

Antiferroelectric Phase in Sm Doped BiFeO_3

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We have identified a composition in Sm doped BiFeO_3 which exhibits a complex mixture of ferroelectric phase and an antiferroelectric phase. **Left** shows a high resolution TEM image of a region displaying an interface between a rhombohedral ferroelectric phase (FE matrix) and antiferroelectric (antipolar clusters). **Right** schematically shows how antiparallel shift in A-site cations (arrows) gives rise to antiferroelectric structure.

