

EVIDENCE FOR THE MAGNETIC PHASE
SEPARATION INDUCED BY A STRUCTURAL
INSTABILITY IN POLYCRYSTALLINE
SAMPLES OF $\text{La}_{1-x}\text{Sr}_x\text{MnO}_{3-\delta}$

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S u m m a r y

Strong suppression of ferromagnetism and conductivity has been observed in $\text{La}_{1-x}\text{Sr}_x\text{MnO}_{3-\delta}$ polycrystalline samples at the crossover from the monoclinic to rhombohedral phase ($x \approx 0.21$). The results are well described in terms of magnetic phase separation arising as a result of the combined effect of oxygen nonstoichiometry and microstrain, the latter being extremely enhanced in the vicinity of the concentration boundary between two structural phases.