Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

Title:

Photo-reduction of heavy metal ions and photo-disinfection of pathogenic bacteria under simulated solar light using photosensitized TiO_2 nanofibers

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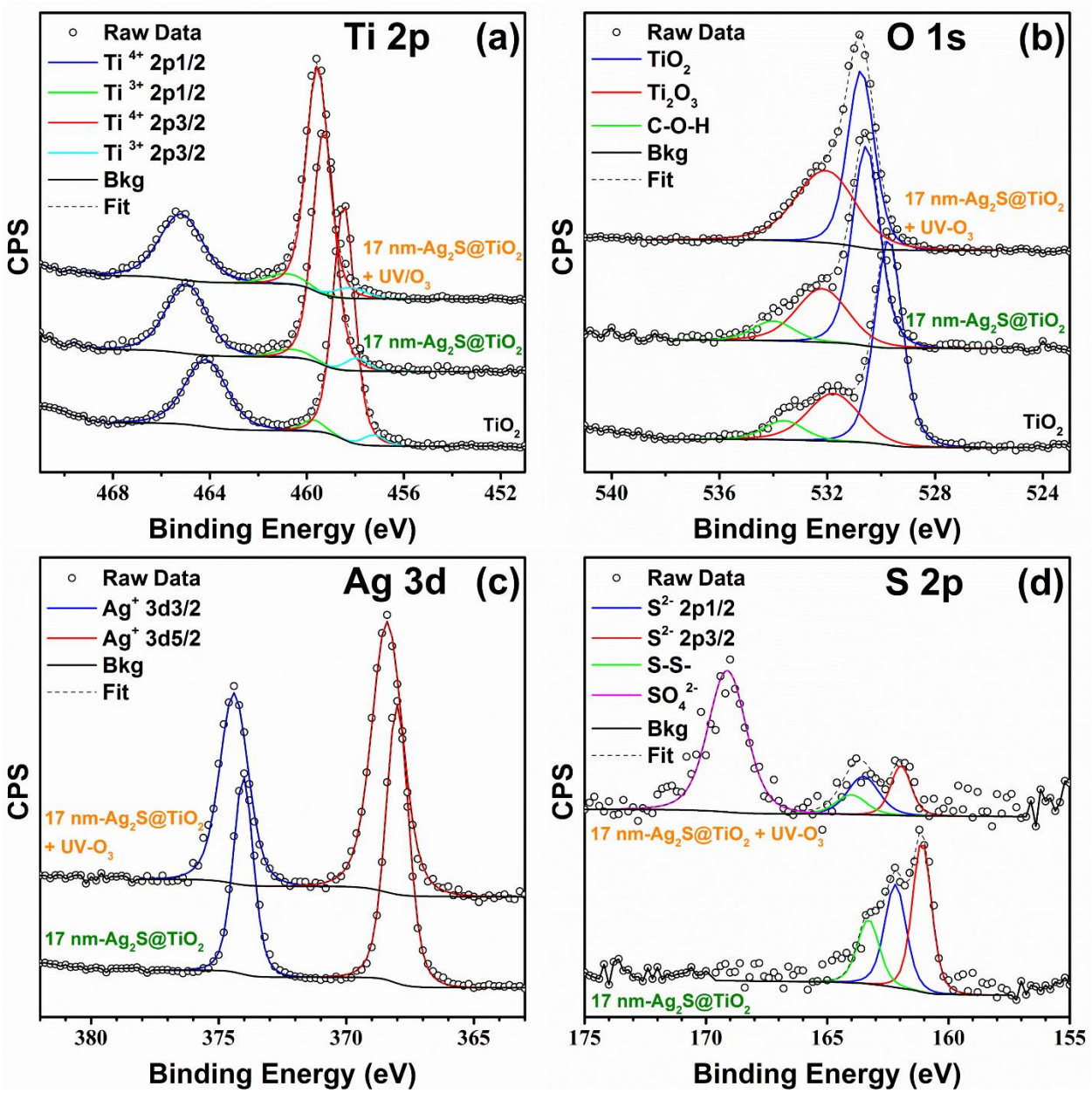

Fig. S1. High resolution XPS spectra of pure TiO_2 and Ag_2S/TiO_2 samples. (a) Ti 2p, (b) O 1s, (c) Ag 3d, and (d) S 2p. *The figure is reproduced from our previous work [*], available under the Creative Commons Attribution 4.0 International Public License.*

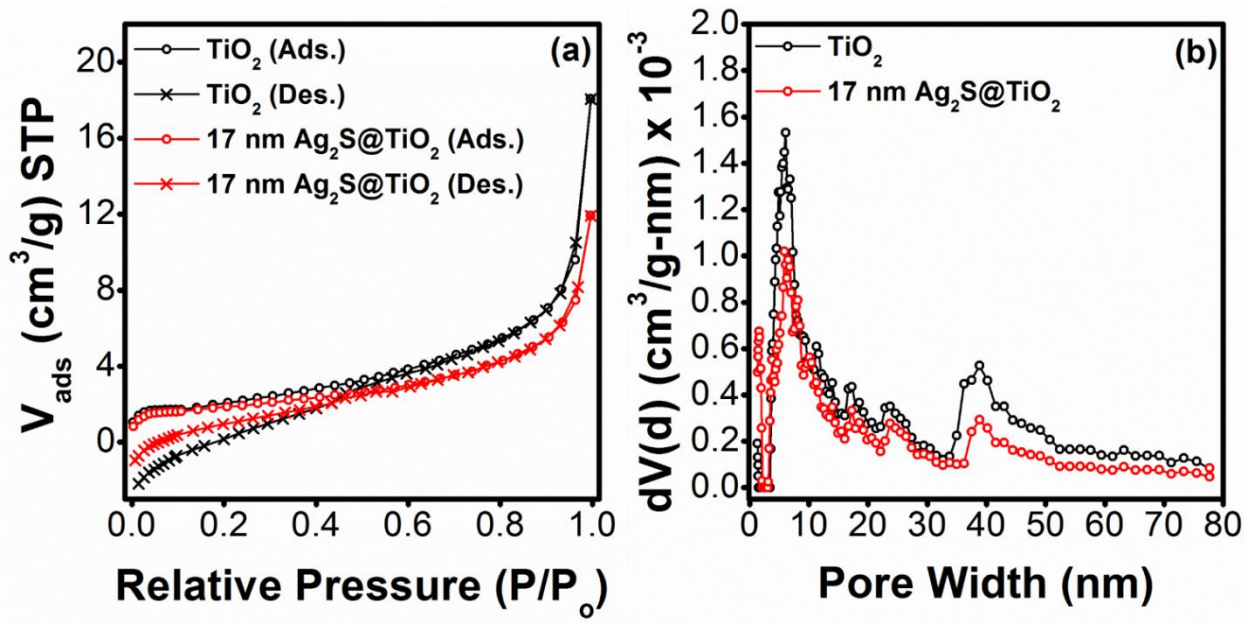

Fig. S2. (**a**) Nitrogen adsorption-desorption isotherms for pure TiO_2 NFs and 17 nm-Ag_2S/TiO_2 composite nanofibers, and (**b**) the corresponding pore size distributions. *The figure is reproduced from our previous work [*], available under the Creative Commons Attribution 4.0 International Public License.*

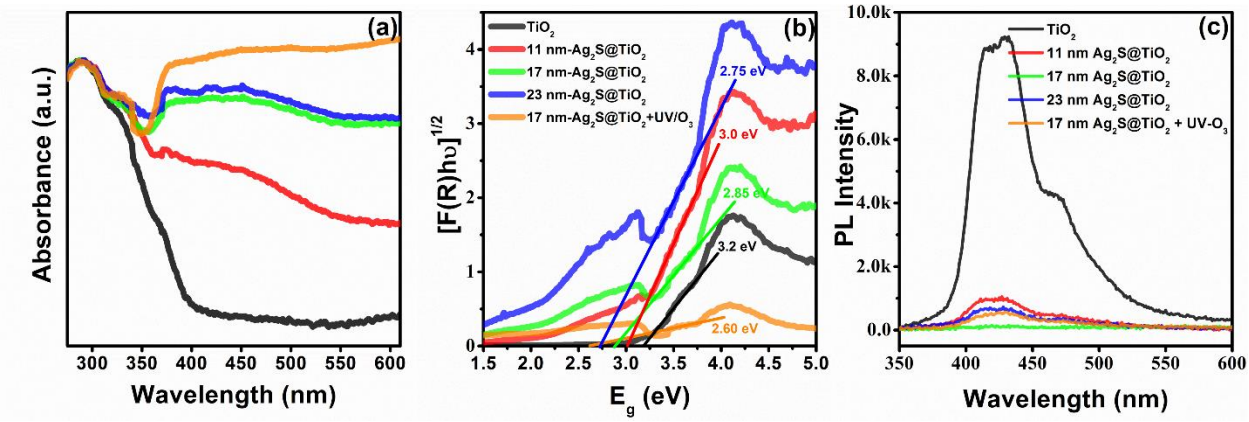

Fig. S3. (**a**) UV-vis diffuse reflectance spectra of $Ag_2S@TiO_2$ NFs (converted to absorbance), (**b**) Kulbelka- Munk transformation showing the estimated bandgaps, and (**c**) the photoluminescence spectra recorded after 325 nm laser excitation. *The figure is reproduced from our previous work [*], available under the Creative Commons Attribution 4.0 International Public License*.

[*] S. Ghafoor, S. Ata, N. Mahmood and S. N. Arshad, *Sci. Rep.*, 2017, **7**, 255.