Electronic Supplementary Material (ESI) for CrystEngComm.

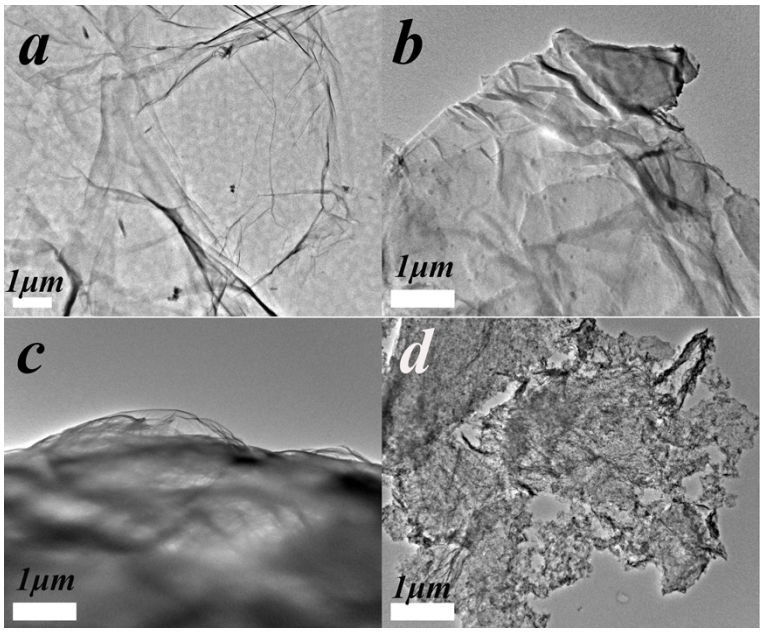

Fig. S1. TEM images of GO and TBT-4: (a) GO, (b) TiO_2 precursor@GO, (c) partial enlarged detail of TiO_2 precursor@GO, (d) TiO_2 nanosheets after removal of the GO.

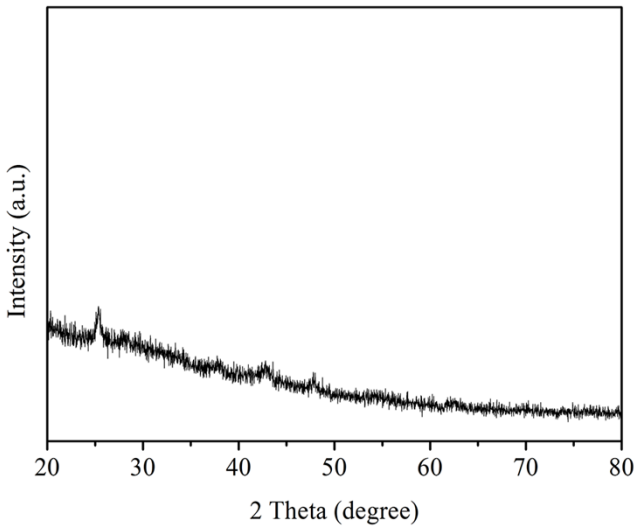

Fig. S2. XRD pattern of TiO_2 precursor@GO.

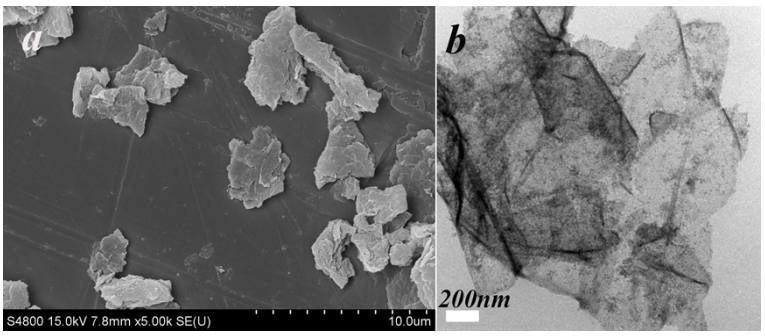

Fig. S3. Low magnification SEM (a) and TEM (b) images of TBT-4.

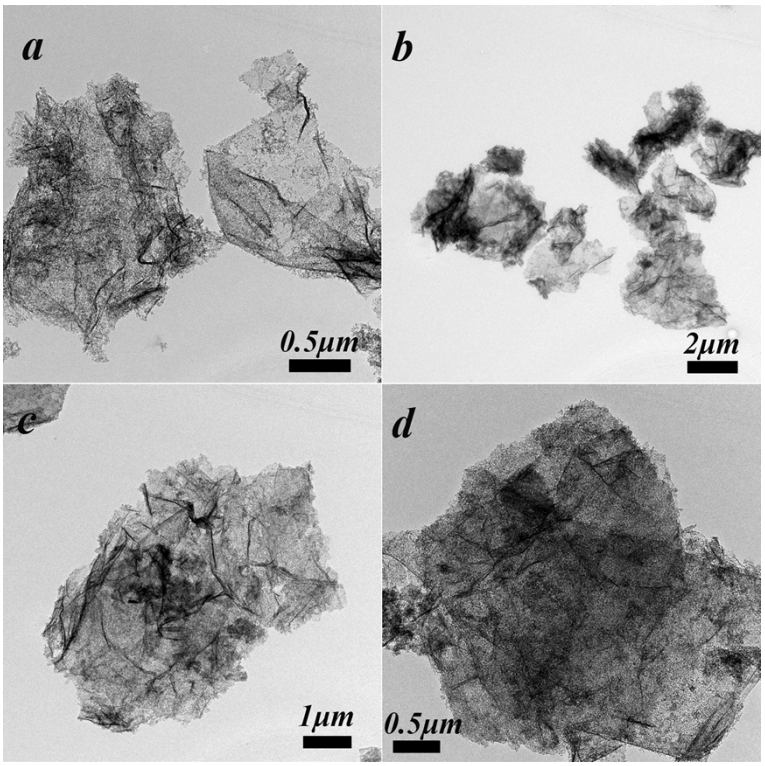

Fig. S4. TEM images of all samples except TBT-4: (a) TBT-1, (b) TBT-2, (c) TBT-3, (d) TBT-5.

The decrease of rutile phase in mix-phase TiO_2 with decreased TBT dosage was explained as below. In our work, GO amount was precisely controlled to 1g in all experiments. The simultaneous thermal gravimetric analysis (STA) of TiO_2 precursor@GO sheets in air was provided in the supporting information. The corresponding differential thermal calorimetry (DSC) curve (Fig. S5) displays two

distinct exothermic peaks at 223 °C and 475 °C, which were attributed to dehydroxylation and oxidation of GO in TiO2 precursor@GO, respectively. Especially, the thermal of strong exothermic at around 475 °C was very likely to form rutile TiO_2. Considering that 1g GO was used in all experiments, the amount of formed rutile TiO_2 was limited. As a result, simply changing the amount of Ti source could manipulate the phase composition. Thus, rutile phase in mix-phase TiO_2 decreased with the decreased TBT dosage.

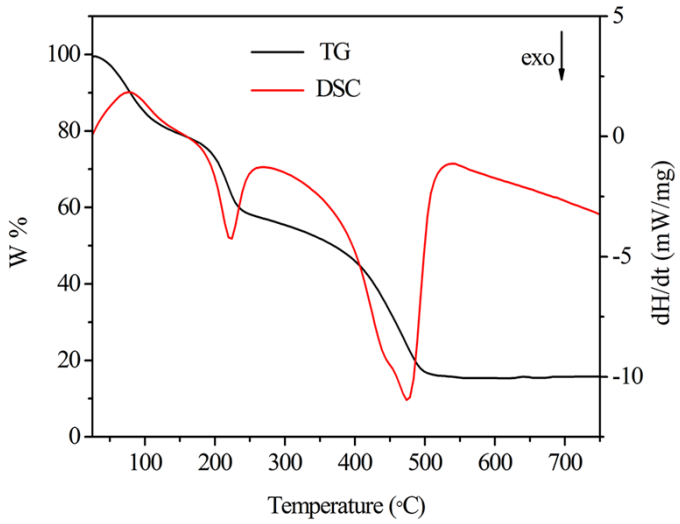

Fig. S5. Simultaneous thermal gravimetric analysis (STA) of TiO2 precursor@GO sheets in air.