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Title: Exceptional points in axion-type photonic structures.

Abstract: We study the emergence of exceptional points in layered photonic structures with an axion-type response. Those structures are periodic layers of dielectric and magnetic materials with gain and loss. The properties of the photonic structure are modelled by the Maxwell equation with an axion term which causes coupling between electric and magnetic fields. Under certain conditions such a system can exhibit an exceptional point that corresponds to the spectral singularity where eigenvalues and eigenvectors vanish simultaneously. We also discuss potential applications of such structures for sensing.

Reference: M. Vieira, S. Sergeenkov, and C. Furtado, *Phys. Rev. A* **96**, 013852 (2017).