

Supporting Information

Two-dimensional porous cuprous oxide nanoplatelets derived from metal-organic frameworks (MOFs) for efficient photocatalytic dye degradation under visible light

Yi-fan Lin,^{a,b} Hao Wan,^{a,b} Fashen Chen,^{a,b} Xiaohe Liu,^{*a} Renzhi Ma,^{*b} Takayoshi Sasaki^b

^aSchool of Materials Science and Engineering, Central South University, Changsha,

Hunan 410083, P. R. China. Email: liuxh@csu.edu.cn.

^bInternational Center for Materials Nanoarchitectonics (WPI-MANA), National

Institute for Materials Science (NIMS), Namiki 1-1, Tsukuba, Ibaraki 305-0044,

Japan. Email: MA.Renzhi@nims.go.jp.

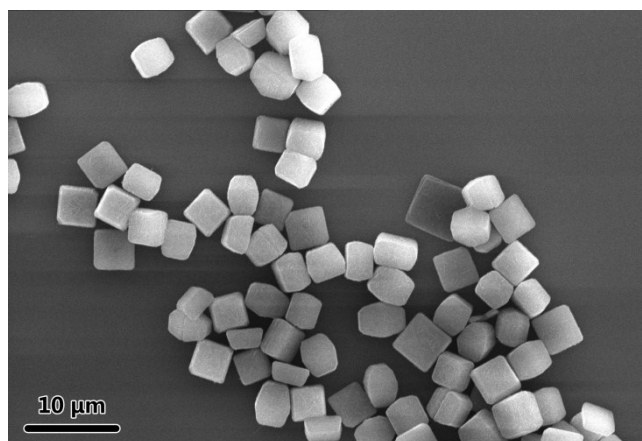


Fig. S1 SEM image of the Cu-based MOFs synthesized without PVP.

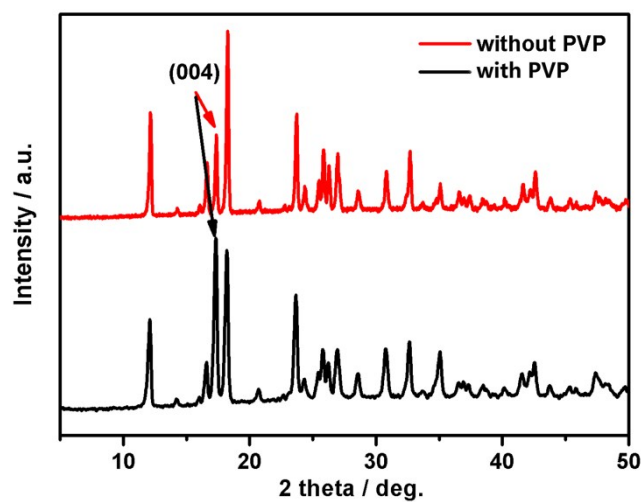


Fig. S2 XRD comparison of products synthesized with and without PVP addition.

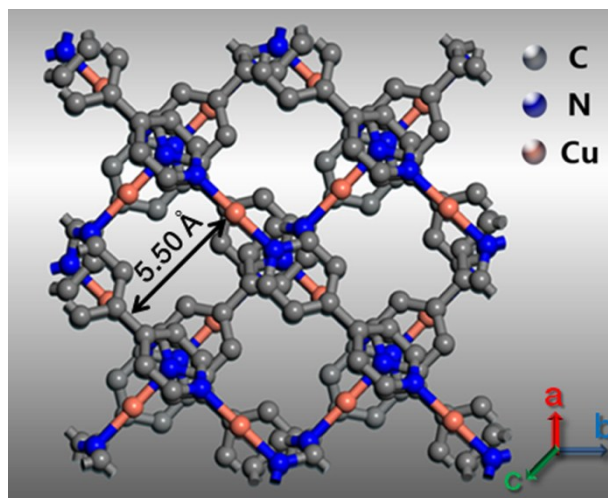


Fig. S3 Schematic for channels constructed by crossweaved chains along [001] direction. The hydrogen atoms and coordinated nitrate ions are omitted for clarity.

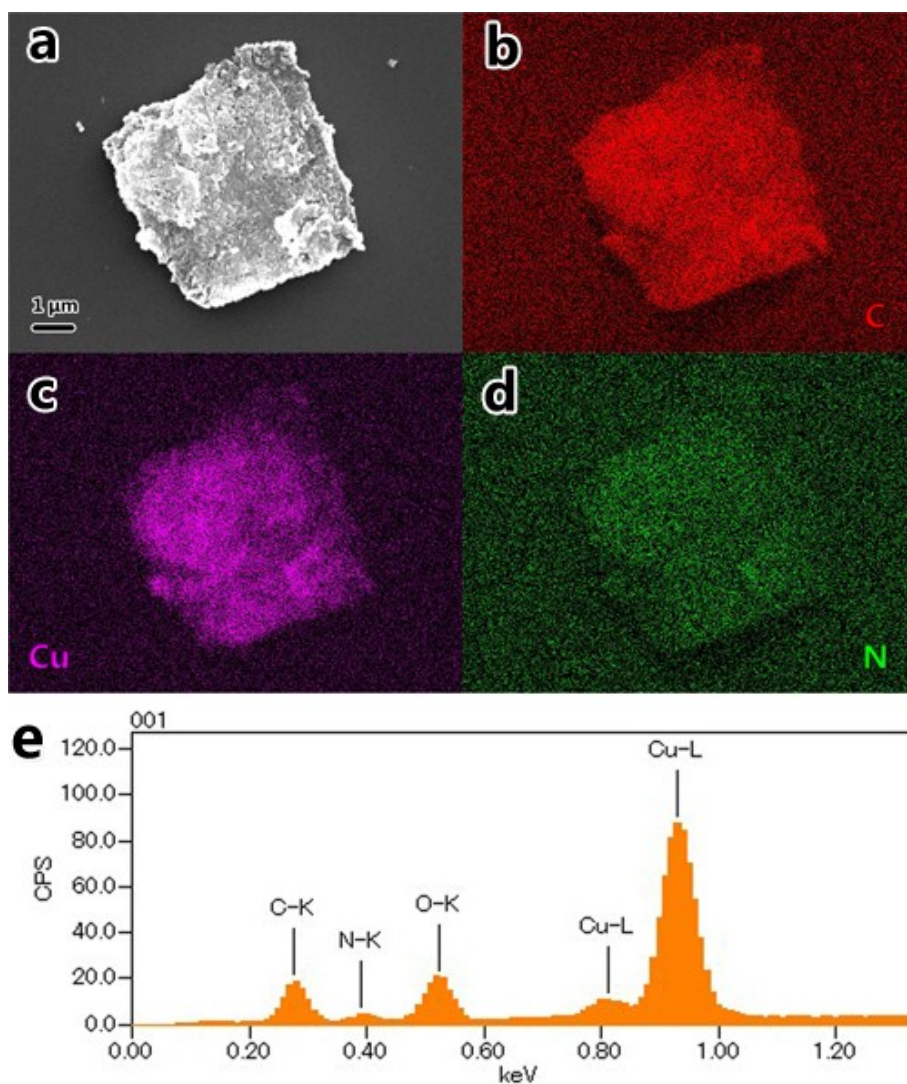


Fig. S4 a) SEM image of a nanoplatelet and corresponding EDS elemental mapping of carbon b), copper c) and nitrogen d). e) spectrum of the N-doped Cu_2O /carbon nanoplatelets.

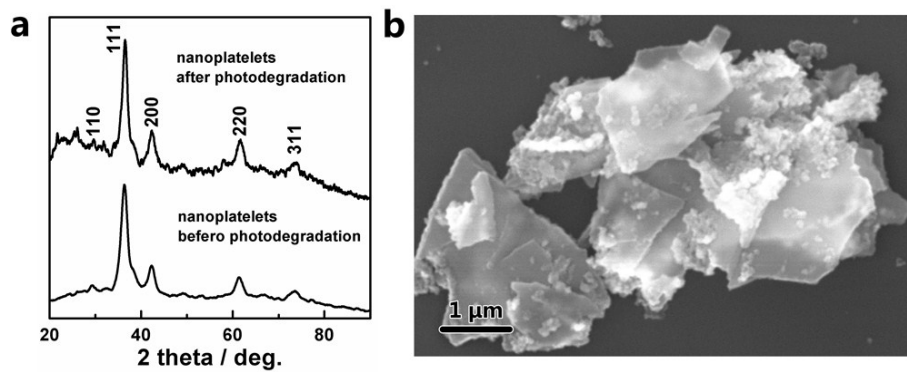


Fig. S5 a) XRD comparison of N-doped Cu₂O/carbon composite before and after photodegradation. A few small peaks observed in the region of 20 to 30 degree could be assigned to the residual MO molecules. b) SEM image of nanoplatelets recovered after photodegradation.