

Explode-Decay Solitons in the Generalized Inhomogeneous Higher-Order Nonlinear Schrödinger Equations

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In this paper we investigate the generalized inhomogeneous higher-order nonlinear Schrödinger equations, generated recently by deforming the inhomogeneous Heisenberg ferromagnetic spin system through a space curve formalism [Phys. Lett. A **352**, 64 (2006)] and construct their multisoliton solutions, using gauge transformation. The amplitude of the bright soliton solutions generated grows and decays with time, and there is an exchange of energy between soliton trains during interaction. – PACS numbers: 02.30.lk, 02.30.Jr, 05.45.Yv.

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