

Electronic Supporting Information

Tunable structural and optical properties of $\text{Ag}_x\text{Cu}_y\text{InS}_2$ colloidal quantum dots

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Table S1. XPS data of atomic composition for CIS quantum dots.

Sample	Atomic composition/ %				
	Ag 3d	Cu 2p	In 3d	O 1s	S 2p
CIS-0	-	1.85	4.66	7.48	10.87
CIS-1.1	0.17	1.70	11.76	20.25	10.42
CIS-1.5	0.18	0.86	6.09	24.11	7.42
CIS-2.2	0.90	3.94	9.03	4.33	23.30
CIS-5.0	1.04	1.03	12.96	20.48	10.03
CIS-6.8	2.02	1.74	11.71	18.31	10.09

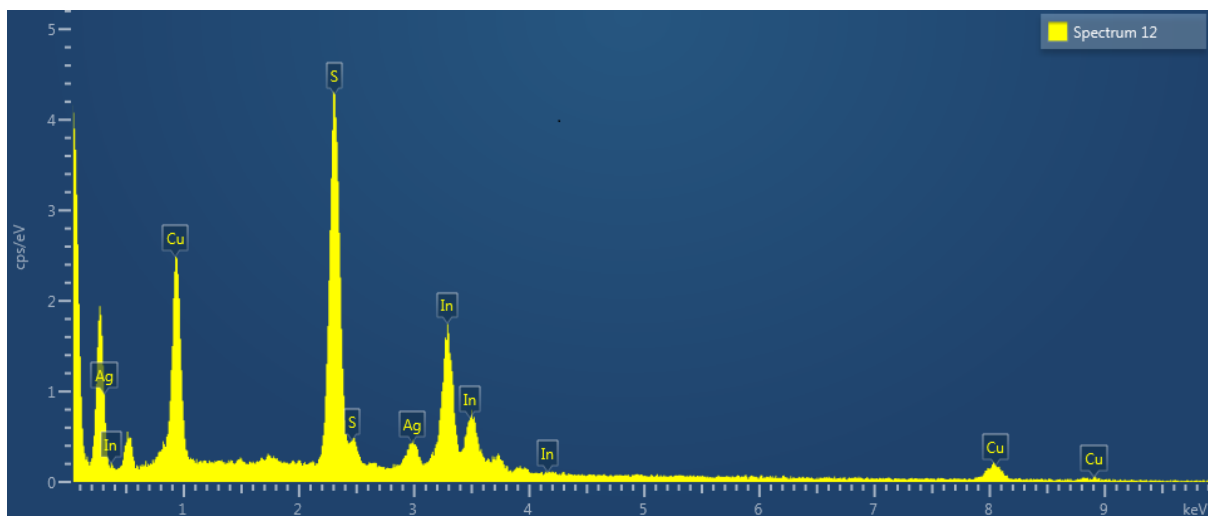


Fig. S1. Representative EDS spectrum for CIS quantum dots; example, CIS-5.0.

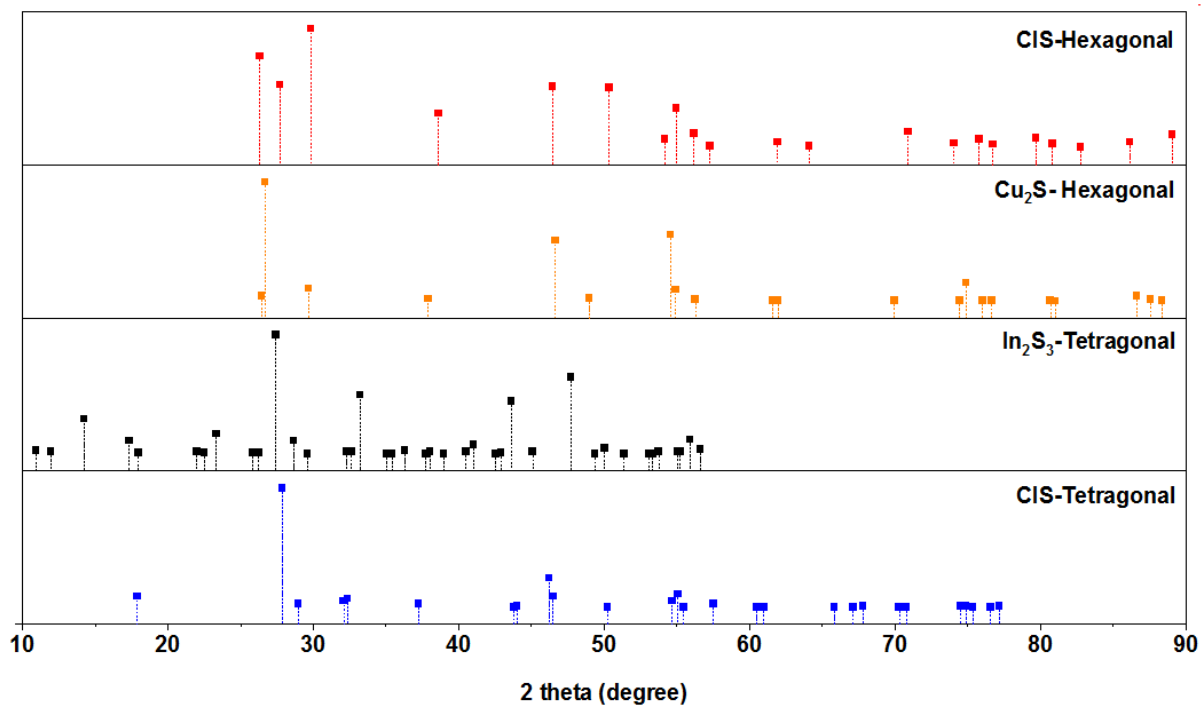


Fig. S2. Reference powder X-ray diffractograms for CIS wurtzite (hexagonal structure, ICDD reference no.01-077-9459), CIS chalcopyrite (tetragonal structure, ICDD reference no.00-027-0159), Cu₂S (hexagonal structure, ICDD reference no.04-010-5153) and In₂S₃ (tetragonal structure, ICDD reference no.00-027-0159).

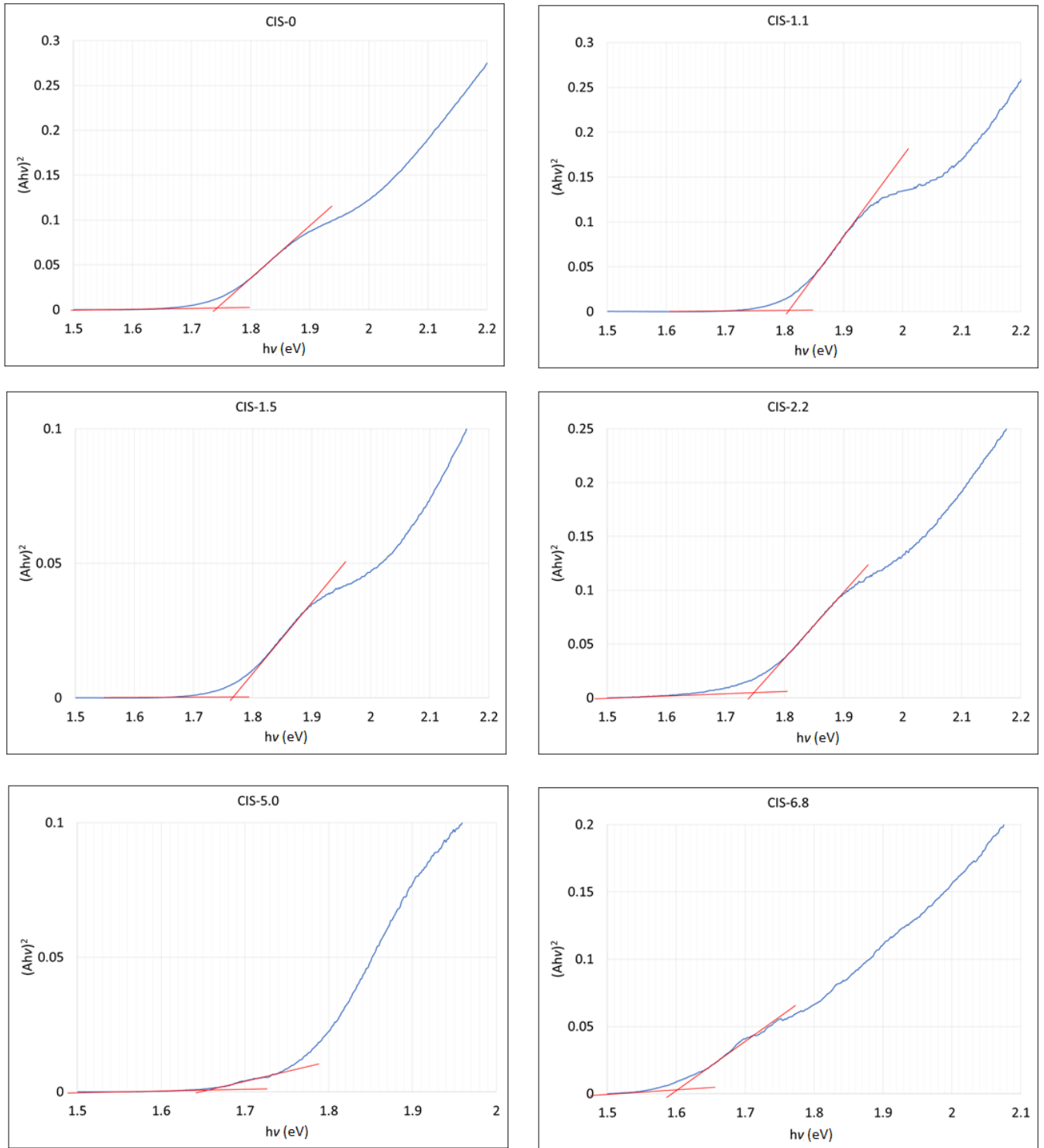


Fig. S3. Tauc plots for CIS quantum dots.

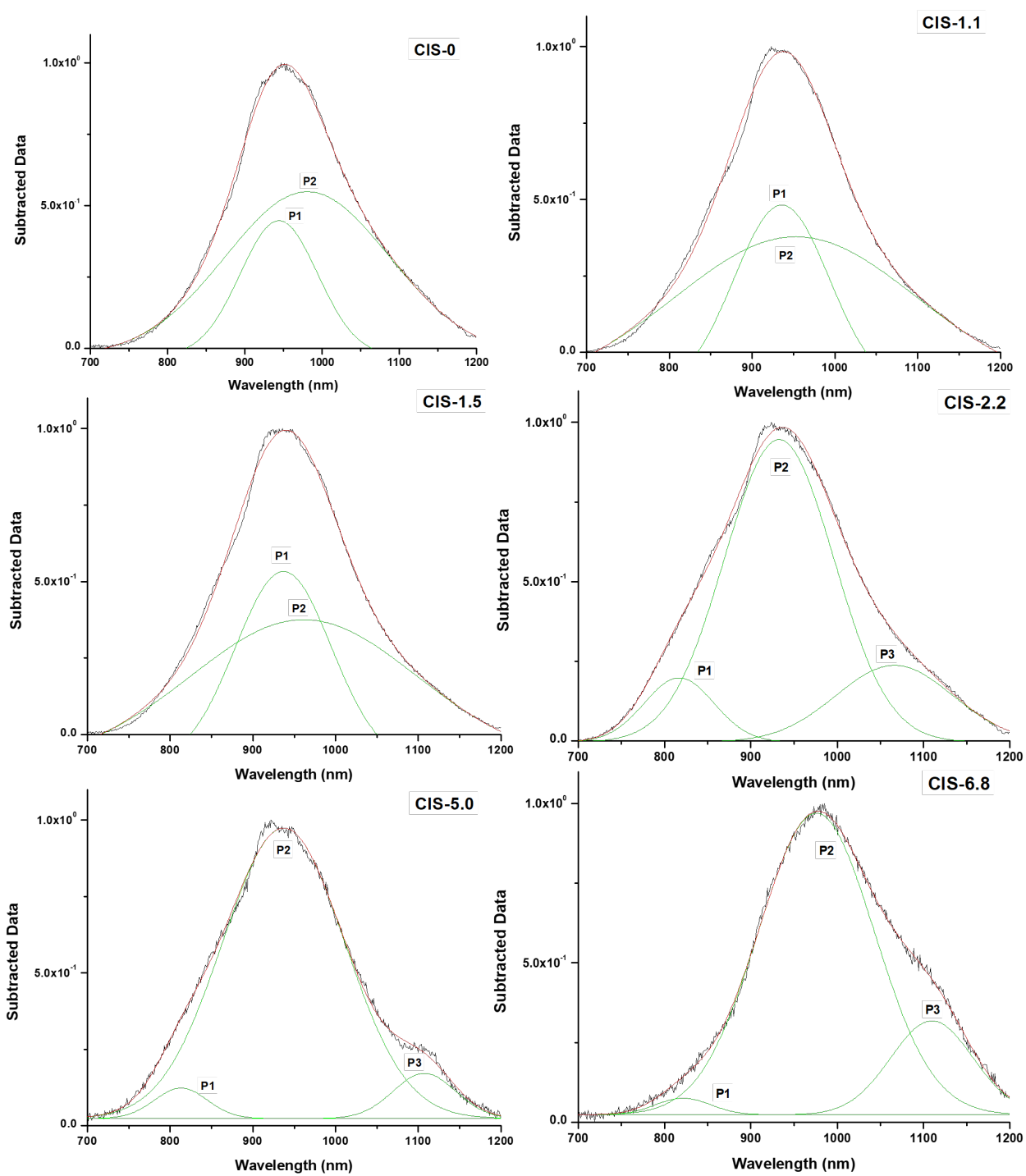


Fig. S4. Gaussian deconvolution of photoluminescence spectra for CIS quantum dots. Black – original, red – gaussian fit, green – fitted components.

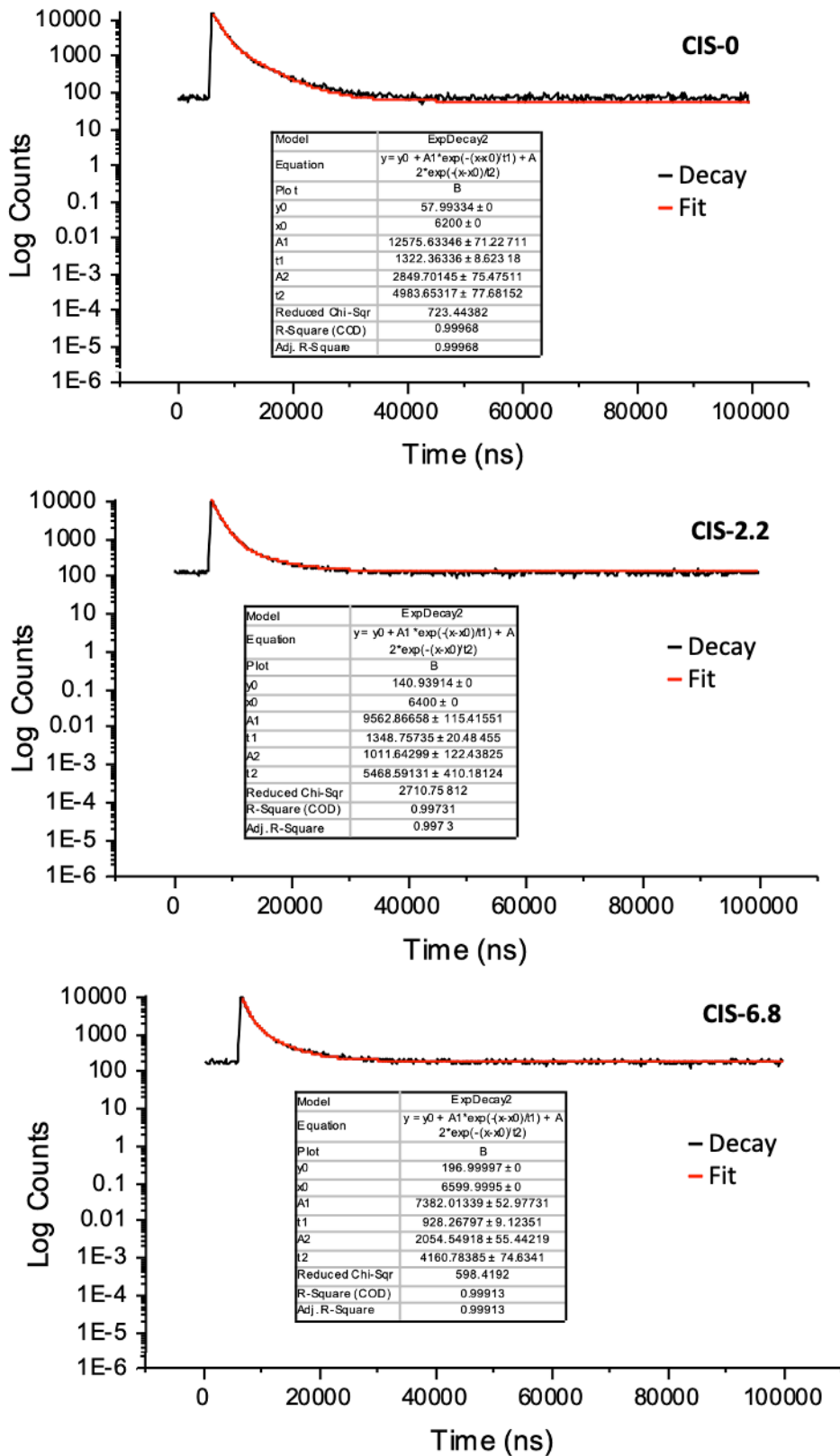


Fig. S5. Representative Gaussian fitting of time-resolved PL decay curves for CIS quantum dots.