

## Supporting Information

### **One-pot construction of Cu and O co-doped porous g-C<sub>3</sub>N<sub>4</sub> with enhanced photocatalytic performance towards the degradation of levofloxacin**

Feng Li <sup>a</sup>, Peng Zhu <sup>b</sup>, Songmei Wang <sup>c</sup>, Xiuquan Xu <sup>b,\*</sup>, Zijun Zhou <sup>b</sup>, Chundu Wu <sup>c,\*</sup>

<sup>a</sup> *Affiliated Hospital of Jiangsu University, Zhenjiang 212001, China*

<sup>b</sup> *School of Pharmacy, Jiangsu University, Zhenjiang 212013, China*

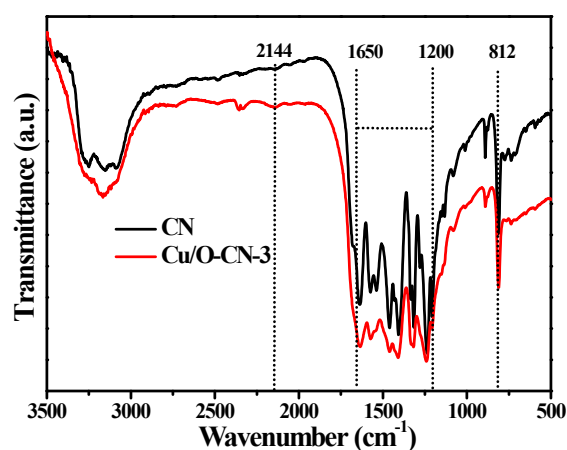
<sup>c</sup> *School of Environment and Safety Engineering, Jiangsu University, Zhenjiang 212013, China.*

\*Corresponding author.

***E-mail address:*** xxq781026@ujs.edu.cn (X. X.); wucd@ujs.edu.cn (C. W.)

## Experiment

The FT-IR spectrum of CN and Cu/O-PCN-3 were identified on a Fourier transform infrared spectrophotometer (Avatar 370, Nicolet Co., USA). The sample about of 2.0 mg was evenly mixed with dried KBr powder and pressed into pellets for FT-IR determination over the wavelength range of 4000 - 400  $\text{cm}^{-1}$ .



**Fig. S1** FT-IR spectra of CN and Cu/O-PCN-3 nanomaterials.

The FT-IR spectra of CN and Cu/O-PCN-3 are given in Fig. S1. For CN and Cu/O-PCN-3 samples, a series of peaks ranging from 1200 to 1650  $\text{cm}^{-1}$  are attributed to the typical stretching vibration of CN heterocycles, while the sharp peak located at 812  $\text{cm}^{-1}$  is assigned to the vibrational mode of repeating triazine units, indicating that heptazine units are retained after Cu and O co-doping.<sup>1</sup> Compared with CN, an extra peak at 2144  $\text{cm}^{-1}$  corresponds to the nitrile groups appeared in Cu/O-PCN-3,<sup>2</sup> which maybe result from the incomplete polymerization when adding  $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ . Obviously, the peaks appears at about 576 and 630  $\text{cm}^{-1}$  corresponds to the stretching vibration of Cu (II)-O and Cu (I)-O bonds are not detected in Cu/O-PCN-3. The result of FT-IR further confirms that Cu was ion-doped into the  $\text{g-C}_3\text{N}_4$ .<sup>3</sup>

## Reference

1 H. L. Dou, L. Chen, S. H. Zheng, Y. P. Zhang and G. Q. Xu, *Mater. Chem. Phys.*, 2018, **214**, 482-488.

2 J. S. Hu, P. F. Zhang, W. J. An, L. Liu, Y. H. Liang, and W. Q. Cui, *Appl. Catal. B: Environ.*, 2019, 245, 130-142.

3 Y. L. Tian, B. B. Chang, J. Fu, B. C. Zhou, J. Y. Liu, F. N. Xi, and X. P. Dong, *J. Solid State Chem.*, 2014, **212**, 1-6.