

Cavity quantum dynamics with pumped few-level emitters

Viorel Ciornea, Profirie Bardetski and Mihai A. Macovei

Institute of Applied Physics, Academy of Sciences of Moldova,

Chisinau 2028, Republic of Moldova

Cavity quantum electrodynamics attracted a lot of attention due to possible applications in various areas. Here we demonstrate increased photon-photon correlations in a setup consisting of a moderately pumped two-level emitter embedded in an optical microresonator. The effect occurs beyond the secular approximation [1]. Furthermore, in a slightly modified scheme, the cavity field can be conveniently modified using quantum interference effects [2].

[1] V. Ciornea, P. Bardetski, M. A. Macovei, Phys. Rev. A 88, 023851 (2013).

[2] V. Ciornea, M. A. Macovei, Phys. Rev. A 90, 043837 (2014).

Unterstützt von / Supported by



Alexander von Humboldt
Stiftung/Foundation