

# Supplementary Materials: Investigation of Morphology of Alumina Co-doped Scandia Stabilized Zirconia (ScAlSZ) Thin Films

**Table S1.** EDS analysis results of ScAlSZ thin films, ( $v_d$ —deposition rate,  $T_d$ —substrate temperature during deposition, and  $c$ —atomic concentration of elements).

$v_d$ , nm/s	$T_d$ , °C	$c_{Sc}$ , at. %	$c_{Al}$ , at. %	$c_{Zr}$ , at. %	$c_{O}$ , at. %
0.2	50	8.7	1.5	32.9	56.9
	150	8.1	1.0	34.0	56.8
	300	8.2	1.0	34.2	56.6
	450	8.5	1.1	34.0	56.4
	600	8.3	0.9	32.6	58.3
0.4	50	8.6	0.9	35.1	55.4
	150	7.7	0.9	34.7	56.7
	300	8.4	0.8	38.5	52.3
	450	8.6	1.1	35.2	55.1
	600	9.0	1.2	36.4	53.3
0.8	50	7.2	0.8	34.3	57.7
	150	8.0	0.9	37.8	53.3
	300	7.8	0.7	35.7	55.9
	450	8.2	1.1	37.6	53.0
	600	7.7	0.7	36.1	55.4
1.2	50	7.8	0.8	34.8	56.6
	150	7.8	1.0	34.3	56.9
	300	7.5	0.9	35.8	55.8
	450	6.7	0.9	34.8	57.7
	600	7.1	0.9	36.3	55.7
1.6	50	7.4	0.6	34.8	57.3
	150	8.2	0.7	35.1	56.0
	300	7.2	0.8	35.1	56.9
	450	8.0	0.6	37.7	53.7
	600	7.5	0.6	37.1	54.8