

vortices in unconventional superconductors pdf

In the relativistic quantum vacuum they are known as cosmic strings, in superconductors as quantized flux lines, and in superfluids, low-density atomic Bose-Einstein condensates and neutron stars as quantized vortex lines.

Vortices in Unconventional Superconductors and Superfluids

Vortices in Unconventional Superconductors and Superfluids PDF | Using a time-dependent two-component Ginzburg-Landau theory, we have studied the flow resistivity of vortices in the time-reversal-symmetry-breaking (T-breaking) phases of unconventional superconductors.

Vortices In Unconventional Superconductors And Superfluids

problem of vortices inside superconductors. Specifically, we study; 1) the effect of the magnetic ... neutron resonance found quite generally in neutron scattering measurements on unconventional superconductors. We reproduce qualitatively (and in some cases semi-quantitatively) several of the recent experimental results.

Vortices in unconventional correlated superconductors

Vortices and domain walls: 'Wormholes' in unconventional superconductors View the table of contents for this issue, or go to the journal homepage for more Home Search Collections Journals About ...

Vortices and domain walls: 'Wormholes' in unconventional

vortices in the time-reversal-symmetry-breaking (T-breaking) phases of unconventional superconductors. The free vortex flow resistivity is found to be generally nonlinear against the magnetic field.

(PDF) Vortex flow in a two-component unconventional

Moving Vortices in Superconductors Researchers have made the first direct visual observation and measurement of ultra-fast vortex dynamics in superconductors.

Moving Vortices in Superconductors - viXra

Vortex structures imaged in unconventional superconductors. No evidence for chiral domain walls in Sr₂RuO₄. Vortex lattice in Sr₂RuO₄ undergoes triangular: square structural transition. Superfluid density for Co-doped SrFe₂As₂ and BaFe₂As₂ well fit by two band model. Fit parameters give insights into symmetry of order parameter in pnictide crystals.

Vortex imaging in unconventional superconductors

Thus--in addition to conventional vortices--the topological structure of the unconventional superconducting order of Sr₂RuO₄ may allow for at least two additional topologically stable defects.

Explorations of domain walls and half quantum vortices in

Russian researchers, together with their French colleagues, have discovered that a genuine feature of superconductors--"quantum Abrikosov vortices of supercurrent"--can also exist in an ordinary ...

Superconducting vortices quantize ordinary metal - phys.org

A proposal of studying vortices with half magnetic flux quanta in heavy-fermion superconductors in three polycrystalline configurations was reported in 1987 by V. B. Geshkenbein, A. Larkin and A. Barone in 1987.

Unconventional superconductor - Wikipedia

Superconductivity is a phenomenon of exactly zero electrical resistance and expulsion of magnetic flux fields occurring in certain materials, called superconductors, when cooled below a characteristic critical temperature.

Superconductivity - Wikipedia

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Abstract. Quasiparticles in the vortex lattice of strongly type-II superconductors are investigated by means of a singular gauge transformation applied to the tight binding lattice Bogoliubov-de Gennes Hamiltonian.

Quasiparticles and Vortices in Unconventional

Quasiparticles in the vortex lattice of strongly type-II superconductors are investigated by means of a singular gauge transformation applied to the tight binding lattice Bogoliubov-de Gennes Hamiltonian.

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