



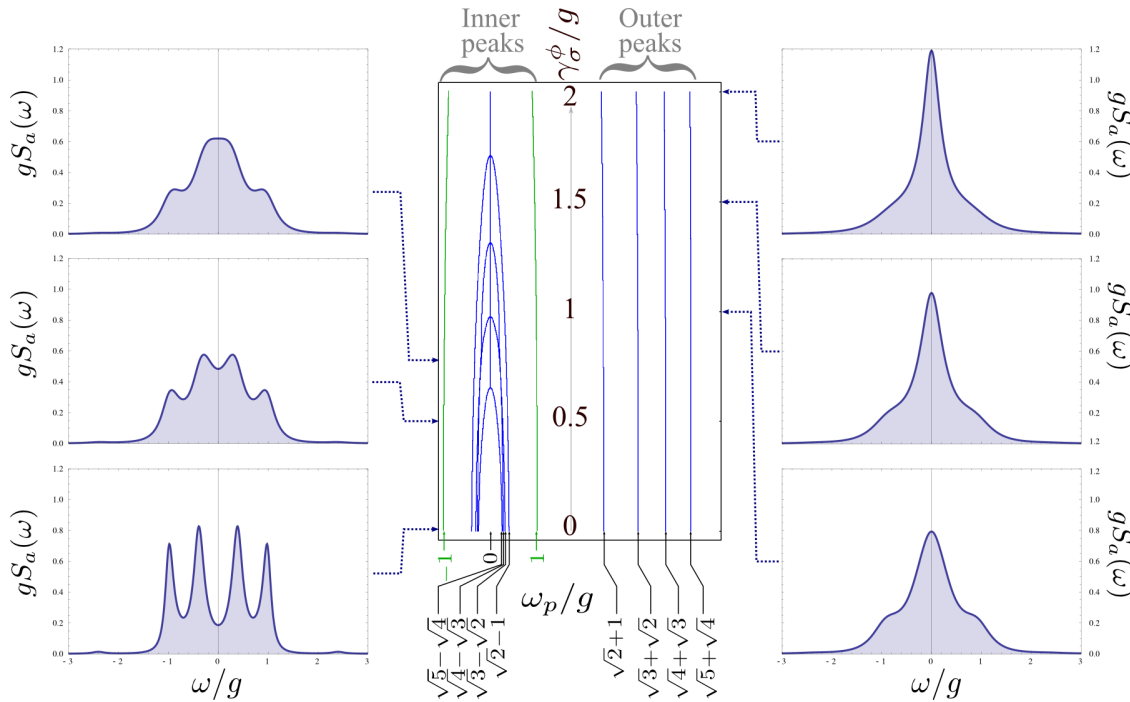
DEPHASING OF STRONG-COUPPLING IN THE NONLINEAR REGIME

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We investigate how pure dephasing [1, 2] affects strong-coupling of quantum dots in microcavities [3, 4] in the nonlinear regime [5]. We report triplet lineshapes, unexpected from the Jaynes-Cumming level structure [6]. We relate our findings to recent experiments [7].



Photoluminescence spectra for various rates of pure dephasing: the Jaynes-Cumming quadruplet—from direct transitions between the dressed states—melts into a triplet with increasing dephasing. This evolution remains in strong-coupling throughout as evidenced by the dressed states structure (central panel).

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