Wave chaos in a new class of optical microcavity

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We introduce a new class of open optical microcavity whose confinement and directional emission properties can be engineered through modification of a space-dependent refractive index. Numerical results are provided for a microdisc with Gaussian deformation of the refractive index. This leads to a new way of breaking integrability and inducing chaos in the classically equivalent system (photonic billiard) and to the potential fabrication of reconfigurable microlasers.

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