

Electronic Supplementary Information

Luminophores of tunable colors from ternary Ag-In-S and quaternary Ag-In-Zn-S nanocrystals covering visible to near-infrared spectral ranges

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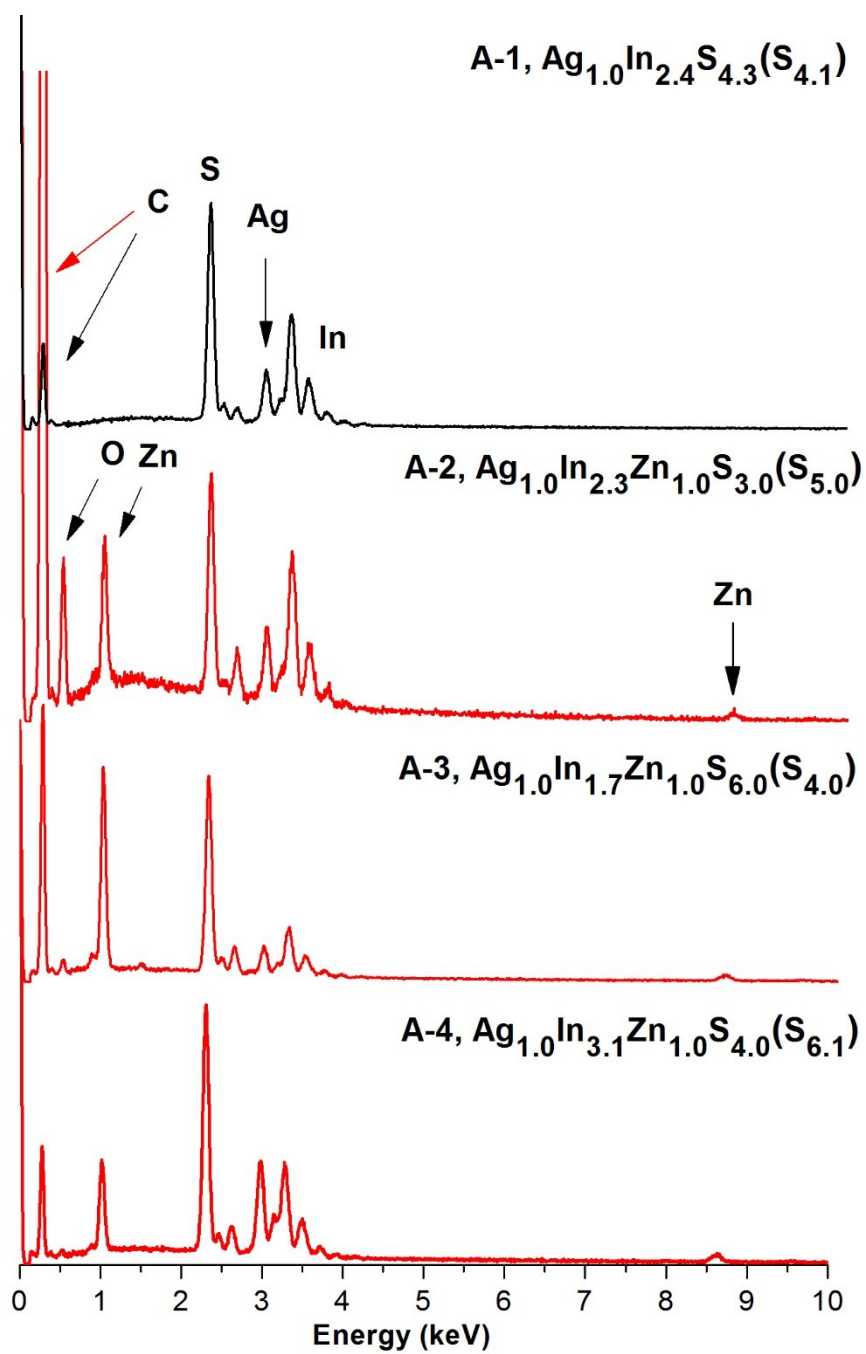


Fig. S1 Energy-dispersive spectra of Ag-In-S and Ag-In-Zn-S nanocrystals of batches A-(1-4).

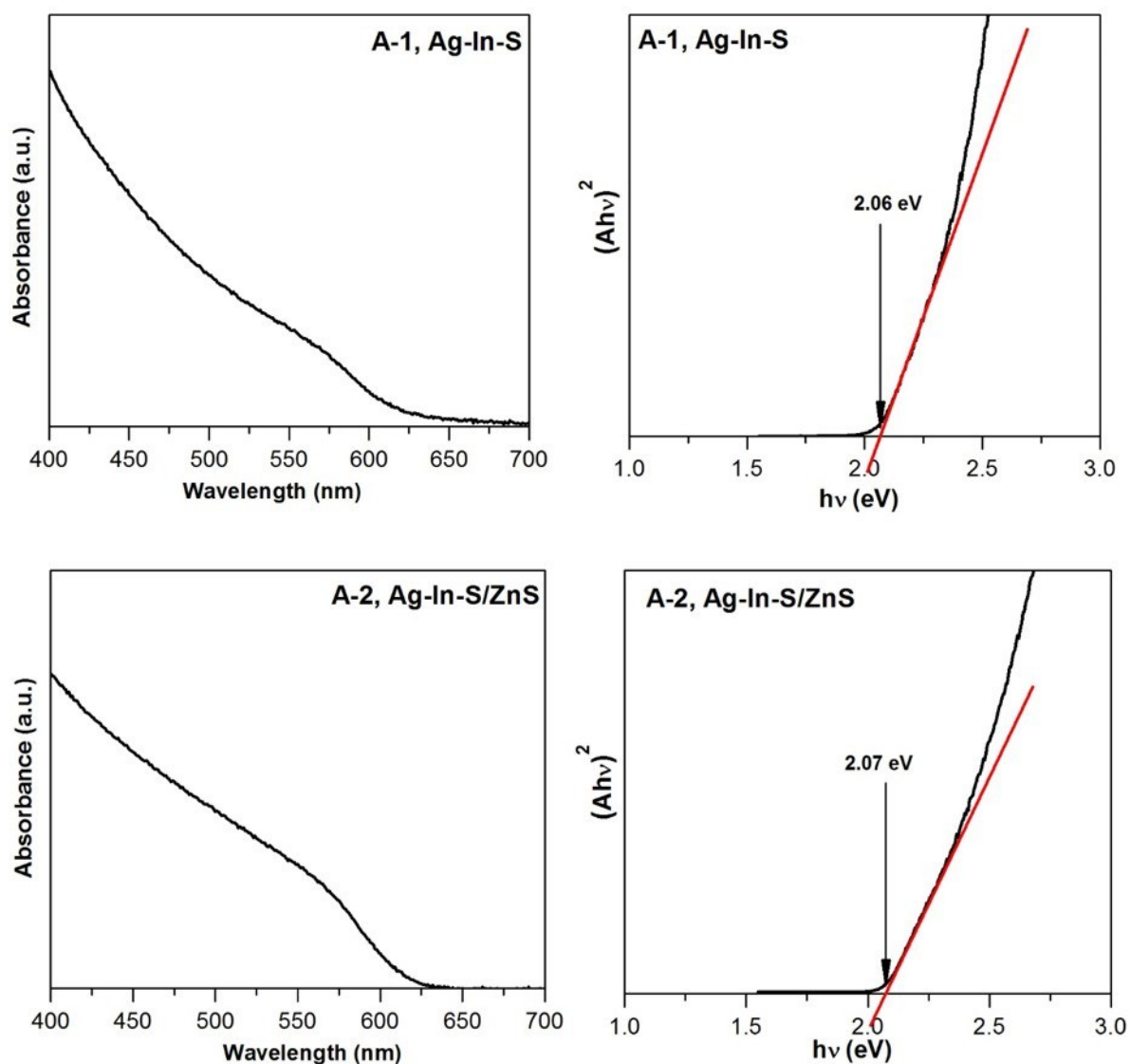


Fig. S2 Room temperature UV-vis-NIR spectra of hexane dispersion of Ag-In-S (**A-1**) and Ag-In-S/ZnS (**A-2**) nanocrystals and the corresponding $(Ah\nu)^2$ vs $h\nu$ curves (where A = absorbance, h = Planck's constant and ν = frequency).

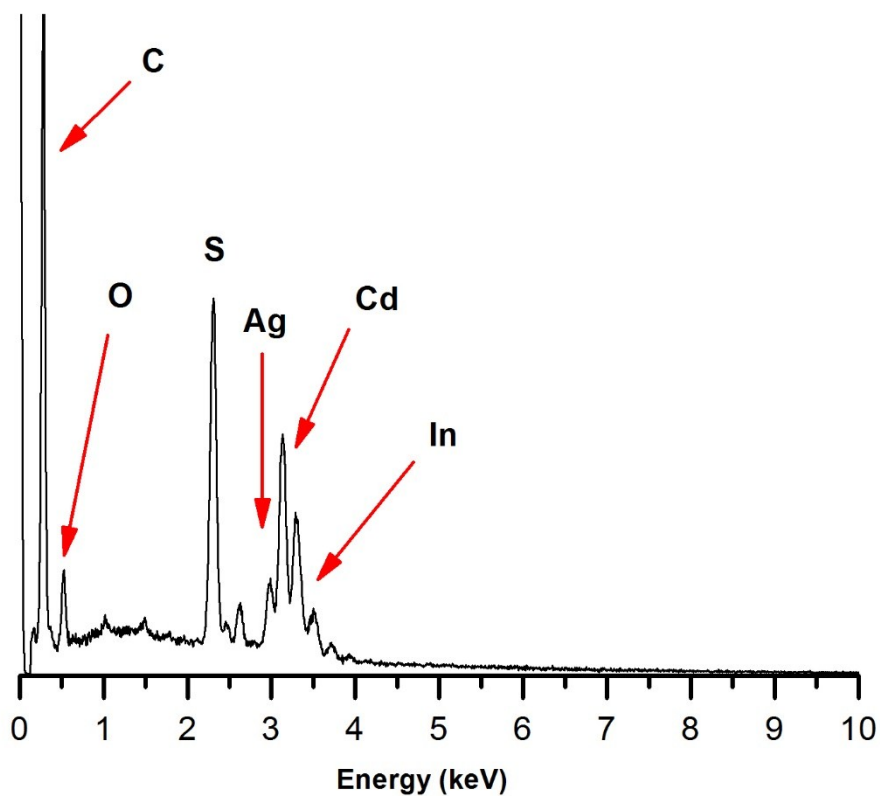


Fig. S3 Energy-dispersive spectra of Ag-In-S/CdS (**B-1**) nanocrystals.

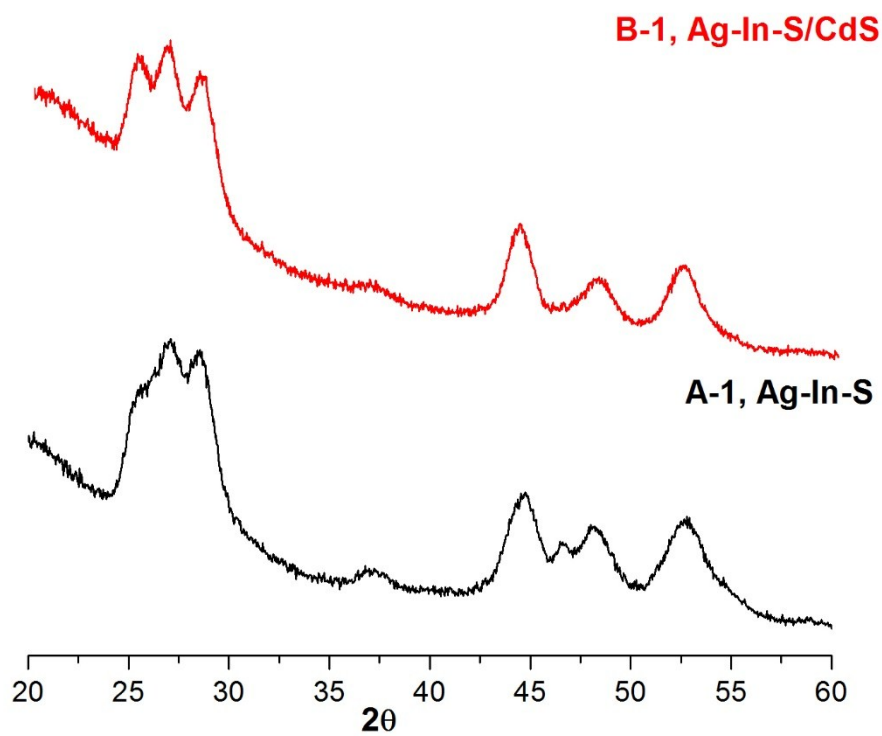


Fig. S4 X-ray powder diffractograms of Ag-In-S (**A-1**) and Ag-In-S/CdS (**B-1**) nanocrystals.

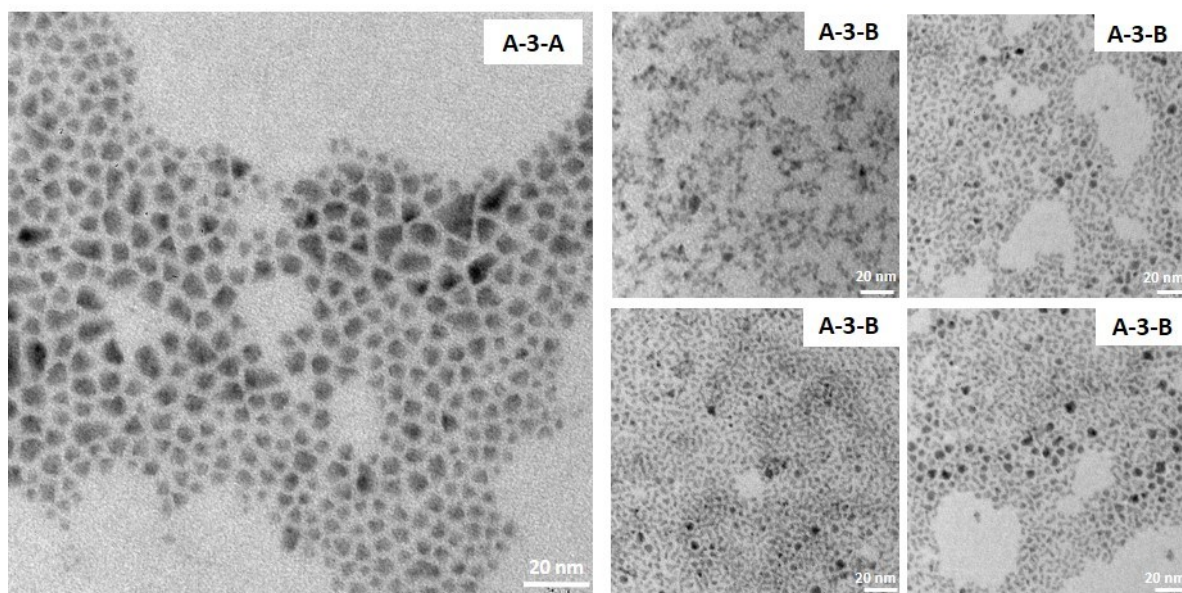


Fig. S5 TEM images of alloyed Ag-In-Zn-S (**A-3-A** and **A-3-B**) quaternary nanocrystals.

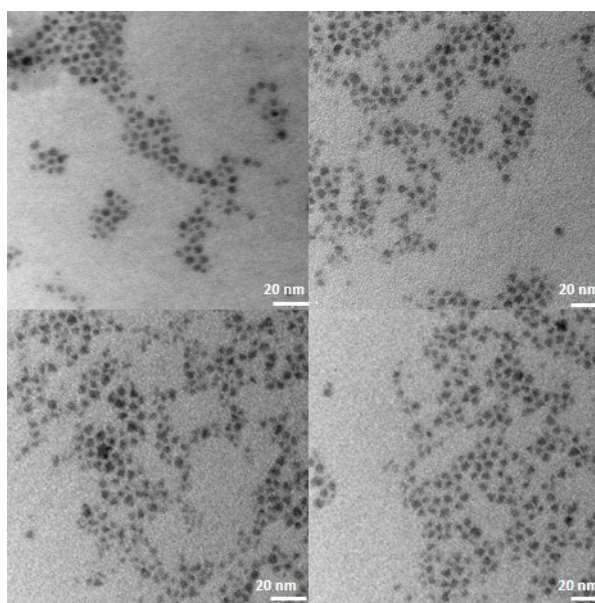


Fig. S6 TEM images of alloyed Ag-In-Zn-S (**A-3-C**) quaternary nanocrystals.

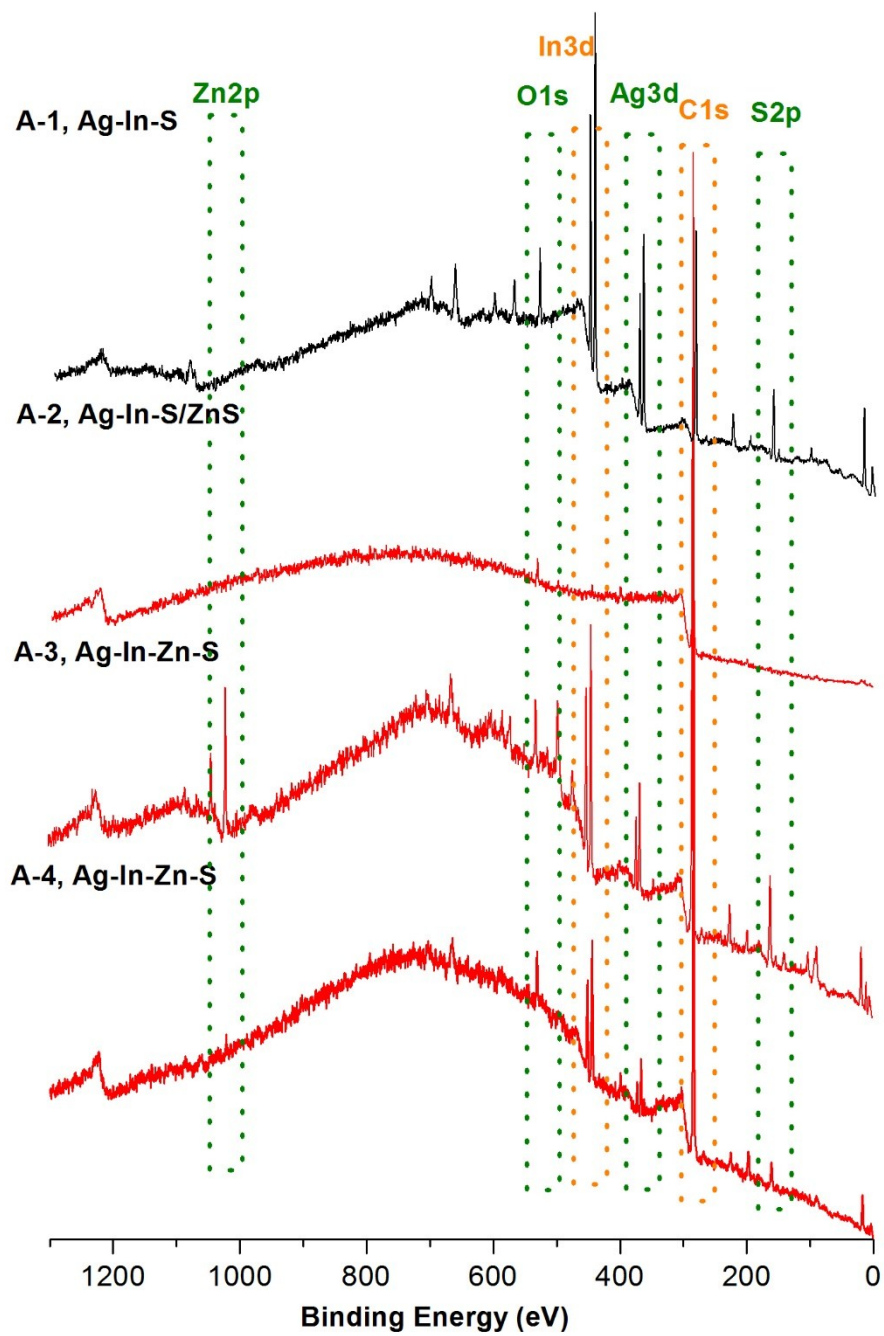


Fig. S7 XPS survey spectra of Ag-In-S (A-1), Ag-In-S/ZnS (A-2) and Ag-In-Zn-S (A-3 and A-4) nanocrystals.

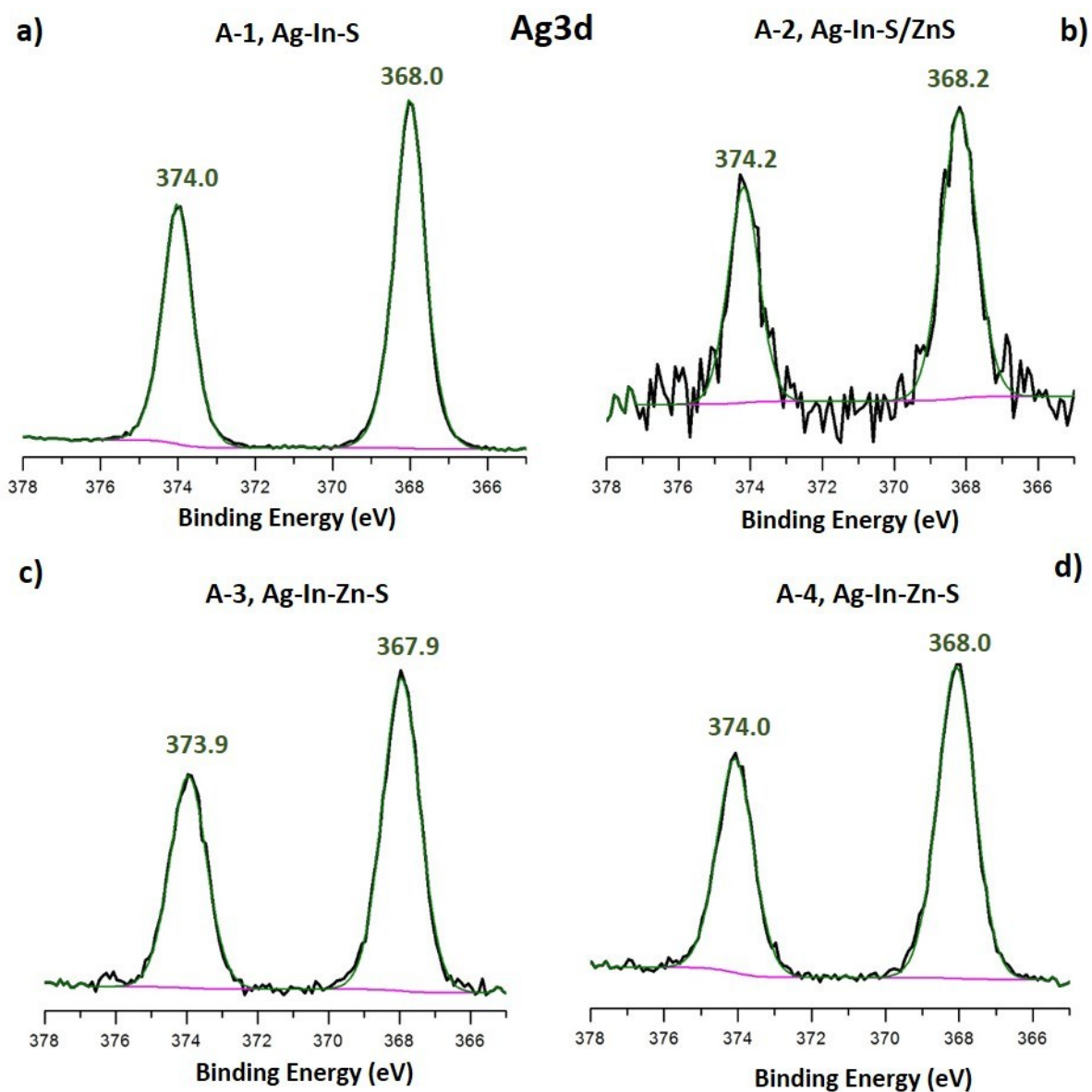


Fig. S8 High-resolution XPS spectra in the Ag3d range of Ag-In-S (A-1) (a), Ag-In-S/ZnS (A-2) (b) and Ag-In-Zn-S (A-3 and A-4) (c,d) nanocrystals.

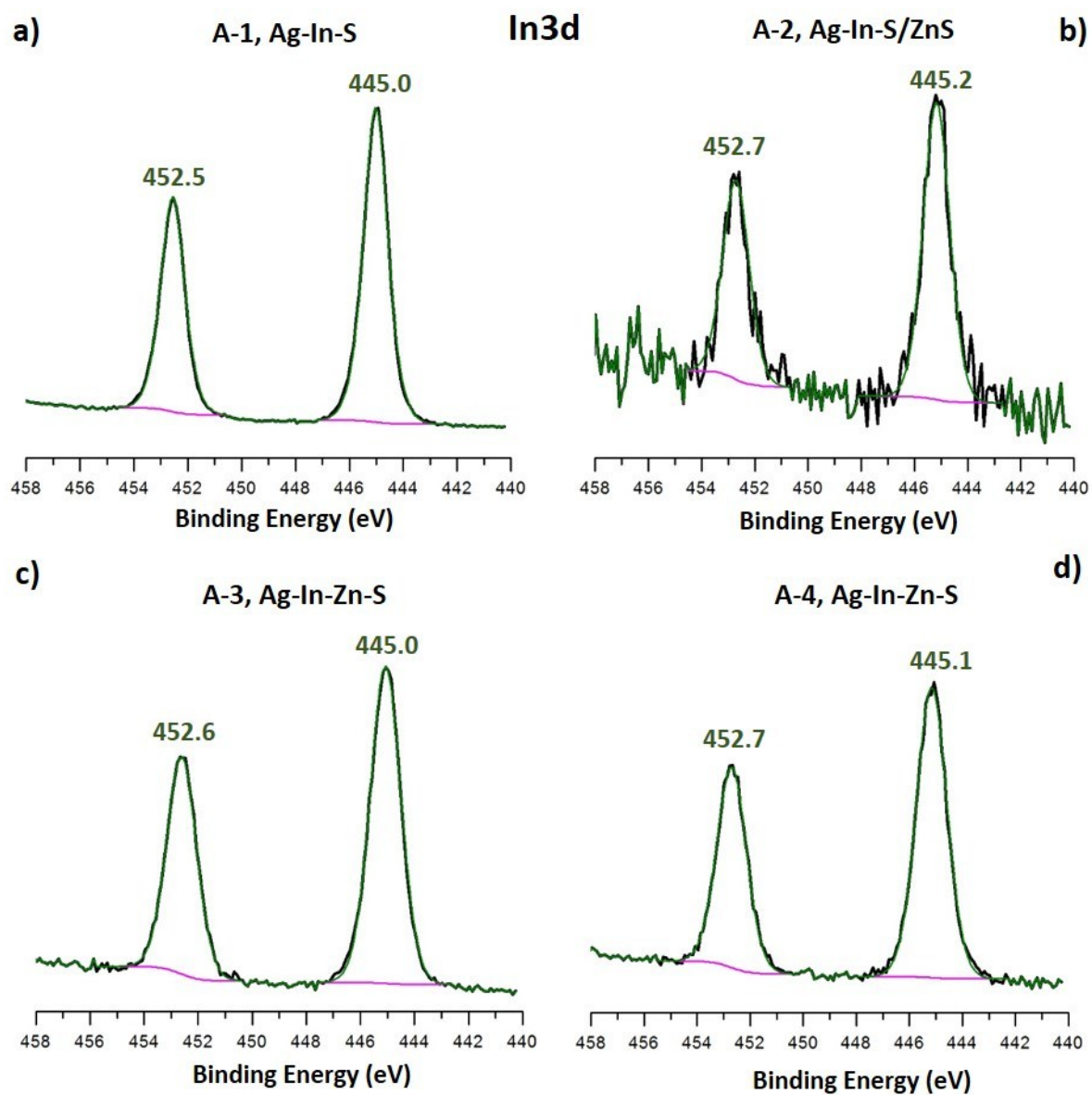


Fig. S9 High-resolution XPS spectra in the In3d range of Ag-In-S (A-1) (a), Ag-In-S/ZnS (A-2) (b) and Ag-In-Zn-S (A-3 and A-4) (c,d) nanocrystals.

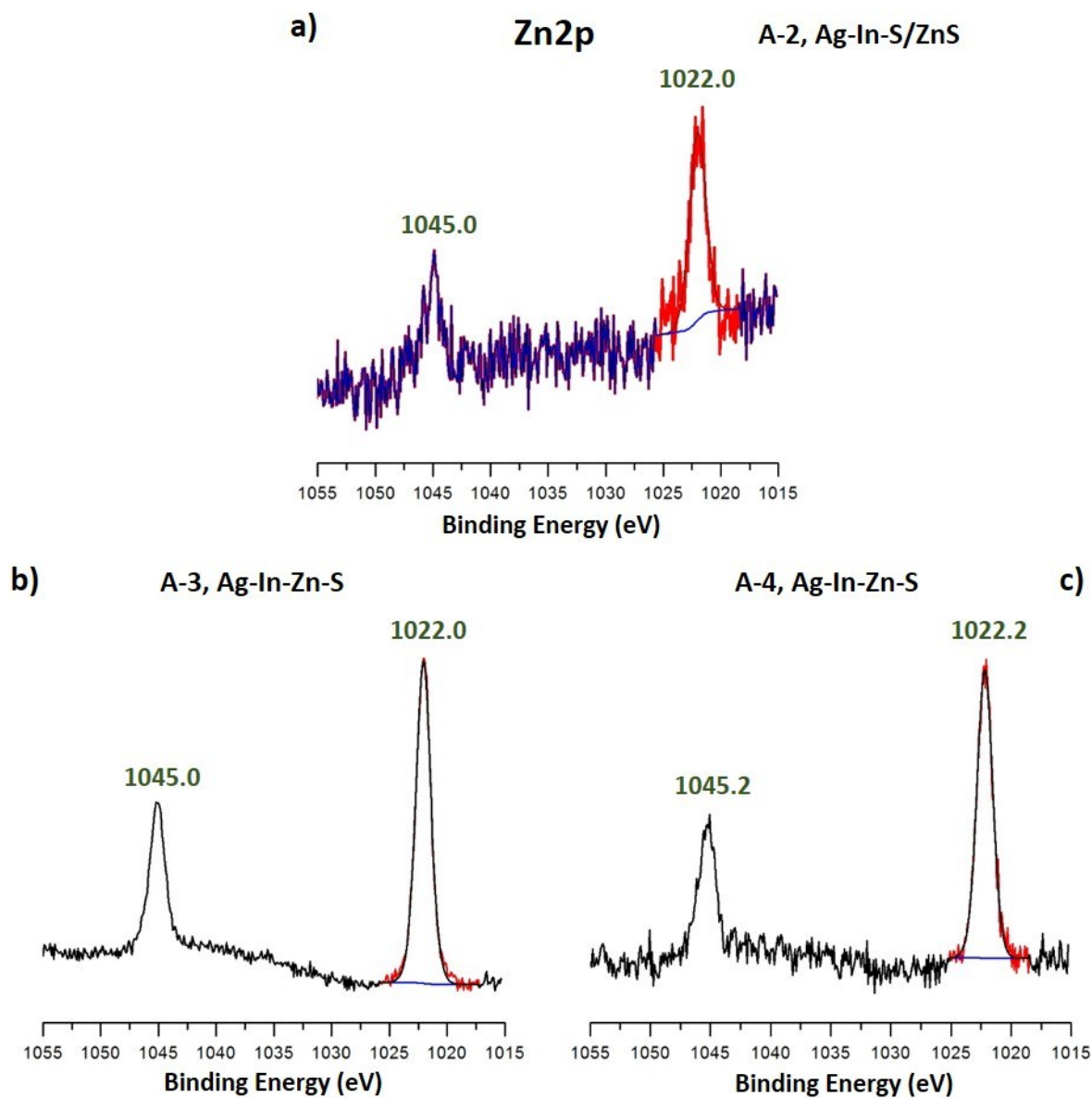


Fig. S10 High-resolution XPS spectra in the Zn2p range of Ag-In-S/ZnS (A-2) (a) and Ag-In-Zn-S (A-3 and A-4) (b,c) nanocrystals.

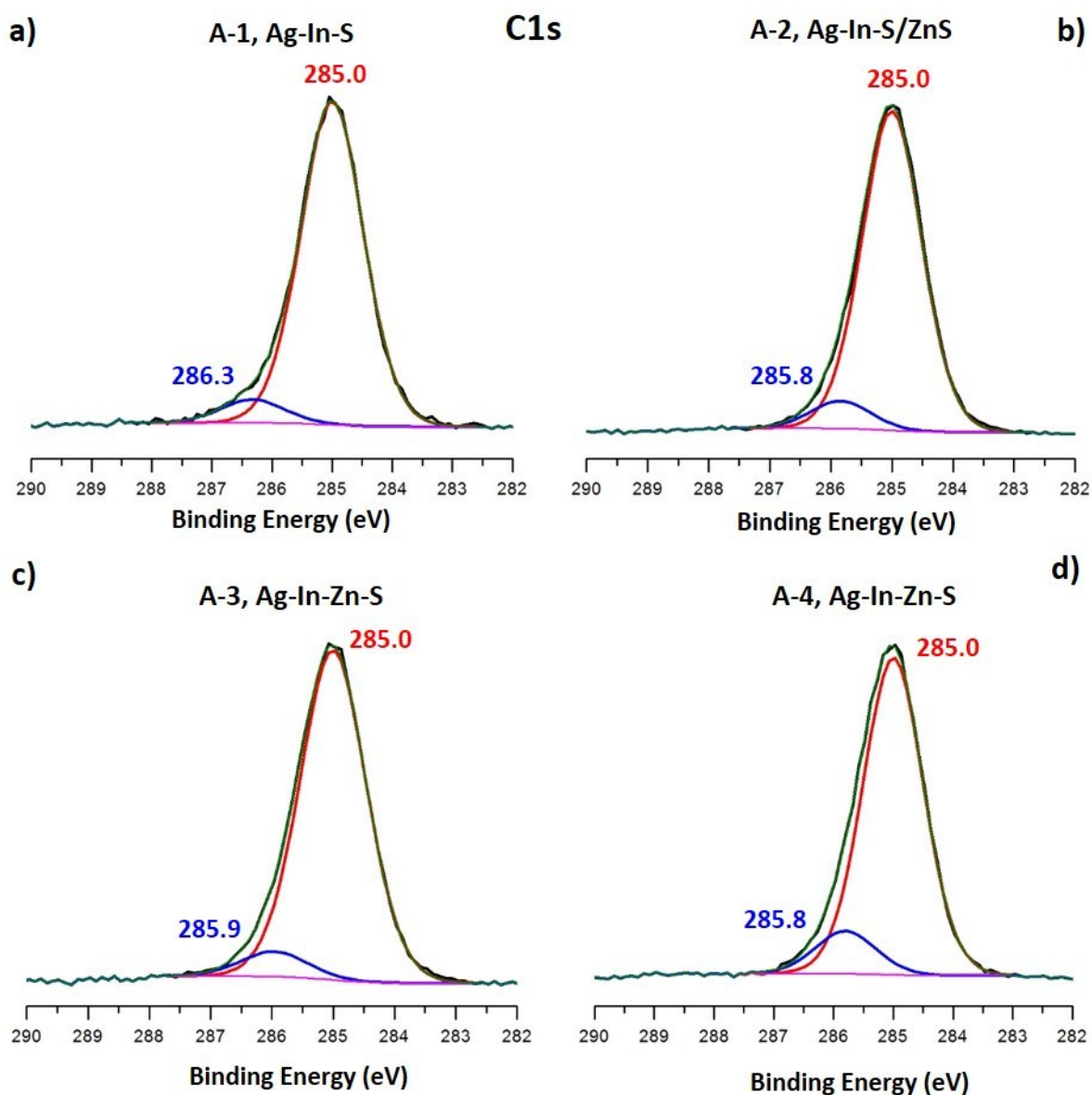


Fig. S11 High-resolution XPS spectra in the C1s range of Ag-In-S (A-1) (a), Ag-In-S/ZnS (A-2) (b) and Ag-In-Zn-S (A-3 and A-4) (c,d) nanocrystals.

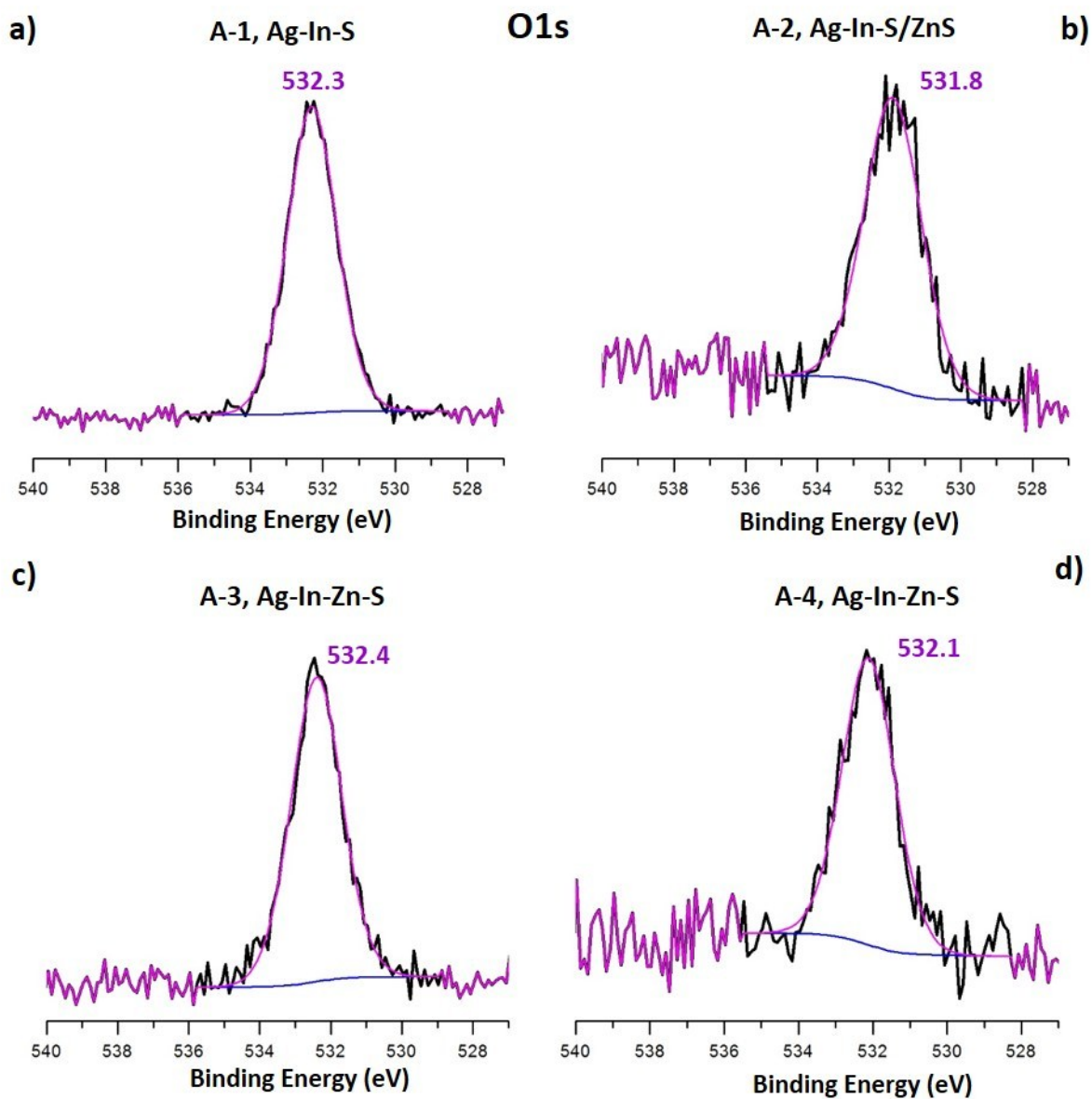


Fig. S12 High-resolution XPS spectra in the O1s range of Ag-In-S (A-1) (a), Ag-In-S/ZnS (A-2) (b) and Ag-In-Zn-S (A-3 and A-4) (c,d) nanocrystals.

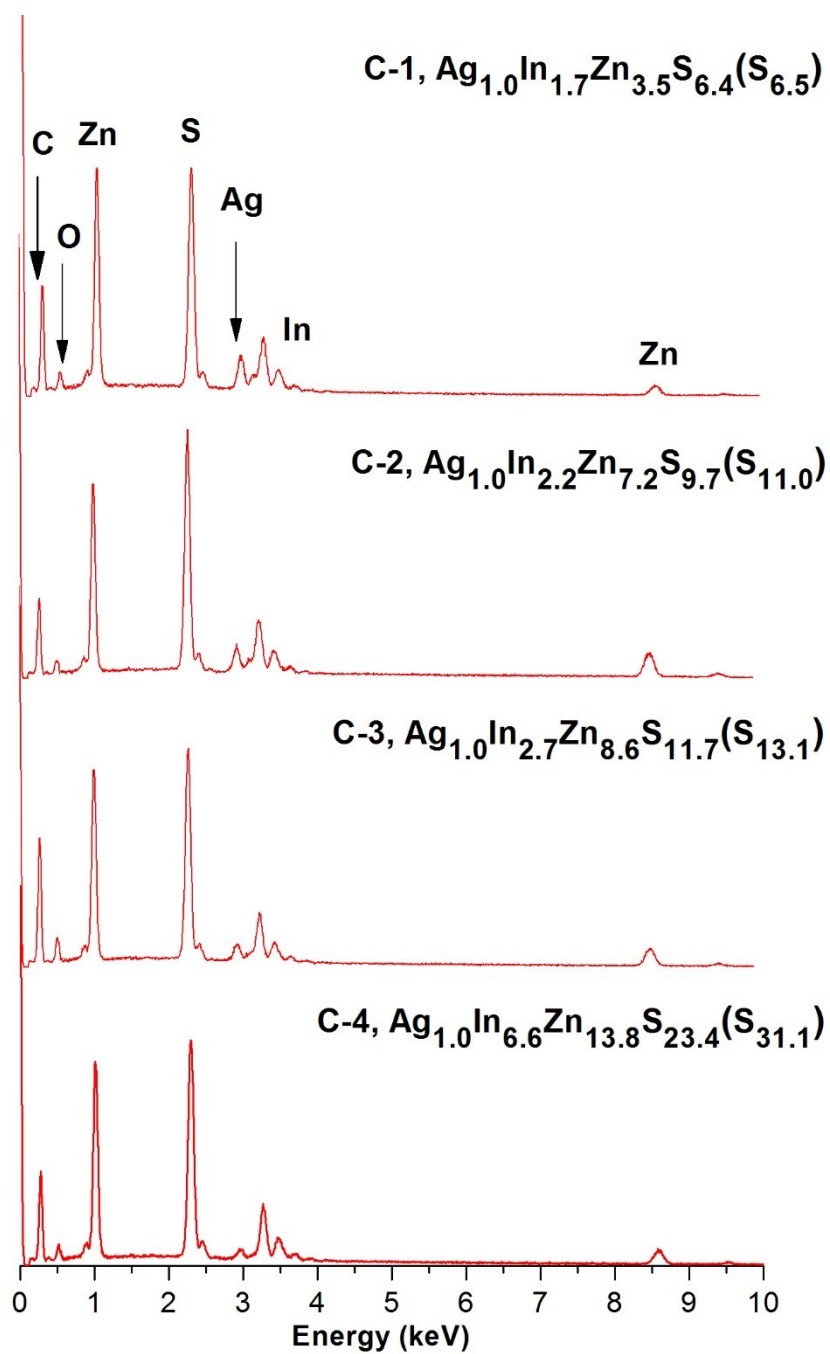


Fig. S13 Energy-dispersive spectra of alloyed Ag-In-Zn-S quaternary nanocrystals of batches C-(1-4).

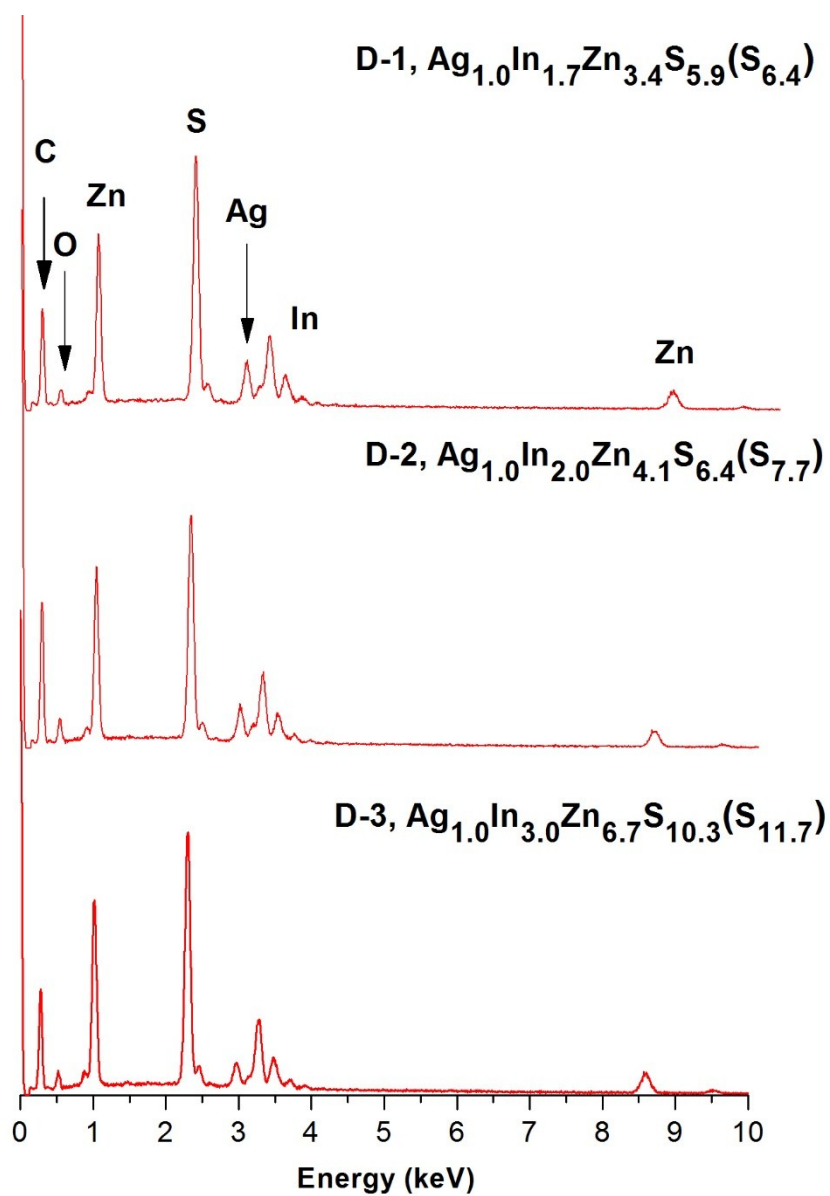


Fig. S14 Energy-dispersive spectra of alloyed Ag-In-Zn-S quaternary nanocrystals of batches **D-(1-3)**.