

COVER IMAGE

Mechanical metamaterials are artificial structures whose properties originate from their geometry. In such structures, it is now shown that topological modes can exist that are robust against a range of structural deformations. Letter p153; News & Views p95

IMAGE: JAYSON PAULOSE

COVER DESIGN: ALLEN BEATTIE

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Quantum steering

Three's a party
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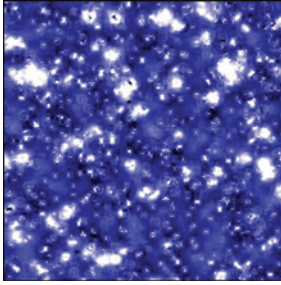
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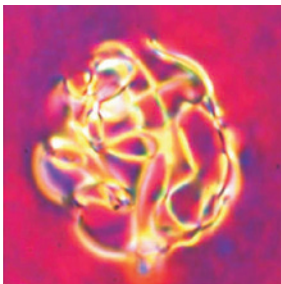
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The mechanism holding Cooper pairs together in iron-based superconductors is highly debated. Finding the 'fingerprint' of the pairing mechanism would be a leap forward.
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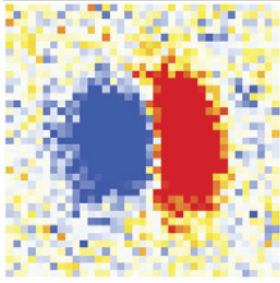
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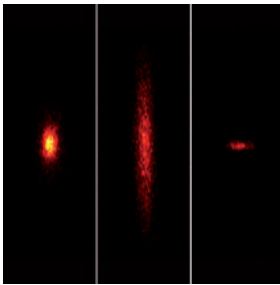
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Chern numbers characterize the quantum Hall effect conductance — non-zero values are associated with topological phases. Previously only spotted in electronic systems, they have now been measured in ultracold atoms subject to artificial gauge fields. Letter p162; Commentary p90



To gain insight into the properties of quantum matter, a superatom — an ensemble of strongly interacting atoms in the Rydberg blockade regime — is created and characterized by precisely controlling the density and Rydberg excitations. Letter p157

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