Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Band alignment and depletion zone at ZnO/CdS and ZnO/CdSe hetero-structures for temperature independent ammonia vapor sensing

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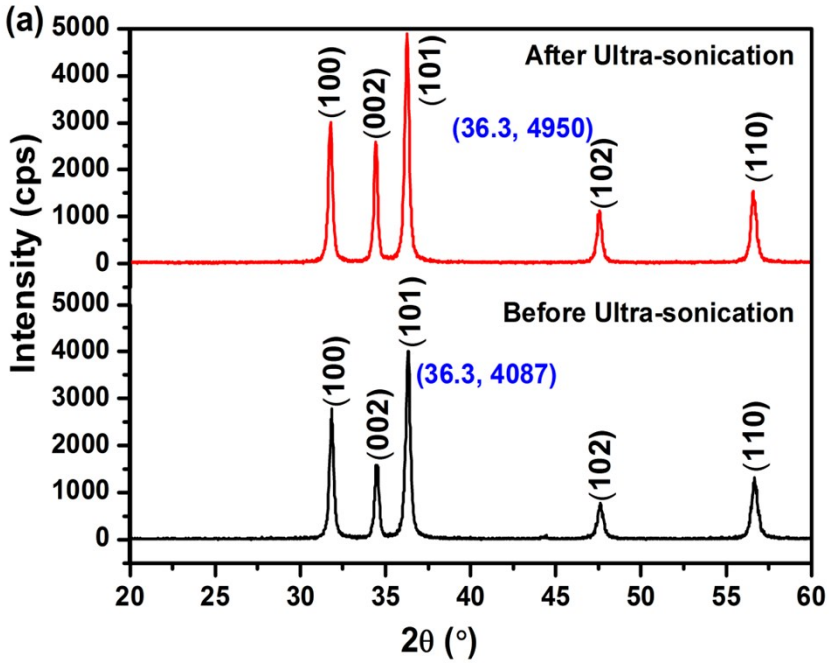
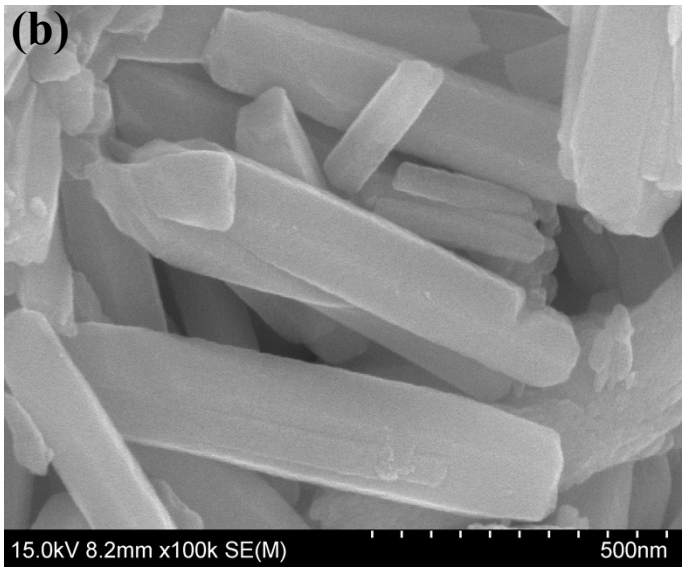
(ESI†) S1 (a) The XRD pattern and (b) SEM morphology of as-synthesized *Z* nanorods after ultra-sonicated for 2 h.





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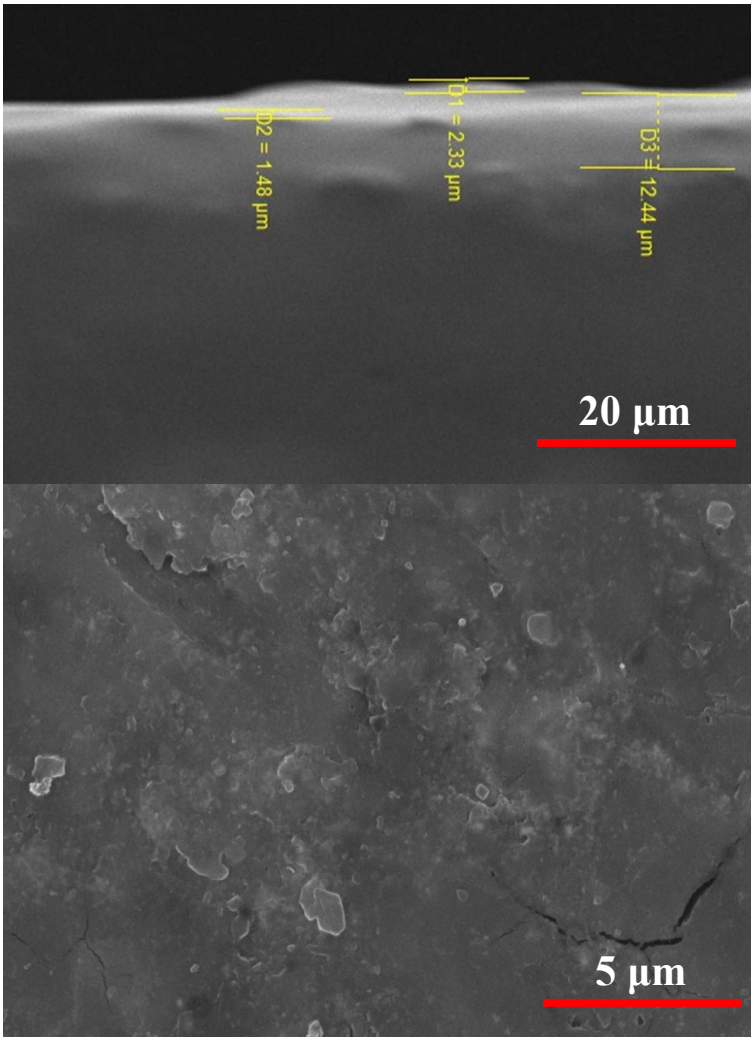
(ESI†) S2 The thickness variation and surface coating morphology of dip-coated ZnO nanostructures on clad removed optical fiber.



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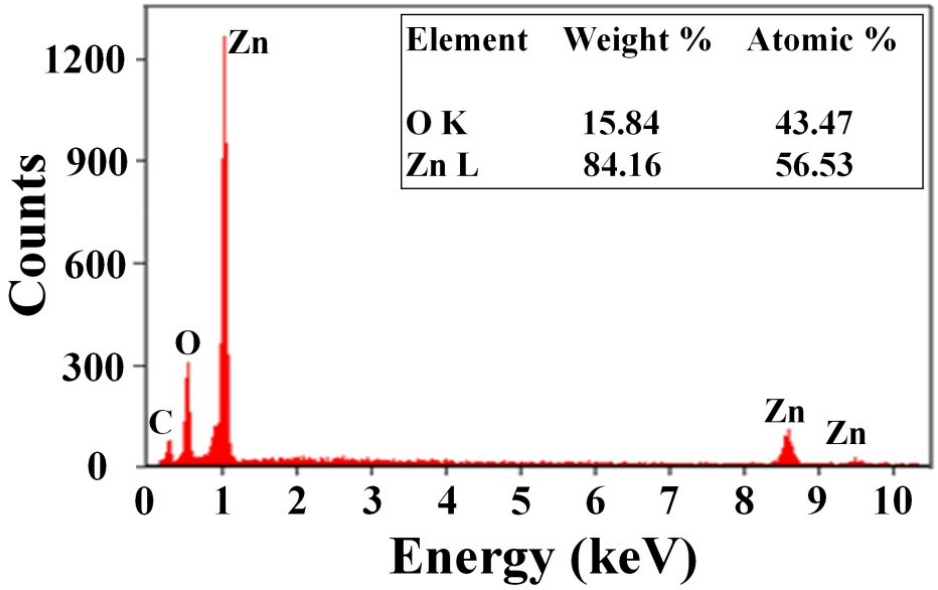
(ESI†) S3 The EDS spectra and the elemental composition of Z nanostructures



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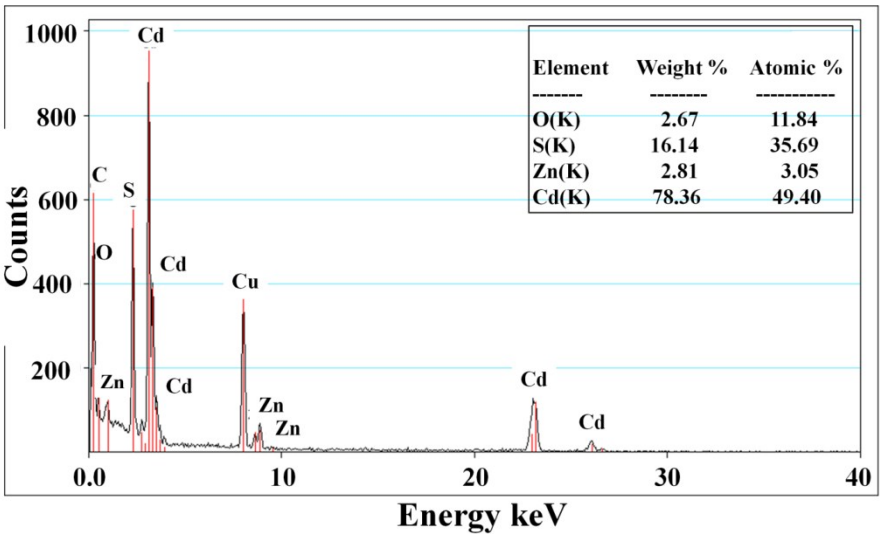
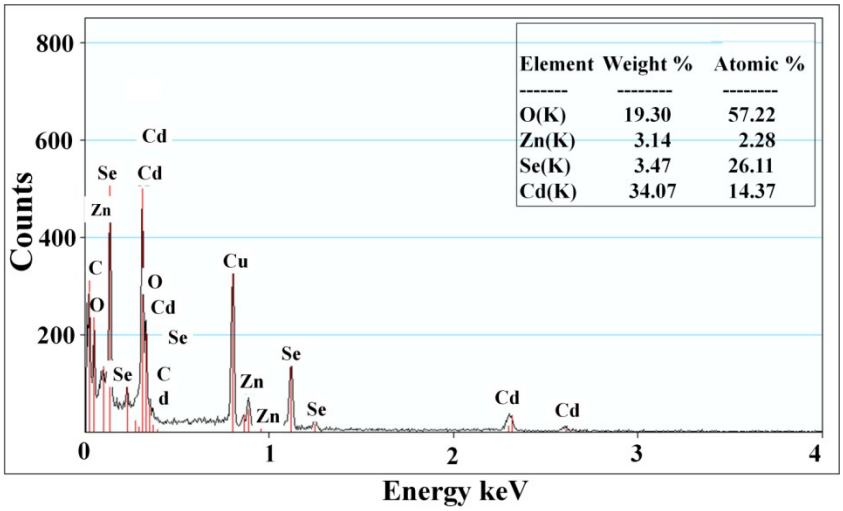
(ESI†) S4 The EDS spectra and the elemental composition of (a) ZC1 and (b) ZC2 nanostructures





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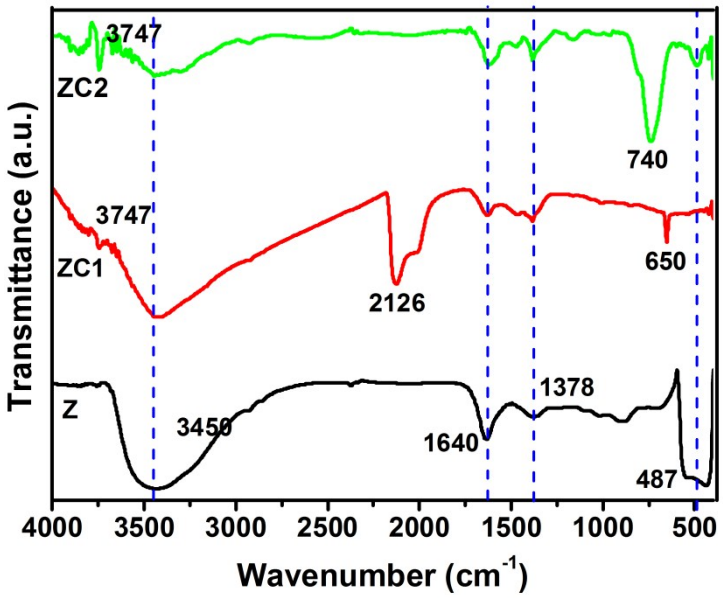
(ESI†) S5 The FTIR spectra of pure ZnO and the surface-decorated ZnO



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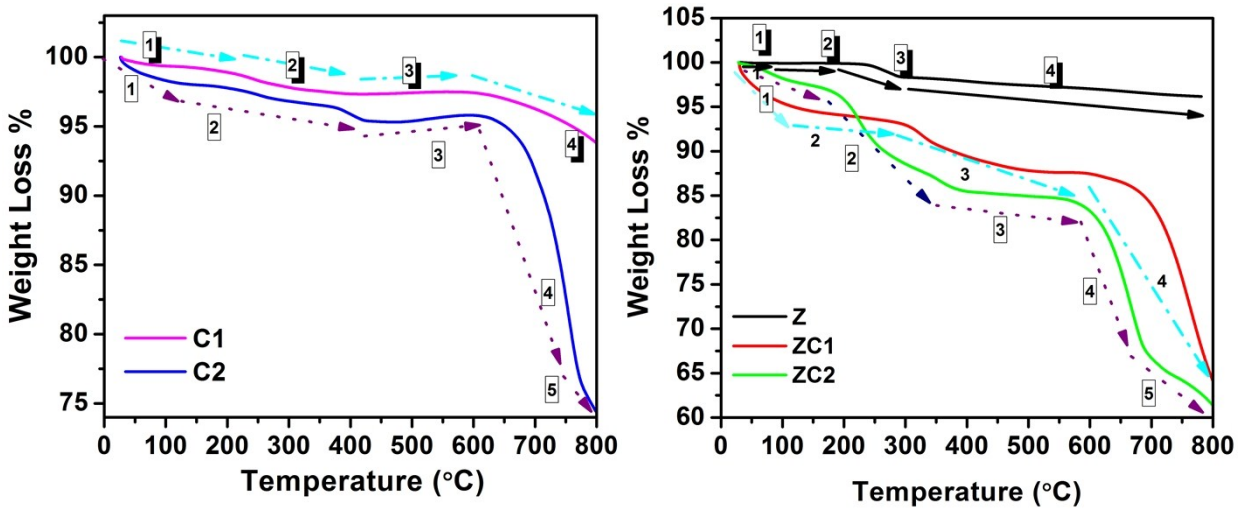
(ESI†) S6 The TGA plots of (a) *C*1 and *C*2 nanoparticles and (b) *Z*, *ZC*1 and *ZC*2 nanostructures



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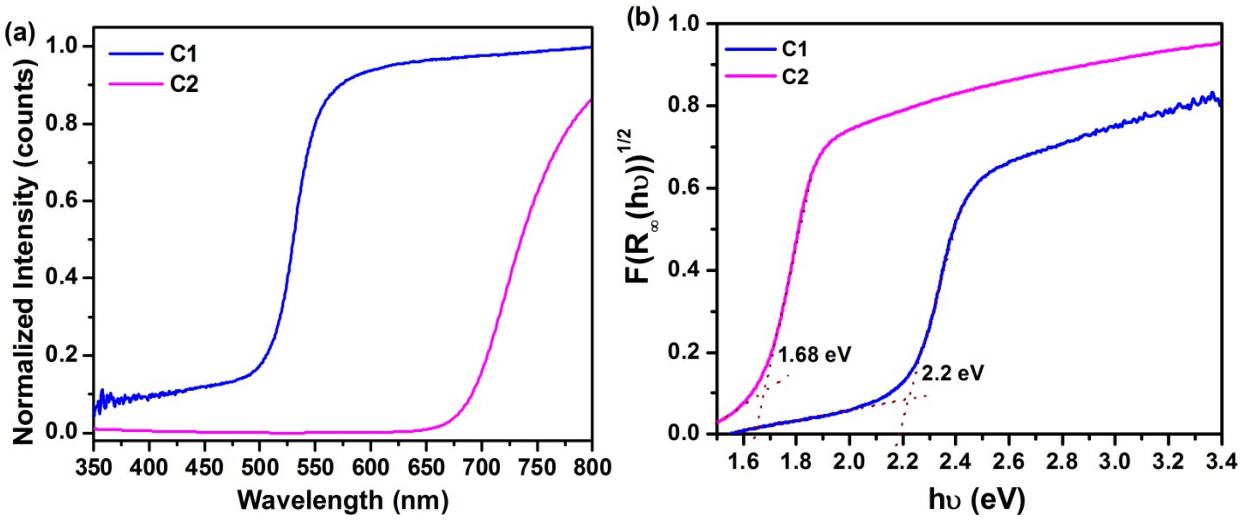
(ESI†) S7 (a) Reflectance spectra and (b) K-M function of as-prepared *C*1 and *C*2 nanoparticles



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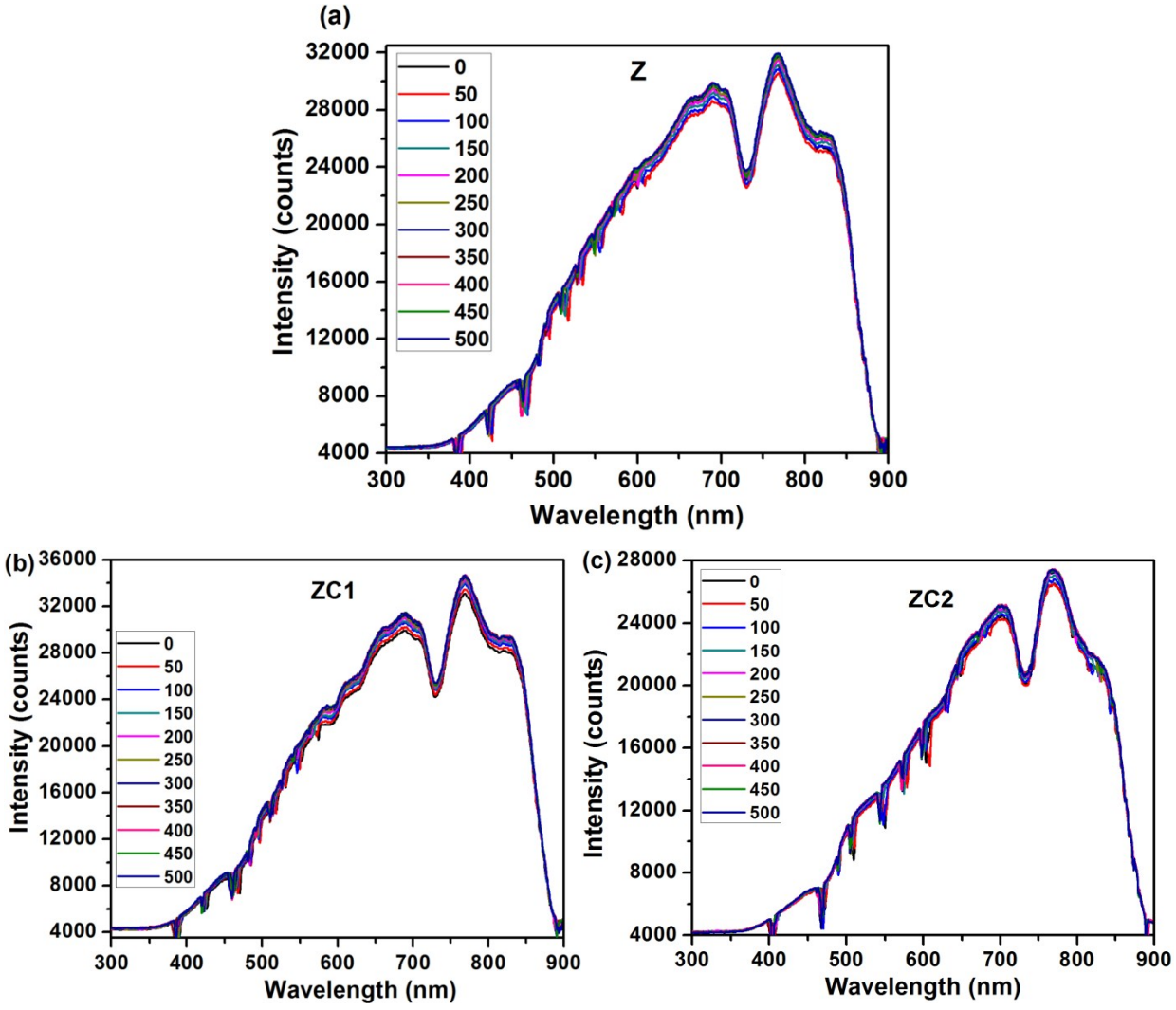
(ESI†) S8 Ammonia vapor adsorptions plot for *Z*, *ZC*1, and *ZC*2 coated fiber optic sensors



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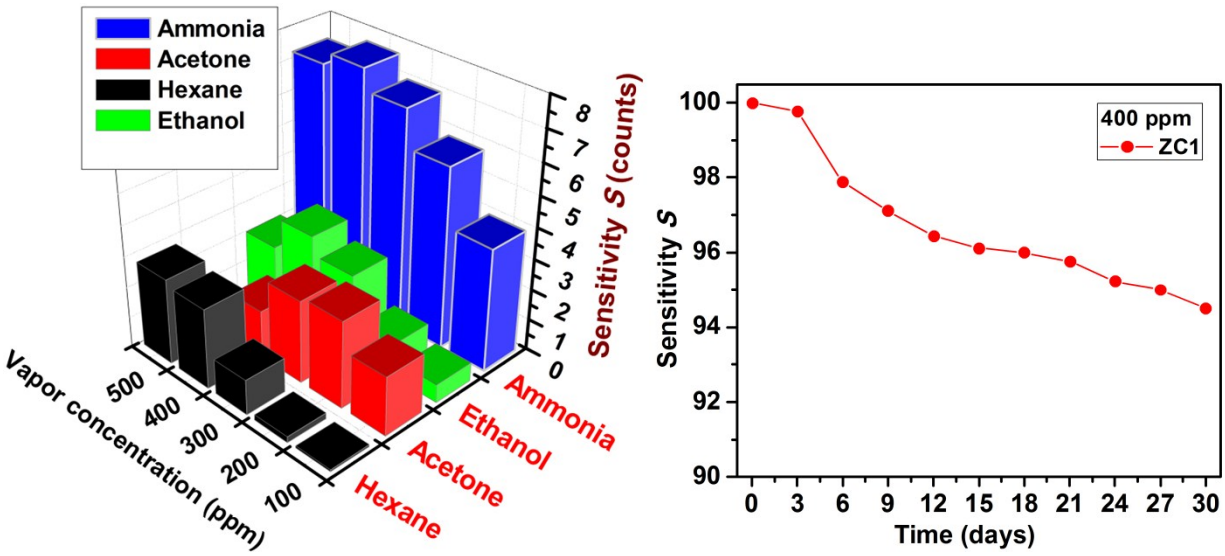
(ESI†) S9 Vapor gas selectivity and the stability of the surface-passivated *ZC*1 nanostructures



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(ESI†) S10 Core-shell like formation and the band alignment of ZnO/CdSe hetero-structure