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# 【847】Dispersive charge sensing of quantum dots in Ge/Si core/shell nanowires

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Holes in germanium/silicon core/shell nanowires are a powerful platform to study and optimize properties of spin qubits. This is a consequence of the strong, gate-tunable direct Rashba spin-orbit interaction, arising from strong confinement in the nanowire. So far, experiments in this system have been done in DC transport, preventing single-shot readout.

Here, we show gate-dispersive charge sensing measurements in a Ge/Si nanowire device with a tank circuit on the sample PCB. A strontium titanate ring-varactor is employed to achieve in-situ impedance matching down to 11 mK. We present progress towards depleting the nanowire to fewer holes and establishing fast qubit readout.

## Theoretical Work

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