

# Aqueous synthesis of color tunable Cu doped Zn-In-S/ZnS nanoparticles in the whole visible region for cellular imaging

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Constant	Cu:(In+Zn)	In:Zn, In+Zn	Cu:Zn, Cu+Zn			Cu:In, Cu+In	
variable	In:Zn	Cu:(In+Zn)	In:(Cu+Zn)			Zn:(Cu+In)	
Cu/In/Zn precursor, corresponding main PL peak	1:5:15, 463 nm	1:30:10, 552 nm	1:30:10, 552 nm	2:30:3, 639 nm	2:40:5, 608 nm	1:10:10 (2:20:20), 578 nm	1:15:5 (2:30:10), 591 nm
	1:10:10, 578 nm	1:15:5 (2:30:10), 591 nm	1:10:10, 578 nm	2:20:3, 668 nm	2:15:5, 678 nm	2:20:3, 668 nm	2:30:3, 639 nm
	1:15:5, 591 nm	2:15:5 (4:30:10), 678 nm					

Table S1. The main PL peak position corresponding to different ratios of Cu/In/Zn.

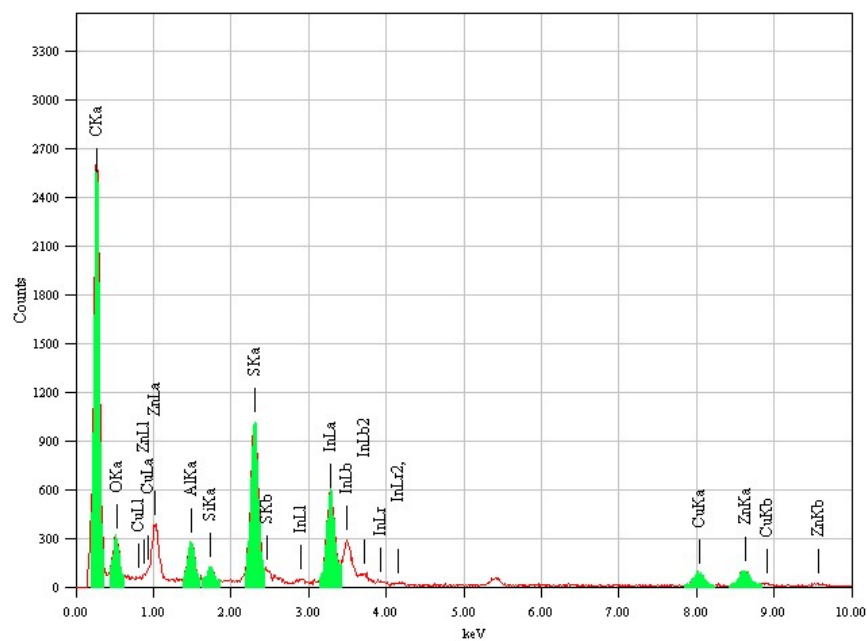


Figure S1. Energy dispersive spectroscopy (EDS) image of CZIS QDs

QDs	Cu	Zn	In	S
<b>CZIS</b>	3.187	4.183	38.313	54.316
<b>CZIS/ZnS</b>	2.298	34.699	13.320	49.684

Table S2. Element ratios of CZIS and CZIS/ZnS QDs estimated by XPS

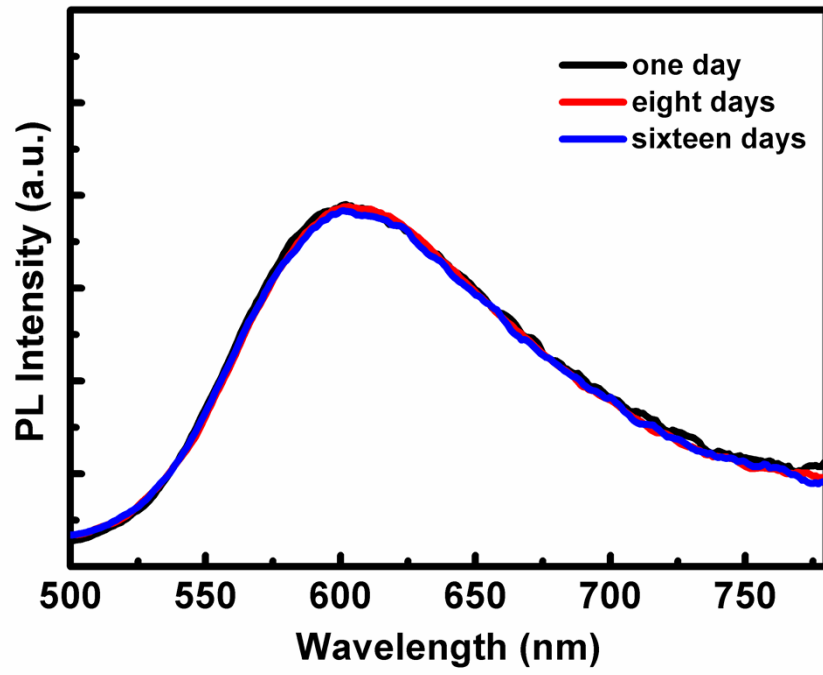


Figure S2. The PL spectra of CZIS/ZnS QDs measured after being stored for different times.