



Figure 1 (a) Scanning transmission electron microscopy with spatially resolved electron energy loss spectroscopy (STEM-EELS) of an $(ATiO_3)_{20}AO$ film with $A = Ba_{0.6}Sr_{0.4}$. Barium atoms are shown in green and titanium atoms in magenta. Arrows indicate the $(AO)_2$ layers of the Ruddlesden-Popper phases separated by 20 perovskite unit cells. (b) Diagram of an MIM capacitor heterostructure. (c) Hysteresis loops measured from the MIM heterostructure represented by (b) at 233 K and 83 K. (d) Room temperature dielectric tunability of the same MIM heterostructure.