

Abstract Submitted
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A one-cent room-temperature magnetoelectric sensor CASEY ISRAEL, NEIL MATHUR, Department of Materials Science, University of Cambridge, JAMES SCOTT, Department of Earth Sciences, University of Cambridge — The replacement of silver-palladium with nickel as an electrode material is reducing the cost of industrially manufactured barium titanate based multilayer capacitors, but nickel is magnetic. We discuss direct magnetoelectric coupling at room temperature in these one-cent multilayer capacitors, the influence of the multilayer geometry on this strain-mediated coupling, and why these capacitors might be adopted as cheap magnetic-field sensors that do not require an electrical power source.

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