**Supporting Information**

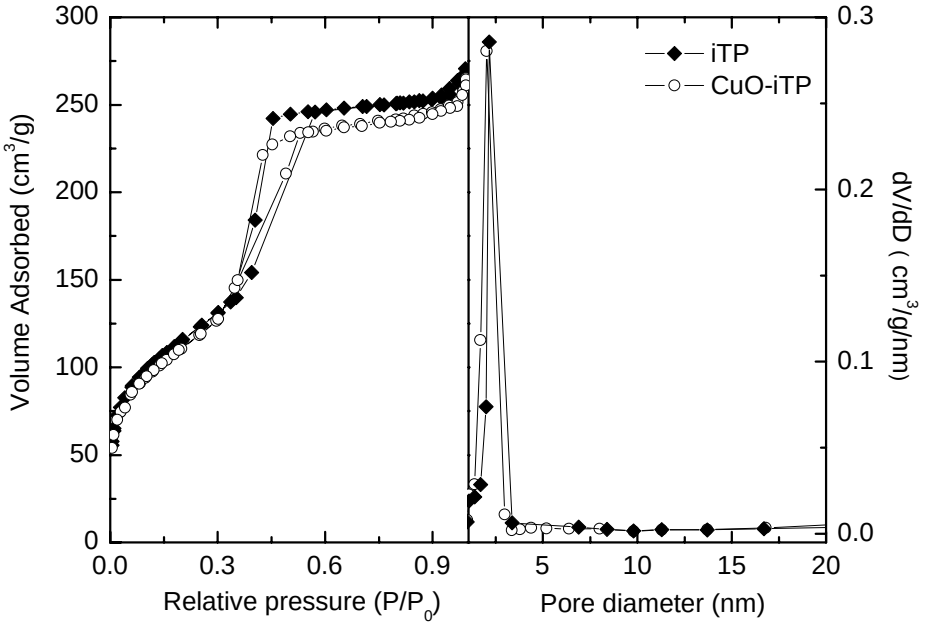


**Fig. S1** $N_2$ adsorption-desorption isotherms (*right*) and the corresponding pore size distribution curves (*left*) of *i*TP and CuO-*i*TP, determined by BJH method.

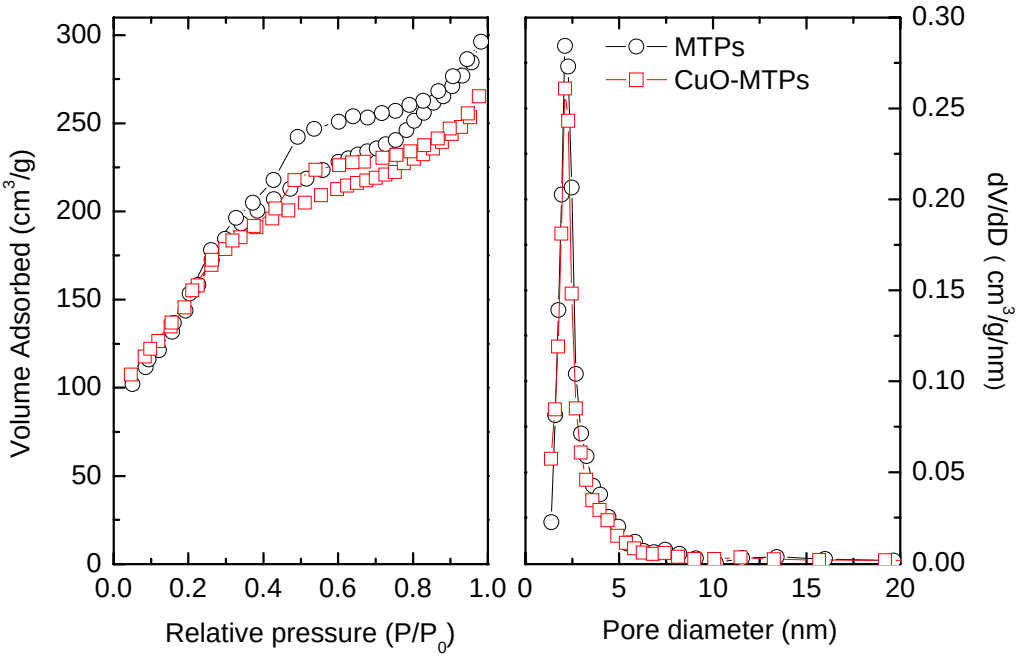


**Fig. S2** $N_2$ adsorption-desorption isotherms (*right*) and the corresponding pore size distribution curves (*left*) of MTPs and CuO-MTPs, determined by BJH method.

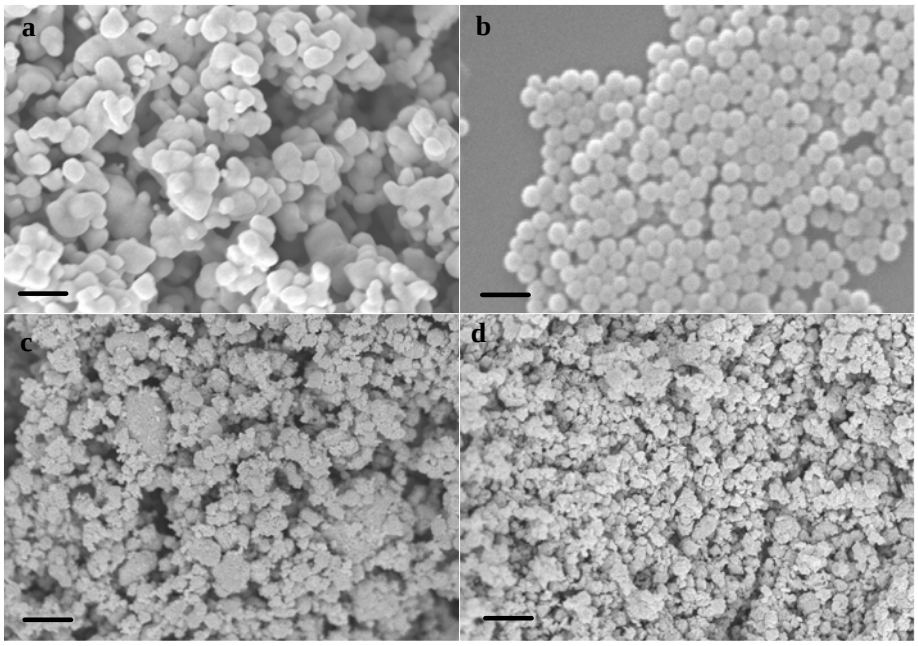


**Fig. S3** SEM images of mesoporous titanium phosphonates prepared at different water/ethanol ratios: (a) 80/20, (b) 75/25, (c) 70/30 and (d) 65/35. The bars in the figures denoted for 1 $\mu$m.

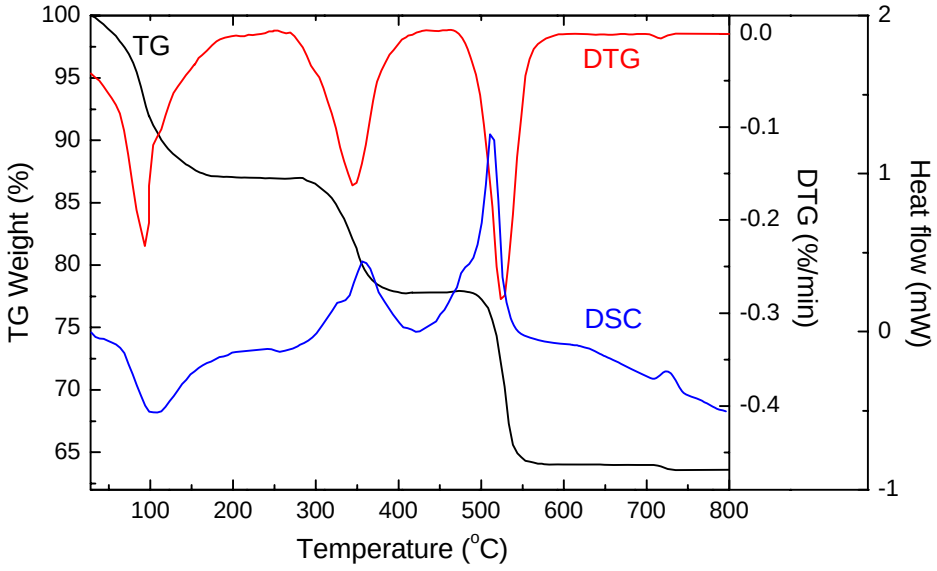


**Fig. S4** TG-DSC profiles of the as-synthesized MTPs solid before surfactant removal.

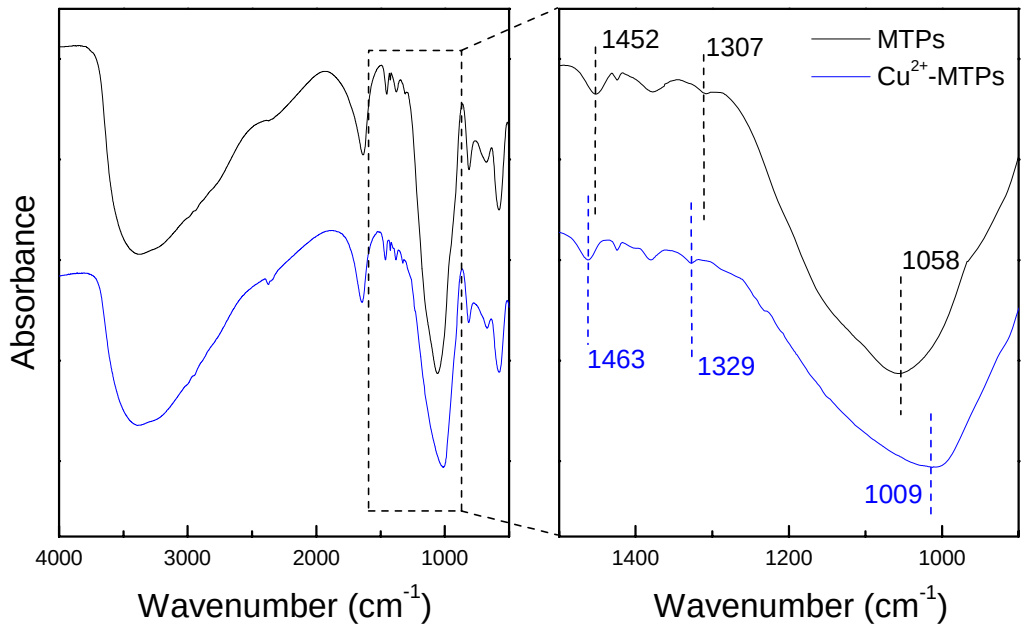


**Fig. S5** FT-IR spectra of the synthesized MTPs and $Cu^{2+}$-MTPs samples.

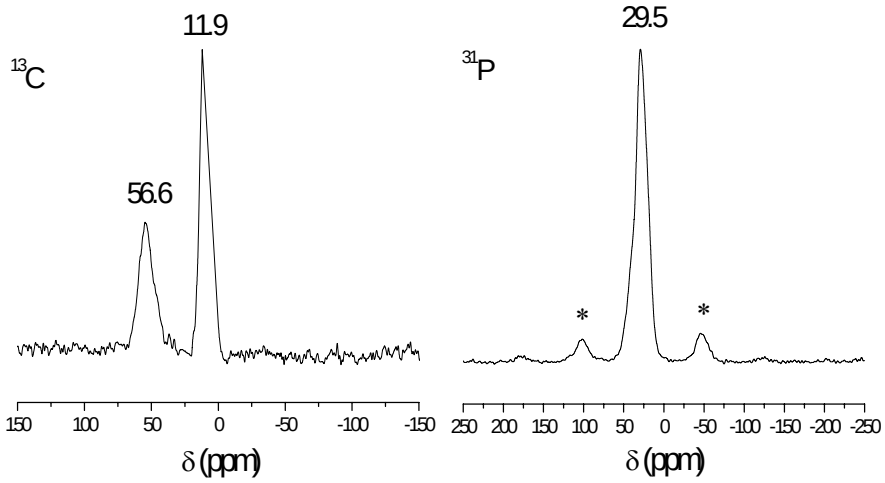


**Fig. S6** $^{13}C$ and $^{31}P$ MAS NMR spectra of synthesized MTPs material.

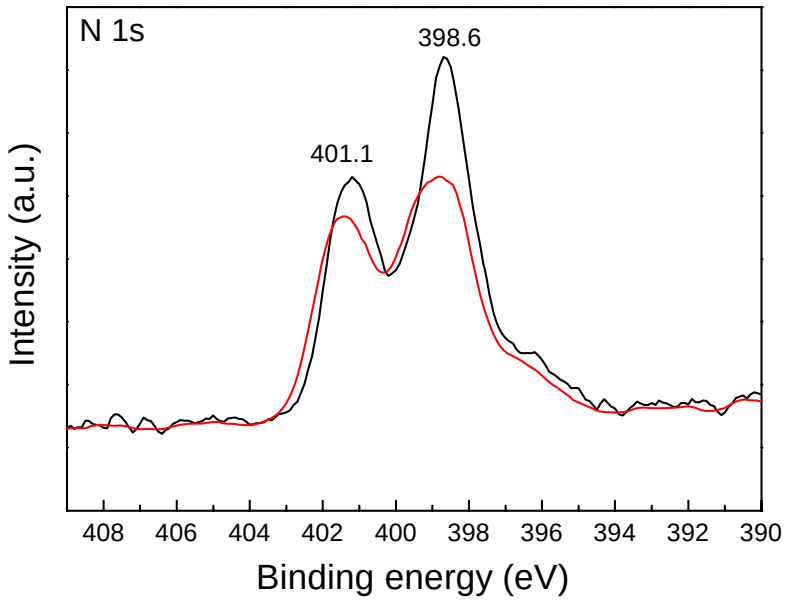


**Fig. S7** High-resolution XPS spectra of the N 1s regions of MTPs (black line) and CuO-MTPs (red line).

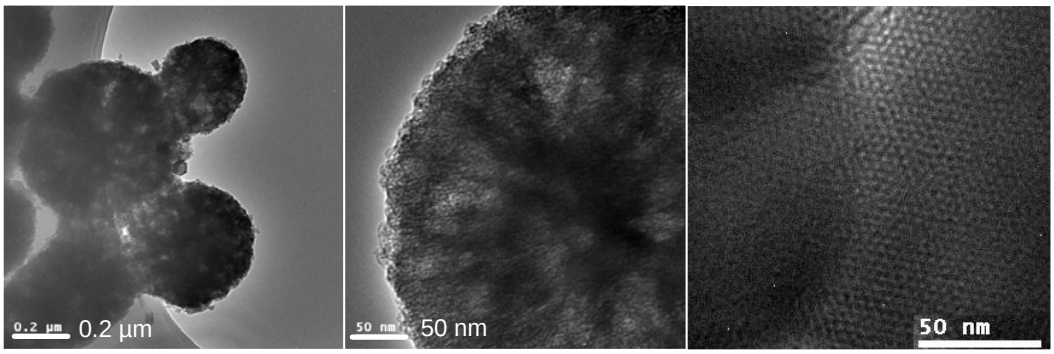


**Fig. S8** TEM images of the synthesized CuO-MTPs.

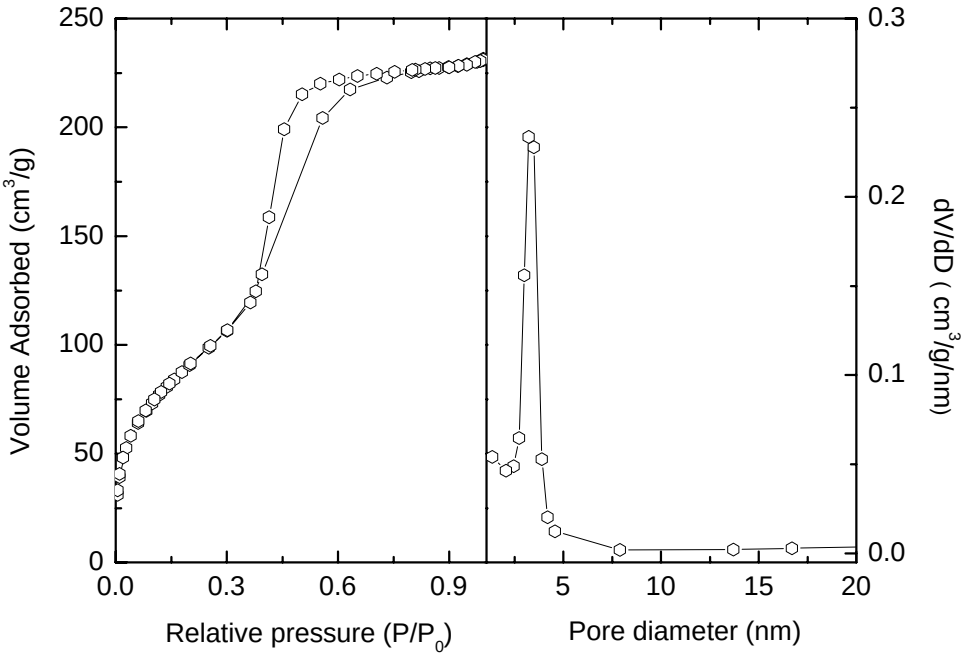


**Fig. S9** $N_2$ adsorption-desorption isotherm (*right*) and the corresponding pore size distribution curve (*left*) of CuO-*i*TPs, determined by BJH method.

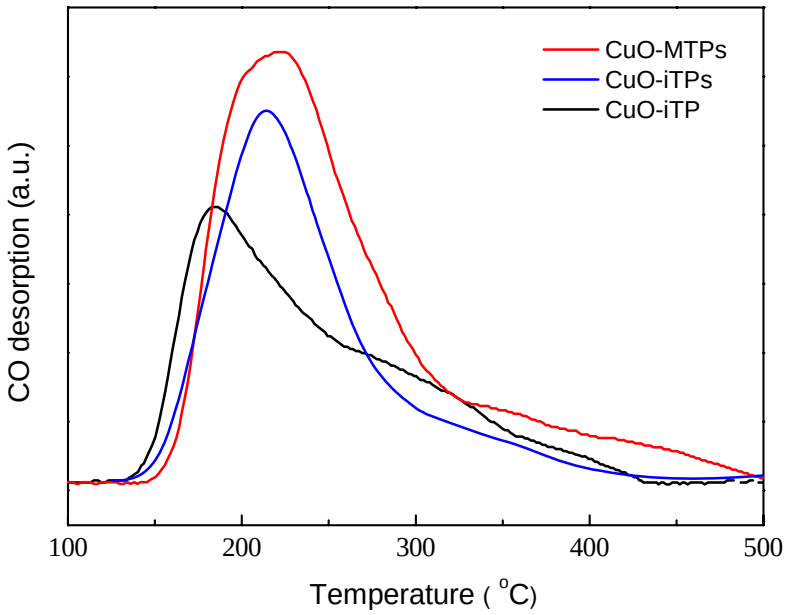


**Fig. S10** CO-TPD profiles of the synthesized samples.