

# Exceptional Point Bifurcations in Coupled Nanocavity Arrays

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Exceptional points (EPs) are spectral singularities at which two or more eigenvalues of a non-Hermitian operator (often Hamiltonians), together with their corresponding eigenvectors, coalesce. Systems operating at or near EPs can give rise to many unique phenomena, such as self-termination of laser and unidirectional invisibility. However, in the aforementioned works, EPs are accessed below the lasing threshold, and therefore are of linear nature. In this work, we experimentally locate and track the EPs above the lasing threshold in coupled semiconductor photonic crystal nanocavities featuring gain/loss components. These EPs are inherently nonlinear, *i.e.* they are bifurcation points of a nonlinear dynamical system.