Abstract Submitted for the MAR08 Meeting of The American Physical Society

First-principles approach to lattice-mediated magnetoelectric effects¹ JORGE INIGUEZ, ICMAB-CSIC — I will present a first-principles scheme for the computation of the magnetoelectric (ME) response of magnetic insulators. The method focuses on the *lattice-mediated* part of the magnetic response to an electric field, which can be expected to be the dominant contribution in materials displaying a strong coupling, thus avoiding the technical difficulties associated to the treatment of a purely electronic ME effect. I will describe results of calcultions for Cr_2O_3 and other model magnetoelectric compounds.

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