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Electric field modulation of magnetism in multiferroics

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Multiferroics with coexistent ferroelectric and magnetic orders can provide an interesting laboratory to test unprecedented magnetoelectric responses and their possible applications. One such example is the dynamical and/or resonant coupling between the magnetic and electric dipoles in a solid. Here, as the examples of electric field modulation of magnetism in multiferroics, (1) the multiferroic domain wall dynamics and (2) the electric-dipole active magnetic responses are discussed with the review of recent experimental observations.