Construction of WO_3-g-C_3N_4 composites as efficient photocatalyts for pharmaceutical degradation under visible light

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HPLC operation

The samples were filtered with 0.45 μm cellulose acetate syringe membrane filter to determine the SMX concentration via ultra-fast liquid chromatography (UFLC) with a Agilent Proshell 120 EC-C 18 column (4.1 ×100 mm, 2.7 μm) and an SPD-M20A diode array detector using a Shimadzu LC system (LC-20AD, Japan). The mobile phases consisted of water (A) and 10 mM ammonium acetate in methanol (B) with 0.1% formic acid. The gradient elution was: 0-0.5 min, 10% B; 0.5-1 min, 10-40% B; 9.0-13 min, 90% A; from 13 to 13.10 to return to the initial conditions and finally from 13.10 to 22 min equilibration of the column. The flow rate and injection volume were 0.8 mL/ min and 5 μL, respectively. The detector wavelength was set at 270 nm. The retention time of SMX was 7.5 min.

Fig. S1 The SMX structures at different pH values: pK_{a1}=1.7 and pK_{a2}=5.6.

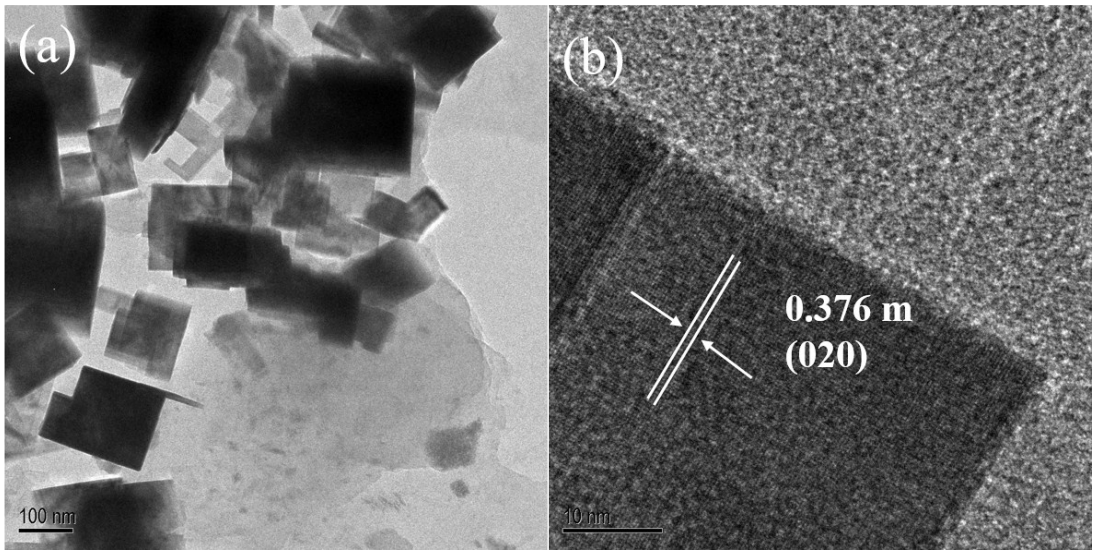

Fig. S2 TEM images of WCN-8 at different magnification: low magnification (a) and high resolution (b)

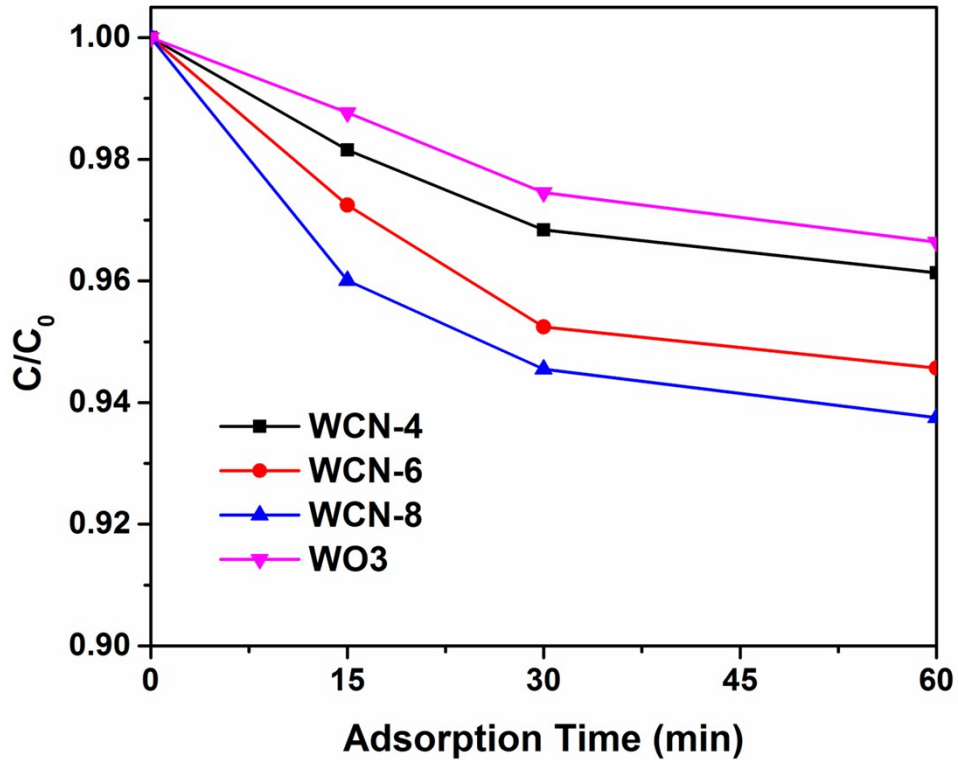

Fig. S3 SMX adsorption on different catalyst within 60 min.

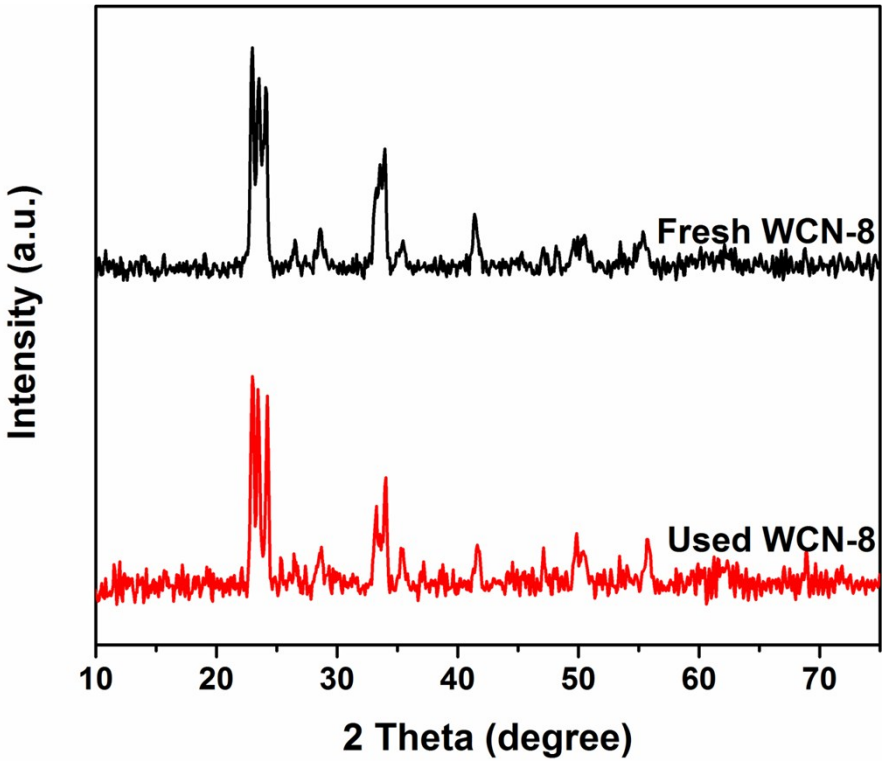

Fig. S4 XRD spectra comparison between fresh WCN-8 and used WCN-8.