Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Interface Reacted $ZnFe_2O_4$ on α-Fe_2O_3 Nanoarrays for Largely Improved Photoelectrochemical Activity

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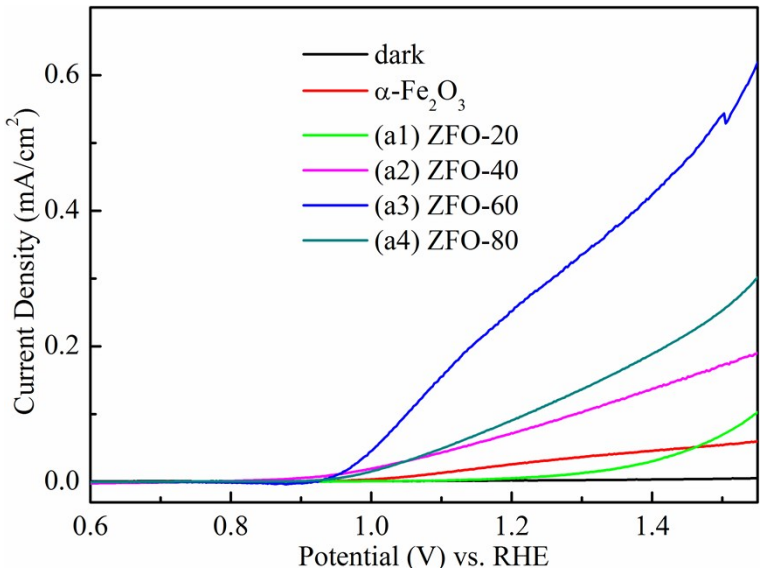

Fig. S1 Variation of Photocurrent density *vs* bias potential (vs. RHE) (*J-V*) with different thickness of ZnO layer under AM 1.5 G illumination and in the dark. (a1) 20 nm, (a2) 40 nm, (a3) 60 nm, (a4) 80 nm.

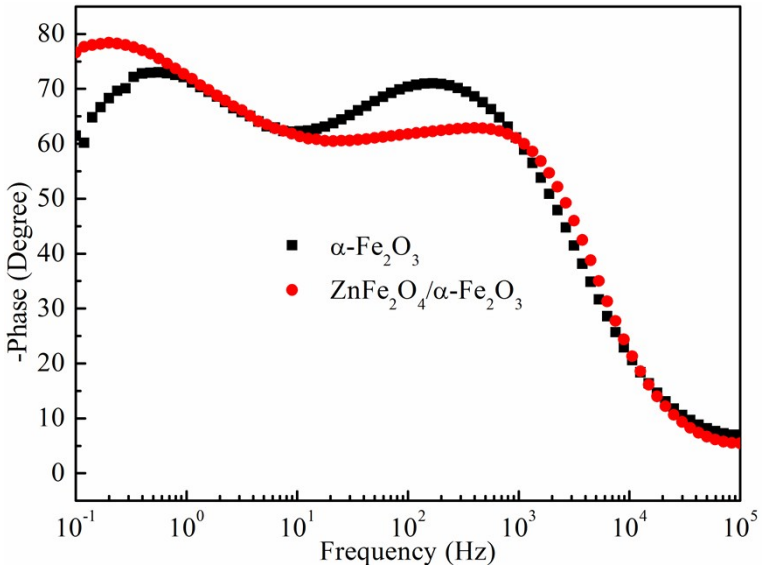

Fig. S2 Bode phase plots of pristine α-Fe_2O_3 nanorod arrays and $ZnFe_2O_4$/α-Fe_2O_3 composite nanorod arrays under light.

Table S1 The comparative PEC performances of our work with other previous reports on $ZnFe_2O_4/Fe_2O_3$. The photocurrent densities were all measured at 1.23 V vs RHE.

Reference	Photocurrent Density (mA cm^{-2})		Enhancement (%)
	Fe_2O_3	$ZnFe_2O_4/Fe_2O_3$	
16	0.009	0.05	456
11	0.18	0.23	28
20	0.25	0.45	80
Our Work	0.03	0.28	833