

## Supplementary Information:

### Colossal Dielectric Constant of Nanocrystalline/Amorphous Homo-Composite BaTiO<sub>3</sub> Films Deposited via Pulsed Laser Deposition Technique

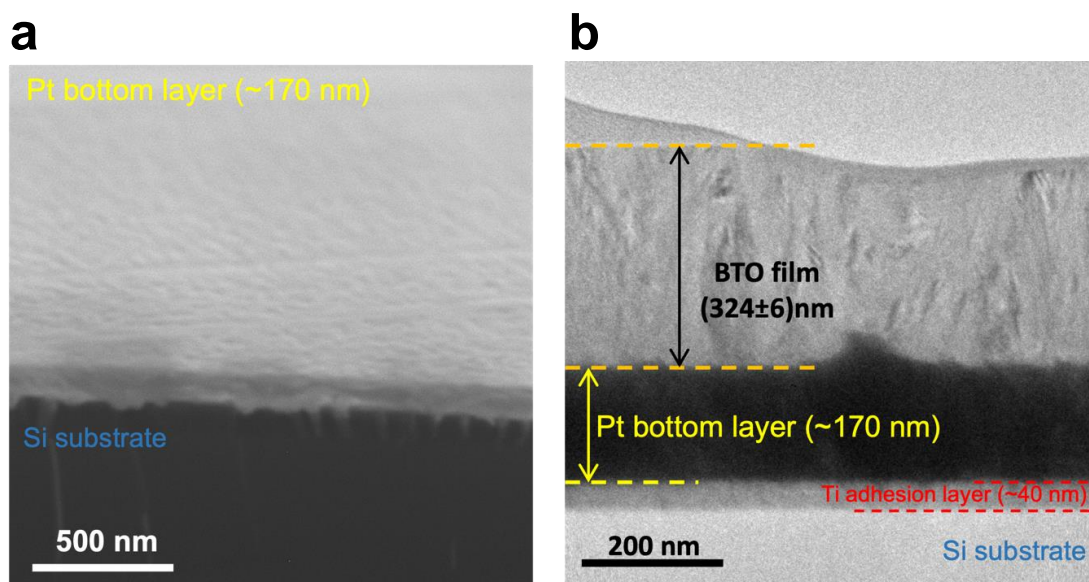
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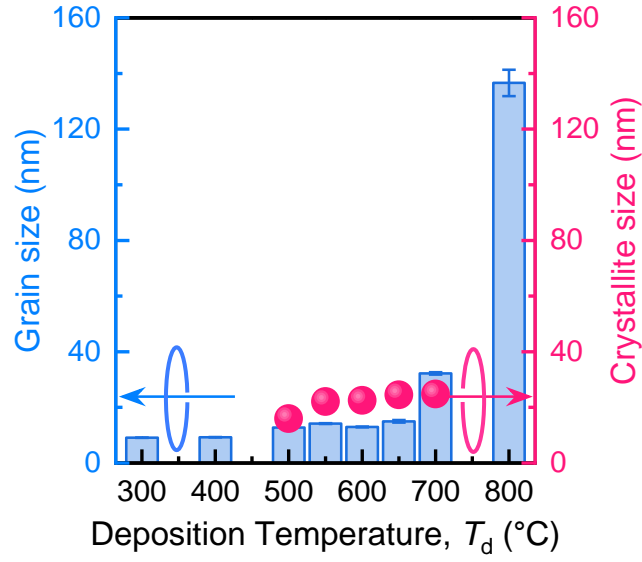
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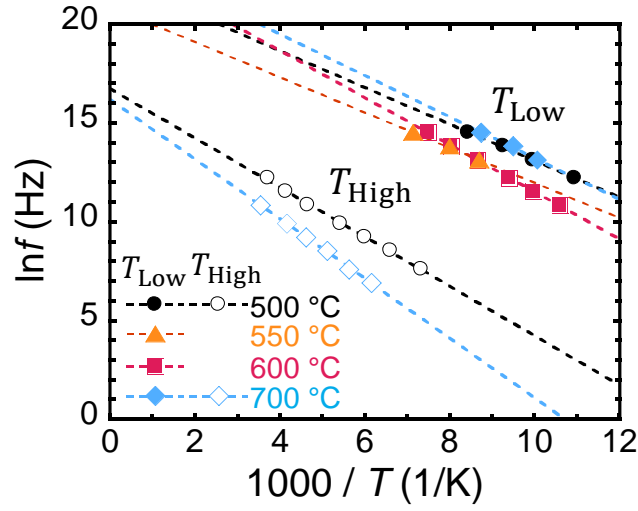
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**Figure S1.** (a) Top SEM image of Pt bottom electrode prior to BTO deposition and (b) their cross-sectional view observed via SEM after BTO deposition at high temperature.



**Figure S2.**  $T_d$  dependence of the average grain size estimated from SEM and the average crystallite size estimated from the BTO(100) and BTO(110) XRD peaks of the PLD-BTO films.



**Figure S3.** Arrhenius plot of the frequency dependence of the temperature at which  $\tan \delta$  exhibited maximum of the PLD-BTO films grown at  $T_d = 500\text{--}700$  °C.

**Table S1.** The activation energies for each polarization for  $T_{Low}$  and  $T_{High}$  of the PLD-BTO films grown at  $T_d = 500\text{--}700$  °C.

Deposition temperature, $T_d$ (°C)	$T_{Low}$ (eV)	$T_{High}$ (eV)
500	0.08	0.11
550	0.08	—
600	0.10	—
700	0.09	0.13