

Topological Aspects of Triplet Superconductors

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Abstract: In this paper, using the ϕ -mapping theory, it is shown that two kinds of topological defects, i.e., the vortex lines and the monopoles exist in the helical configuration of magnetic field in triplet superconductors. And the inner topological structure of these defects is studied. Because the knot solitons in the triplet superconductors are characterized by the Hopf invariant, we also establish a relationship between the Hopf invariant and the linking number of knots family, and reveal the inner topological structure of the Hopf invariant.

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Key words: triplet superconductor, topological defects, Hopf invariant

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