

Supporting Information

Electric-field controlled reversible high-temperature perpendicular magnetic anisotropy in cobaltate-manganite heterostructures

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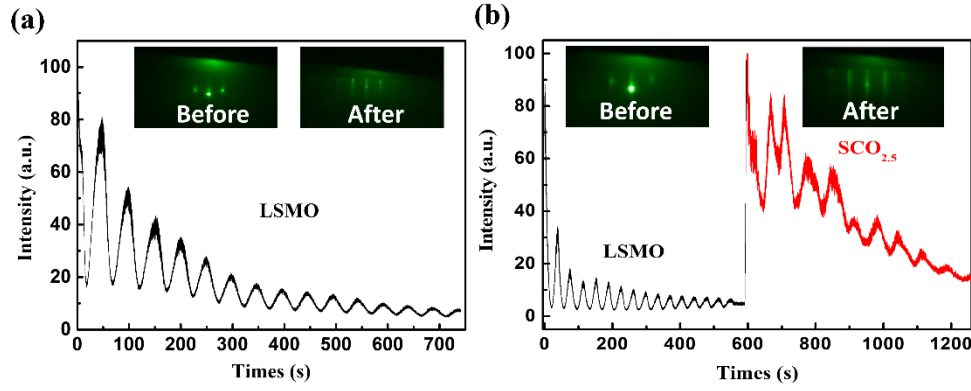


Fig. S1 RHEED oscillation curves of single LSMO films and B-SCO/LSMO bilayer. Insets are the Rheed patterns of films during the deposition.

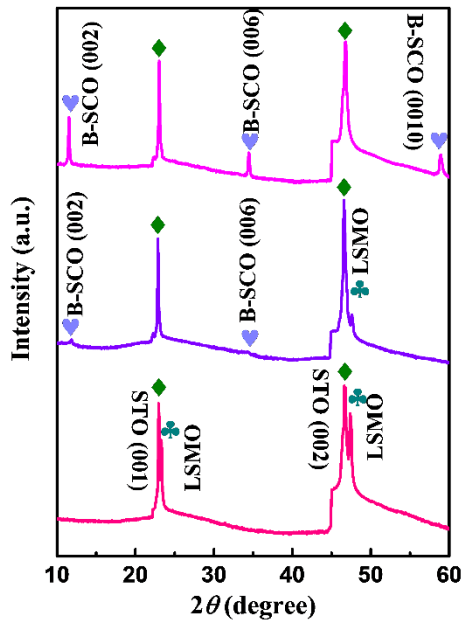


Fig. S2 X-ray diffraction spectra of LSMO single films (bottom, 100u.c.), B-SCO (20 u.c.)/LSMO (20 u.c.) bilayer (middle) and single B-SCO films (top, 100 u.c.) between the range of 10-60 degree.

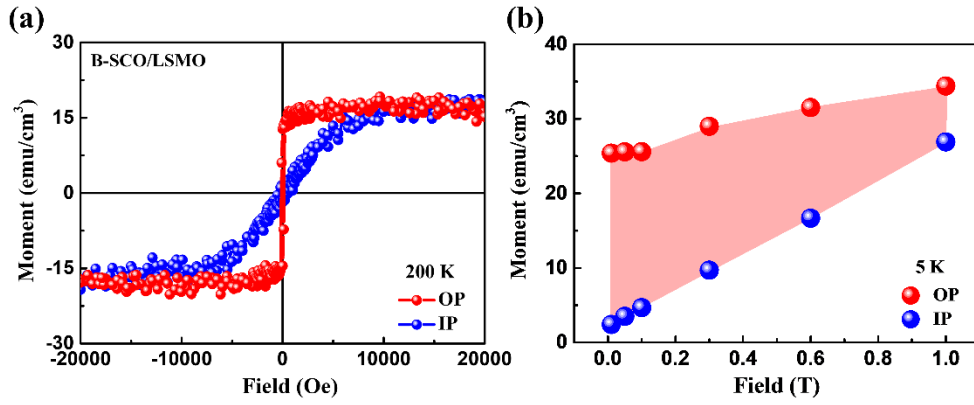


Fig. S3 (a) Field dependence of moment for B-SCO/LSMO at 200 K. (b) The moment as a function of field of B-SCO/LSMO bilayer. The data is obtained from the Fig. 3(a) at 5 K.

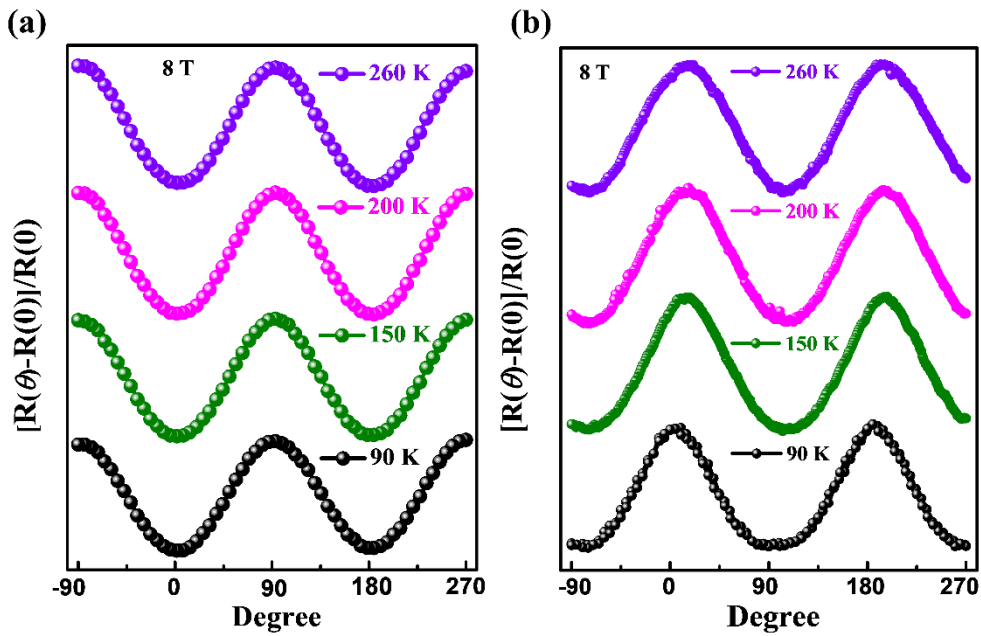


Fig. S4 Angular dependence of magnetoresistance of single LSMO films (a) and B-SCO/LSMO bilayer at different temperature.

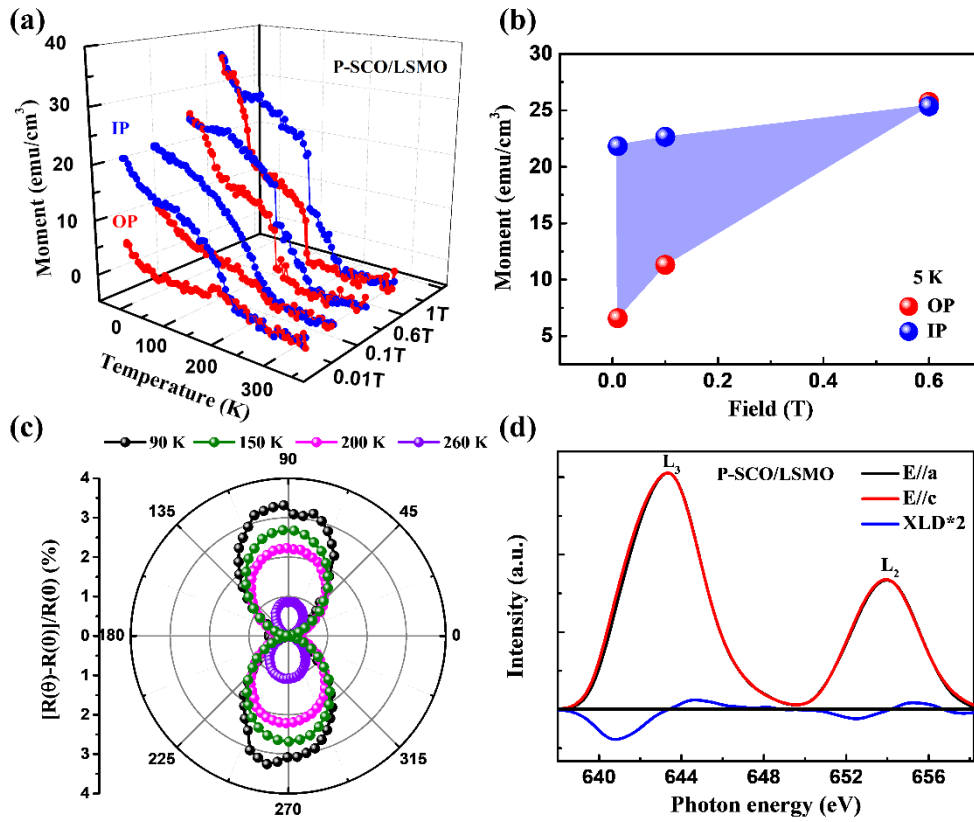


Fig. S5 (a) In-plane and out-of-plane moment versus temperature curve of P-SCO/LSMO bilayer. (b) Moment as function of field of P-SCO/LSMO bilayer. (c) The polar plots of angular dependence of magnetoresistance of P-SCO/LSMO bilayer, measured at different temperature. (d) XLD spectra of Mn *L*-edge of P-SCO/LSMO bilayer.