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MDPI

Supplementary Materials

Homogeneous versus Inhomogeneous Polarization Switching in PZT Thin Films: Impact of the Structural Quality and Correlation to the Negative Capacitance Effect

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1. TEM studies

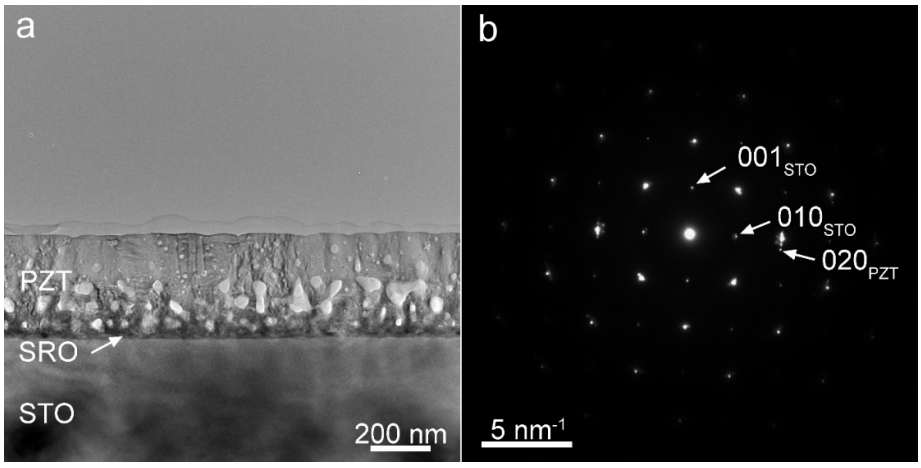

Figure S1. (**a**) TEM image at low magnification of the PZT/SRO/STO structure and (**b**) the corresponding SAED pattern from an area which include both the substrate and the thin films.

2. PFM studies

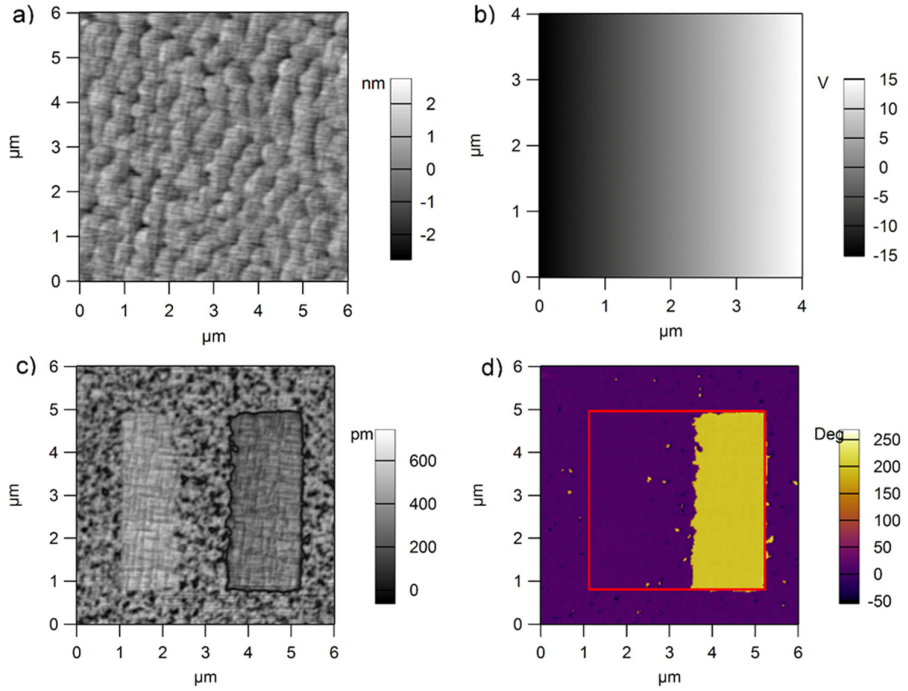

Figure S2. Topography (**a**), poling map (**b**) amplitude (**c**) and phase (**d**) of the PFM signal obtained after poling in the case of the PZT films deposited from the in-house made, pure target on single crystal STO substrate with bottom SRO electrode.

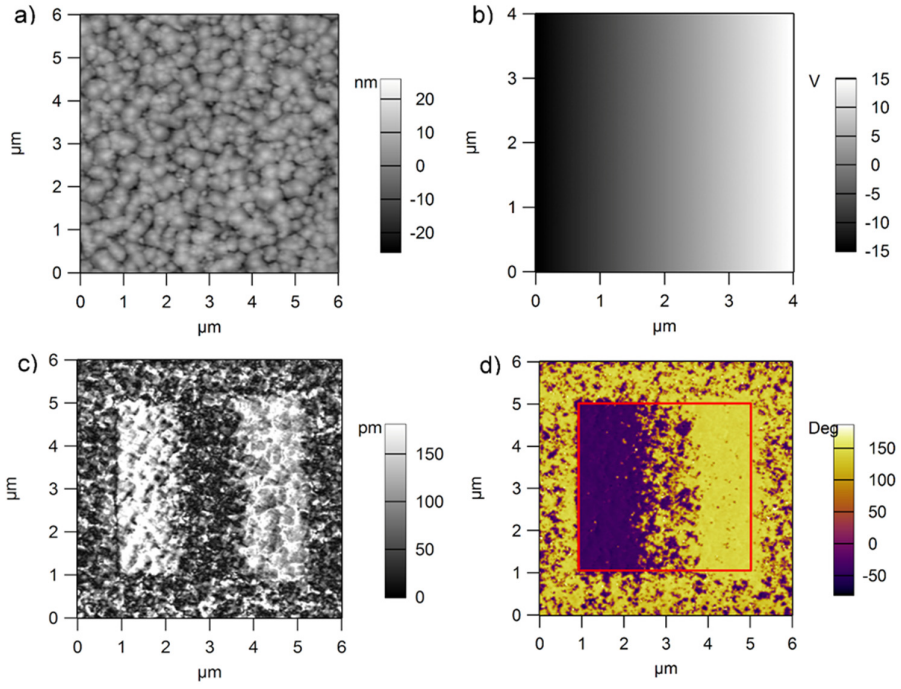

Figure S3. Topography (**a**), poling map (**b**) amplitude (**c**) and phase (**d**) of the PFM signal obtained after poling in the case of the PZT films deposited by sol-gel on single crystal STO substrate with bottom SRO electrode.