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Title

Coherent Generation of Acoustic Phonons in Optical Microcavities

Source

Chinese Journal of Physics, vol.49, no.1, Feb. 2011, 127-32. Publisher: Physical Society of the Republic of China, Taiwan.

Abstract

Ultrafast coherent generation of acoustic phonons is studied in a semiconductor microcavity. In this work, we experimentally study the effects of the confinement of a light pulse in the cavity spacer. By changing the laser wavelength and thus the detuning with the microcavity mode, we show how the generation and detection of acoustic phonons is enhanced. The reported results open new perspectives for enhancing the generation and detection efficiency in picosecond acoustics as well as for the development of amplified THz monochromatic hypersound sources. (24 References).