

Abstract Submitted
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Random Matrix Theory Approach to Chaotic Coherent Perfect Absorbers¹ HUANAN LI, SUWUN SUWUNNARAT, Department of Physics, Wesleyan University, Middletown, Connecticut 06459, USA, RAGNAR FLEISCHMANN, Max Planck Institute for Dynamics and Self-organization (MPIDS), 37077 Gottingen, Germany, HOLGER SCHANZ, Institute for Mechanical Engineering, Hochschule Magdeburg-Stendal, 39114 Magdeburg, Germany, TSAMPIKOS KOTTOS, Department of Physics, Wesleyan University, Middletown, Connecticut 06459, USA — We investigate coherent perfect absorption (CPA) in complex systems using Random-Matrix Theory. In terms of eigenmodes of the isolated cavity, which carry the information about the chaotic nature of the target, the lossy strength and energy realizing CPA are expressed and further the corresponding statistics feature are given by analytical formula. Our results are tested against complex networks of coupled resonators and chaotic quantum graph as CPA cavities

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