Supporting Information

Broad-band Three Dimensional Nanocave ZnO Thin Film Photodetectors Enhanced by Au Surface Plasmon Resonance

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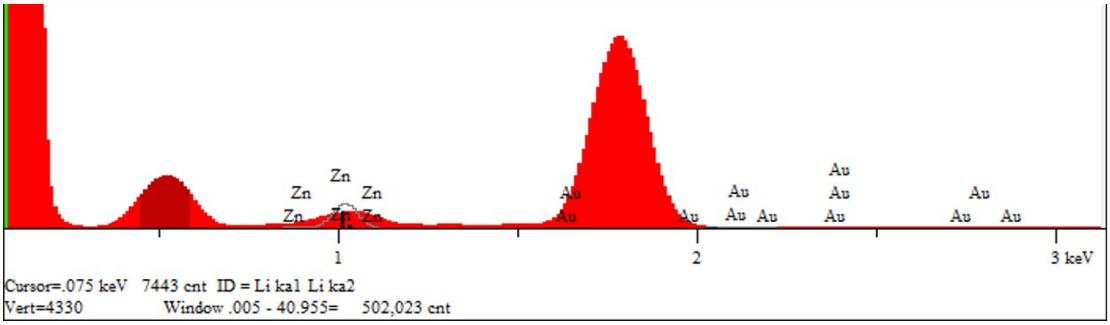

Elt.	Line	Intensity (c/s)	Conc	Units	Error 2-sig	MDL 3-sig	
Zn	Ka	20.80	99.520	wt.%	6.537	24.077	
Au	Ma	70.91	.480	wt.%	.089	.057	
			100.000	wt.%			Total

Fig. S1. The EDS result of ZnO-Au thin film.

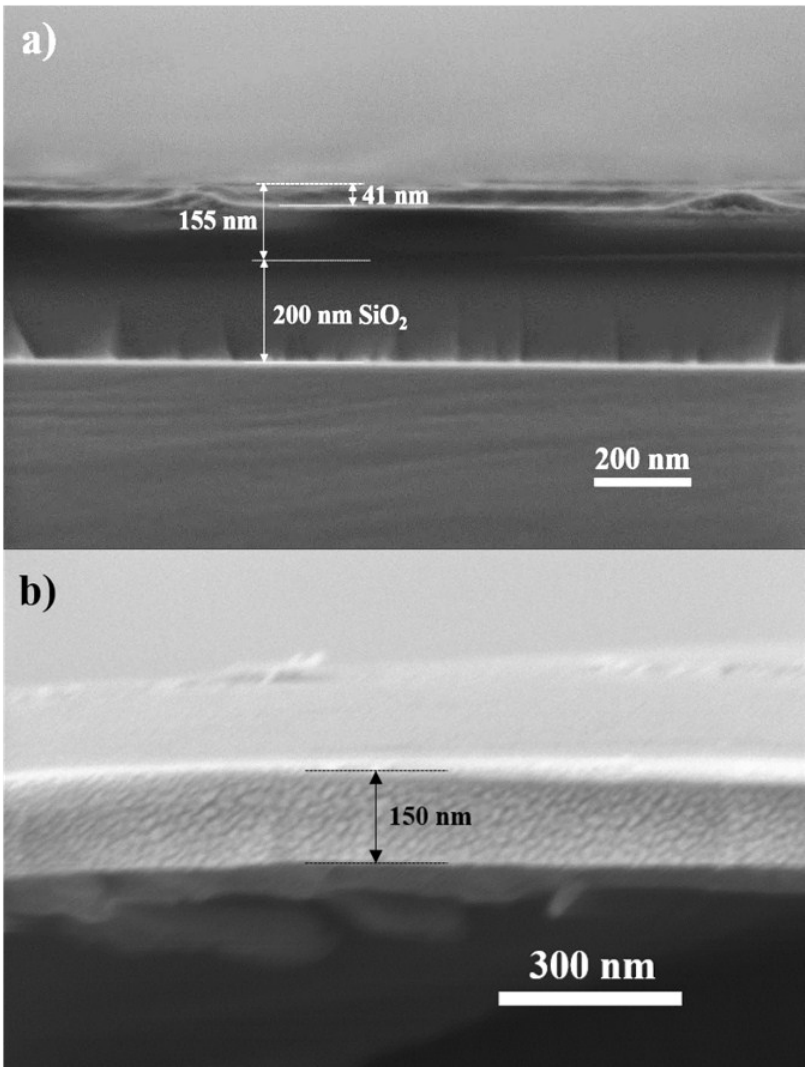

Fig. S2. The SEM cross-sectional views of (a) pattered and (b) flat ZnO films.

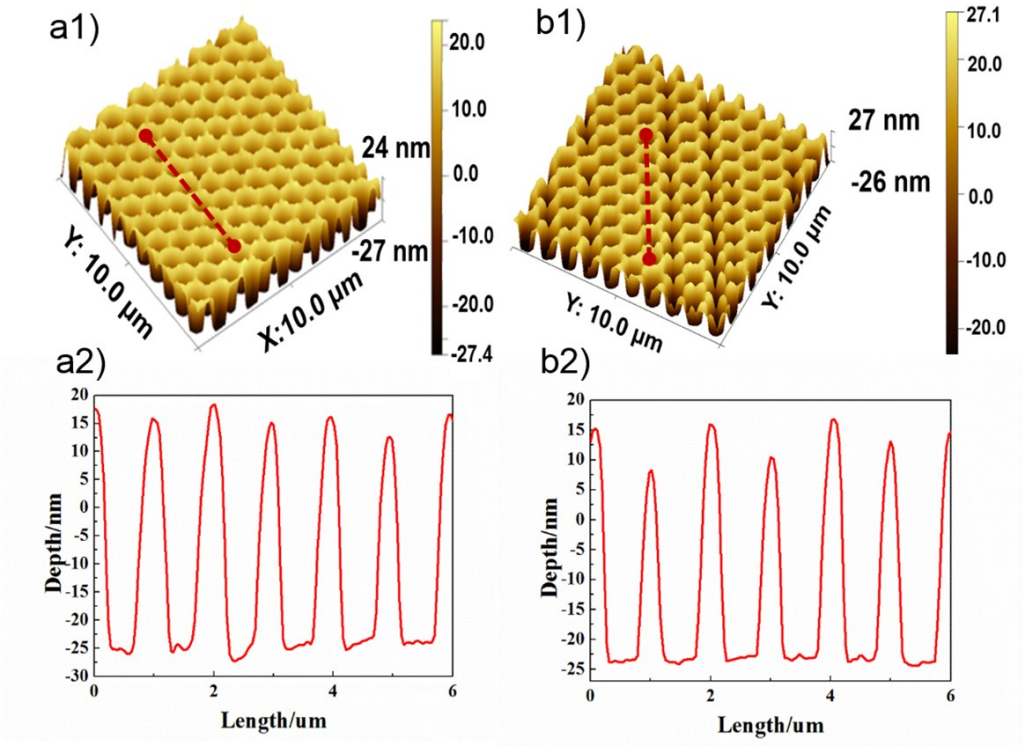

Fig. S3. (a1, b1) Atomic Force Microscope (AFM) images and corresponding (a2, b2) depth profiles of patterned (a1, a2) ZnO and (b1, b2) ZnO-Au film by using the guideline in Figs a1 and b1.

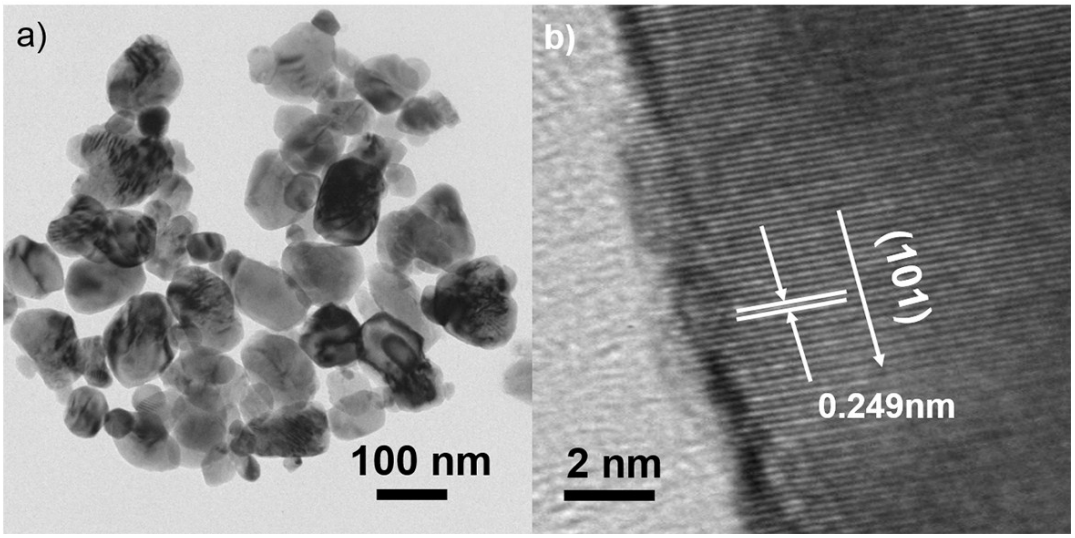

Fig. S4. (a) Transmission electron microscopy (TEM) and (b) high-resolution transmission electron microscopy (HRTEM) images of ZnO nanoparticles.

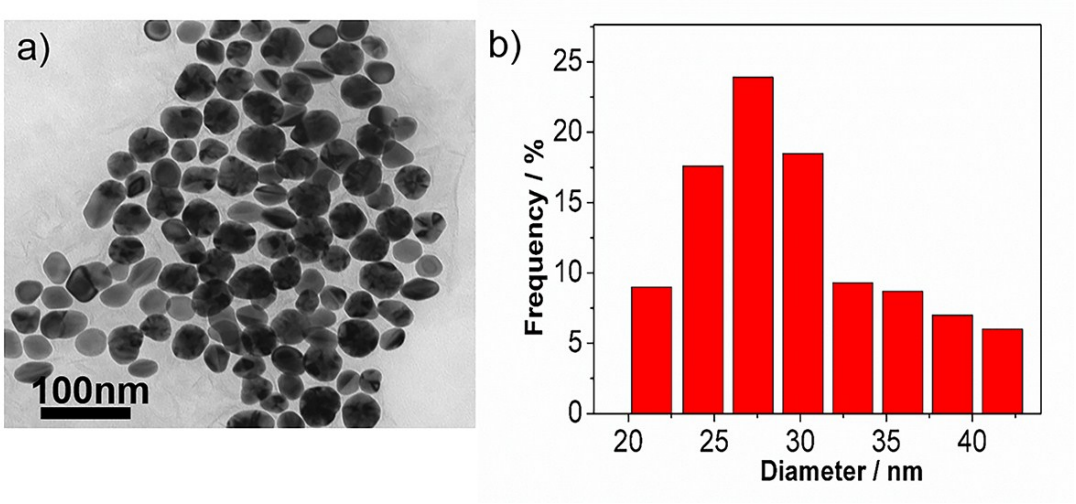

Fig. S5. (a) TEM image of Au nanoparticles and (b) the histogram of Au nanoparticles distribution

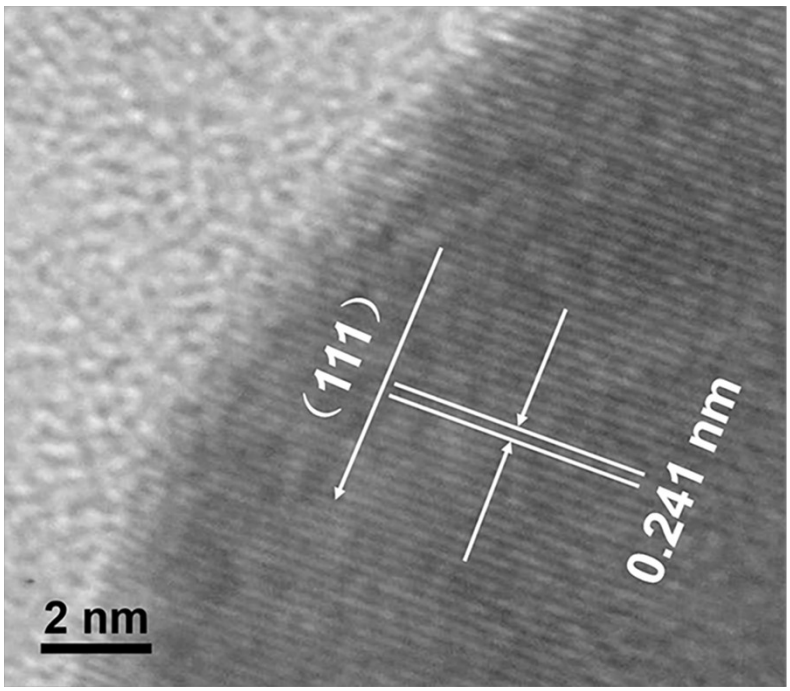

Fig. S6. A HRTEM image of Au nanoparticle.

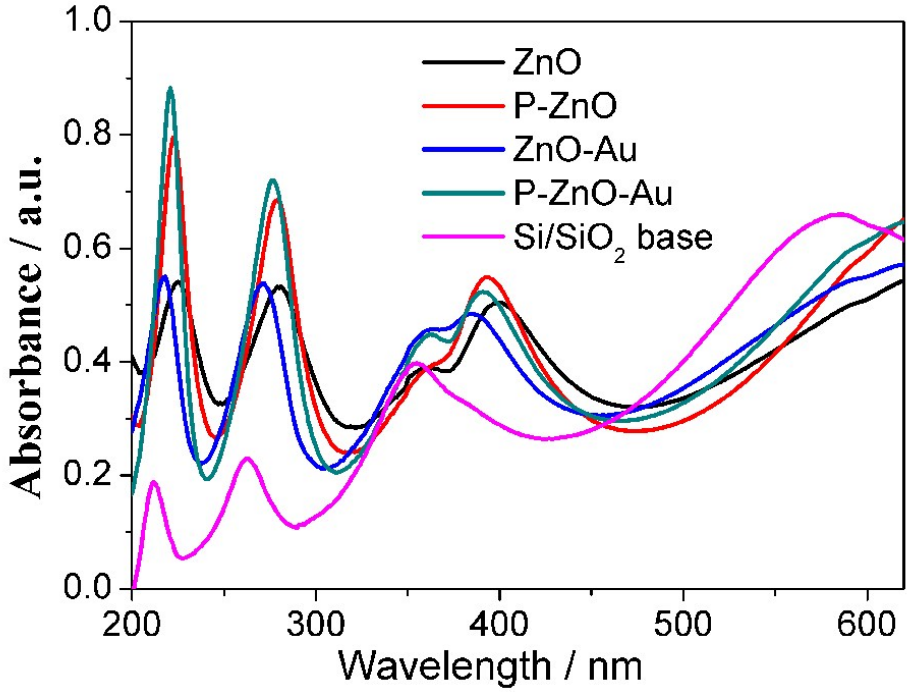

Fig. S7. The absorption spectra of ZnO based photodetectors on Si/SiO_2 substrates as well as the bare Si/SiO_2 substrate.

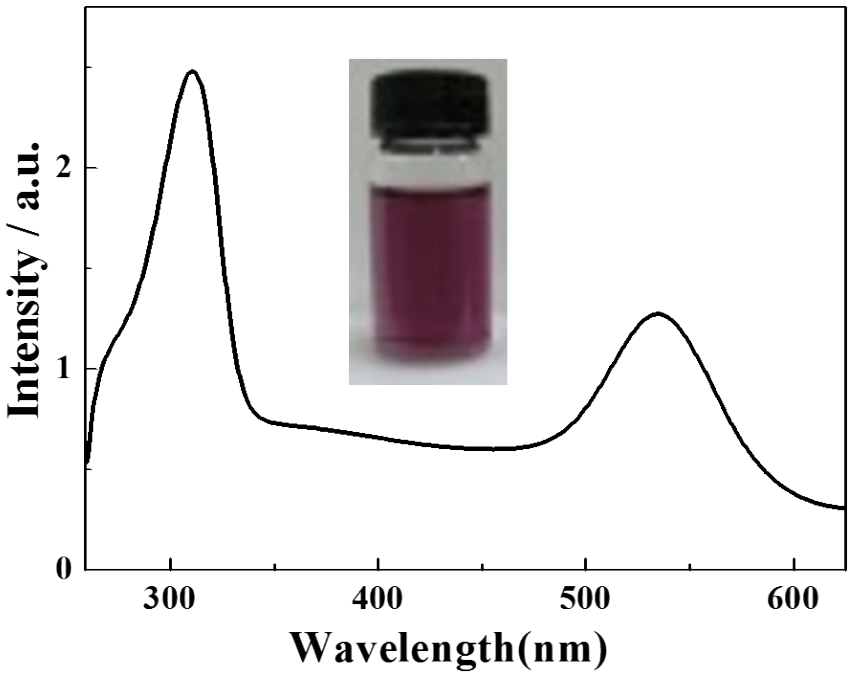

Fig. S8. The absorption spectrum of ZnO-Au sol.