Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Supporting Information

Syntheses of asymmetric zinc phthalocyanines as sensitizer of Pt-loaded graphitic carbon nitride for efficient visible/near-IR-light-driven H_2 production

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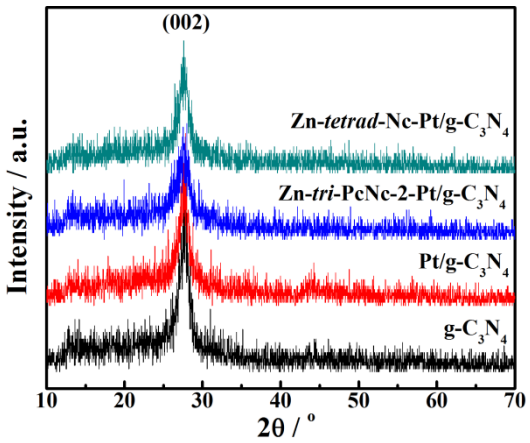

Fig. S1 XRD patterns of g-C_3N_4, Pt/g-C_3N_4, Zn-*tri*-PcNc-2-Pt/g-C_3N_4 and Zn-*tetrad*-Nc-Pt/g-C_3N_4.

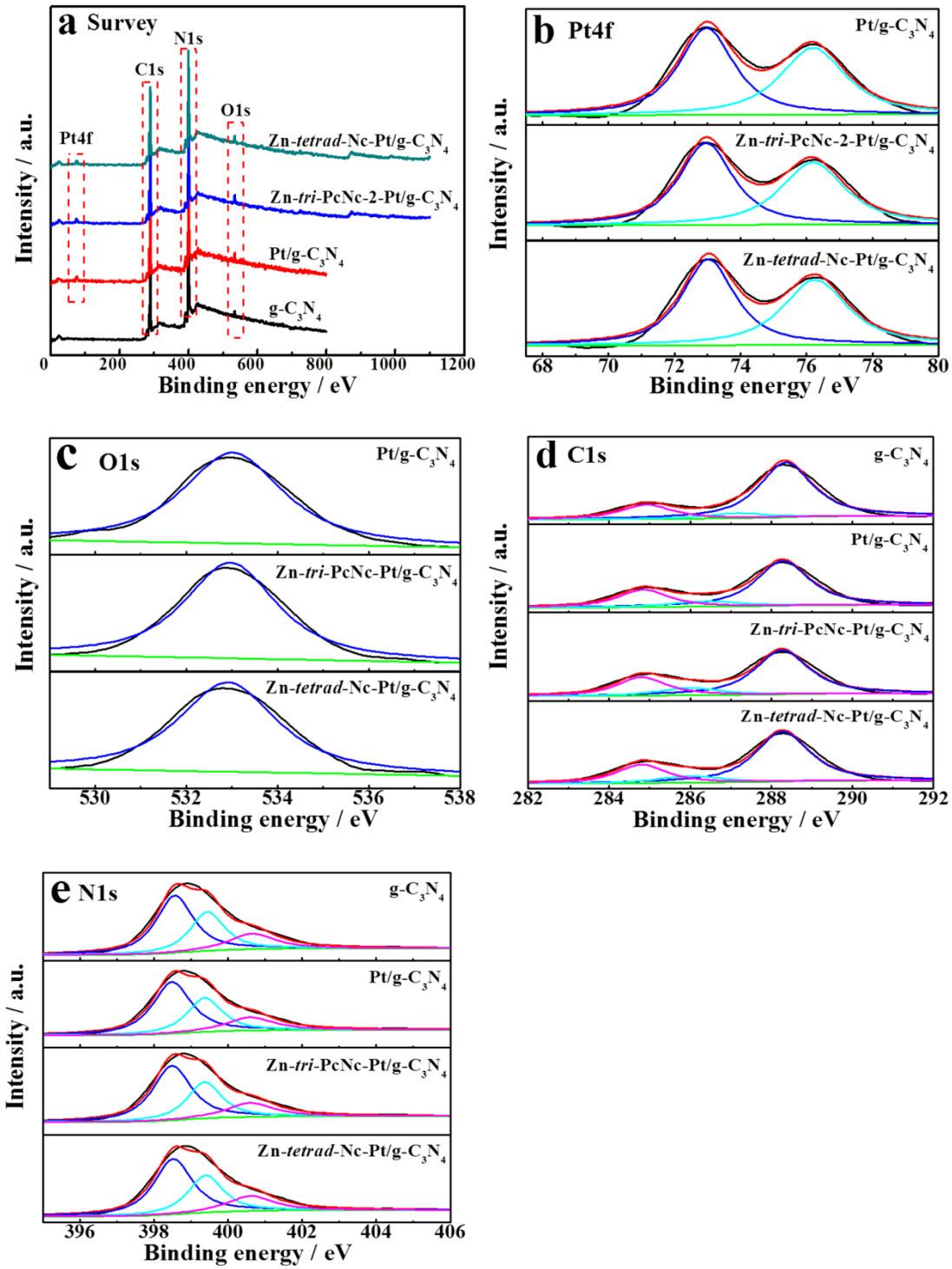

Fig. S2 Survey and high resolution XPS spectra of the products before and after the 0.5wt% Pt-loading and 5.0 μmol g^{-1} ZnPcs-sensitization. (a) survey; (b) high resolution Pt4f; (c) high resolution O1s; (d) high resolution O1s; and (e) high resolution N1s.

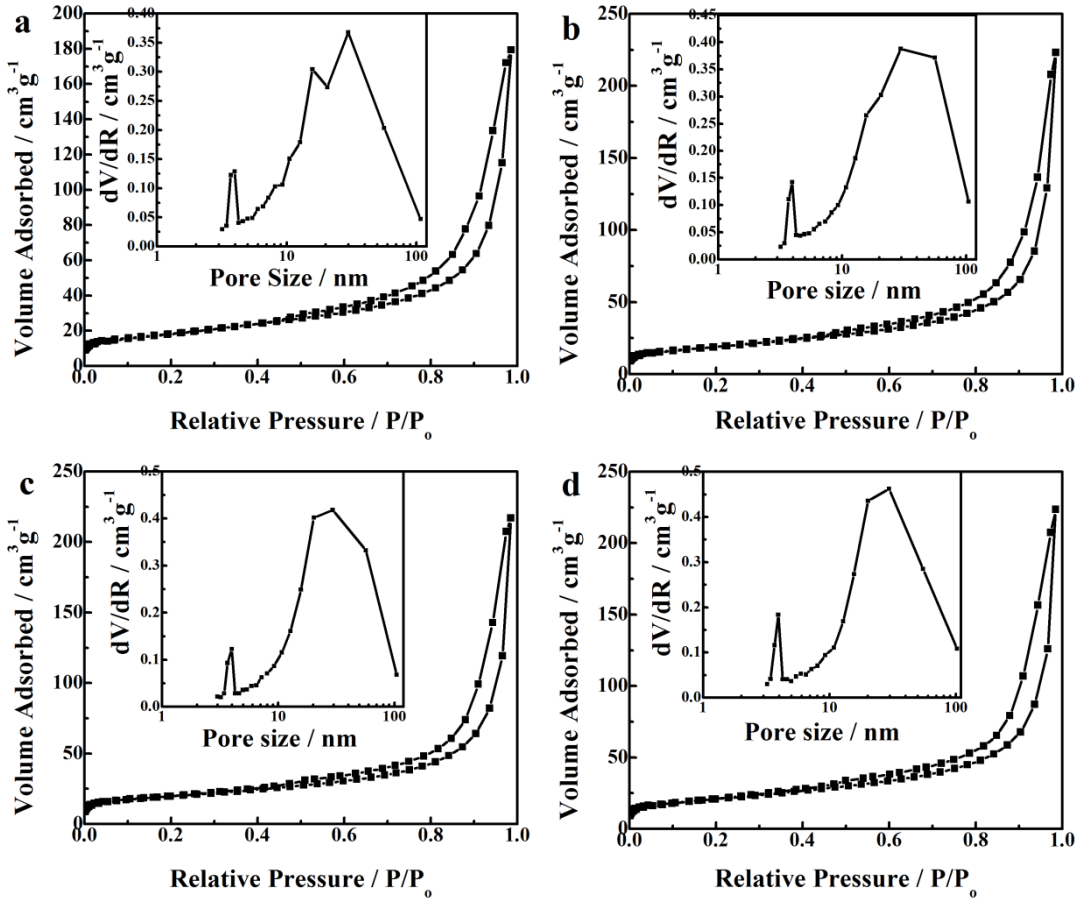

Fig. S3 N_2 adsorption-desorption isotherms and the corresponding Barrett-Joyner-Halenda (BJH) pore size distribution curves of (a) g-C_3N_4, (b) Pt/g-C_3N_4, (c) Zn-*tetrad*-Nc-Pt/g-C_3N_4 and (d) Zn-*tri*-PcNc-2-Pt/g-C_3N_4 with 0.5wt% Pt and 5.0 μmol g^{-1} dye-adsorbed amount.

Table S1 BET surface area, pore size and pore volume determined by N_2 adsorption and desorption measurements of g-C_3N_4, Pt/g-C_3N_4, Zn-*tetrad*-Nc-Pt/g-C_3N_4 and Zn-*tri*-PcNc-2-Pt/g-C_3N_4.

Sample	Surface area /m^2 g^{-1}	Pore volume /cm^3 g^{-1}	Pore size distribution /nm
g-C_3N_4	64.08	0.28	3.2-3.4; 15.8-56.6
Pt/g-C_3N_4	66.56	0.34	3.2-3.4; 15.7-56.1
Zn-*tetrad*-Nc-Pt/g-C_3N_4	64.35	0.33	3.5-3.6; 15.7-56.7
Zn-*tri*-PcNc-2-Pt/g-C_3N_4	69.15	0.34	3.2-3.4; 15.6-55.0