Supporting information

Integration of CuInS$_2$ Based Nanocrystals for High Efficiency and High Colour Rendering White Light-Emitting Diodes

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Table S1. The elemental analysis from EDS determinations. CIS 1 is the Cu-In-Zn-S cores. CIS 2-7 are the samples that produced with adding various amount Zinc precursors.

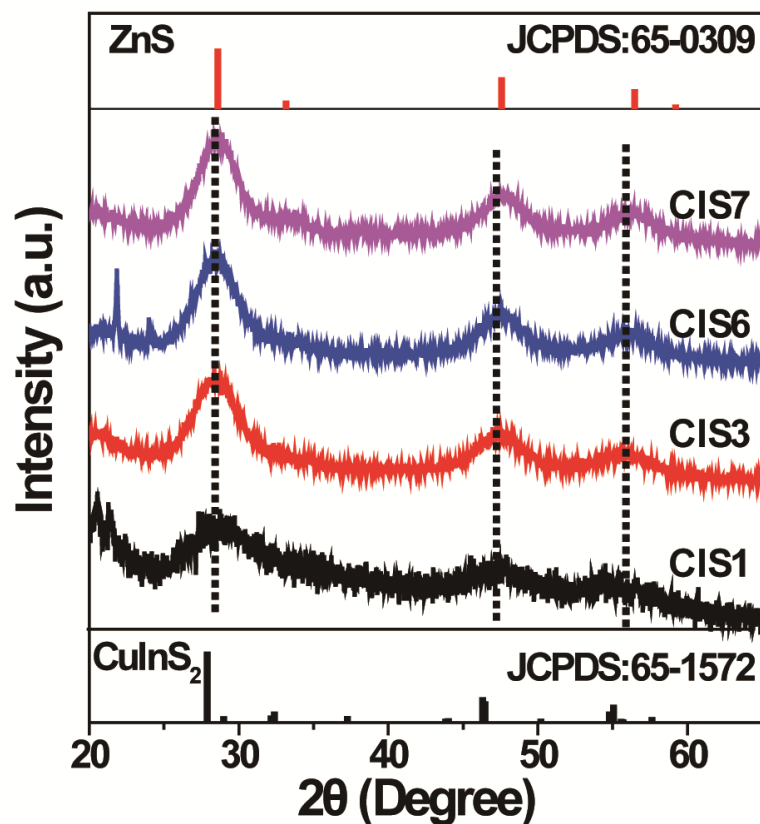| Sample	Emission peak	EDS results				
		Cu	:	In	:	Zn	Zn/(Cu+In)
CIS1	565 nm	1	:	8.9	:	1.4	0.14
CIS2	547 nm	---		---		---	---
CIS3	540 nm	---		---		---	---
CIS4	538 nm	1	:	3.6	:	17.0	3.67
CIS5	535 nm	---		---		---	---
CIS6	530 nm	1	:	6.5	:	24.3	3.25
CIS7	525 nm	1	:	10.4	:	42.0	3.68

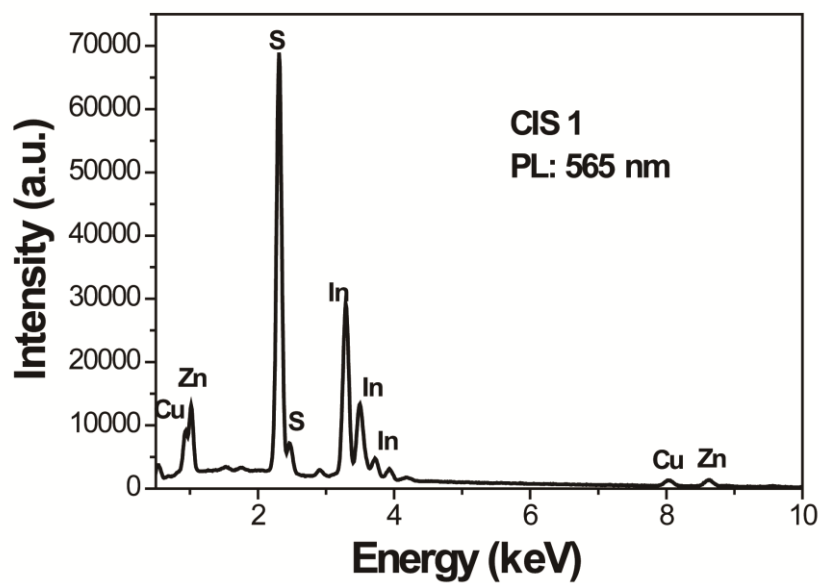**Figure S1**. XRD patterns of resulting NCs (CIS 1, CIS 3, CIS 6).

Figure S2. A typical EDS spectrum of resulting CuInS$_2$ based NCs.
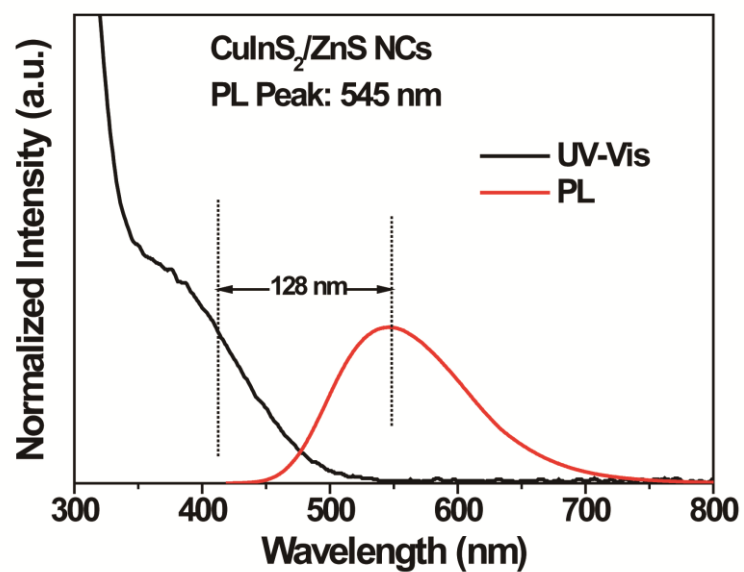

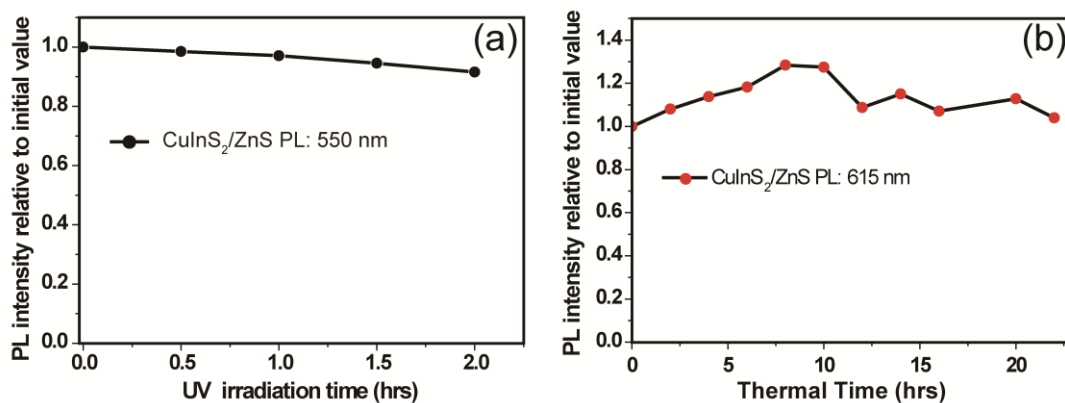**Figure S3**. The absorption and PL spectra of typical CuInS$_2$ based NCs in toluene.

Figure S4. The evolution of PL intensity of CuInS$_2$ based NCs (a) under UV 365 nm radiation and (b) thermal treatment at 150 °C under air for 20 h.
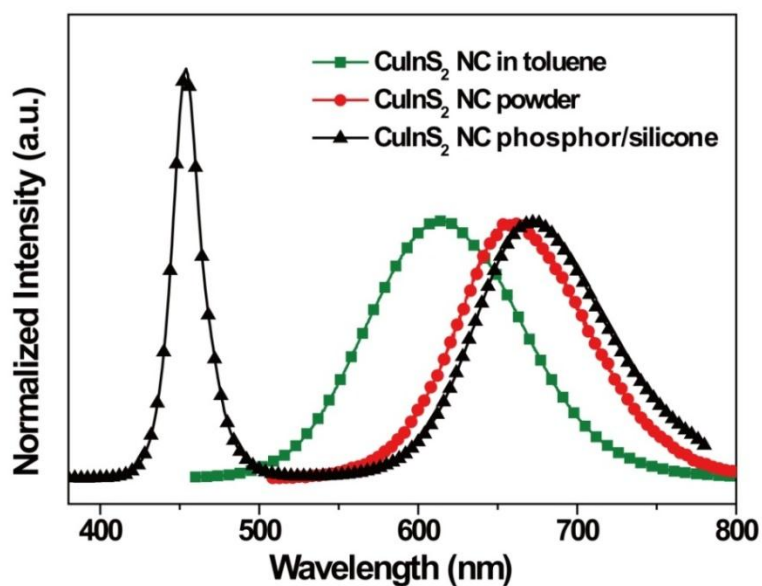

Figure S5. Normalized PL spectra of CuInS$_2$ based NC in toluene (green square line), CuInS$_2$ based NC powder (red circle line) under laser excitation of 405 nm and EL spectra of the LED devices based on composites of silicone and CuInS$_2$ based NC phosphors with emission peak at 615 nm.