

Supporting Information

Anchoring of Ag₆Si₂O₇ Nanoparticles on α-Fe₂O₃ Short Nanotubes as Z-Scheme Photocatalyst for Improving Their Photocatalytic Performances

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Table S1 The parameters on spectral distribution and relative intensity of the used mercury lamp in the photocatalytic tests.

Wavelength (nm)	250	313	365	400	510	620	720
Relative Intensity (%)	20	85	100	30	20	40	80

The measurement of the intensity of the mercury lamp light (*I*)

The intensity of this light is calculated as 29.02 mW/cm². This result is measured by irradiatometer (FZ-A, Photoelectric Instrument Factory of Beijing Normal University, wavelength range (400-1000 nm)). Which are carried out in our previous report.¹ The light source is the 300 W high pressure mercury lamp, the intensity and wavelength distribution of this high pressure mercury lamp are shown

in **Table S2**. Only the light with 400, 510, 620 and 720 nm could be measured by irradiatometer (**Table S2**). According to the relative intensity of the light with different wavelength, the optical power I ($\text{mW}\cdot\text{cm}^{-2}$) of each wavelength could be calculated corresponding. Total optical power I ($\text{mW}\cdot\text{cm}^{-2}$) of this light is $29.02 \text{ mW}\cdot\text{cm}^{-2}$.

Table S2 The parameters on spectral distribution and relative intensity of the used high pressure mercury lamp and their corresponding optical power I ($\text{mW}\cdot\text{mL}^{-1}$) in the photocatalytic tests.

Wavelength (nm)	250	313	365	400	510	620	720	Total
Relative Intensity (%)	20	85	100	30	20	40	80	/
Measured I ($\text{mW}\cdot\text{cm}^{-2}$)		/			13.15			/
Calculated I ($\text{mW}\cdot\text{cm}^{-2}$)	1.55	6.58	7.74	2.32	1.55	3.09	6.19	29.02

References

1. J. Liu, S. Yang, W. Wu, Q. Tian, S. Cui, Z. Dai, F. Ren, X. Xiao, C. Jiang, *ACS Sustainable Chem. Eng.*, 2015, **3**, 2975-2984.