

Ground state sign-changing solution for Schrödinger-Poisson system with critical growth

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Abstract

This article is devoted to study the nonlinear Schrödinger-Poisson system with pure power nonlinearities $-\Delta u + u + |\phi u|^{p-1}u + |u|^4u, \text{ and } \phi = u^2, \text{ where } 4 < p < 5$. By employing constraint variational method and a variant of the classical deformation lemma, we show the existence of one ground state sign-changing solution with precisely two nodal domains, which complements the recent work of Wang et al. (missing citation).

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Radial-Sign-changing-SP-Critical-Case.pdf available at <https://authorea.com/users/363235/articles/484061-ground-state-sign-changing-solution-for-schr-o-dinger-poisson-system-with-critical-growth>

References