

Table S1. Crystalline phases parameters.*

Sample	Miller Indexes of g-C ₃ N ₄ phase peaks	angle 2 θ , °	CrySizeL (nm)	LVol-IB (nm)	Lvol-FWHM (nm)
g-C ₃ N ₄	100	13.34(1)	3.6(1)	2.27(7)	3.2(1)
	002	27.446(2)	7.08(3)	4.51(2)	6.30(2)
			CrySizeG (nm)	LVol-IB (nm)	Lvol-FWHM (nm)
ZnIn ₂ S ₄ /g-C ₃ N ₄	002	27.639(8)	8.5(2)	8.0(2)	7.5(2)
CdZnS/g-C ₃ N ₄	100	13.99(8)	1.29(6)	1.22(6)	1.15(6)
	002	27.444(5)	9.7(1)	9.2(1)	8.6(1)

Other phases

Sample	Miller Indexes of phase peaks	angle 2 θ , °	CrySizeG (nm)	LVol-IB (nm)	Lvol-FWHM (nm)
ZnIn ₂ S ₄ /g-C ₃ N ₄	005	22.92(1)	4.7(1)	4.4(1)	4.2(1)
	102	28.19(5)	4.8(1)	4.4(1)	4.2(1)
	110	47.731(3)	10.06(9)	9.45(8)	8.96(8)
CdZnS/g-C ₃ N ₄	100	25.71(1)	15.9(12)	14.9(11))	14.1(10)
	002	26.22(4)	5.9(2)	5.6(2)	5.3(2)
	101	28.895(9)	5.14(5)	4.83(5)	4.58(5)
	110	45.403(5)	6.12(6)	5.75(6)	5.44(6)
	103	49.42(1)	6.0(1)	5.6(1)	5.3(1)

*The crystallite size calculations were performed in several ways [28]: the values calculated from the half-width of the reflections (LVol-FWHM) and the integrated reflection intensity (LVol-IB) are the volume-weighted values of the crystallite sizes, and the CrySizeL parameter is the size of the crystallites in the direction perpendicular to the analyzed planes, with the Lorentz type of peak broadening.