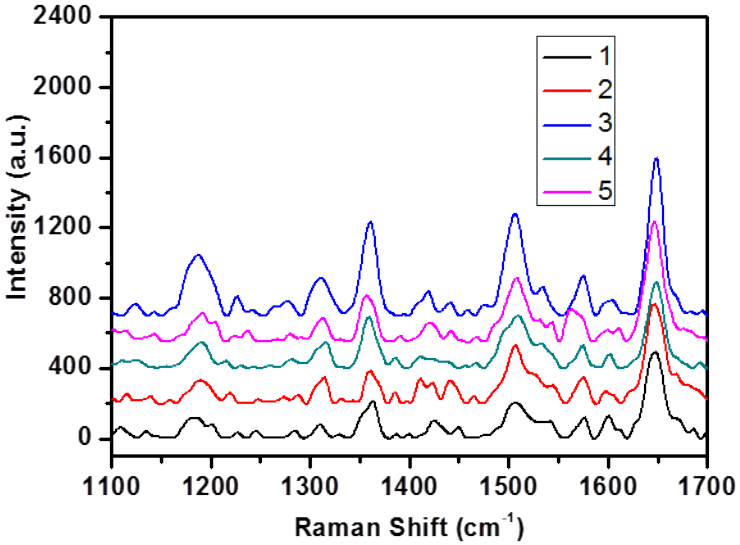

Fig. S9 SERS spectra of 10^{-6} M R6G for 5 random positions of the smooth side of NPCFs.

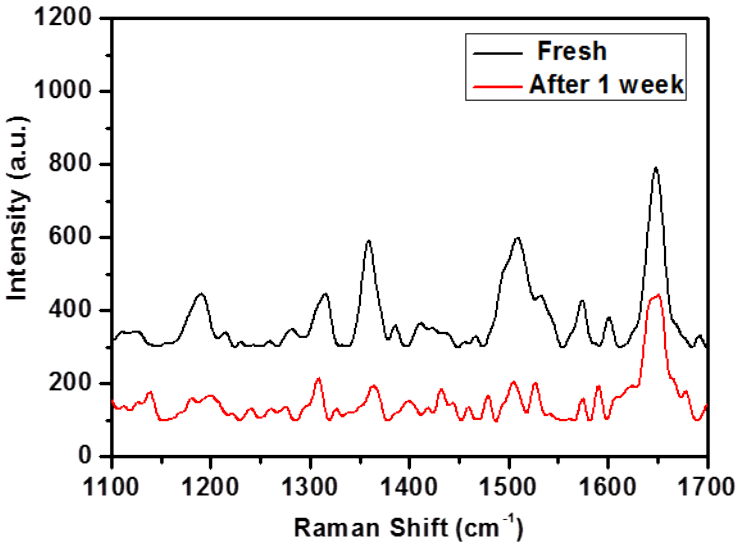

Fig. S10 The contrastive SERS spectra of 10^{-6} M R6G for the smooth side of NPCFs before and after being exposed in air for about 1 week.