

Mirror manipulation by attractive and repulsive forces of guided waves

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Abstract: Two mirrors guiding laser light may experience an either attractive or repulsive force, according to the type of eigenmode they guide. We propose a method for the control over the motion of a mirror by changing the operation wavelength along the dispersion curve of the mode. In addition, a novel method for trapping a mirror in a stable equilibrium, based on a superposition of two modes, is presented. The mirror is then trapped by being exposed to light only from one of its sides.

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OCIS codes: (260.21100) Electromagnetic theory; (140.7010) Trapping; (130.2790) Guided waves; (230.1480) Bragg reflectors
