

Supplementary File

Table S1. EDX elemental analysis and nominal composition of CuInSe₂-ZnO nanocomposites.

Samples	Zn		Cu		In		Se	
	Exp.	Nom. (wt%)	Exp.	Nom. (wt%)	Exp.	Nom. (wt%)	Exp.	Nom. (wt%)
ZnO	100	100	-	-	-	-	-	-
ZC-3	96.95	97	0.79	0.75	0.83	0.75	1.43	1.5
ZC-5	95.61	95	0.98	1.25	0.96	1.25	2.45	2.5
ZC-10	89.45	90	2.66	2.5	2.06	2.5	5.83	5.0
ZC-25	76.07	75	5.93	6.25	5.86	6.25	12.14	12.5
ZC-50	51.06	50	11.85	12.5	11.96	12.5	25.13	25.0

Table S2. Photocatalytic activity of CuInSe₂-ZnO samples in presence of 30 ppm CR under UV and/or visible light.

Samples	T _{dark} (min)		T _{Removal} (min)		% Removal	
	UV	vis	UV	vis	UV	vis
Z - bulk	30	-	180	-	39.6	-
Z	30	-	180	-	43.9	-
ZC - 3	30	-	120	-	83.7	-
ZC - 5	35	-	120	-	88.5	-
ZC - 10	30	30	90	90	99.8	80.3
ZC - 25	40	40	120	120	94.1	61.5
ZC - 50	40	40	120	120	73.9	46.2

Fig. S1 EDX analysis of a) ZnO (Z) and b) 50 wt% CuInSe₂- ZnO (ZC-50) samples.

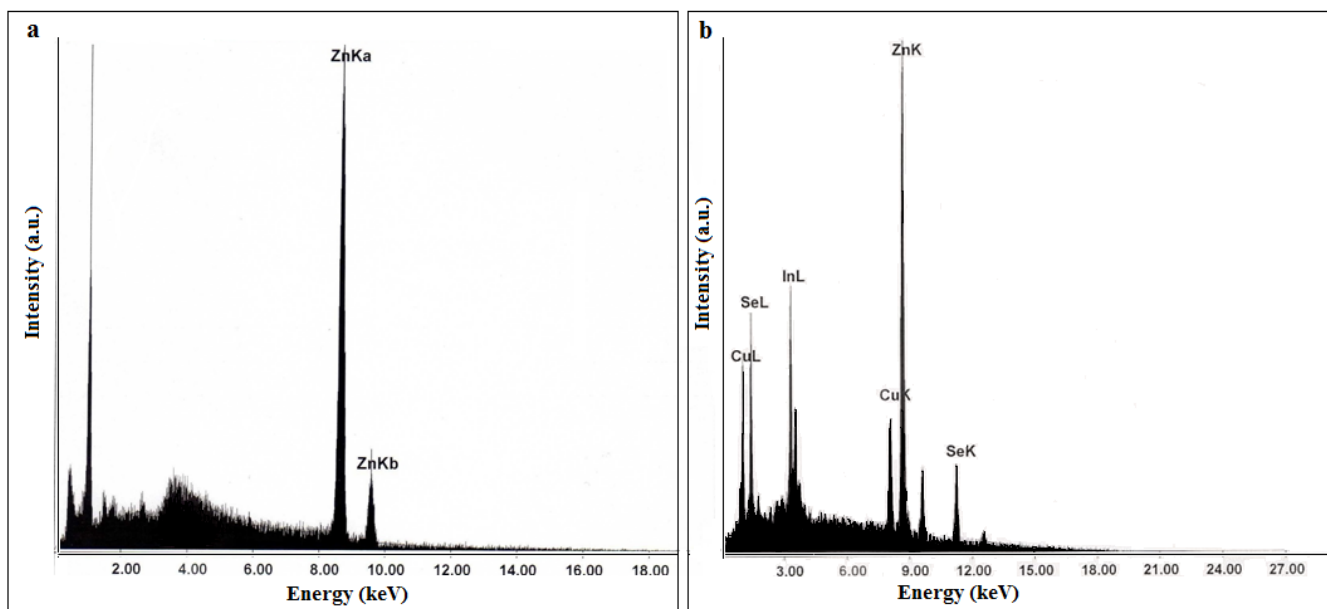


Fig S2. XRD patterns of CuInSe_2 samples synthesized by the three solvents (a: ethylenediamine, b: diethylamine and c: ethylenediamine and ethanol (1:1)).

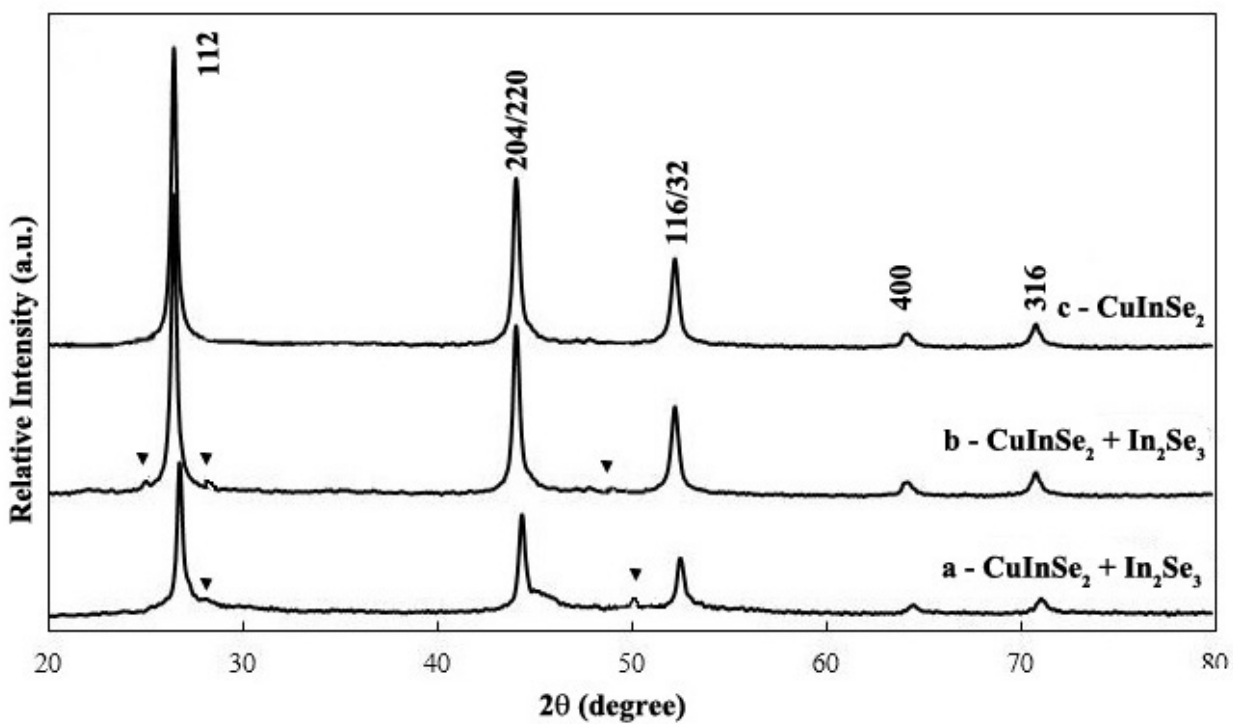


Fig. S3 Absorption spectra of a solution of 30 ppm CR in presence of a) Z, b) ZC-10 c) ZC-25 and d) ZC-50 samples under UV light irradiation.

