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## **【162】 Capacitive Coupling between an on-chip resonator and a semiconductor nanowire**

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In low-dimensional semiconducting nanostructures, strong confinement leads to quantization of charges allowing to investigate and control their individual physical properties. Particularly, one-dimensional semiconducting nanowires have attracted a lot of attention as hosts of spin-qubits or, in combination with superconducting leads, as hosts of Andreev levels and Majorana bound states. Here, we present a novel approach to investigate semiconducting nanowires, where we couple capacitively to a superconducting on-chip resonator. We report results on our most recent experiments where we have individually coupled a high-impedance, magnetic-field resilient NbTiN resonators to both a Ge/Si core/shell nanowire, and an InAs nanowire with superconducting leads.

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