

Supplementary Materials for

Strong polarization in paraelectric tungsten-bronze systems via bonding engineering

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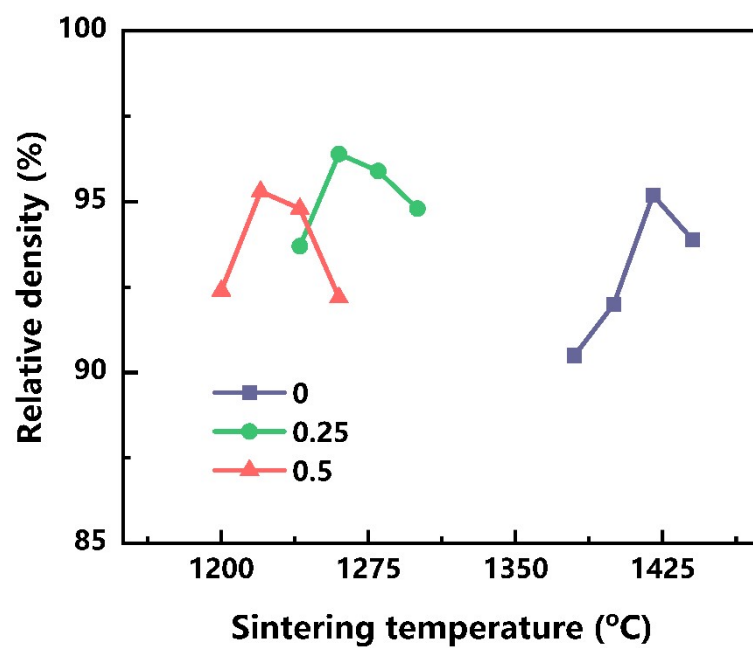


Fig. S1 Relative bulk density of x=0, 0.25 and 0.5 samples.

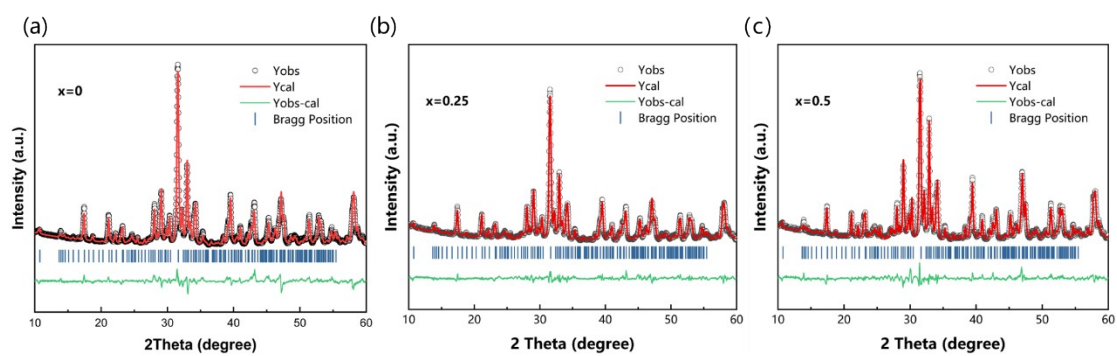


Fig. S2 Rietveld refinement figure of $x=0$, (a) 0.25 (b) and 0.5 (c) samples.

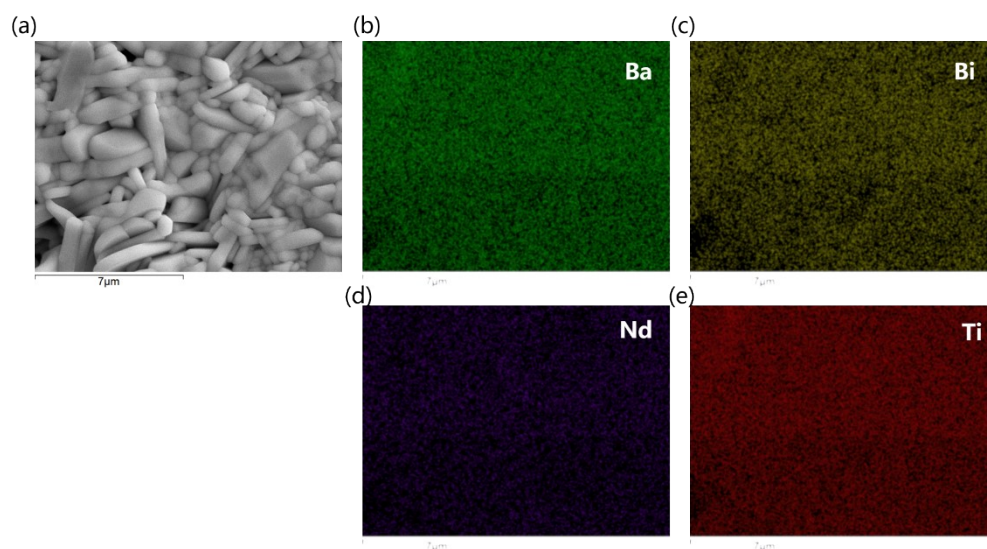


Fig. S3 SEM image (a) and energy dispersive spectroscopy (EDS) mapping (b-e) of $x=0.5$ sample.

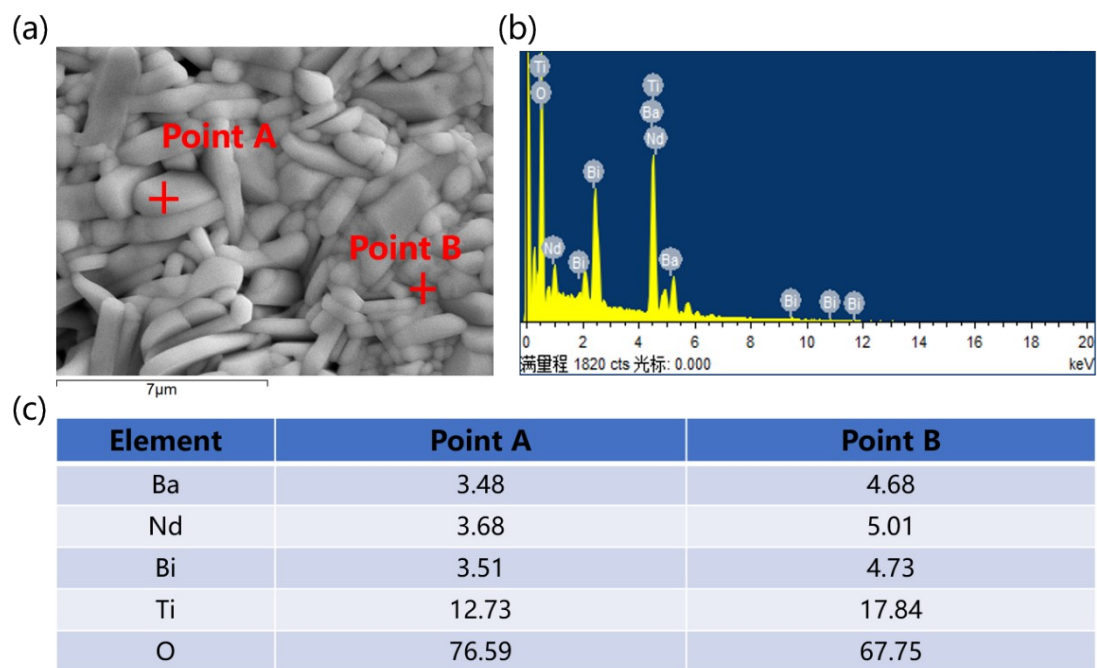


Fig. S4 SEM image (a), spectrum (b) and (c) atomic percentage of elements of point A and B of the x=0.5 sample.

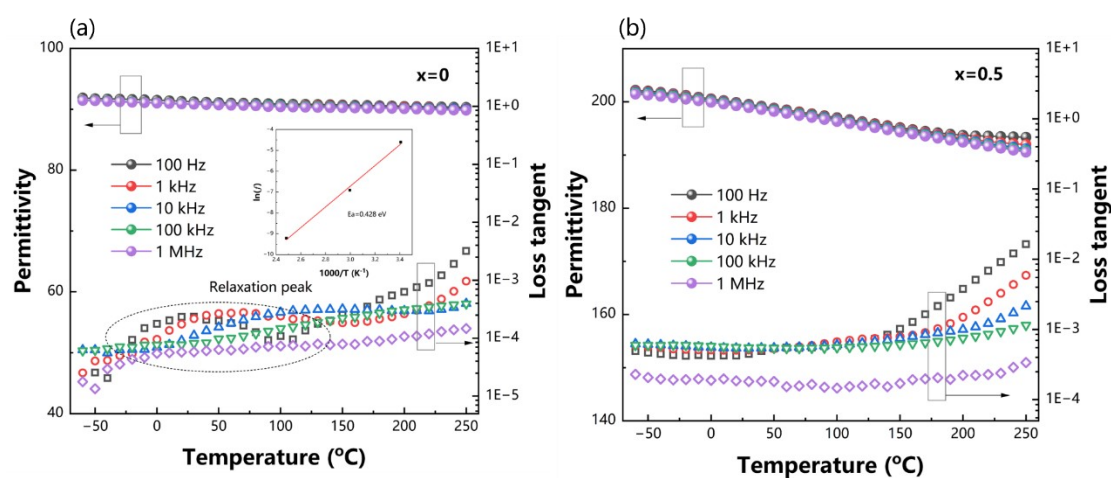


Fig. S5 Temperature dependence of permittivity and loss tangent at given frequencies of the x=0 and 0.5 samples.

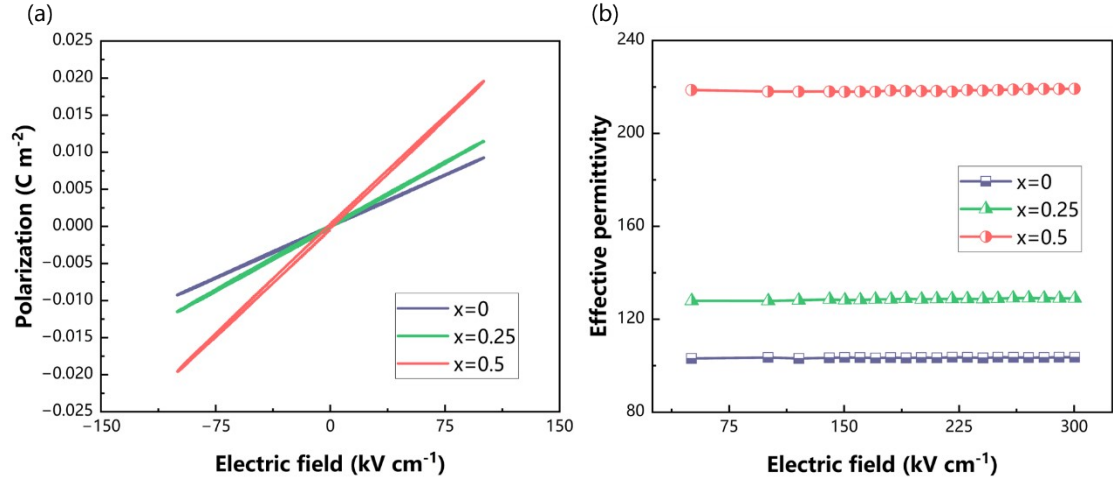


Fig. S6 P-E loops of the (a)x=0, 0.25 and 0.5 samples measured at 100 kV/cm and 100Hz, and (b) Electric field-dependent effective permittivity of these three samples.

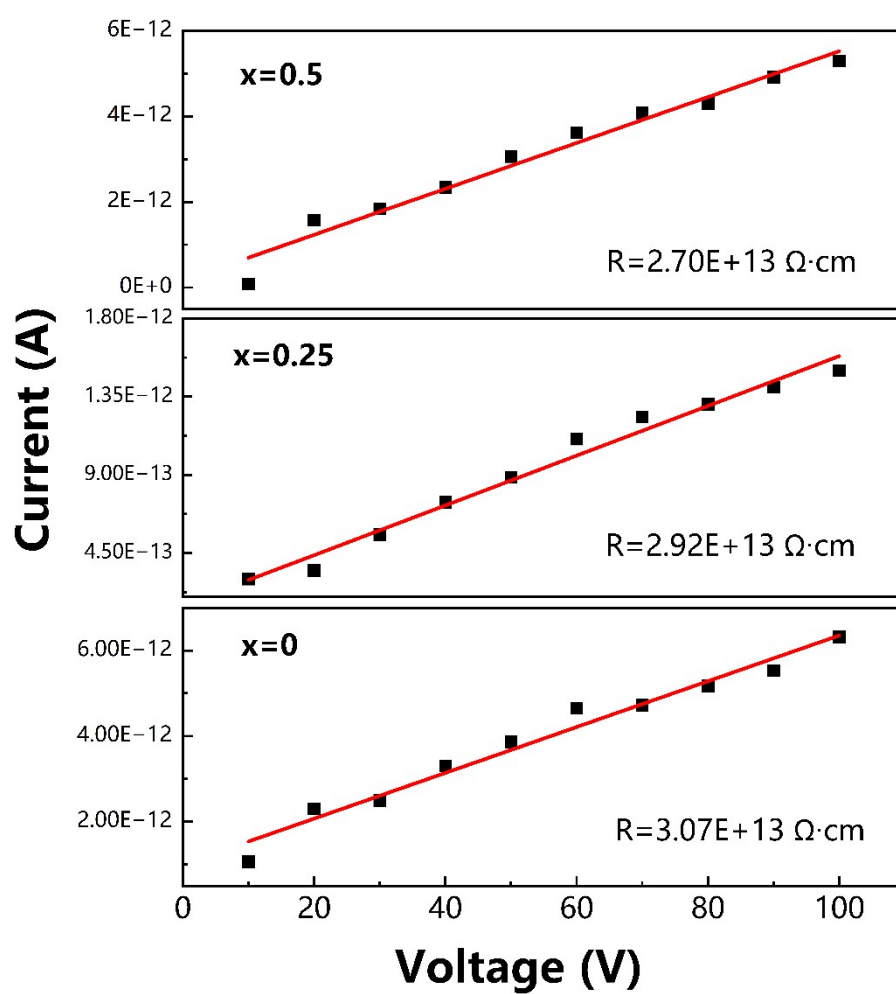


Fig. S7 DC resistance of $x=0$, 0.25 and 0.5 samples.

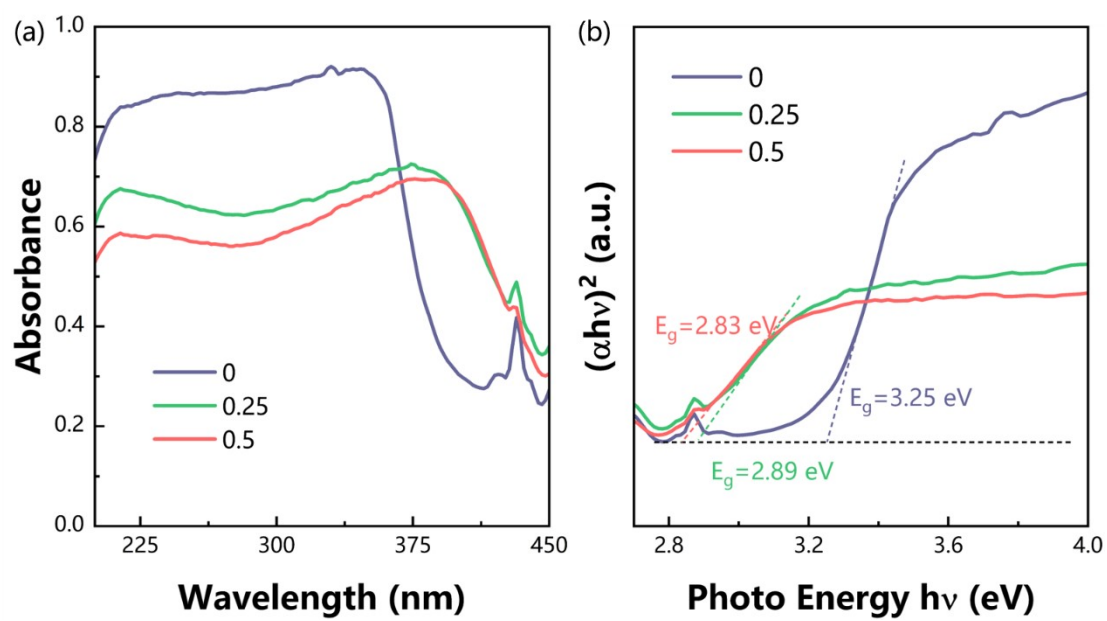


Fig. S8 UV-vis spectra of x=0, 0.25 and 0.5 samples.

