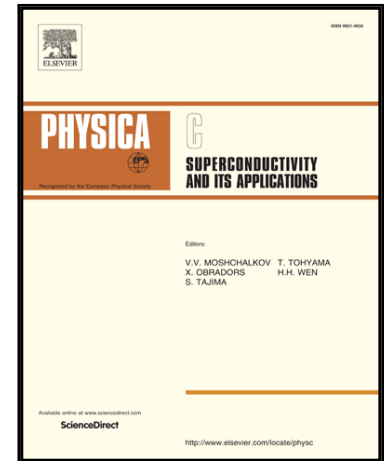


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Little-Parks effect in proximity superconductor-ferromagnet coaxial cylinders

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Highlights

- We use the generalized Usadel equations in gauge-invariant form to study the Little-Parks effect in hybrid SC/FM proximity cylinders.
- The switching phenomena of the induced superconductivity in the ferromagnet with various vorticities are investigated in detail by solving self-consistently the Usadel equations.
- Numerical analysis shows that the vortex states are most energetically favorable than the usual superconducting ground state when the ferromagnetic radius is large.

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