Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Supporting S1

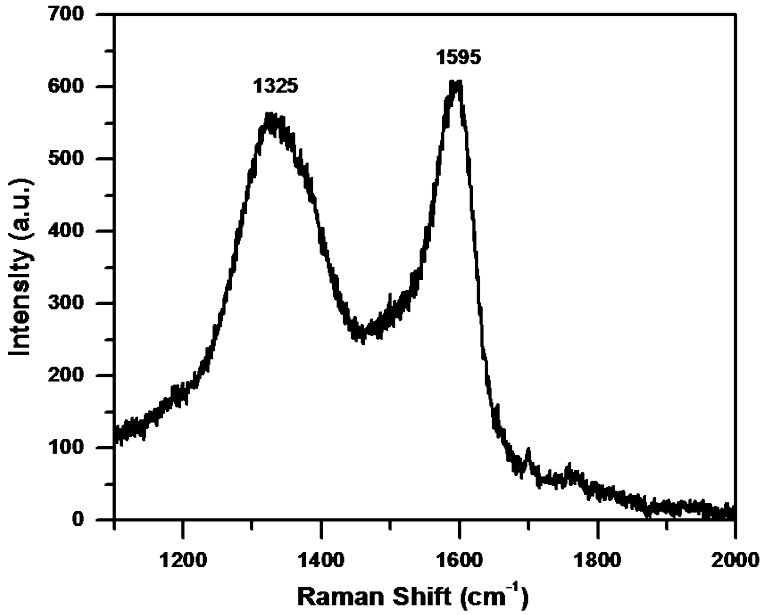

Fig. S1 Raman spectrum of GO

Supporting S2

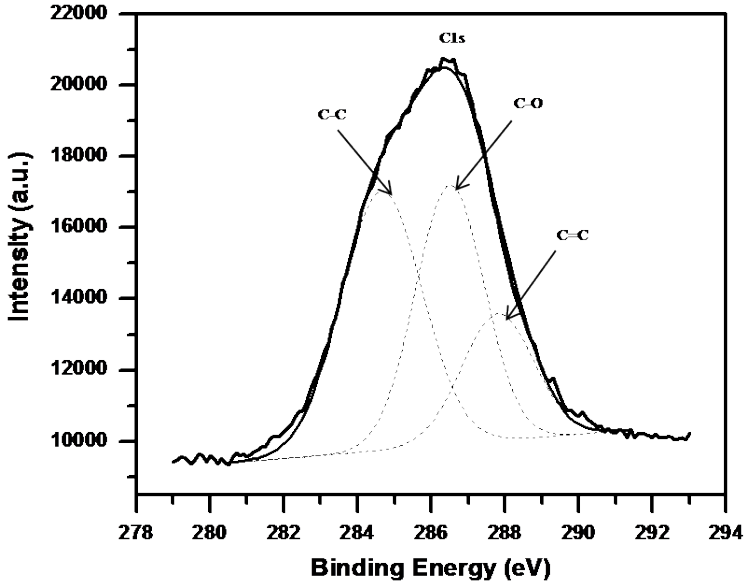

Fig. S2 XPS patterns of GO for C1S

Supporting S3

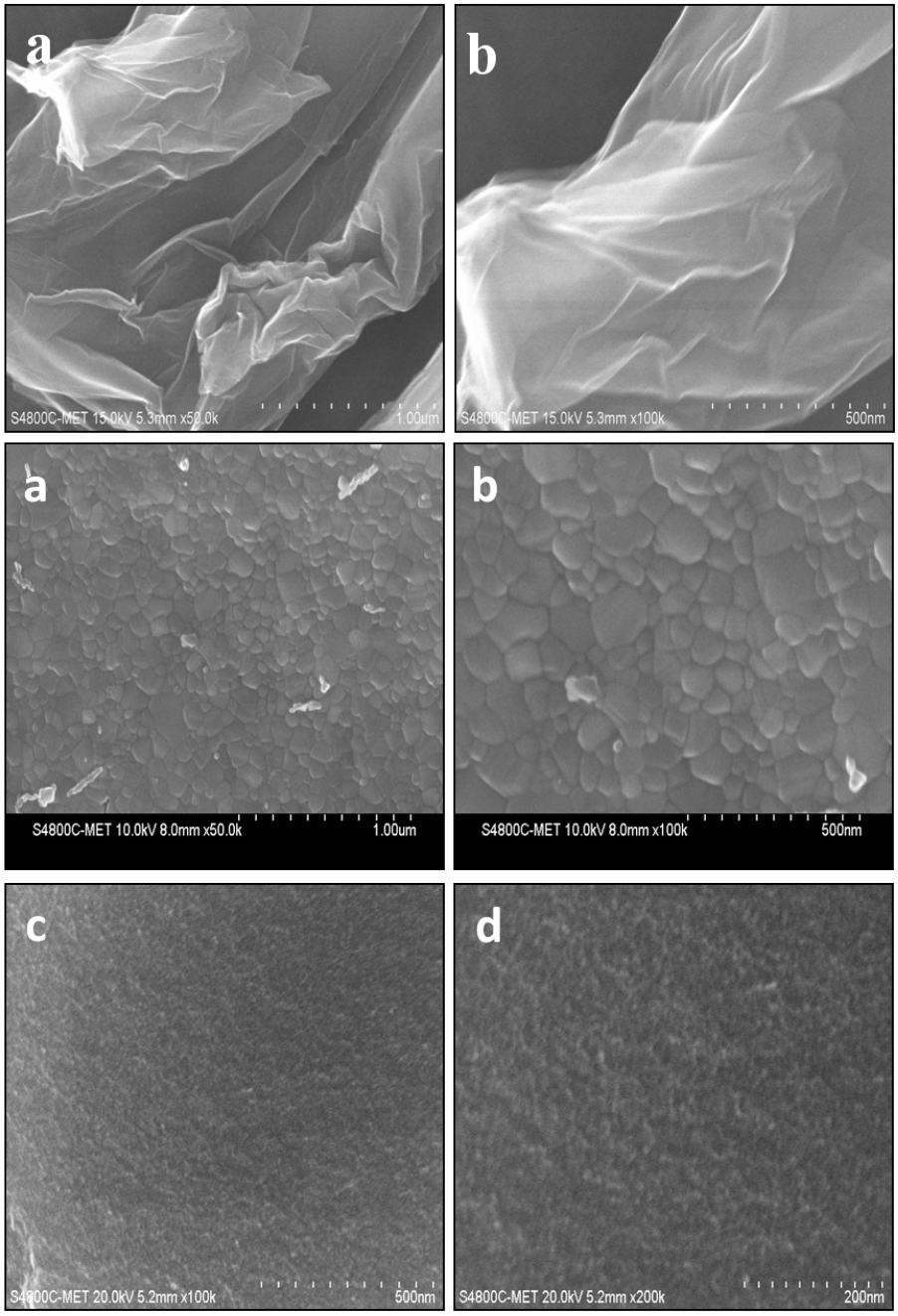

Fig. S3 FESEM of samples (a,b) GO (c,d) undoped TiO_2 (T1) treated at 300^oC for 3h (e,f) N-TiO_2 treated at 300^oC for 3h (T2)

Supporting S4

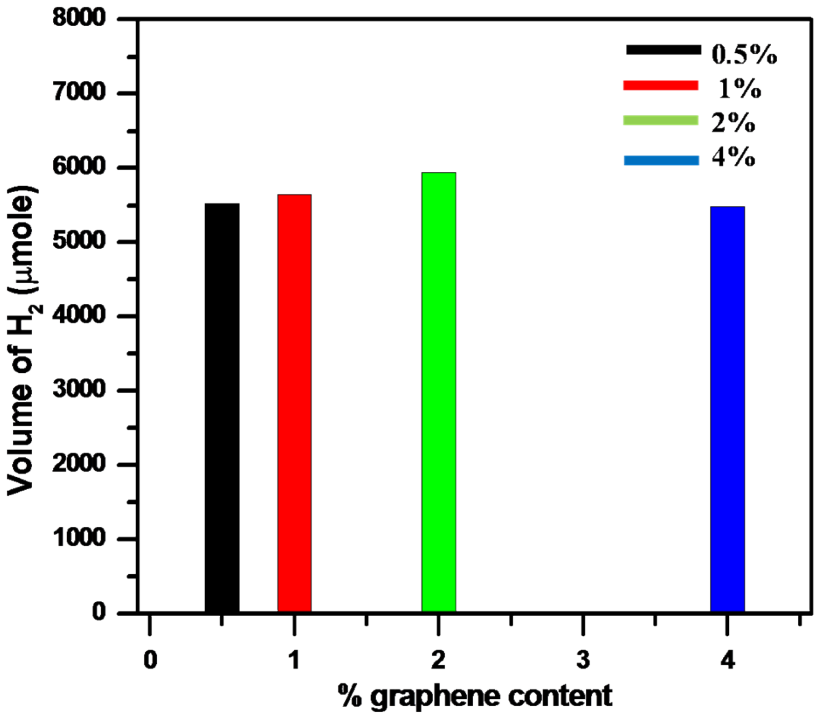

Fig. S4 percent of graphene content verses volume of H_2 (µmole) evolution for 420 minutes i.e. 7 hours of samples with different % of graphene (0.5, 1, 2, 4%)

Supporting S5

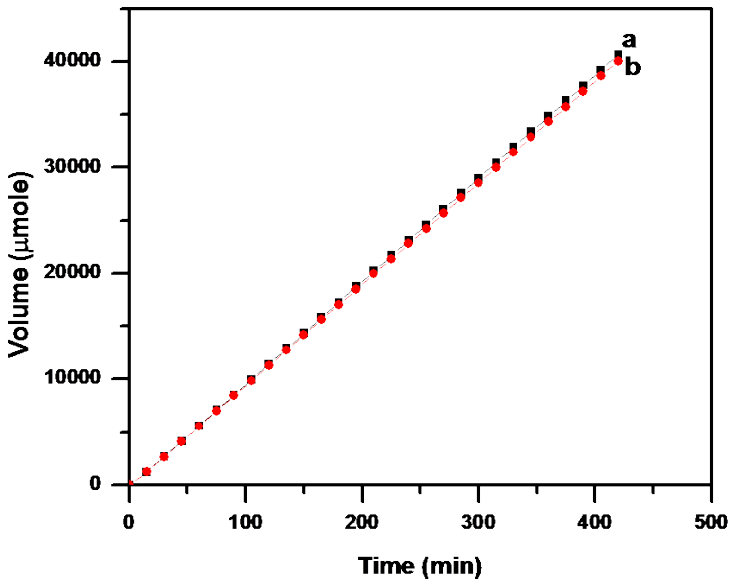

Fig. S5 Time verses volume of H_2 (µmole) evolution of recycled T6 sample (a) first cycle (b) third cycle.

Supporting S6

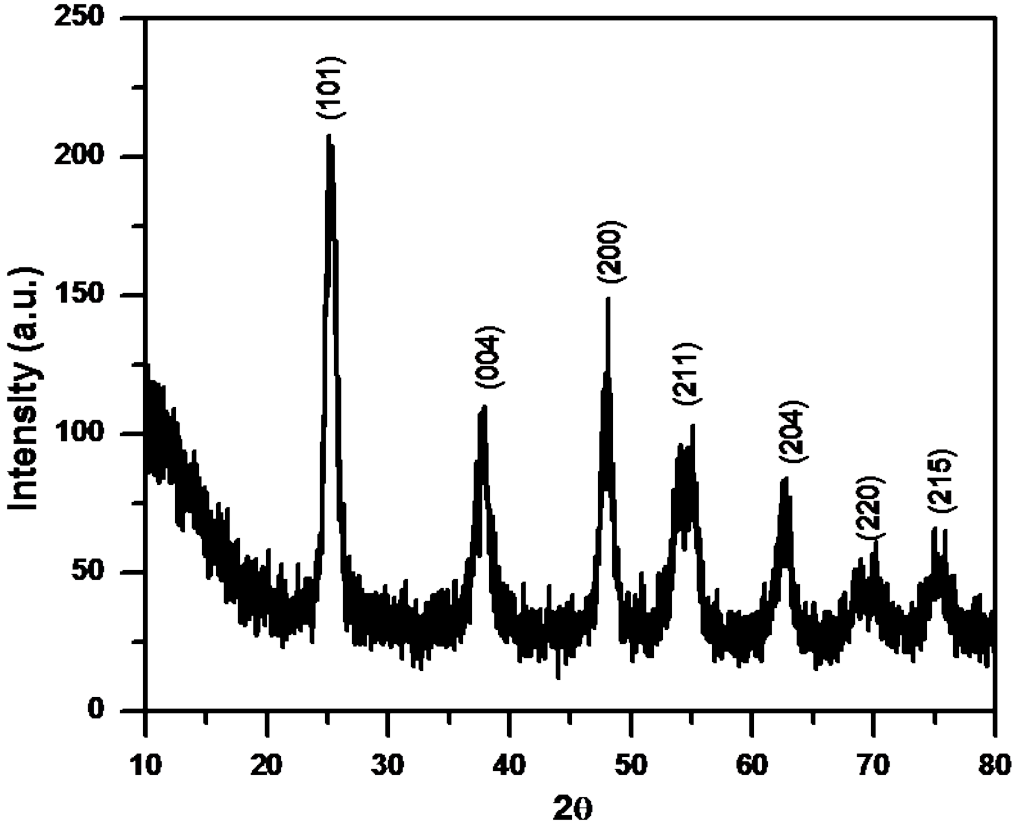

Fig. S6 XRD spectrum of samples (T6) after three cyles (1260 minutes i.e. 21 hours) of photocatalytic study

Supporting S7

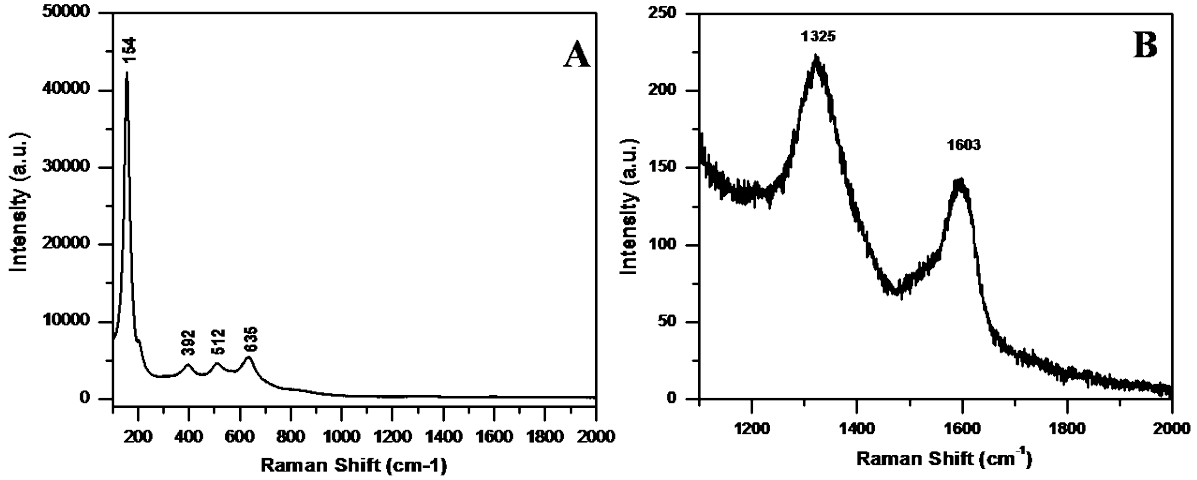

Fig. S7(A, B) Raman spectrum of sample T6 after three cyles (1260 minutes i.e. 21 hours) of photocatalytic study

Supporting S8

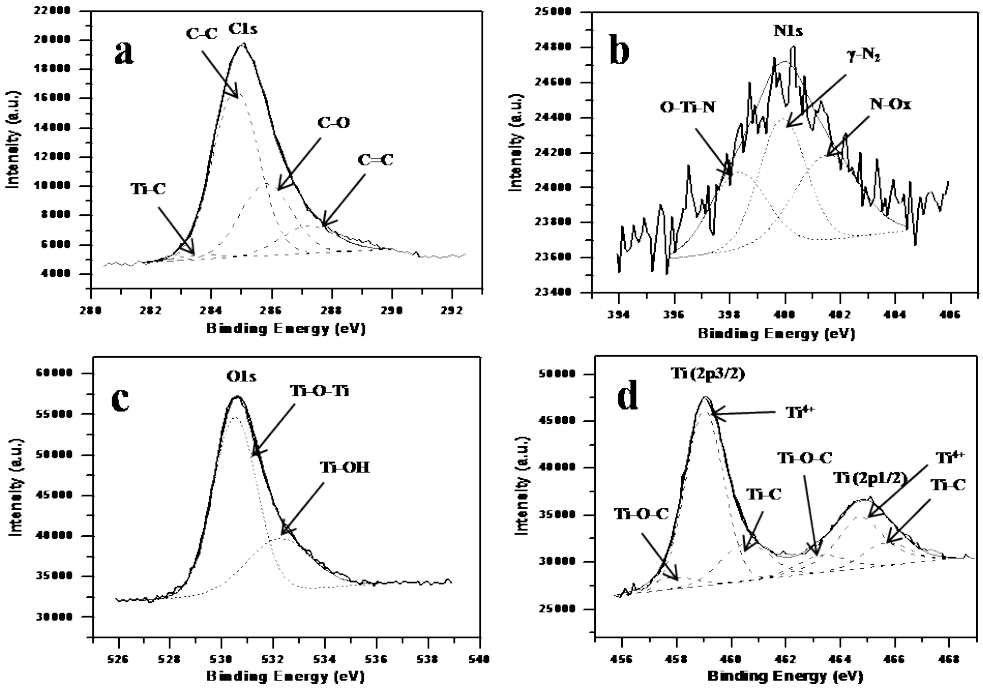

Fig. S8 XPS patterns of N-TiO_2/Gr composite with 2% GO loading synthesized at 300°C for 3h (T6) after three cycles (1260 minutes i.e. 21 hours) of photocatalytic study (a) C(1s), (b) N(1s), (c) O(1s), (d) Ti(2p).

Supporting S9

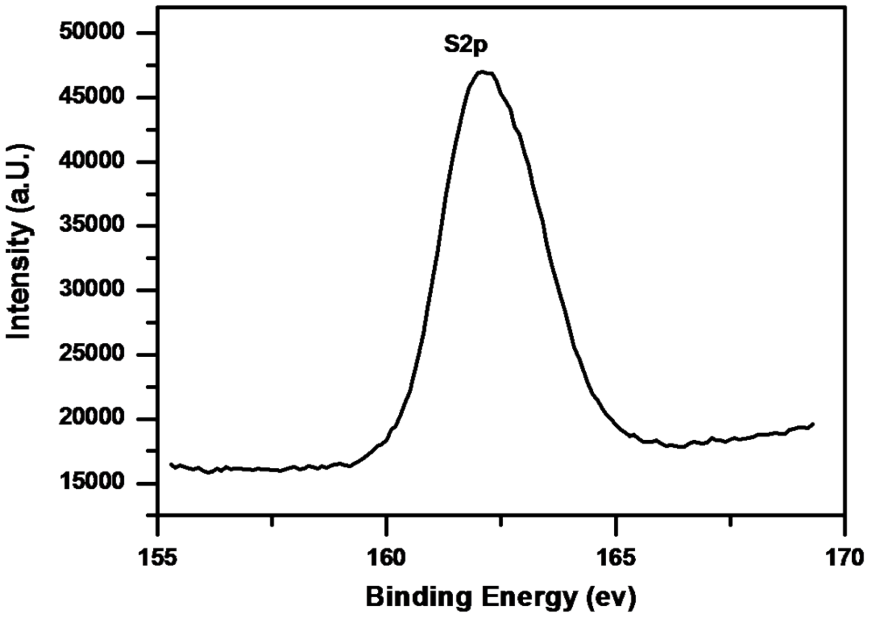

Fig. S9 XPS patterns of N-TiO_2/Gr composite with 2% GO loading synthesized at 300°C for 3h (T6) after three cycles (1260 minutes i.e. 21 hours) of photocatalytic study S(2p)