

Fig. S1 A schematic of thin film photoreactor used for photocatalytic degradation of oxalic acid. Light source: Black light blue lamp (NEC, 15W, maximum emission 350nm, emission range 300-400nm). Reactor volume: 30mL, Illumination area: 21cm<sup>2</sup>

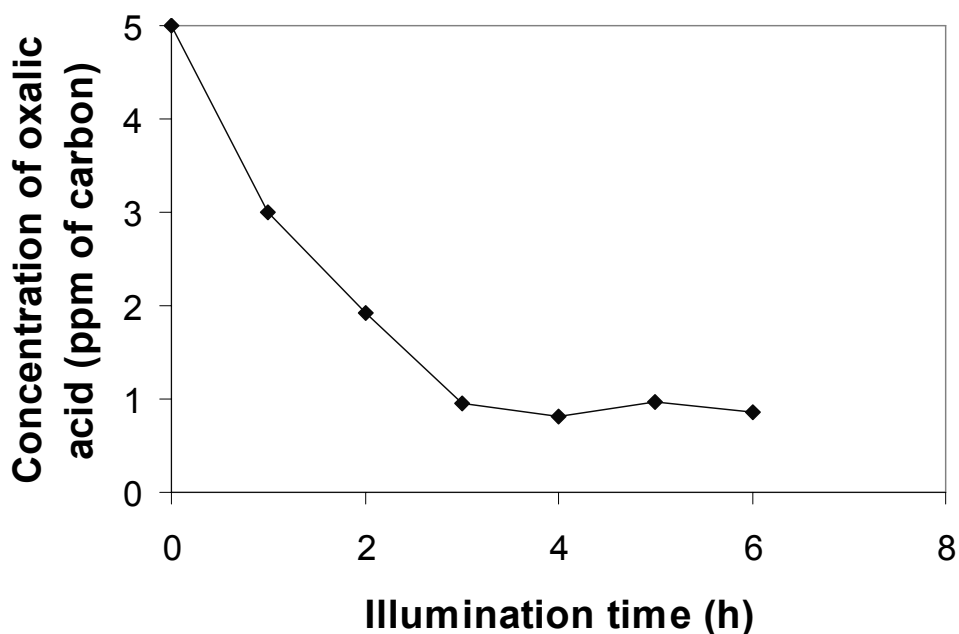


Fig S2 Photocatalytic degradation of oxalic acid as a function of illumination time.  
Condition: [Oxalic acid]=5ppm of carbon, [TiO<sub>2</sub>]=3wt% and pH=3±0.5. Reactor volume: 30mL, Illumination area: 21cm<sup>2</sup>

Analytical method: High Performance Liquid Chromatogram (HPLC, Waters 2695 series) equipped with Photodiode Array Detector (PDA, Waters 2996). A reverse phase C18 Atlantis column (4.6 x 250mm) was used to perform the separation. The mobile phase used was 20mM potassium dihydrogen phosphate, with pH adjusted to 2.7 using phosphoric acid. The flow rate of the mobile phase was maintained at 0.5mL/min.