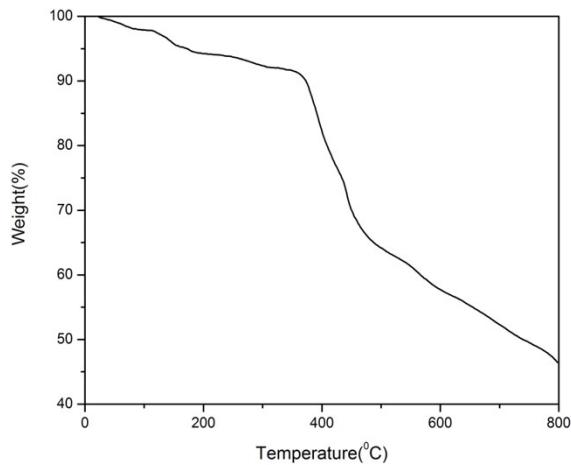


*Electronic Supplementary Information (ESI) for*

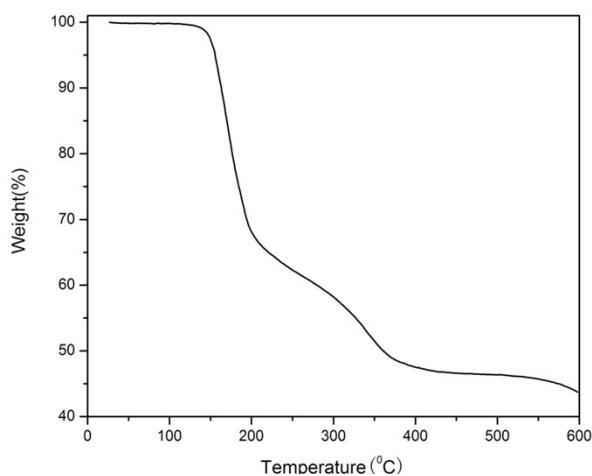
## Synthesis of Borocarbonitride from a Multifunctional Cu(I) Boron Imidazolate Framework

Tian Wen, Er-Xia Chen, De-Xiang Zhang, and Jian Zhang\*

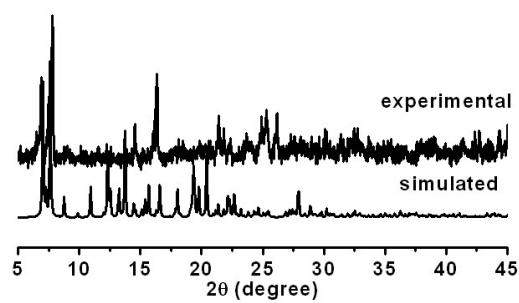
*State Key Laboratory of Structural Chemistry, Fujian Institute of Research on the  
Structure of Matter, the Chinese Academy of Sciences, Fuzhou, Fujian 350002, P. R.  
China. E-mail: zhj@fjirsm.ac.cn*



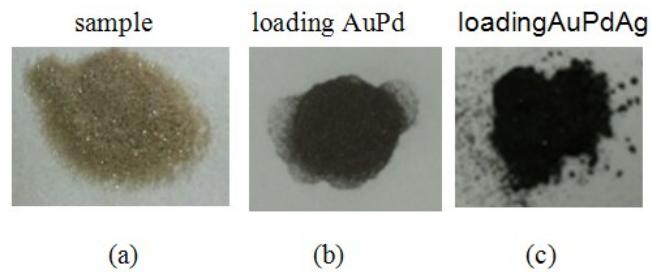
**Fig. S1** Thermogravimetric analysis of **BIF-36** sample.



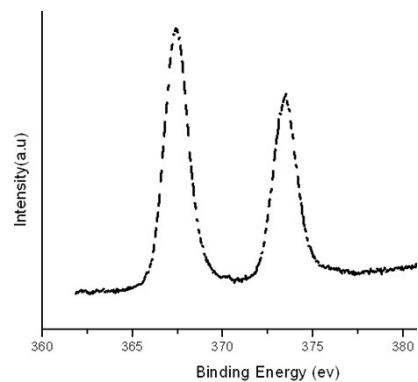
**Fig. S2** Thermogravimetric analysis of **BIF-37** sample.



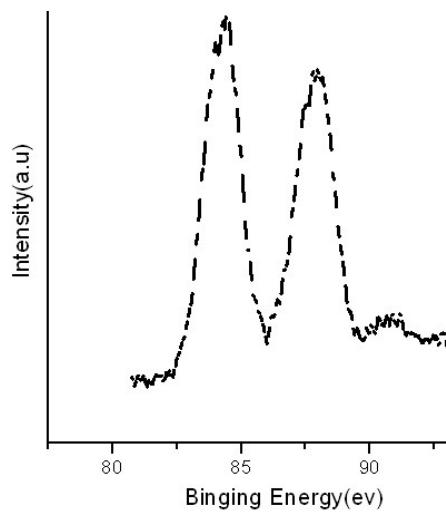
**Fig. S3** The PXRD patterns of **BIF-37**



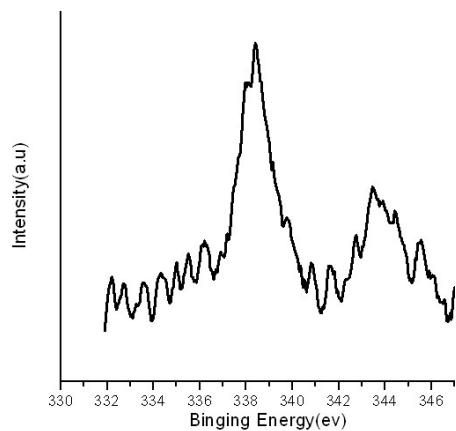
**Fig. S4** (a) optical image of **BIF-36**; (b) optical image of **AuPd@BIF-36**; (c) optical images for **AuPdAg@BIF-36** crystals.



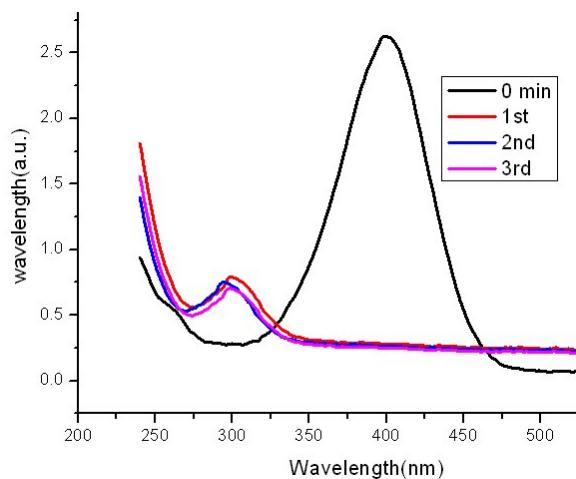
**Fig. S5** The XPS spectrum of Ag.



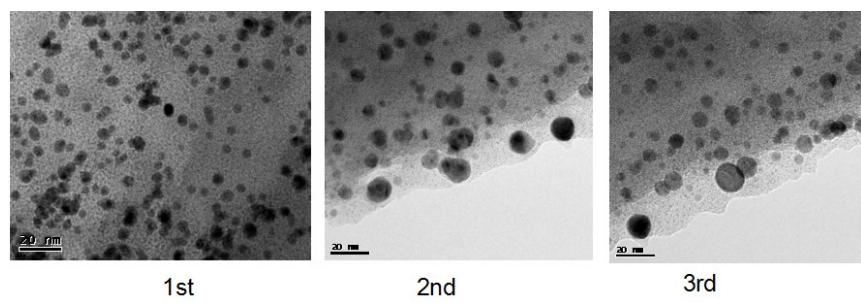
**Fig. S6** The XPS spectrum of Au.



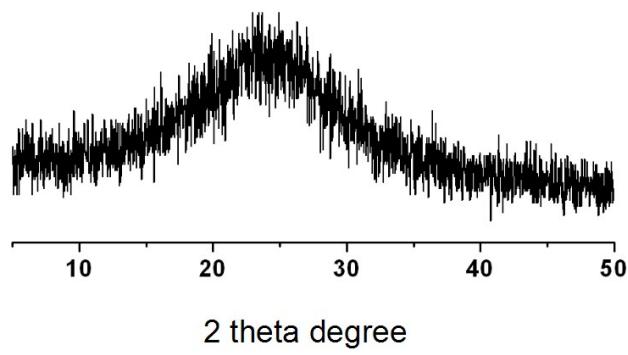
**Fig. S7** The XPS spectrum of Pd.



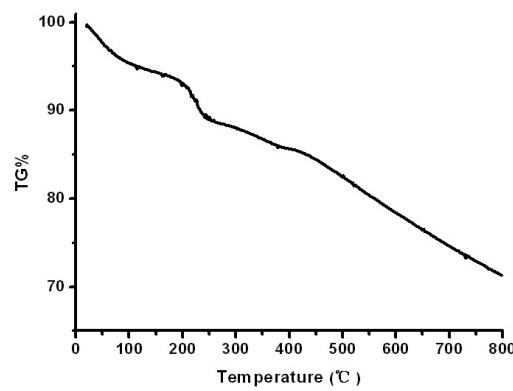
**Fig. S8** Recycling test on reduction of 4-NP over **AuPdAg@BIF-36**.



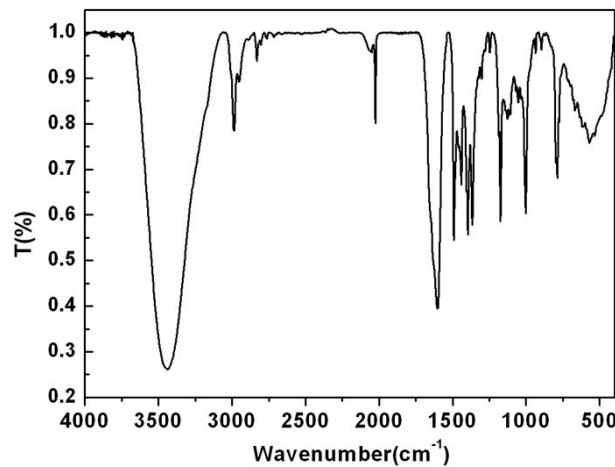
**Fig. S9.** TEM images of **AuPdAg@BIF-36** after three times catalytic reaction.



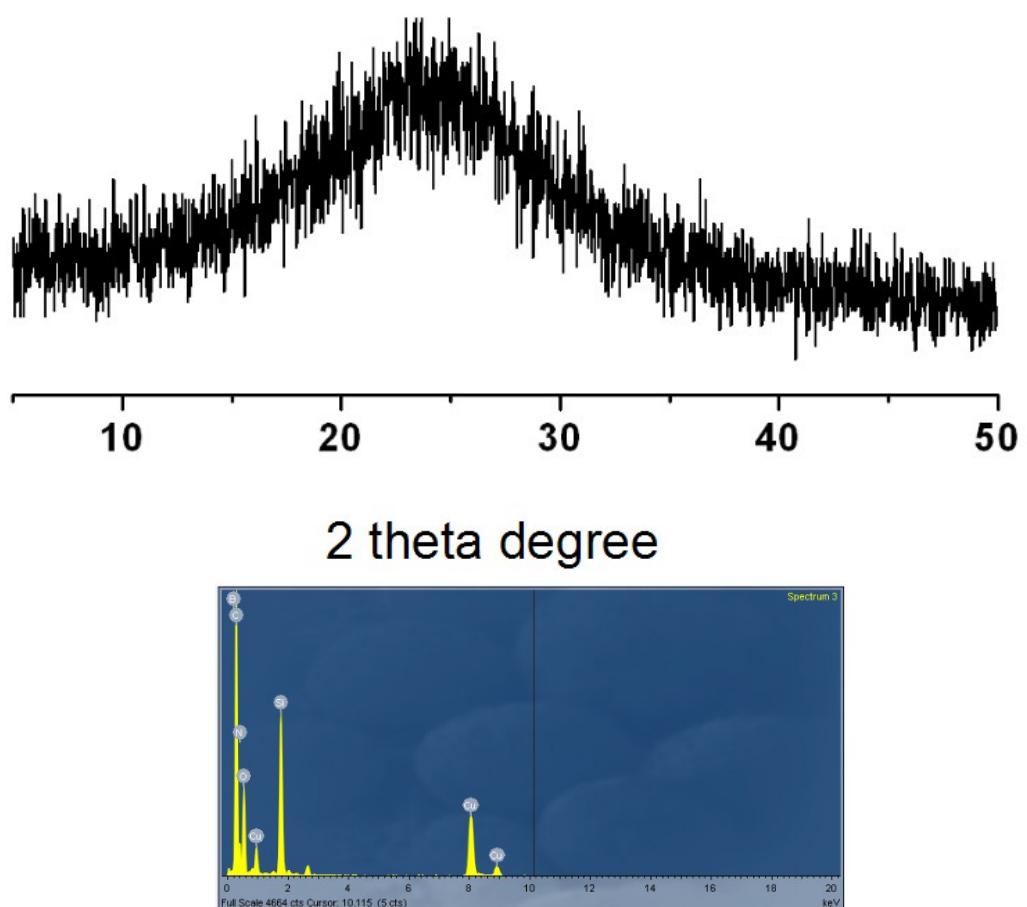
**Fig. S 10.**The PXRD patterns of borocarbonitrides .



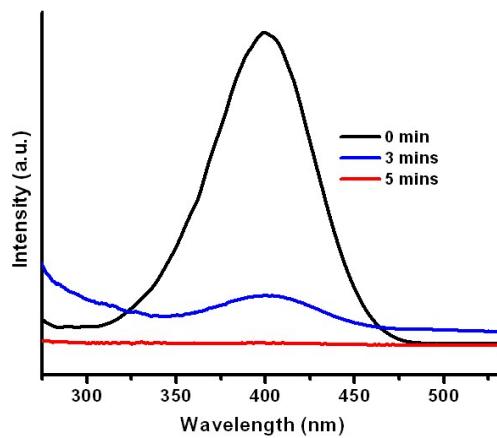
**Fig. S11.**Thermogravimetric analysis of the borocarbonitrides sample.



**Fig. S 12.** IR spectrum of the samples after carbonisation.



**Fig. S 14.** EDS spectrum of the borocarbonitrides sample.



**Fig. S 15.** UV-vis spectra showing fast adsorption of 4-NP over mesoporous borocarbonitrides materials.