Quantum Physics

Solitons of two-component Bose-Einstein condensates modulated in space and time

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In this paper we present soliton solutions of two coupled nonlinear Schodinger equations modulated in the bspace and time. The approach allows us to obatin solitons with large variety of solutions depending on the nonlinearity and the potential profiles. As examples we show three cases with soliton solution in such system, one of them with potential varying between repulsive and attractive behavior and the others with nonlinearity localized and delocalized, respectively.

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