Superconducting and Optical Modules

The research and development of flip-chip and optical pulse drive technology for superconducting circuits were mainly discussed, with a focus on the process of installing photodiodes ...

In this Letter, we present a hardware-efficient bosonic module architecture that provides a complete blueprint for scalable superconducting quantum networking.

Here we demonstrate optical readout of a superconducting transmon qubit through an optical fibre connected via a coaxial cable to a fully integrated piezo-optomechanical transducer.

Superconducting properties at DC and at microwave frequency range were measured by the conventional four-probe method and by using a network analyzer, respectively.

We propose a modular architecture using SNAIL-based parametric coupling to interface Brillouin M2O transducers with long-lived 3D cavities, while maintaining plug-and-play compatibility.

Given these obstacles, innovative solutions for cryogenic optical modulator technologies could lead to new paradigms for future superconducting classical and quantum computing technologies.

Here we describe a single-chip electronic-photonic transmitter that is driven directly by superconducting electronics and is fabricated using a commercial complementary...

We realize direct and coherent transduction between superconducting and photonic circuits based on the triple-resonance electro-optic principle, with integrated devices incorporating ...

In this review, we have discussed different models for single photon detection, followed by research activities carried out employing different superconducting materials over the last 20 years.

CA OPTRONICS GROUP INC"s single-photon detectors module based on superconducting nanowires single photon detector (SNSPDs) have rapidly emerged as a highly promising photon counting ...

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