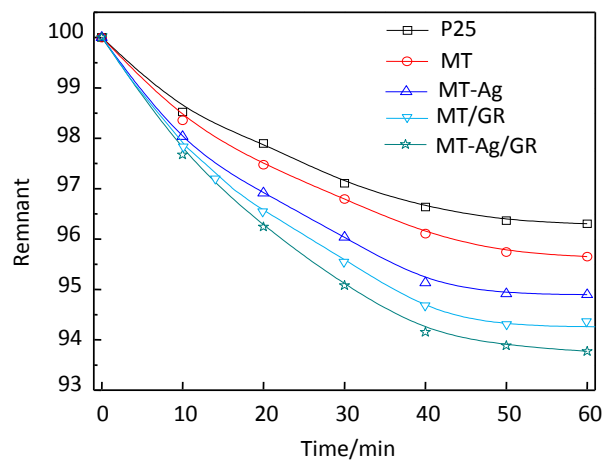
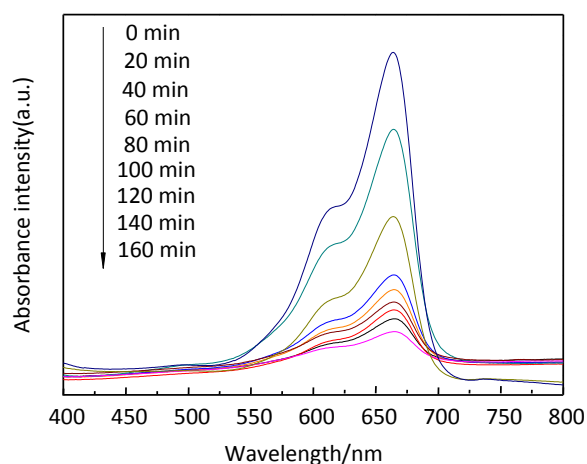


Fig.S1



Prior to irradiation, the mixture of the dye and catalyst was stored in the dark to attain adsorption–desorption equilibrium. The amount of adsorbed dye was measured by UV visible spectroscopy and plotted against the catalyst (Fig. S1). We observed some correlation between the amounts of dye adsorbed with the surface area of different composites (compare Table 1 and Fig. S1).

Fig.S2



The relationships between Uv-vis absorbance intensity of MB solution and differently photocatalytic time

The $O_2^{\cdot-}$ and $\cdot OH$ radicals, together with the holes in photocatalysis process, can directly oxidize the organic dye to colorless small molecules (H_2O and CO_2), following dye content decreasing with the loss of its absorbance intensity (Fig. S2).

The indirect band gaps E_g are determined by extrapolation of the linear portion of the $(F(R)hv)^{0.5}$ curve versus the photon energy hv