

Photosensitive Schottky barrier diode based on Cu/p-SnSe Thin Film Fabricated by Thermal Evaporation

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h k l	2θ (Deg) Observed	2θ (Deg) Calculated	d (Å) ^o Observed	d (Å) ^o Calculated	FWHM	Crystallite Size t (nm)	Micro-Strain $\epsilon \times 10^{-02}$ ($\text{lin}^{-2} \text{m}^{-4}$)	Dislocation density δ ($\text{lin} \text{m}^{-2}$)
2 1 0	25.281	25.332	3.5200	3.5131	0.5010	28.3519	12.2214	5.6E+08
0 1 1	29.391	29.495	3.0365	3.0259	0.5010	28.6003	12.1152	5.5E+08
1 1 1	30.419	30.525	2.9361	2.9262	0.5010	28.6689	12.0862	5.5E+08
4 0 0	31.050	31.110	2.8779	2.8725	0.4008	35.8903	09.6544	3.5E+08
3 1 1	37.757	37.862	2.3807	2.3743	0.4509	32.4861	10.6661	4.3E+08
4 1 1	43.288	43.400	2.0884	2.0833	0.4509	33.0702	10.4777	4.1E+08
5 1 1	49.667	49.784	1.8341	1.8300	0.5010	30.4834	11.3668	4.9E+08
8 0 0	64.745	64.868	1.4386	1.4362	0.5010	32.7553	10.5784	4.2E+08

Table S1. Crystallographic parameter of SnSe thin film obtained from XRD.

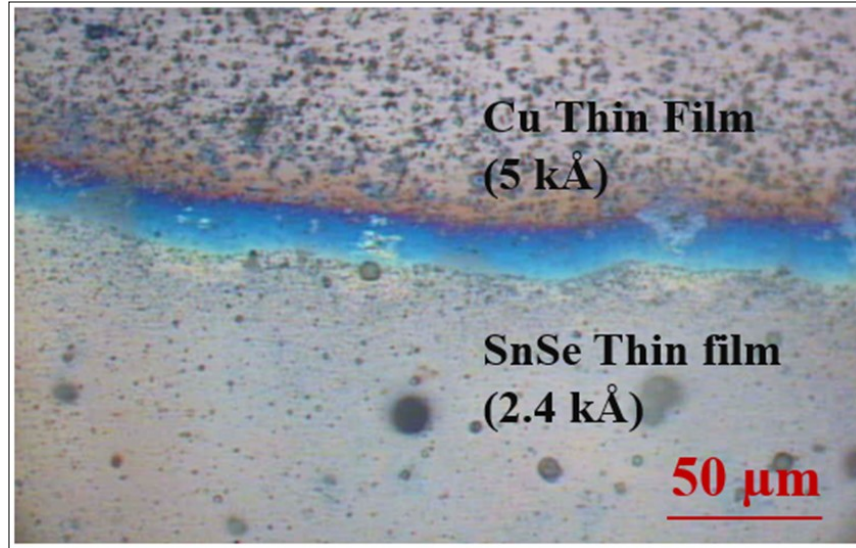


Fig. S1. Optical image of Schottky diode by optical microscope having magnification of 10x.



Fig. S2. HR-TEM image of SnSe thin film deposited on NaCl crystal.

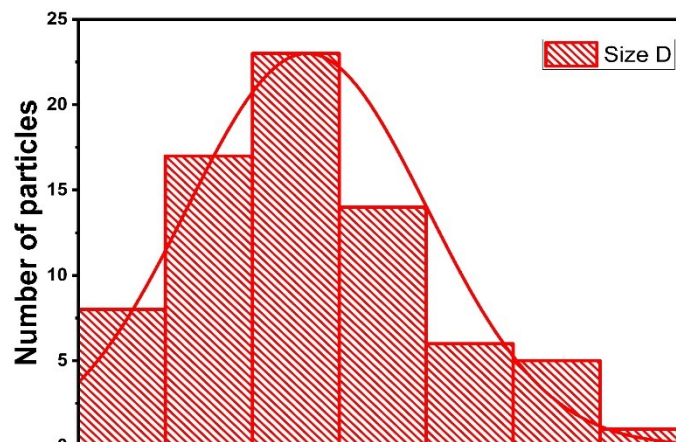


Table S2. Comparison of present work with previously reported data

Materials	Optical property	Ref.
	Bandgap (E_g) (eV)	
SnSe	1.13	(1)
SnSe	0.87	
SnSe₂	2.04	(2)
SnS	1.14	(3)
SnS	1.24	(4)
SnS₂	2.53	(5)
SnTe	0.35	(6)
SnSe	1.75	This work

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