

**Electronic supplementary information**

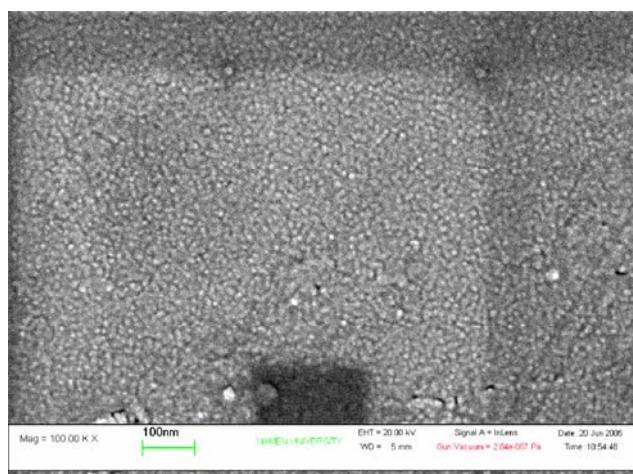
## Vapour Generation at an UV/TiO<sub>2</sub> Photocatalytical Reaction Device for Determination and Speciation of Mercury by AFS and HPLC-AFS

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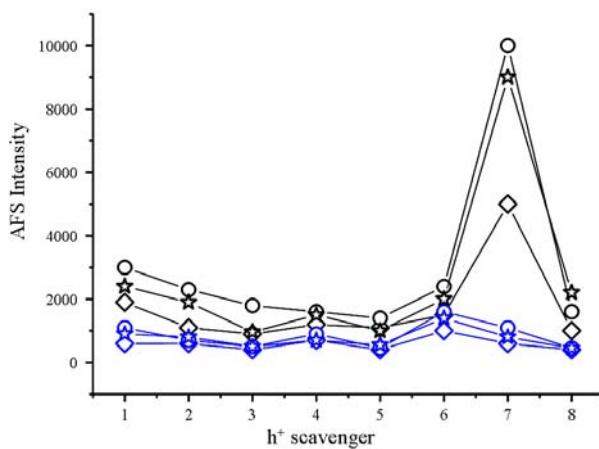
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### Figures



**Fig. S1** SEM image of nano TiO<sub>2</sub> film coated on the glass fibre.



**Fig. S2** Effect of h<sup>+</sup> scavenger on the vapor generation efficiency of Hg species of 5 ng each with UV/TiO<sub>2</sub> PCRD and without UV/TiO<sub>2</sub> PCRD but only UV irradiation. 1) potassium sodium tartrate; 2) tartaric acid; 3) oxalic acid; 4) glycerol; 5)  $\beta$ -cyclodextrin; 6) hydroquinone; 7) HCOOH/HCOONa buffer; 8) H<sub>2</sub>O. ◇ Hg<sup>2+</sup>; ○ MMC; ☆ EMC. The black line: with UV/TiO<sub>2</sub> PCRD; the blue line: without UV/TiO<sub>2</sub> PCRD but only UV irradiation. Each point in the figure represented the average value of AFS intensity of 5 replicate runs, and the RSD was less than 3% in all the cases.