The dynamics of magnetic vortices in type II superconductors with pinning sites studied by the time dependent Ginzburg–Landau model

We investigate the dynamics of magnetic vortices in type II superconductors with normal state pinning sites using the Ginzburg–Landau equations. Simulation results demonstrate hopping of vortices between pinning sites, influenced by external magnetic fields and external currents. The system is highly nonlinear and the vortices show complex nonlinear dynamical behaviour.

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