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Structural study of manganese multiferroics in phase diagram $Ba_{1-x}Sr_xMn_{1-y}Ti_yO_3$.[1] KAMAL CHAPAGAIN, OMAR CHMAISSEM, STANISLAW KOLESNIK, DENNIS BROWN, BOGDAN DABROWSKI, Northern Illinois University — We have designed and synthesized unique manganese multiferroics exhibiting ferroelectricity and magnetism originating solely from Mn ion. Structural study shows large ferroelectric-type distortion, which are reduced by antiferromagnetism. Ti-substituted compounds with increase temperature and size of ferroelectric polarizations show an unusually large hysteresis of ferroelectric transitions and strong dependence of pressure.

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