

Supplementary Information for

**Modified ferroelectric and photovoltaic properties of BiFe_{0.91}Zr_{0.09}O₃ thin films
via altered annealing atmospheres**

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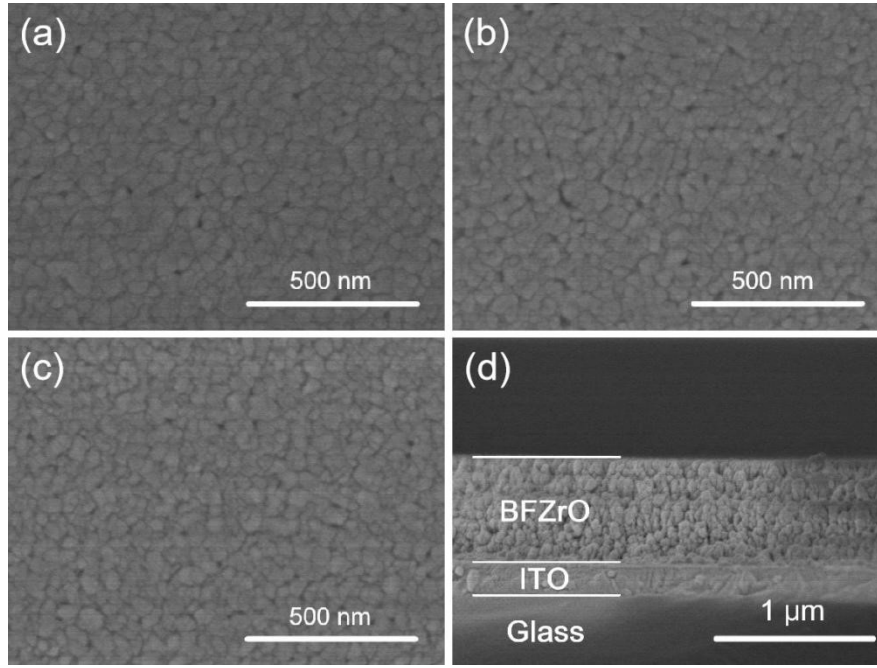


Fig. S1. SEM images of BFZrO films annealed under different atmospheres: (a) air; (b) O₂; (c) N₂; (d) cross-section diagram.

Table S1. Rietveld refinement parameters of BFZrO films annealed under different atmospheres.

Parameters	Phases	Fraction(%)	Cell parameters							R-Factors(%)			Gof
			a(Å)	b(Å)	c(Å)	α(°)	β(°)	γ(°)	Volume(Å ³)	Rwp	Rp	Rexp	
Air	R3c	81.09	5.6181	5.6181	13.7475	90	90	120	375.77	4.43	3.51	1.35	3.295
	Pnma	18.91	5.6525	16.0095	11.6029	90	90	90	1049.99				
O ₂	R3c	83.14	5.6187	5.6187	13.7678	90	90	120	376.42	5.13	4.01	1.37	3.732
	Pnma	16.86	5.5866	15.9991	11.8044	90	90	90	1055.09				
N ₂	R3c	80.51	5.6235	5.6235	13.7635	90	90	120	376.94	3.86	2.91	1.38	2.793
	Pnma	19.49	5.6969	15.7237	11.5352	90	90	90	1033.27				

