

Supporting Information

The magnetic and adsorption properties of $\text{ZnO}_{1-x}\text{S}_x$ nanoparticles

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Fig. S1

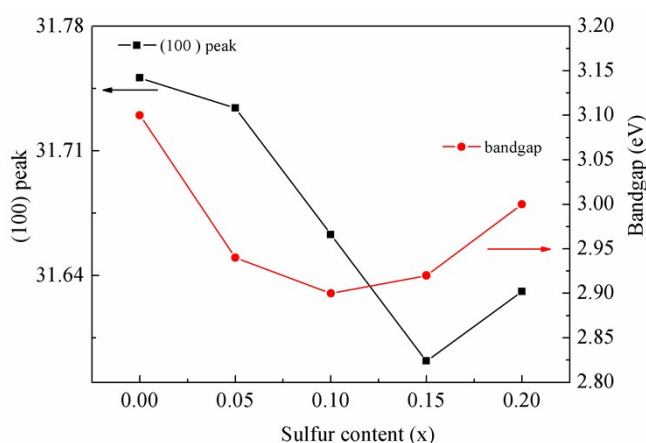


Fig. S1 The dependence of (100) diffraction peak position and E_g on sulfur concentration.

Fig. S2

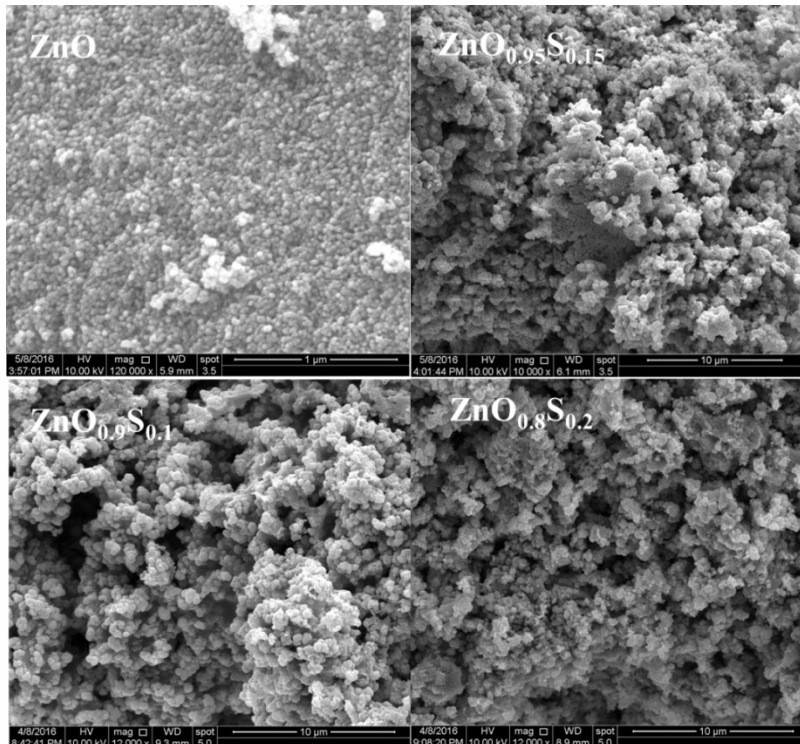


Fig. S2 The SEM images of ZnO, ZnO_{0.95}S_{0.05}, ZnO_{0.9}S_{0.1}, ZnO_{0.8}S_{0.2}, respectively.

Fig. S3

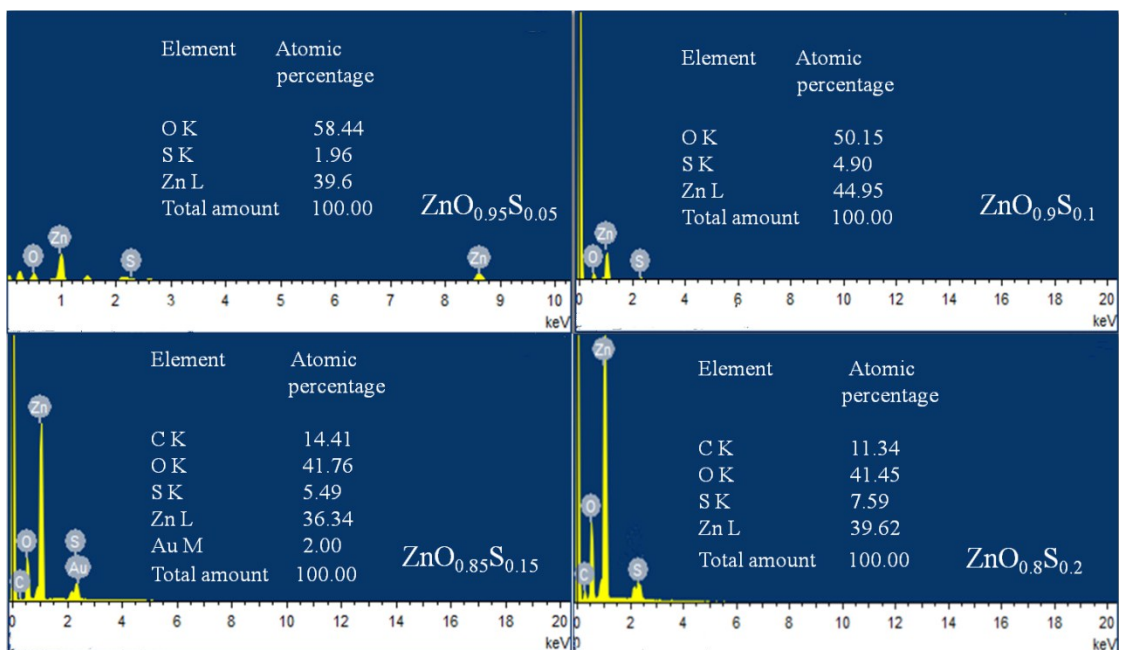


Fig. S3 the EDX pattern of Zinc oxysulfide nanoparticles. It should be noted that O

concentration cannot be determined accurately. Thus, we determined the S concentration from Zn.

Fig S 4

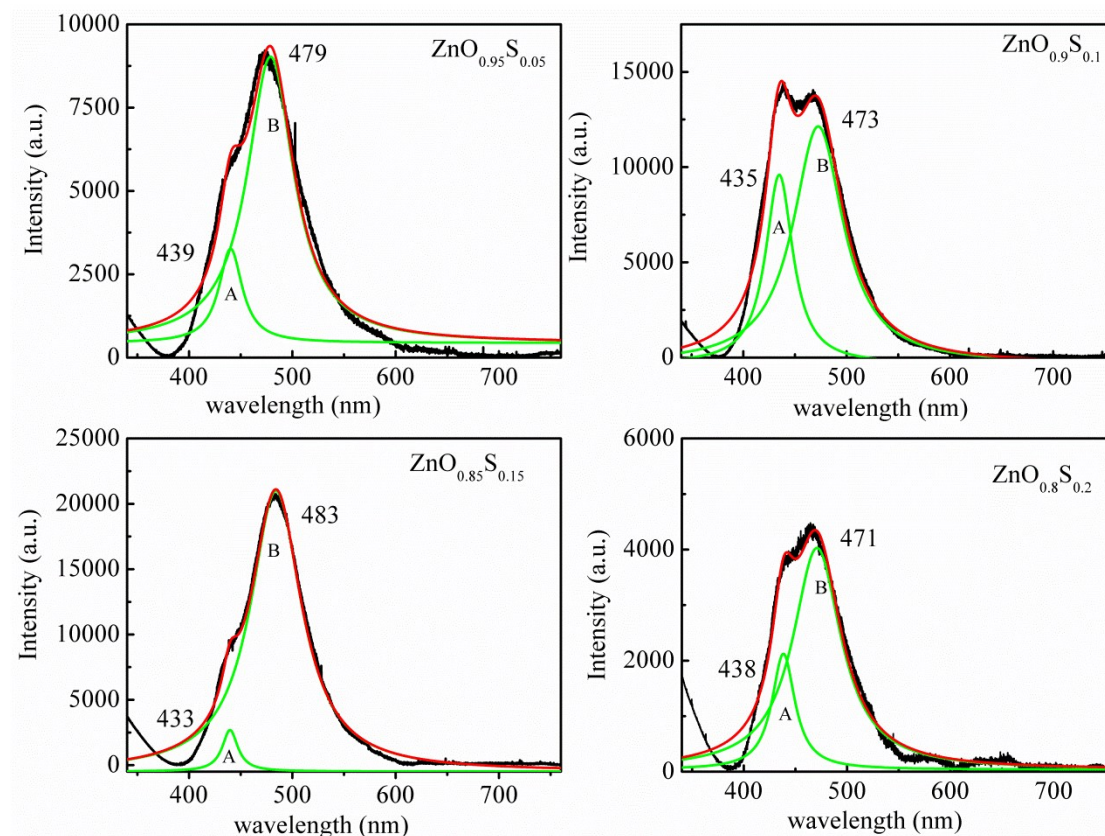


Fig. S4 The Lorentzian fitting of the emission peak of S doped ZnO.

Table S1 The location and area of peak A and peak B obtained by the fitting results shown in Fig. S4.

	Peak A (Zn_i)		Peak B (V_{Zn})	
	Location (nm)	(area)	Location (nm)	(area)
$ZnO_{0.95}S_{0.05}$	440	121791	479	739895
$ZnO_{0.9}S_{0.1}$	435	500321	473	1159060
$ZnO_{0.85}S_{0.15}$	433	66881	484	1414760
$ZnO_{0.8}S_{0.2}$	438	88581	471	357047