

Table –SI 2. Powder X-ray diffraction data of **8** and **9** showing *d*-spacings and intensities. (Relevant data of CdS and Ag₂S from JCDPS are also given for a comparison)

CdS (00-02-0563)		Ag ₂ S (01-003-0844)		Ag ₂ Cd ₈ S ₉ (8)		Ag ₂ Cd ₅ S ₆ (9)	
d [Å]	I [%]	d [Å]	I [%]	d [Å]	I [%]	d [Å]	I [%]
3.55	80	3.41	10	3.56400	62.20	3.56728	69.35
3.32	60	3.38	10	3.34583	48.74	3.42168	10.56
3.12	100	3.07	80	3.14966	100.00	3.38292	55.71
2.42	60	2.81	80	3.07269	13.30	3.18577	100.00
2.06	90	2.66	10	2.82911	17.30	3.08432	18.98
1.89	90	2.58	100	2.65568	9.38	2.84132	24.83
1.75	80	2.44	10	2.59974	27.82	2.66731	14.28
1.57	30	2.37	90	2.44669	41.73	2.60982	30.07
1.4	60	2.21	70	2.37693	20.62	2.58655	21.43
1.32	60	2.08	80	2.20777	11.94	2.45087	32.77
1.3	30	2.05	40	2.06450	63.38	2.44342	28.90
1.26	60	1.99	40	1.89646	55.59	2.42464	14.77
1.19	40	1.96	50	1.79053	7.41	2.38528	25.10
		1.91	40	1.75922	42.44	2.21589	15.44
		1.87	40	1.72891	19.93	2.08556	14.94
		1.72	70	1.57683	8.28	2.06893	59.26
		1.58	50			2.06861	27.60
		1.54	40			2.04874	4.88
		1.51	40			1.99583	4.21
		1.48	30			1.96435	6.59
		1.46	50			1.89896	45.05