Supporting Information

Enhanced visible-light-induced photocatalytic performance of novel ternary semiconductor coupling system based on hybrid Zn-In mixed metal oxide/g-C_3N_4 composites

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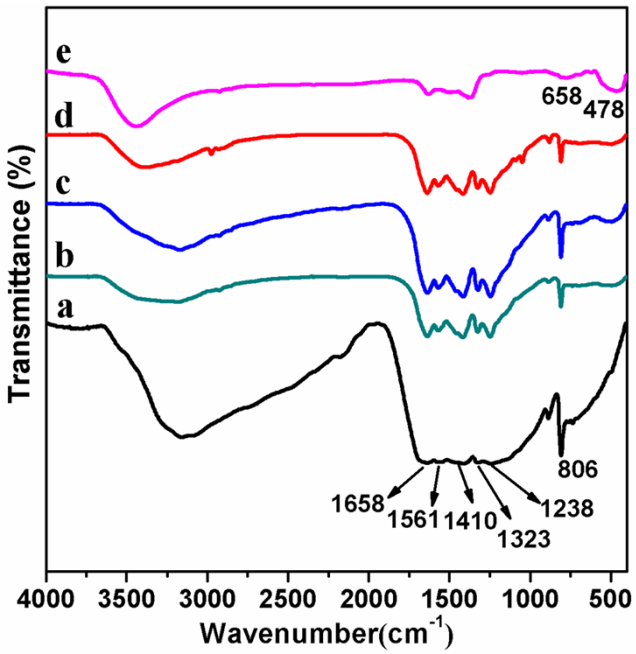

Fig. S1 FT-IR spectra of pure *g*-C_3N_4 (a), 5-MMO/C_3N_4 (b), 3-MMO/C_3N_4 (c) 1-MMO/C_3N_4 (d) and ZnIn-MMO (e). In the case of ZnIn-MMO/g-C_3N_4 composites, there are the strong absorption peaks for the typical C=N and C-N stretching modes of the C_3N_4 heterocycles at 1238, 1323, 1410, 1561, and 1658 cm^{-1} and the characteristic breathing mode of the s-triazine units at 806 cm^{-1}.

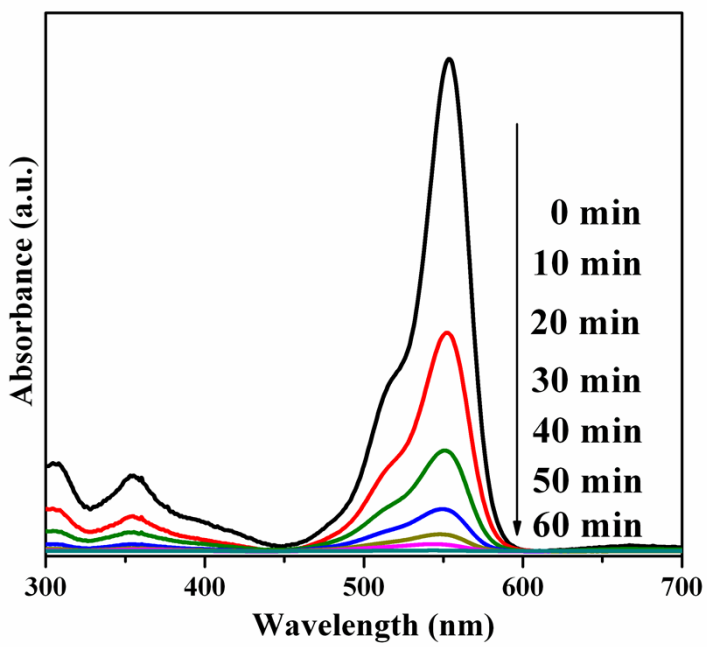

Fig.S2 Absorption changes of RhB solution during the photo-degradation process over the 3-MMO/C_3N_4 sample under visible light irradiation.

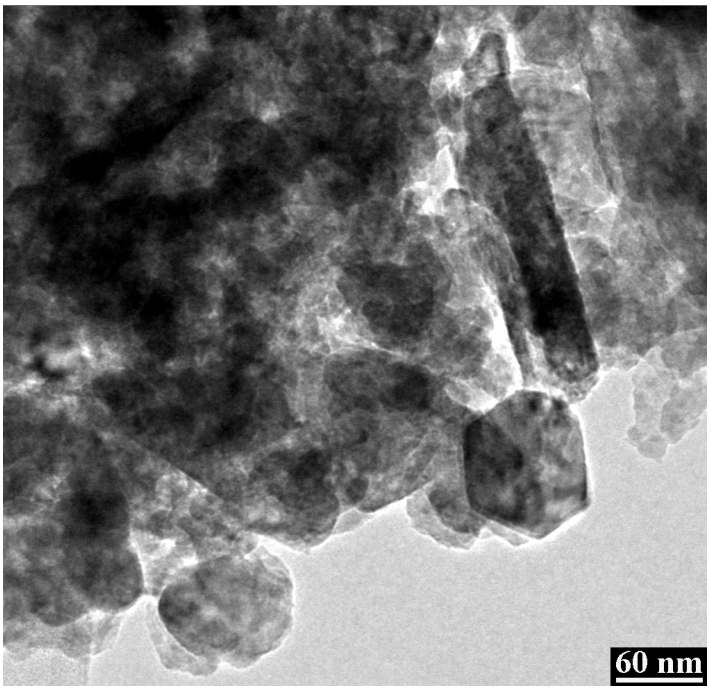

Fig. S3. Typical TEM image of 5-MMO/C_3N_4

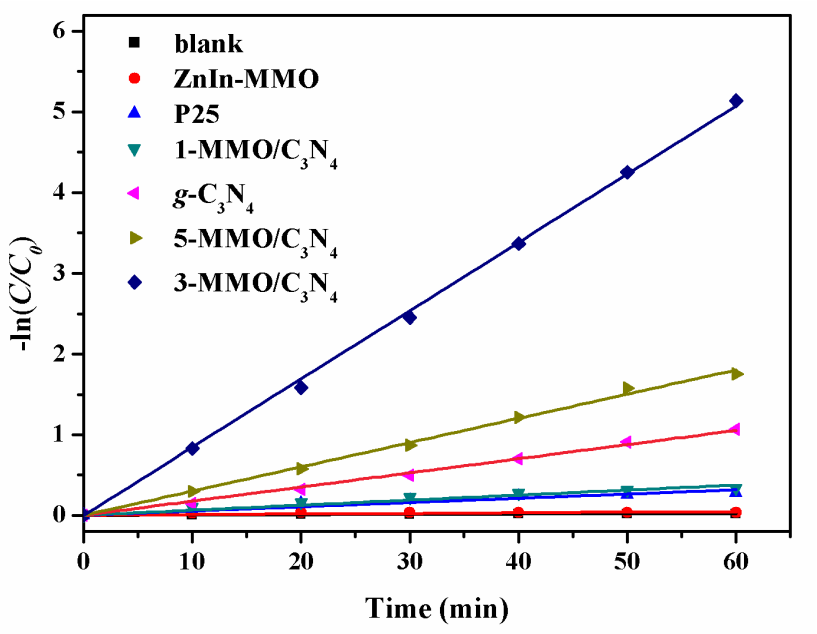

Fig. S4. Pseudo-first-order kinetic for the photo-degradation of RhB over different samples under visible light irradiation.

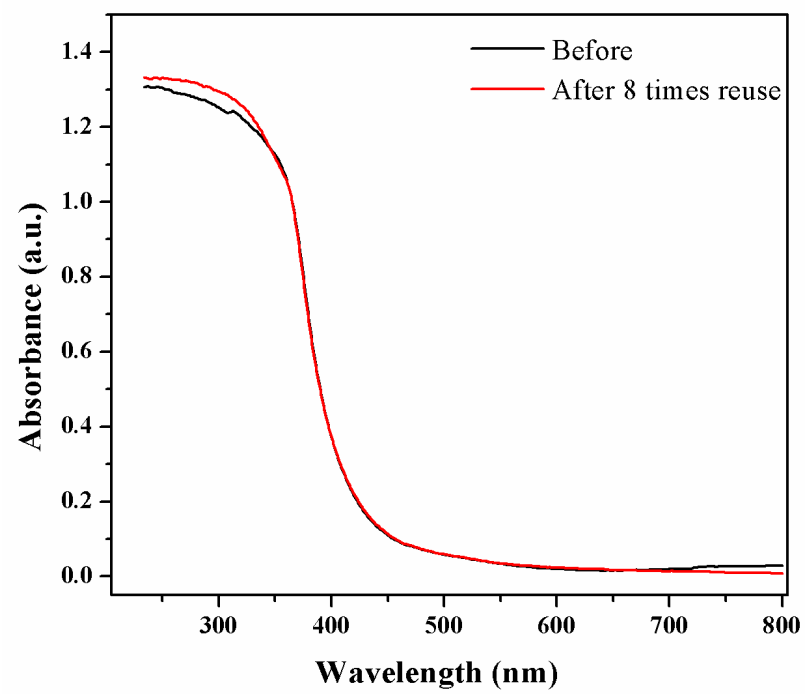

Fig. S5. UV-vis diffuse absorption spectra of 3-MMO/C_3N_4 before use and after eight cycles.

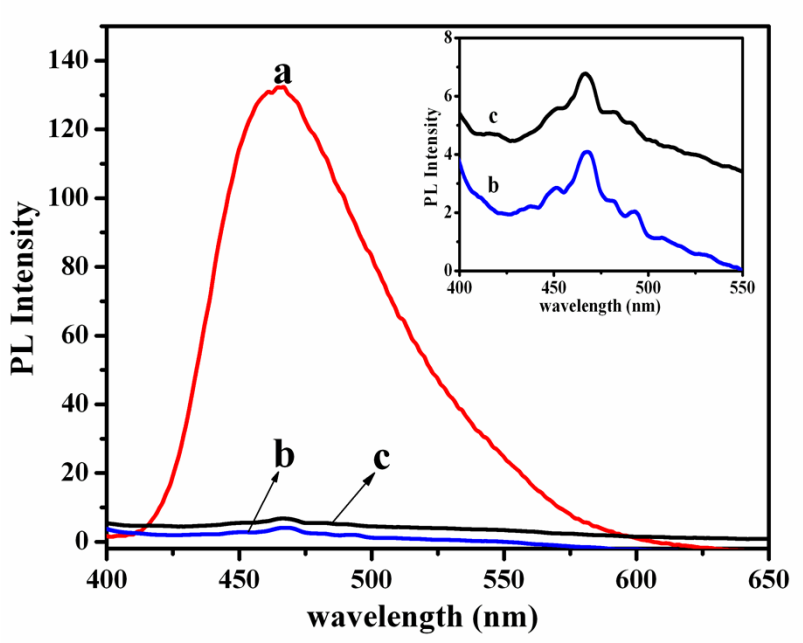

Fig. S6 Room temperature PL emission spectra of g-C_3N_4 (a) 3-MMO/C_3N_4 (b) and ZnIn-MMO (c). Inset shows the enlarged PL emission spectra of 3-MMO/C_3N_4 (b) and ZnIn-MMO (c).