Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

InPZnS alloy quantum dot with tris(hexylthio)phosphine as a dual anionic precursor

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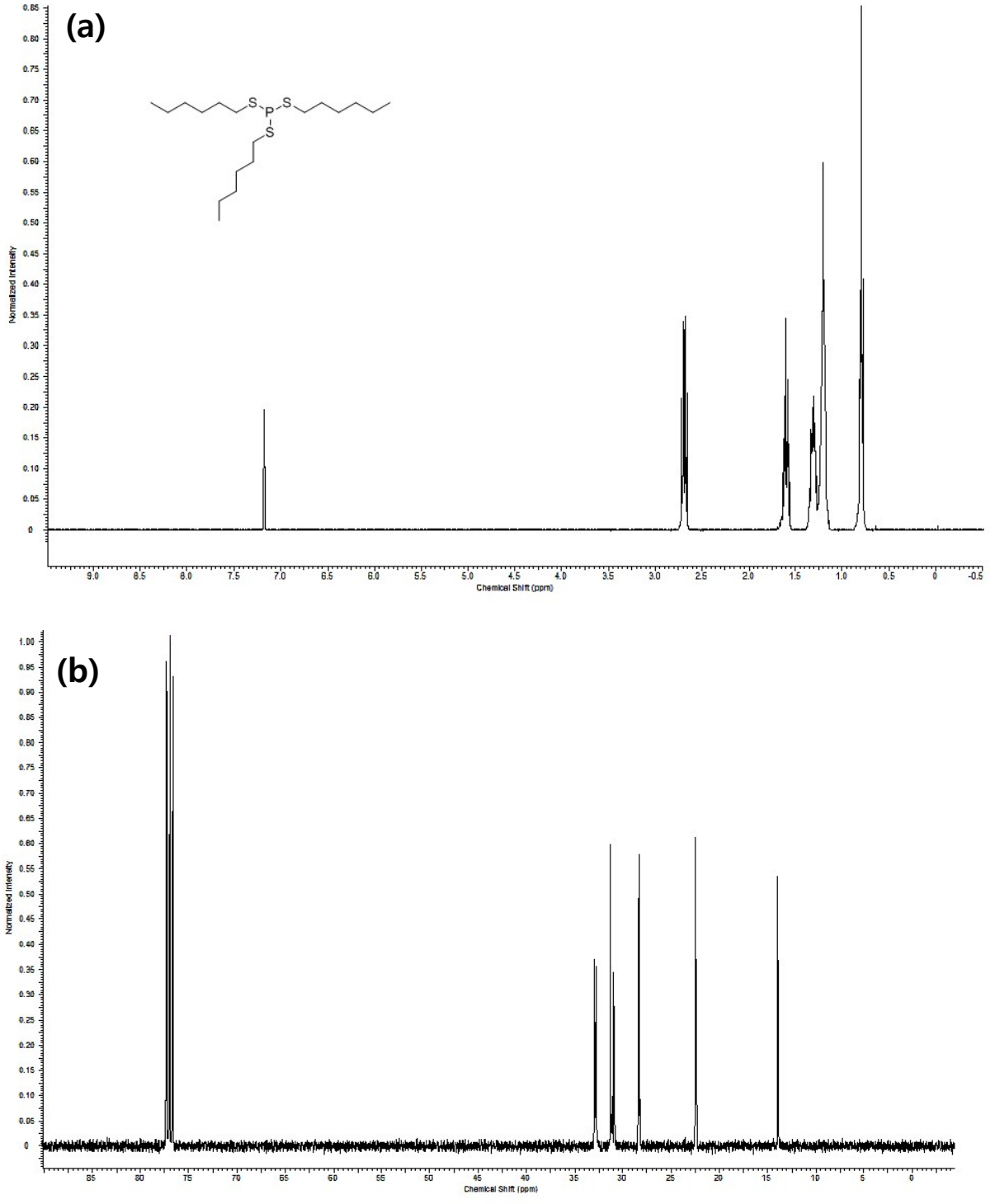

Figure S1. (a) ^{1}H NMR of tris(hexylthio)phosphine

(b) ^{13}C NMR of tris(hexylthio)phosphine

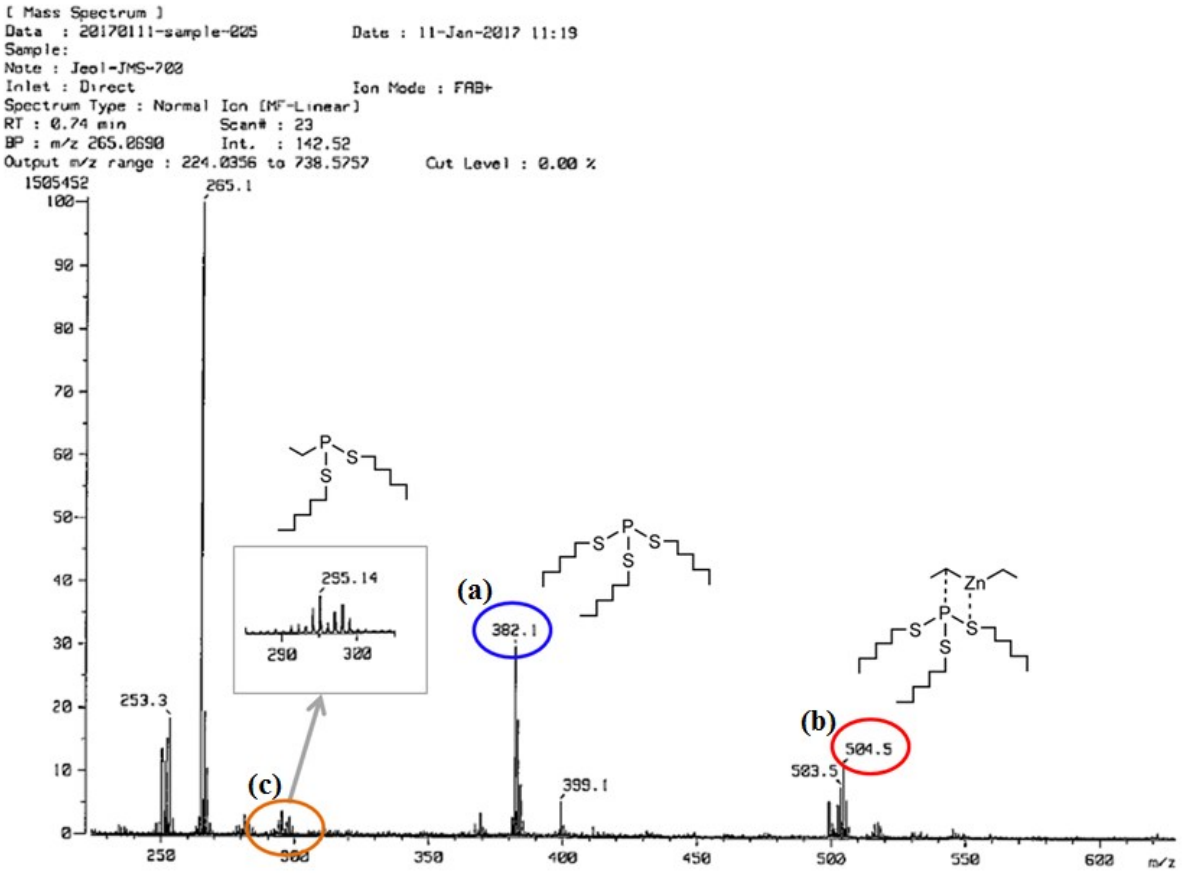

Figure S2. The FAB-Mass
(a) tris(hexylthio)phosphine.
(b) tris(hexylthio)phosphine(THTP) and diethylzinc complex.
(c) ethyldihexylthiophosphine.

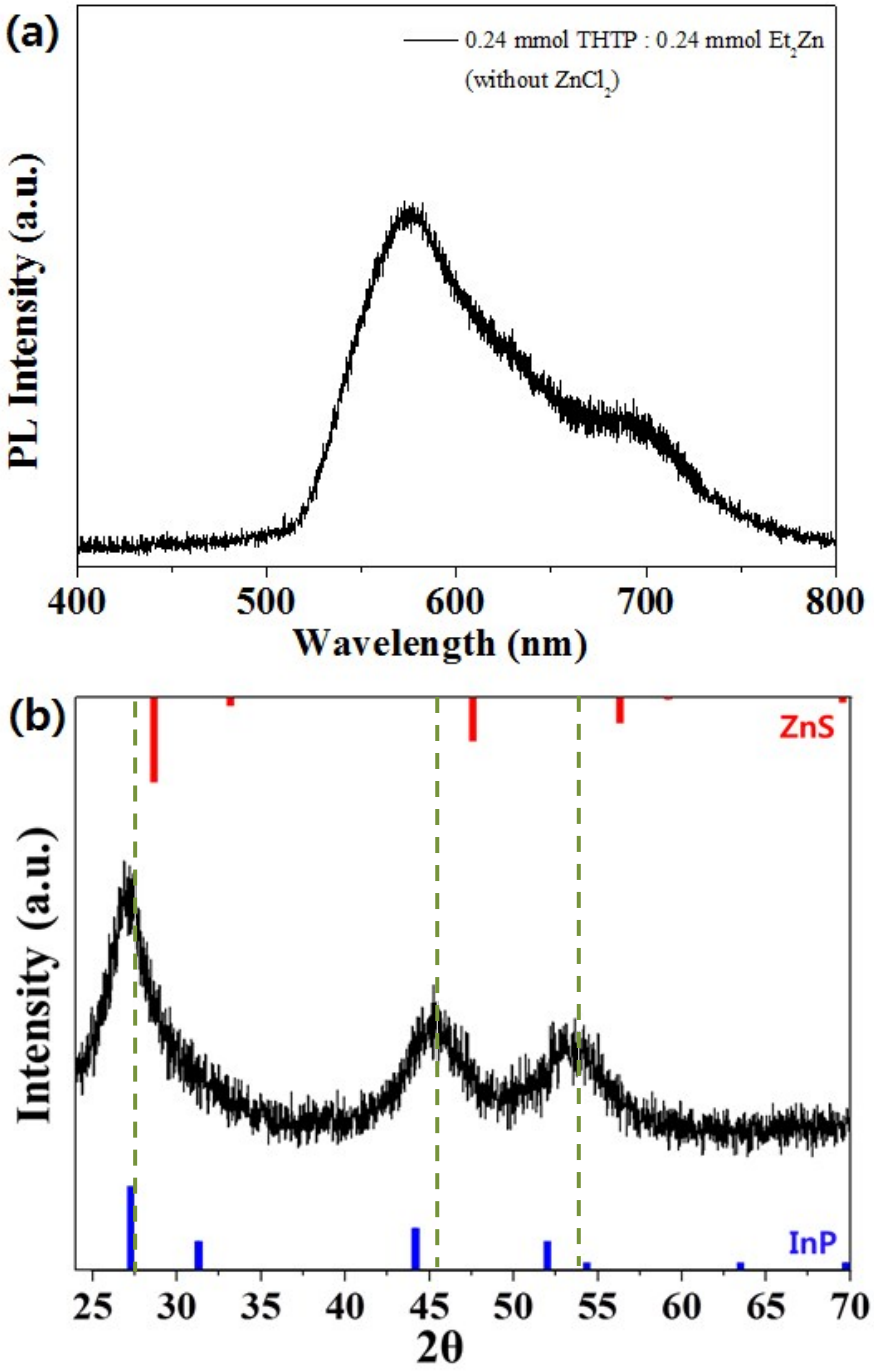

Figure S3. (a) photoluminescence spectra of InPZnS alloy core (λ=570 nm). (b) XRD diagram of InPZnS alloy core

(THTP, Et_2Zn used 0.24 mmol without $ZnCl_2$)

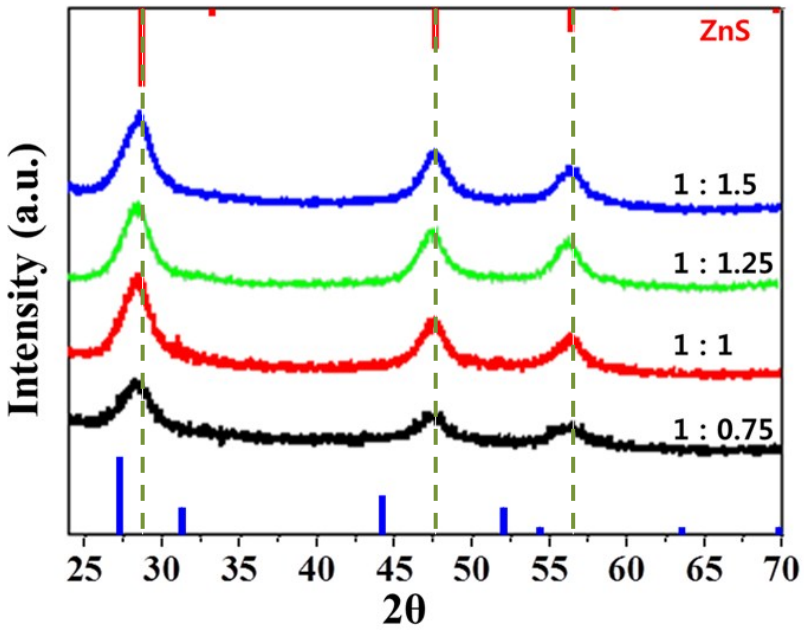

Figure S4. XRD diagram of THTP/Et2Zn ratio.
As the diethylzinc amount increases, the XRD peak shifts toward ZnS.

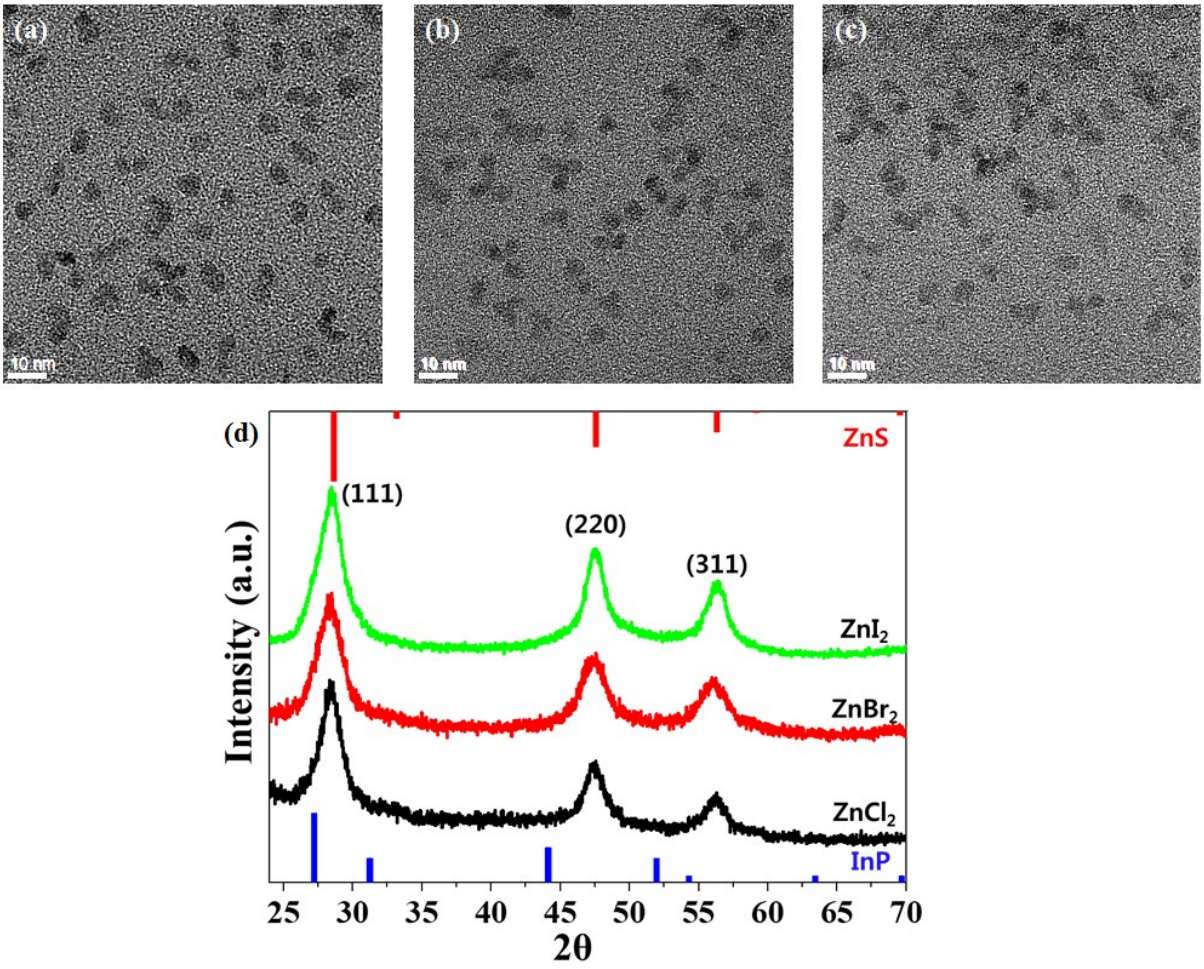

Figure S5. TEM images of InPZnS alloy core using different zinc precursor (a) ZnCl2 (b) ZnBr2 (C) ZnI2. (d) XRD diagram using different zinc precursor.

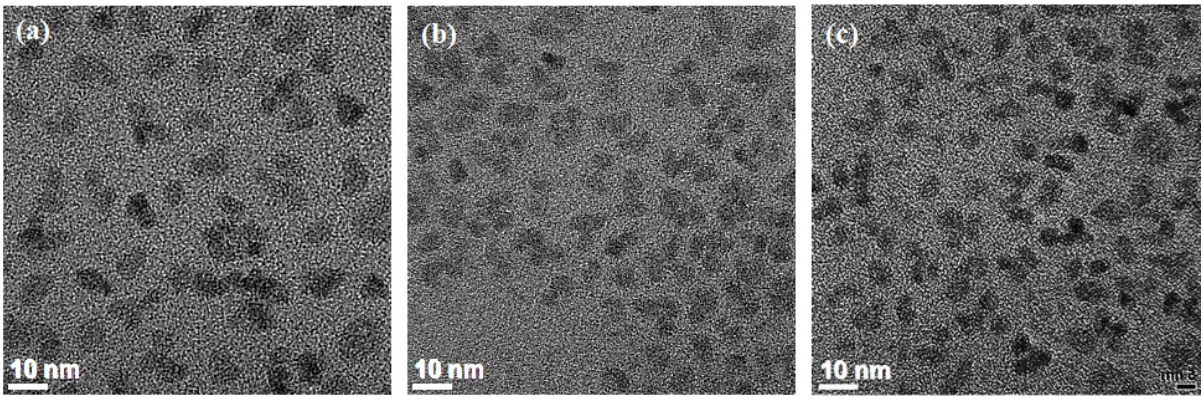

Figure S6. TEM images of InPZnS/ZnS usig different zinc precursor (a) $ZnCl_2$ (b) $ZnBr_2$ (C) ZnI_2.