Supporting information

Sputtered ZnSnO buffer layers for kesterite solar cells

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Table S1: Atomic concentration measured by XPS and EDX in the ZTO layer deposited with various SF_6 content in carrier gas. Deposition are made at 0.6 Pa and 50 W.

SF6 in Ar (%)	Zn (at%)		Sn (at%)		O (at%)		F (at%)		S (at%)	
	XPS	EDX	XPS	EDX	XPS	EDX	XPS	EDX	XPS	EDX
0.0	31.1	35.2	10.0	9.9	58.9	54.2	0.0	0.0	0.0	0.0
0.07	30.5	32.0	9.5	7.4	52.1	48.9	7.4	11.6	0.5	0.1
0.5	26.2	26.0	10.4	7.1	42.7	33.9	20.0	32.7	0.7	0.3
1.0	21.3	29.6	12.6	5.7	43.1	16.0	22.8	48.5	0.2	0.2

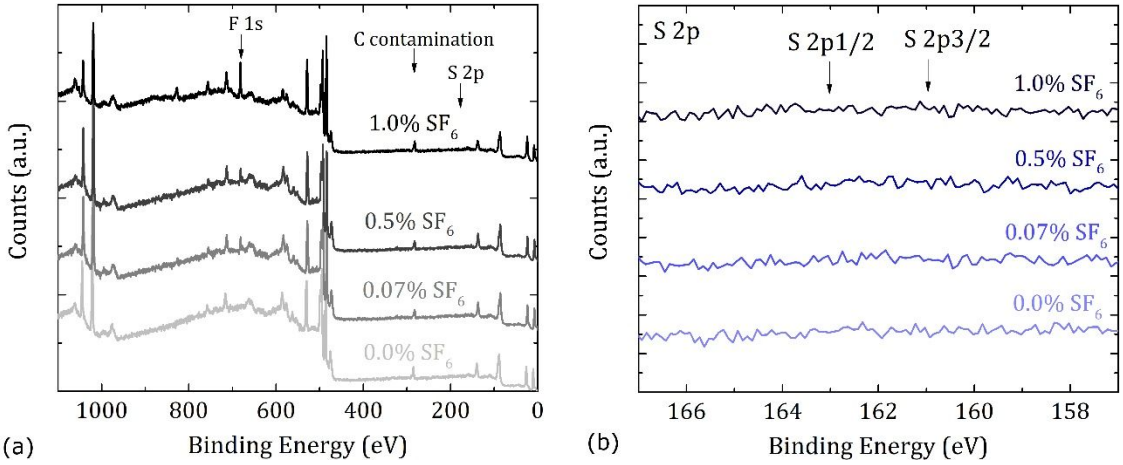

Figure S1: (a) XPS survey spectra of the ZTO:F layers as a function of the SF_6 content in the carrier gas. C 1s peak (contamination), F 1s and position of the S 2p peaks are highlighted. (b) High resolution XPS spectra focused on the expected position of the S 2p peaks in the ZTO layer.