

Control of emission spectrum of a quantum dot coupled to phonon and electron reservoirs

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Abstract

© Published under licence by IOP Publishing Ltd. The influence of phonon and electron reservoirs on the spectral emission from a quantum-dot cavity system is investigated. The line shapes strongly depend on the energy dependence of the exciton self-energy function, that in turn depends on the tunneling rate. This allows one to control the light emission from a single quantum dot.

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