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# 【817】Tuning Ferromagnetism at Room Temperature by Visible Light

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Most of the digital information today is encoded in the magnetization of ferromagnetic domains. Writing a bit is usually achieved by rotating domains, which relies on magnetic fields. An alternative approach is to change the magnetic state directly by changing the interaction between spins. Correlated oxides are ideal materials for this because the effect of small external control parameter is amplified by the electronic correlations. Here, we present a radically new method for reversible, light-induced tuning of ferromagnetism at room temperature using a CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>/La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> heterostructure. We demonstrate that photo-induced charge carriers from the CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> photovoltaic perovskite efficiently dope the La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> thin film and melt the ferromagnetism.

**Authors:** Dr NÁFRÁDI, Bálint (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Mr SZIRMAI, Péter (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Dr SPINA, Masimo (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Dr PISONI, Andrea (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Mr METTAN, Xavier (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Prof. NEMES, Norbert (Laboratorio de Heteroestructuras con aplicación en Spintronica, Unidad Asociada Consejo Superior de Investigaciones Científicas/Universidad Complutense Madrid, ES-28049 Madrid, Spain); Prof. FORRÓ, László (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland); Dr HORVATH, Endre (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland)

**Presenter:** Dr NÁFRÁDI, Bálint (Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de Lausanne, Switzerland)

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