

Generating topological states with non-Hermiticity and symmetry breaking

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Abstract

We present our recent theoretical and experimental works regarding ways to generate photonic topological states in photonic crystals, by breaking the crystal symmetry, with adding phase-change materials / non-Hermitian periodic modulation. We also show various interplays of polarization singular points and exceptional points in non-Hermitian photonic crystals, leading to interesting chiral properties.