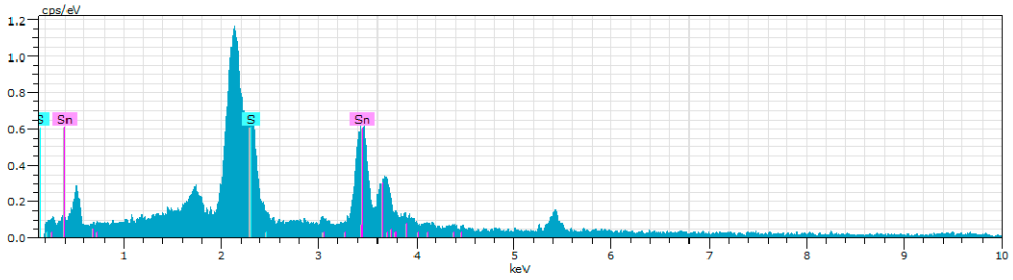
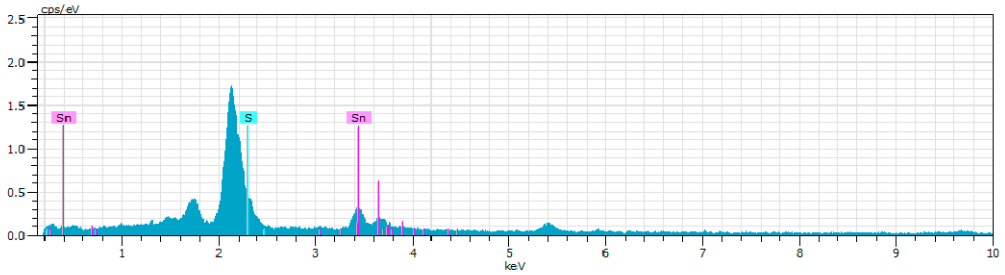
Supplementary Materials: SnS_x (x=1, 2) nanocrystals as effective catalysts for photoelectrochemical water splitting

Po-Chia Huang, Yu-Min Shen, Sanjaya Brahma, Muhammad Omar Shaikh, Jow-Lay Huang, Sheng-Chang Wang



El	AN	Series	unn. C [wt.%]	norm. C [wt.%]	Atom. C [at.%]	Error (1 Sigma) [wt.%]	K fact.	Z corr.	A corr.	F corr.
S	16	K-series	7.66	22.53	51.84	0.33	0.057	3.834	1.000	1.033
Sn	50	L-series	26.35	77.47	48.16	0.89	0.293	2.607	1.000	1.014
		Total:	34.01	100.00	100.00					

Figure. S1. Elemental analyses of the SnS thin films samples by EDX spectroscopy indicate the presence of Sn and S.



El	AN	Series	unn. C [wt.%]	norm. C [wt.%]	Atom. C [at.%]	Error (1 Sigma) [wt.%]	K fact.	Z corr.	A corr.	F corr.
S	16	K-series	5.33	30.77	62.20	0.24	0.041	7.259	1.000	1.029
Sn	50	L-series	11.99	69.23	37.80	0.45	0.138	4.951	1.000	1.013
		Total:	17.33	100.00	100.00					

Figure. S2. Elemental analyses of the SnS_2 thin films samples by EDX spectroscopy indicate the presence of Sn and S.

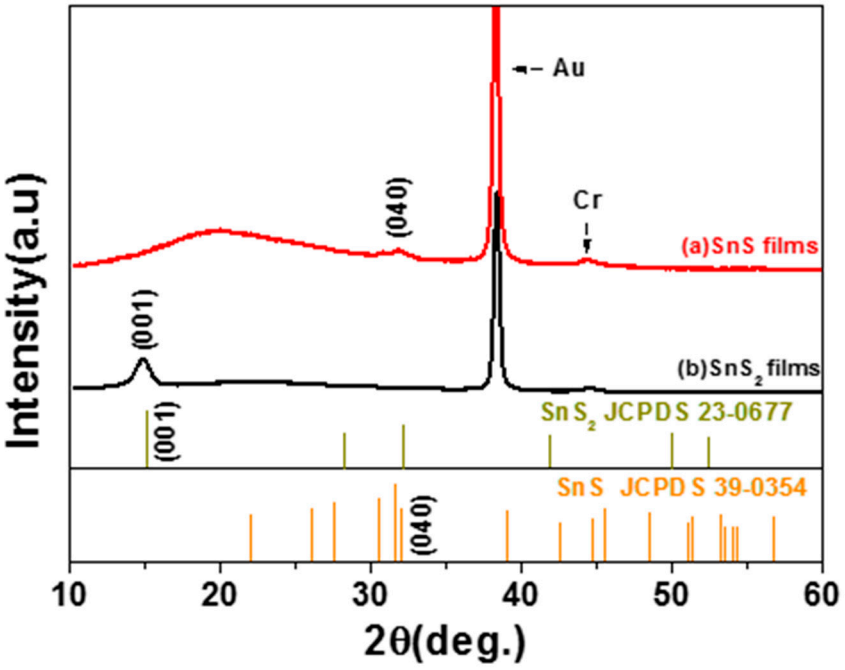


Figure.S3. XRD pattern of the (a) SnS thin film, and (b) SnS_2 thin film after 3600sec stability test.

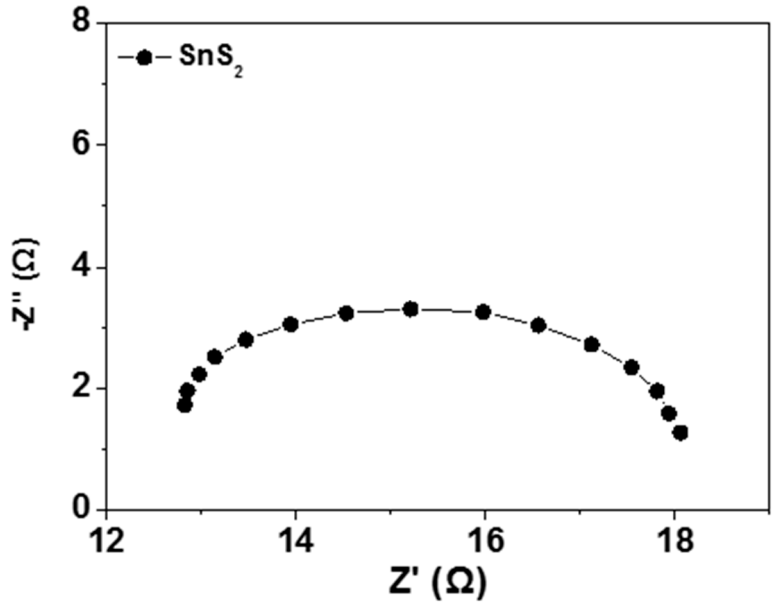


Figure.S4. Electrochemical impedance spectra of SnS_2 thin films.

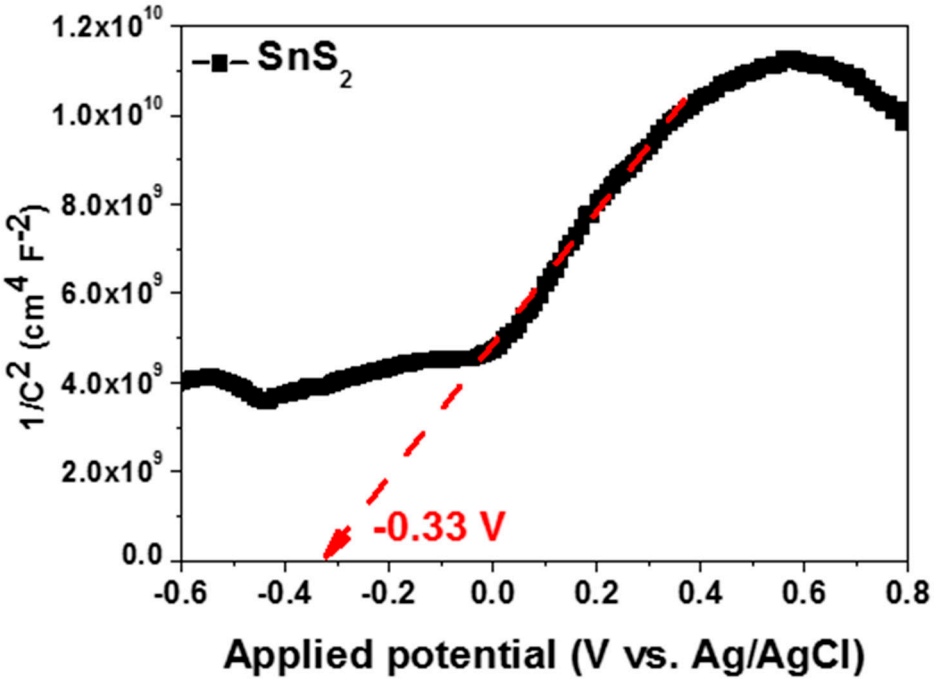


Figure.S5. Mott–Schottky plots of SnS_2 thin films.

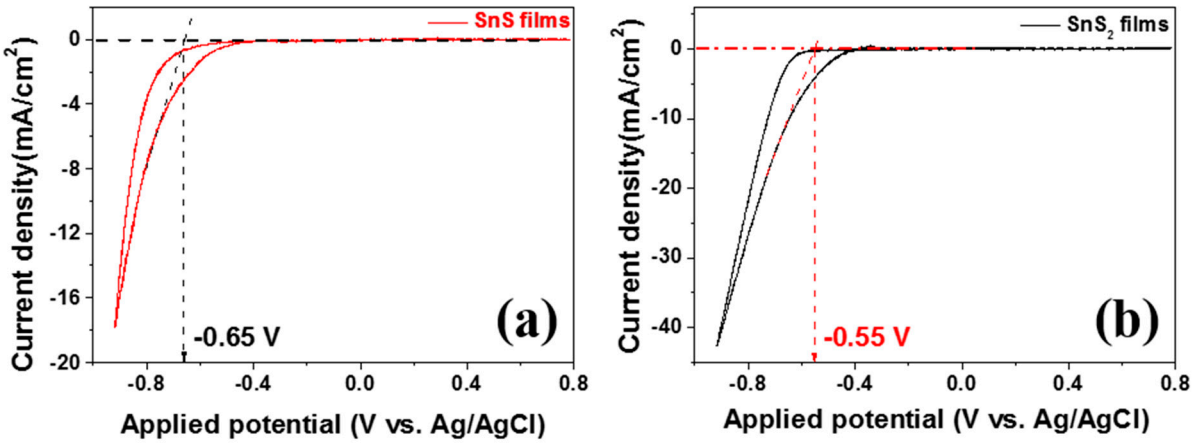


Figure. S6. (a) SnS, (b) SnS_2 cyclic voltammograms for determination of reduction onset potential