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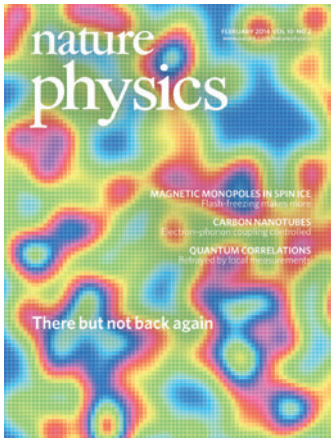

COVER IMAGE

Chemical substitution often mimics the effects of applied pressure on a compound, and 'doping' is a standard way to reach a quantum critical point from a given phase. However, CeCoIn5 is a natural quantum critical superconductor, and Cd-doping tunes the system away from criticality. Applied pressure reverses the effect of doping, but although superconductivity is restored, quantum criticality is not.

Letter p120; News & Views p94

IMAGE: NICHOLAS CURRO

COVER DESIGN: ALLEN BEATTIE

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Magnetic monopoles in spin ice
Flash-freezing makes more
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Betrayed by local measurements
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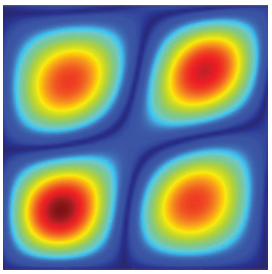
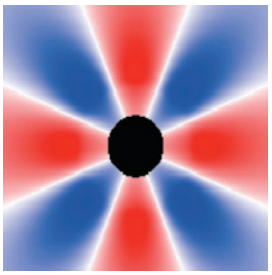


In open quantum systems the correlations between the system and its environment play an important role. A trapped-ion experiment demonstrates that these correlations can be detected without accessing or knowing anything about the environment or its interactions.
Letter p105



Ensembles of micrometre-sized water droplets in a laminar oil flow are ideal systems for studying non-equilibrium dynamics. In the case of two-dimensional confinement, the interactions between the droplets' flow-induced dipole moments lead to long-range velocity correlations and four-fold angular symmetry — behaviour that can be understood from first-principle hydrodynamics calculations.
Letter p140; News & Views p87

ARTICLES

FUTURES

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