Electronic Supplementary Material (ESI) for RSC Advances.

An Easily-Modified FeCl3 Method Used to Synthesize Nanoporous Gold with High Surface Area

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Table S1. The distribution of the mean pore size and Ag content (at. %) of NPG-N, NPG-H, NPG-HP and NPG-EG.

Samples	Mean pore size (nm)	Ag content (at. %)
NPG-N	23.6	<=5
NPG-H	25.4	6.8
NPG-HP	10.8	20.6
NPG-EG	8.2	14.9

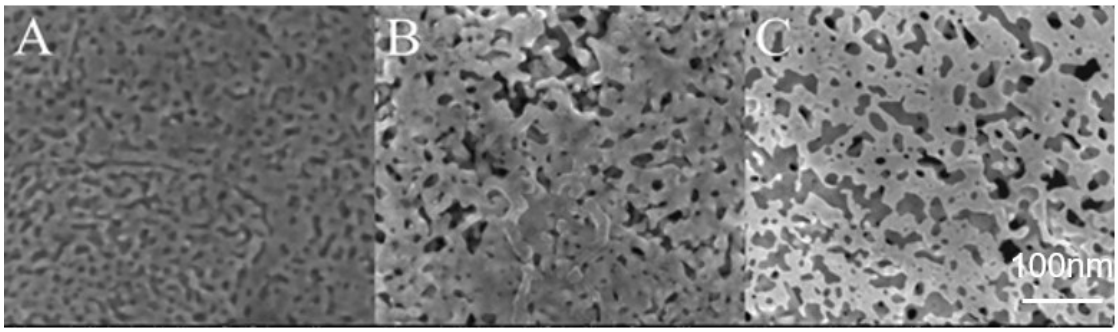

Figure. S1 Nanoporous gold leaf synthesized by a) 0.2 M $FeCl_3$, 30 °C, 1h, b) 1.5M $FeBr_3$, 30 °C, 1h and c) 1.0M $CuCl_2$. 70 °C, 1h.

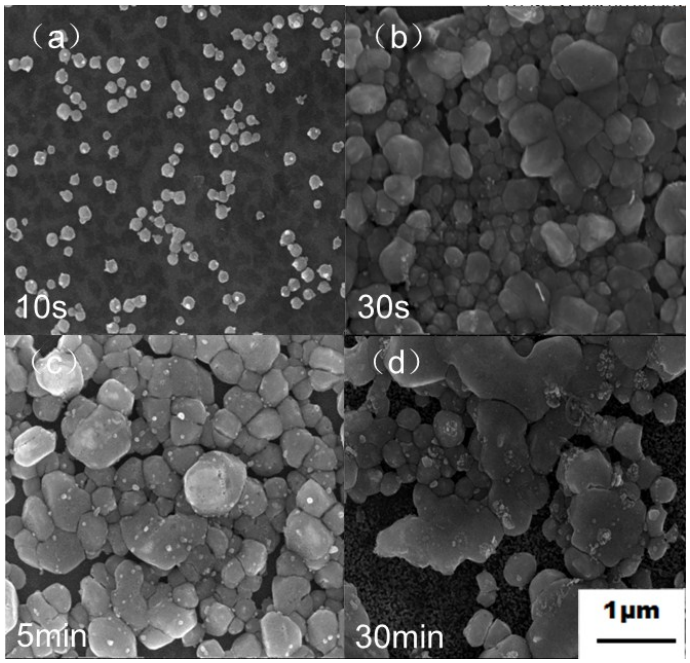

Figure. S2 (a) - (d) SEM images of plane section (made by 400nm thick Au-Ag alloy) at different etching time in 2M $FeCl_3$ solution.

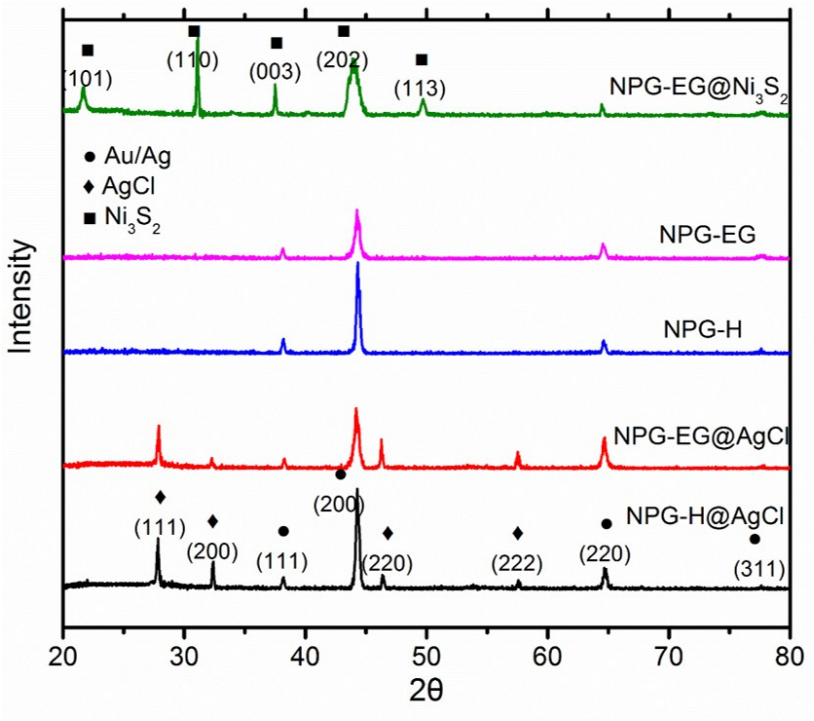

Figure. S3 The X-ray diffraction patterns of NPG-H@AgCl, NPG-EG@AgCl, NPG-H, NPG-EG and NPG-EG@Ni_3S_2, respectively.

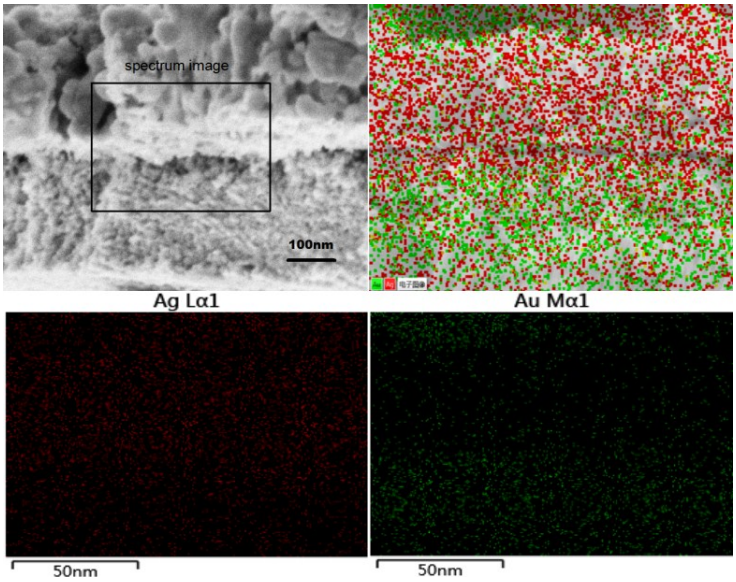

Figure. S4 SEM mapping of cross section selected from NPG@AgCl with an etching time of 30s. Red and green points represent Ag particles and Au atoms, respectively.

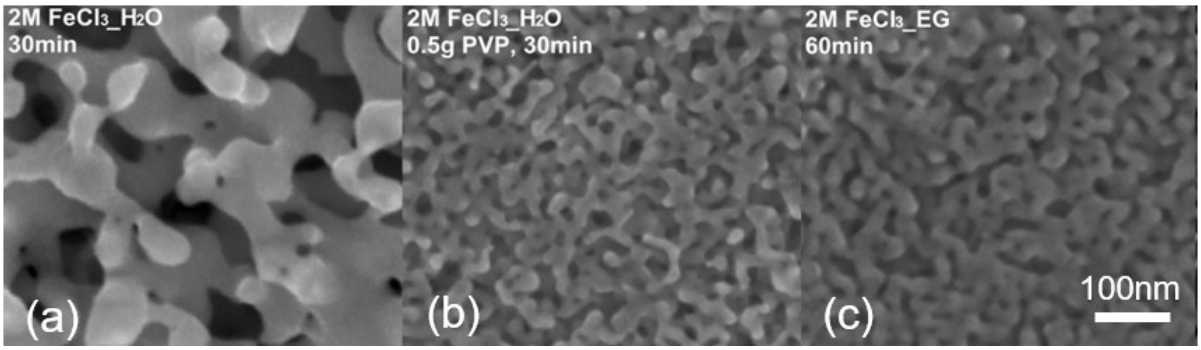

Figure. S5 SEM images of (a) NPG–H, (b) NPG-HP and (c) NPG-EG and reaction temperature was 30°C.PVP and EG can both remarkably attenuate the ligament size of nanoporous structure.

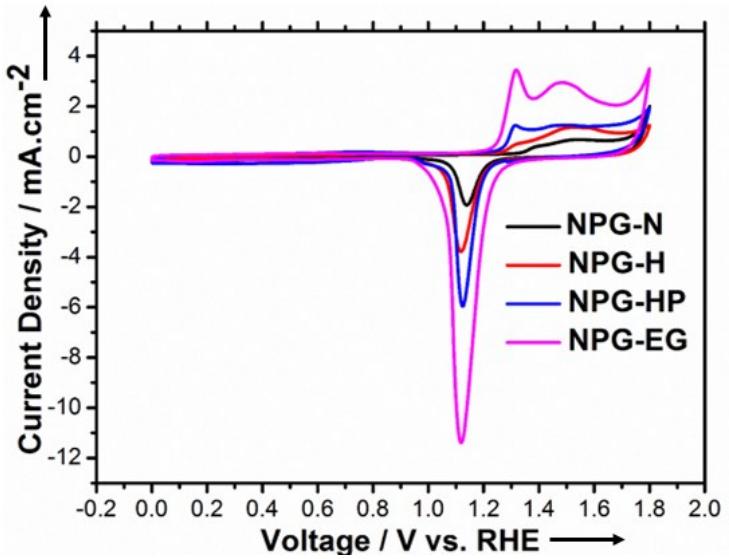

Figure. S6 The cyclic voltammogram of NPG-N, NPG-H, NPG-HP and NPG-EG electrodes in 0.1M $HClO_4$ solution at a scan rate of 50mV.s^{-1}

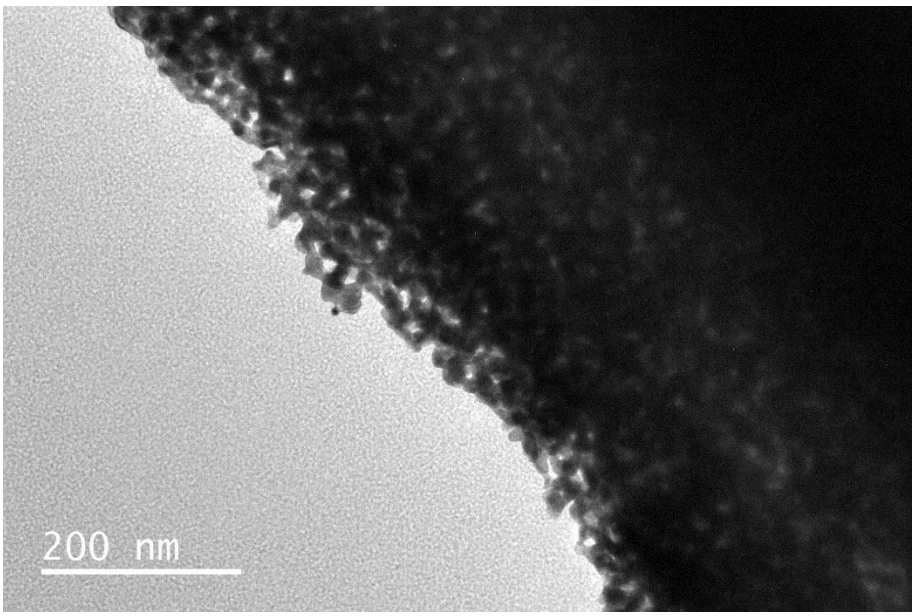

Figure. S7 The TEM image of NPG-EG@Ni3S2 with lower resolution.