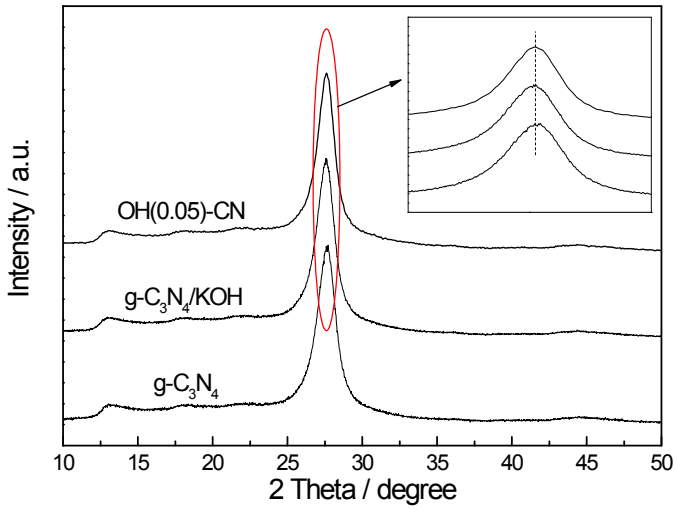

Fig. S1. XRD patterns of as-prepared g-C_3N_4 and K(x)-CN.

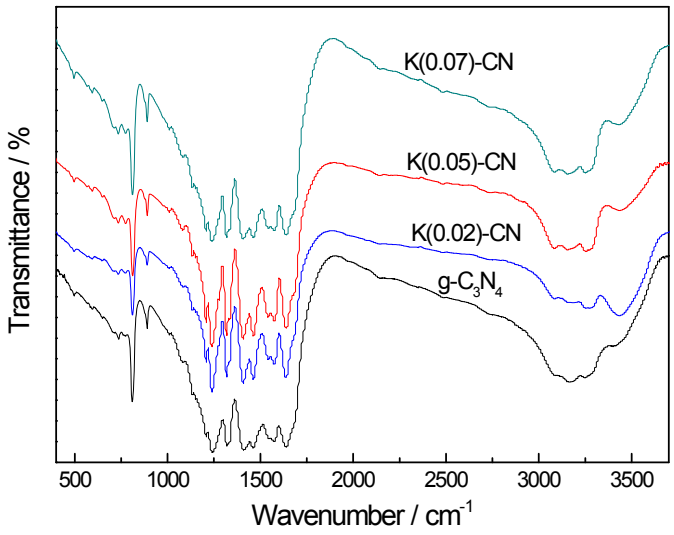

Fig. S2. FT-IR spectra of as-prepared g-C_3N_4 and K(x)-CN.

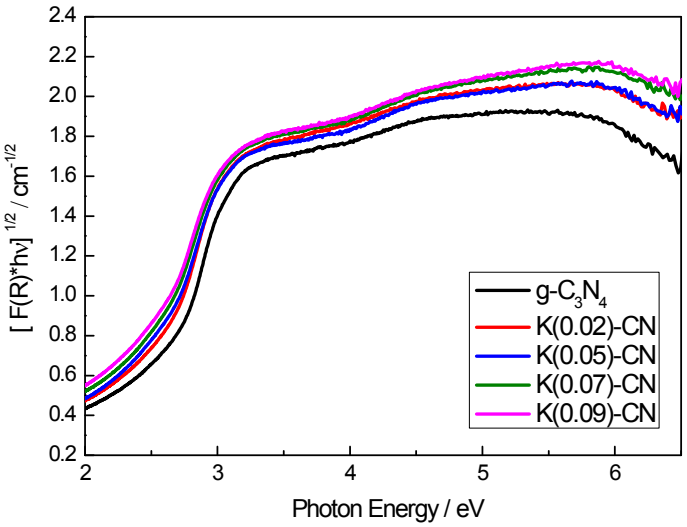

Fig. S3. Plots of the transformed Kubelka-Munk function versus the energy of light over the as-prepared g-C_3N_4 based catalysts.

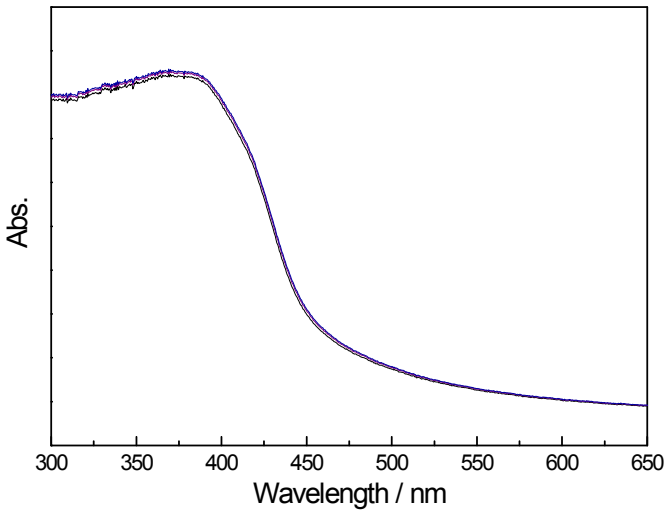

Fig. S4. UV-Vis spectra of g-C_3N_4, g-C_3N_4/KOH and OH(0.05)-CN.

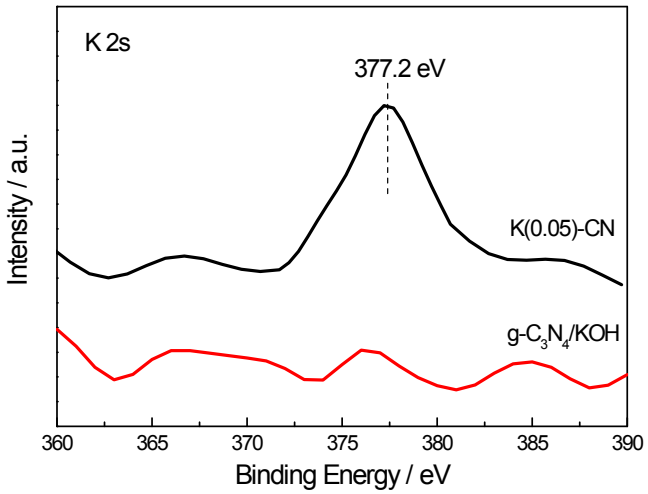

Fig. S5. XP spectra of K(0.05)-CN and g-C_3N_4/KOH in K 2s region.

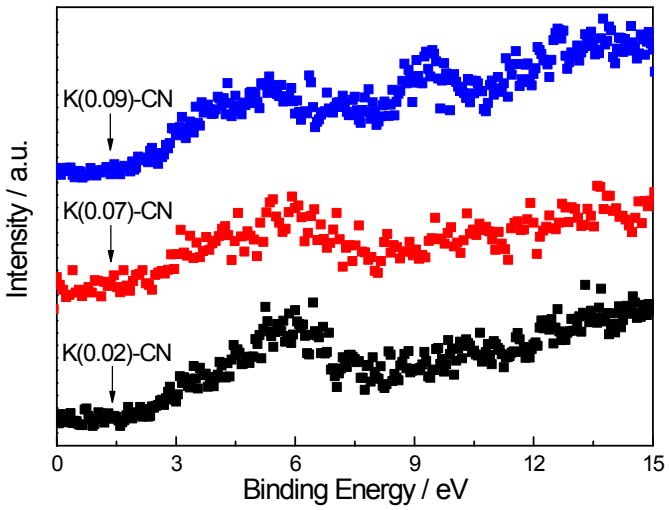

Fig. S6. VB XPS of K(0.02)-CN, K(0.07)-CN and K(0.09)-CN.

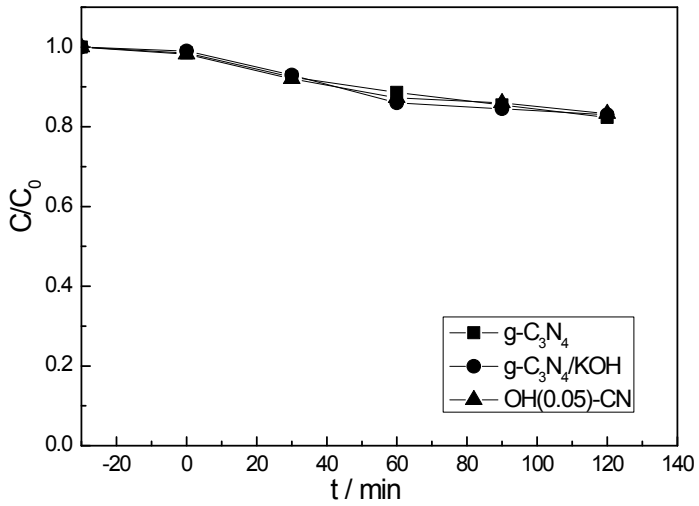

Fig. S7. Photocatalytic performances of as-prepared g-C_3N_4 based catalysts in the degradation of RhB under visible light irradiation.

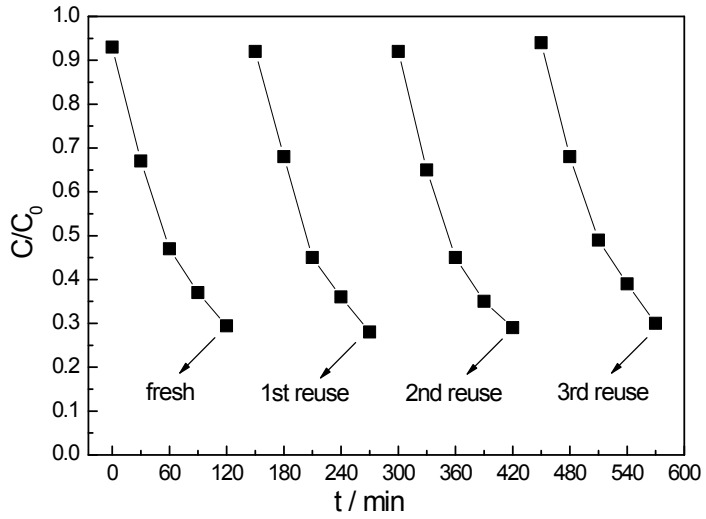

Fig. S8. Photocatalytic stability of K(0.05)-CN.

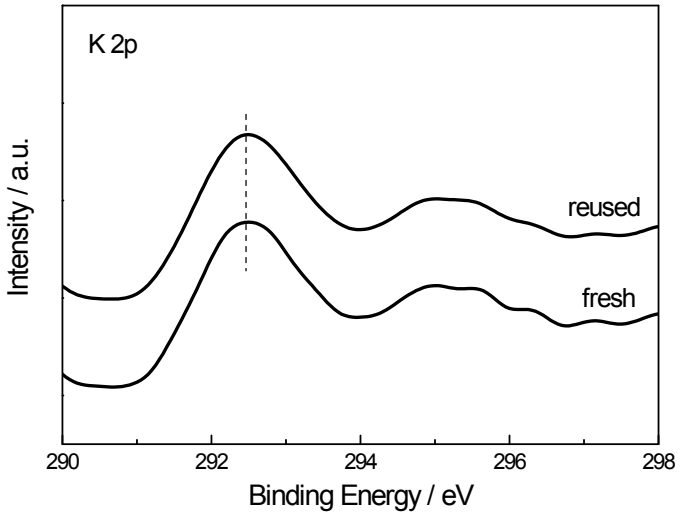

Fig. S9. XP spectra of fresh and reused K(0.05)-CN in the region of K 2p.

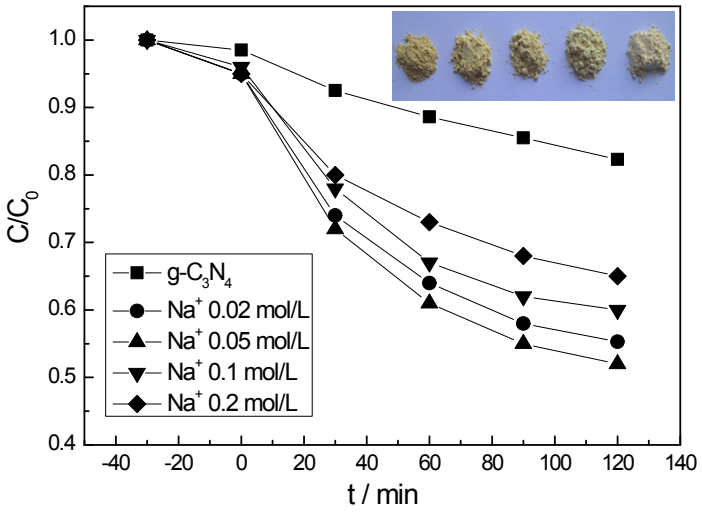

Fig. S10. Photocatalytic performances of as-prepared g-C_3N_4 and Na^+ doped g-C_3N_4 catalysts in the degradation of RhB under visible light irradiation.