

## Module Optical Cavity Coupling



### Overview

Long-distance coupling between two optical cavities is enabled through a taper fiber. Phase shift and loss induced by the taper lead to complex coupling strength and hence observation of various distinctive cou.



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The ever-increasing demands for computing power are beyond the capabilities of pluggable optical modules. Higher connectivity bandwidth can be achieved in a sma.



When atoms or molecules are placed in an optical cavity, they can coherently exchange photonic energy with optical cavity vacuum fields, entering the strong coupling interaction regime.



Mode coupling is a phenomenon where energy is transferred between different propagation modes of a waveguide or an optical cavity. It is analyzed by ...



To conclude, we have demonstrated a taper-assisted coupling between two optical cavities featuring complex coupling strength, which supports distinctive coupling conditions and ...



In this work, we present a universal framework for pulse-comb synthesis under cavity EO modulation, where coupling strength and modulation ...



This platform opens new avenues for cavity-QED experiments, with potential applications spanning cavity-mediated interactions between distinct atomic species, interconnects for quantum ...



This surprising lifetime enhancement, which results from the interference of decay channels, showcases the use of multimode strong coupling as a general strategy to control extrinsic ...



Here, we report a method to purely modulate the coupling rate by exploiting an optical analogue of superradiance in an array of bidirectionally interacting microring cavities.



In this work, we present a universal framework for pulse-comb synthesis under cavity EO modulation, where coupling strength and modulation bandwidth far exceed the cavity's free spectral...



Mode coupling is a phenomenon where energy is transferred between different propagation modes of a waveguide or an optical cavity. It is analyzed by decomposing light into the modes of an undisturbed ...



Efficient coupling of light from an optical cavity to a single-mode fiber is required in a range of quantum technologies. In this work we consider the coupling of a high-finesse macroscopic Fabry-Pérot (FP) ...



Coupled systems of optical waveguides and micro cavities provide a powerful platform for integrated optical components with applications ranging from optical experiments to communication networks.

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