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

Supplementary Information

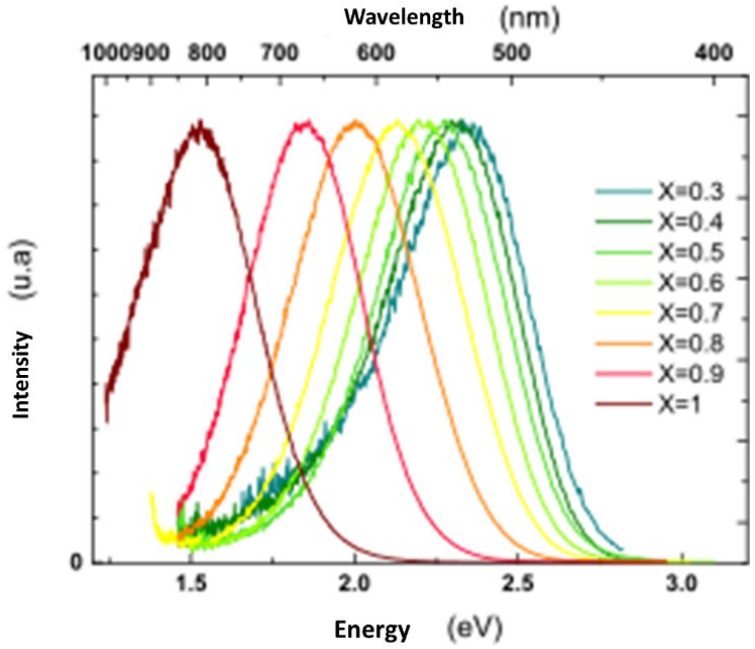

Figure 1 : Steady states fluorescence spectra of ZAIS Nanocrystals for X=0.3 to 1.0

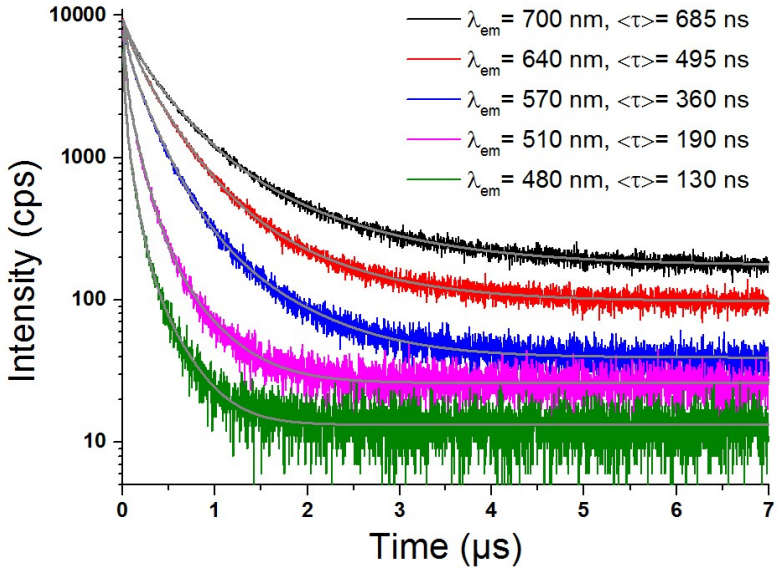

Figure 2: Decay profiles for different wavelengths associated with the corresponding fit, for composition X=0.7.

Table1: Fitting parameter for decay profiles at different wavelength for composition X=0.7

$$I(t,\lambda) = y_0 + A_1 \exp(-\frac{t}{\tau_1}) + A_2 \exp(-\frac{t}{\tau_2}) + A_3 \exp(-\frac{t}{\tau_3})$$

Wavelength nm	χ^2_{red}	P	$\tau_{1\ (ns)}$	$\tau_{2\ (ns)}$	$\tau_{3\ (ns)}$	A_1	A_2	A_3
480	1.039	34%	15.9	83.5	301.9	3990.8	2024.5	300.6
510	1.054	29%	26.2	132.0	420.5	4379.5	3178.4	459.8
570	1.096	17%	53.8	243.3	745.6	3229.7	5072.4	693.2
640	1.043	32%	87.0	332.4	940.8	2450.6	5868.3	952.6
700	1.05	30%	94.6	399.7	1169.7	2222.7	5586.5	1342.0

P=probability of obtaining this $\chi 2$ value because of random error. Must be above 5% (Iakowicz 2006)

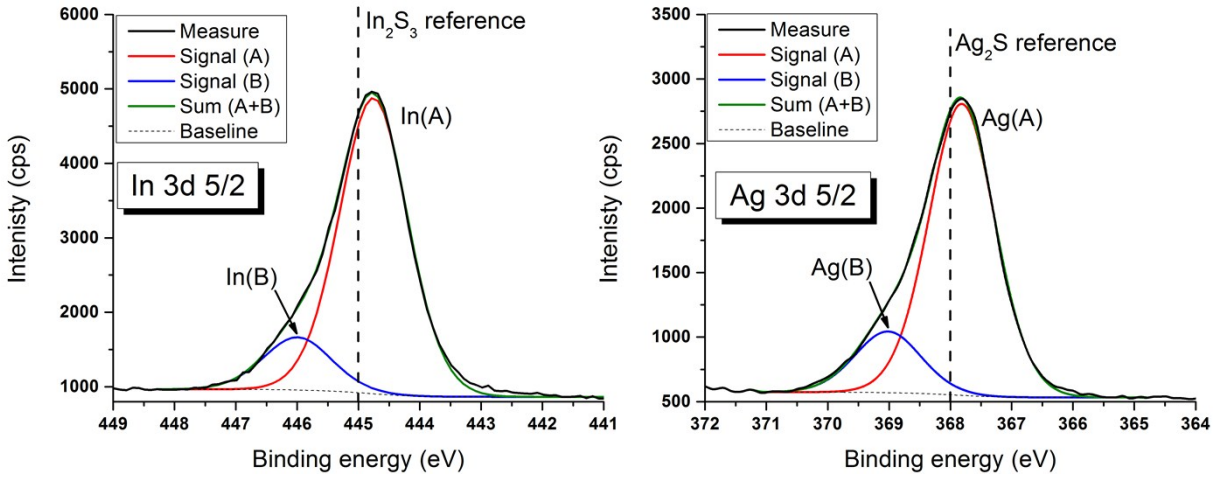

Figure 3: XPS Signal for Indium (In 3d5/2) and Silver atoms (Ag 3d5/2) obtained in AgInS2-ZnS nanocrystals (Here X=1).

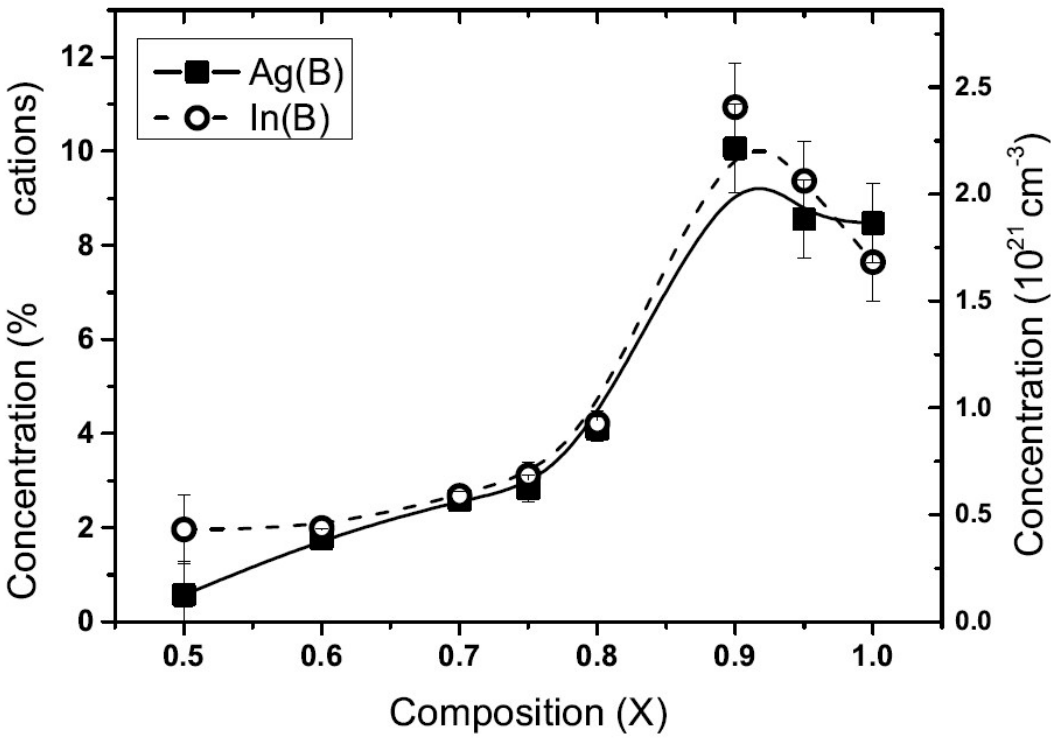

Figure 4: Environment Concentration for In(B) and Ag(B) versus X composition for precursors.

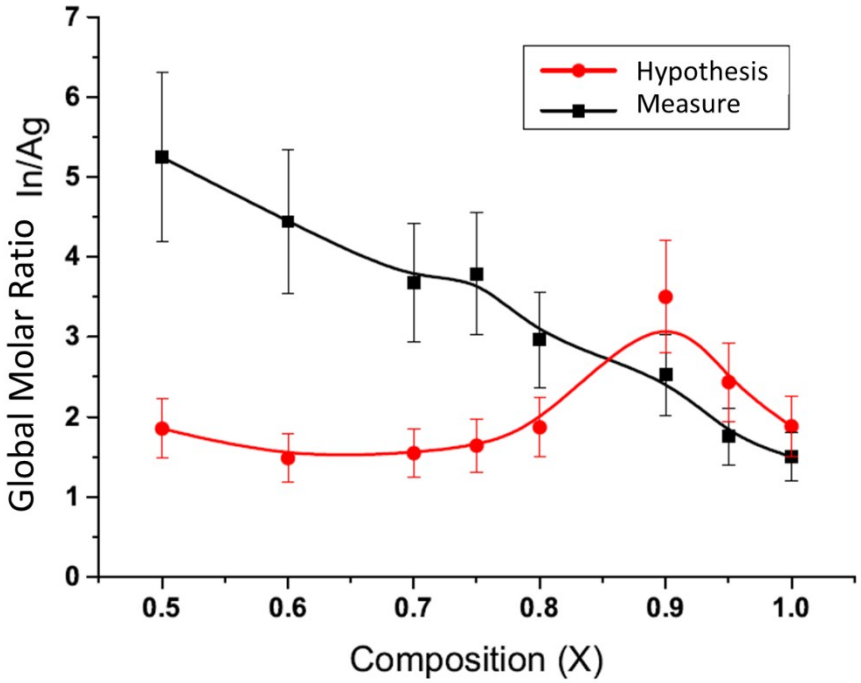

Figure 5: In/Ag Molar Ratio comparison in the frame of hypothesis of two doping mechanisms and the measure.