Abstracts

Chirosolitons: Unique Spatial Solitons in Chiral Media

K. Hayata and M. Koshiba. "Chirosolitons: Unique Spatial Solitons in Chiral Media." 1995 Transactions on Microwave Theory and Techniques 43.8 (Aug. 1995 [T-MTT]): 1814-1818.

We show analytically that unique spatial solitons (chirosolitons) can propagate in chiral media that exhibit Kerr-type nonlinearities. In contrast to the solitons in achiral media, unique features of the chirosolitons can be seen in their elliptically polarized nature, the bisoliton state, and the possibility of superluminous phase propagation. Conditions for supporting the bright- and dark-type chirosolitons are discussed.

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