Wave chaos in a new class of optical microcavity

G. Painchaud-April, J. Poirier, P.-Y. St-Louis, J. Lépine, S. Saidi, L. J. Dubé

Département de physique, de génie physique, et d'optique
Université Laval, Cité universitaire, Québec, Canada

Laboratoire de chimie-physique – Matière et rayonnement
Université Pierre et Marie Curie, Paris, France

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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