

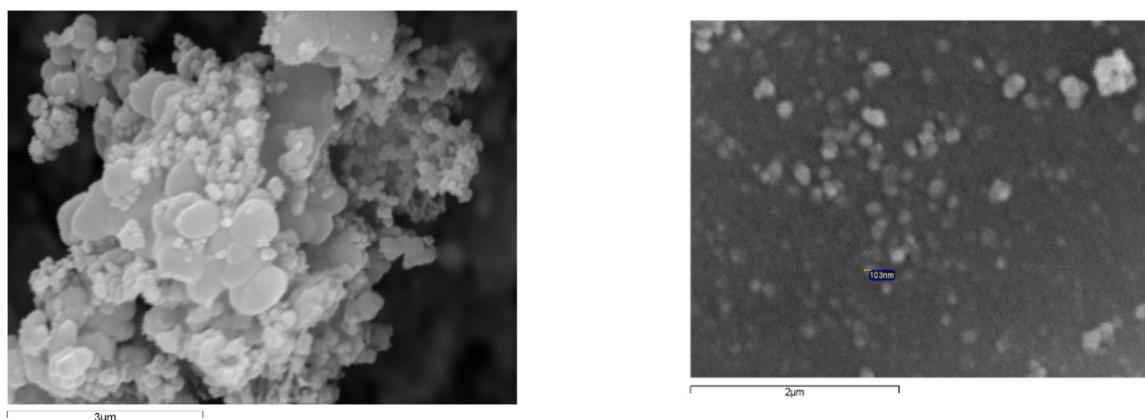
**Electronic supplementary information (ESI)**

**Effect of calcination temperature on the photocatalytic efficiency of acidic sol-gel synthesized TiO<sub>2</sub> nanoparticles in the degradation of alprazolam**

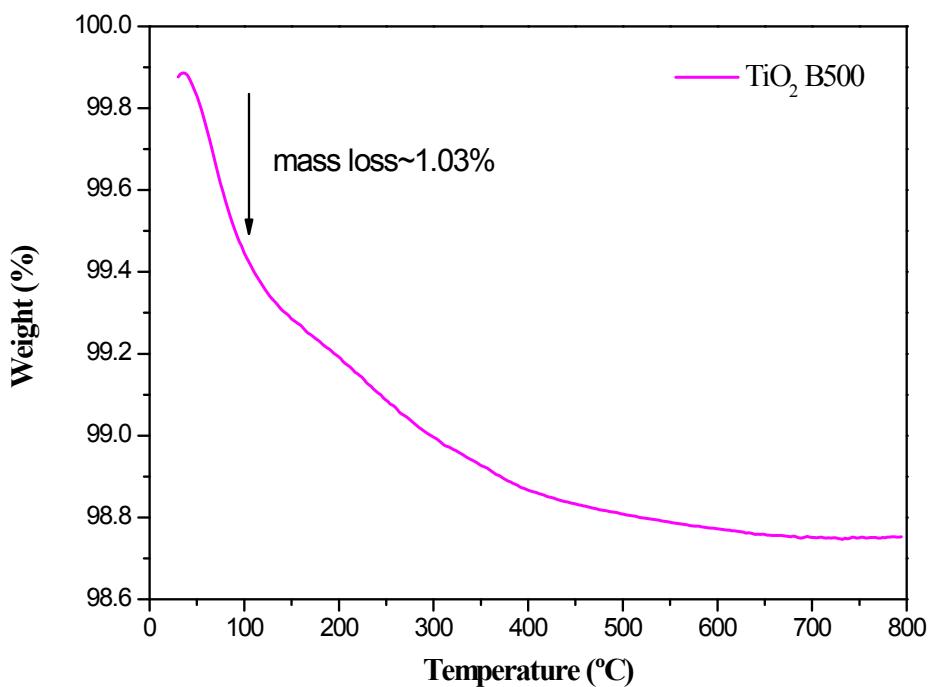
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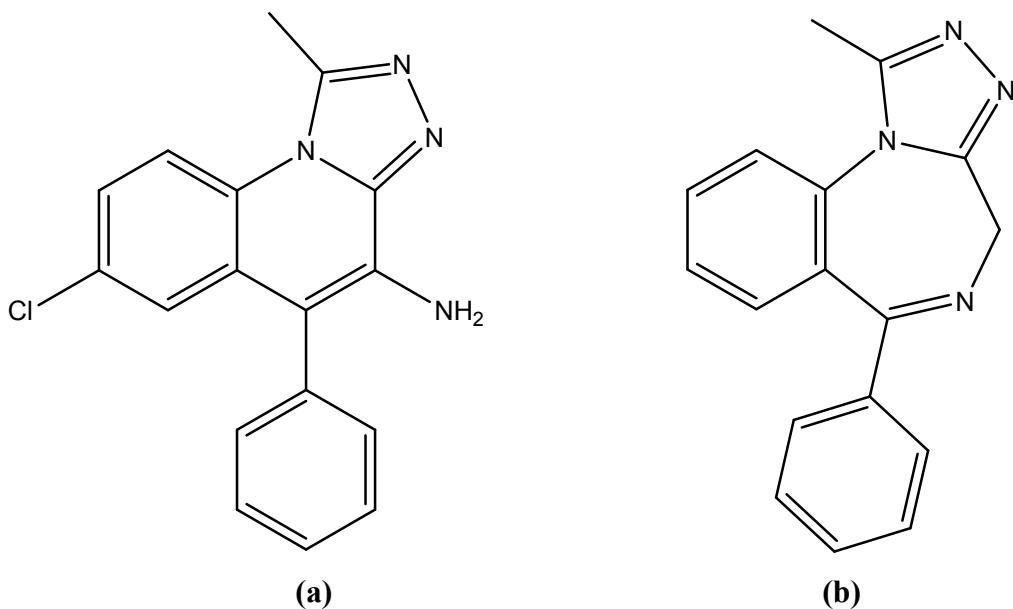
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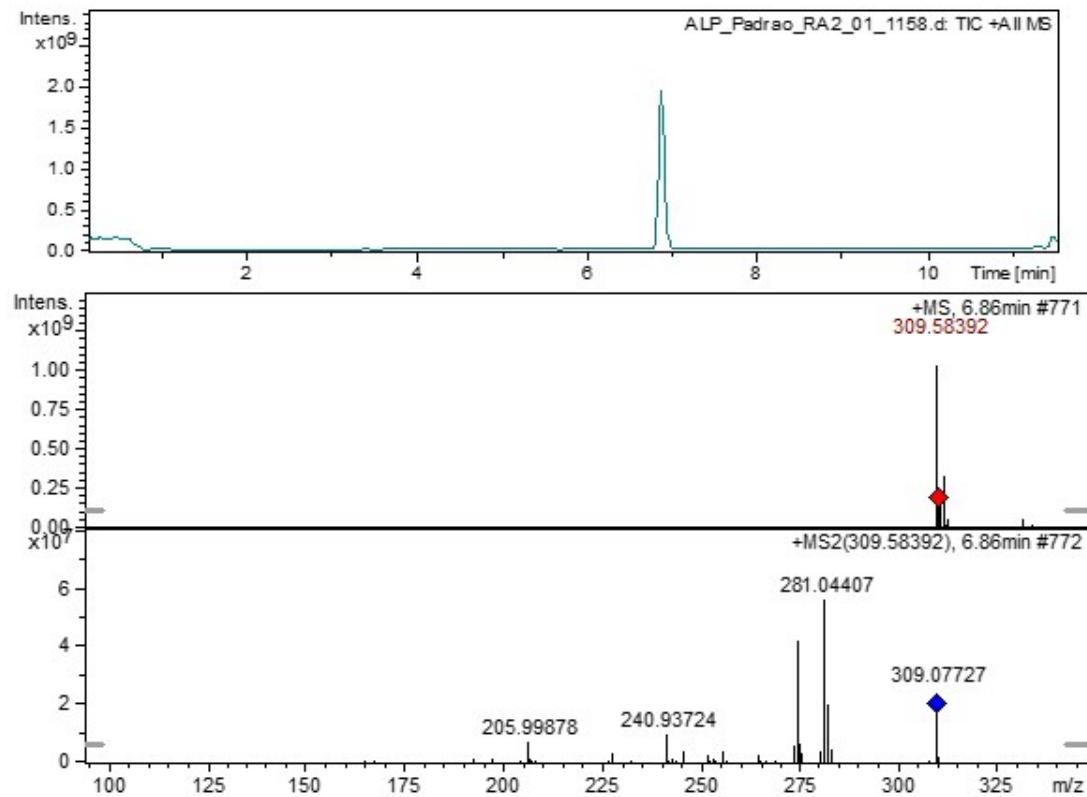
**Fig. S1** Electron micrographs of catalyst B500 TiO<sub>2</sub> obtained by SEM.



**Fig. S2** Thermogram of  $\text{TiO}_2$  B500 sample.



**Fig. S3** Chemical structures of photochemical reaction products (a) triazolaminoquinoline and (b) 8H-alprazolam identified by fluorescence.



**Fig. S4** MS<sup>2</sup> analyses of alprazolam chromatograph peak with m/z 309 following 366 nm photolysis of ALP ( $1.5 \cdot 10^{-5}$  M) in the presence of  $0.5 \text{ g} \cdot \text{L}^{-1}$  B500 TiO<sub>2</sub>.