Abstract Submitted
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Effects of La-doped $BaSnO_3$epitaxial electrode on the ferroelectric properties of $BaTiO_3$[1] HAHOON LEE, YOUNG MO KIM, YOUJUNG KIM, JUYEON SHIN, KOOKRIN CHAR, Seoul Natl Univ — In order to integrate the newly discovered high-mobility perovskite semiconductor $BaSnO_3$ with a ferroelectric perovskite, we have grown epitaxial ferroelectric $BaTiO_3$ (BTO) on top of the 4 % La-doped $BaSnO_3$ (BLSO). X-ray diffraction measurement suggests that the BTO film on top of BLSO electrode is tensilely strained due to the larger lattice constant of BLSO. An all epitaxial sandwich structure of BLSO/BTO/BLSO was fabricated in order to measure the ferroelectric properties of the BTO under tensile strain. The polarization-electric field (P-E) hysteresis curve will be discussed from the viewpoint of the tensile strain. In addition, the breakdown field will be measured to evaluate the potential of BTO for a gate oxide on top of BLSO.

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