## SUPPLEMENTARY INFORMATION

## IMMOBILIZATION OF EXFOLIATED g-C<sub>3</sub>N<sub>4</sub> FOR PHOTOCATALYTICAL REMOVAL OF ORGANIC POLLUTANTS FROM WATER

Rusek J.<sup>1</sup>, Paušová Š.<sup>1</sup>, Praus P.<sup>2</sup>, Krýsa J.<sup>1</sup>

<sup>1</sup>Department of Inorganic Technology, University of Chemistry and Technology, Prague,

Technická 5, 166 28 Praha 6, Czech Republic (rusekj@vscht.cz)

<sup>2</sup>Department of Chemistry and Institute of Environmental Technology, VŠB-Technical University of Ostrava, 17. listopadu 2172/15, 708 00 Ostrava-Poruba



Figure S1: XRD patterns of bulk and exfoliated g-C<sub>3</sub>N<sub>4</sub>. Two lines are visible, namely (002) (27 °) and (100) (13 °).



Figure S2: Particle size distribution of as prepared exfoliated  $g-C_3N_4$  and exfoliated  $g-C_3N_4$ treated in EtOH in ultrasonic bath for 3 hours.



Figure S3: AO7 concentration (measured by UV-vis spectroscopy) decrease under light (for 3 contents of g-  $C_3N_4$ ). A three months aged suspension was used for layer deposition, the light source was UV Sylvania Lynx-S BLB, with a broad maximum at 365 nm. The initial concentration of AO7 is  $10^{-4}$  mol dm<sup>-3</sup>.



Figure S4: HPLC analysis of the initial solution of 4-CP (A) and the reaction mixture after 4 h irradiation in the presence of immobilized exfoliated  $g-C_3N_4$  photocatalyst (0.206 mg cm<sup>-2</sup>) (B).

The retention time of 4-CP is about 3.3 min. Peaks around one minute are influenced by injection of sample and were not analysed.



Figure S5: UV-vis spectra (transmittance) of FTO glass and layers of exfoliated  $g-C_3N_4$  (of different content) on FTO glass.



Figure S6: GC/MS analysis of 4-CP solution after 16 hours in dark (A) and after 16 hours irradiation (B) in the presence of exfoliated  $g-C_3N_4$  photocatalyst.