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【843】Enhancing Coherence in Ge/Si Core/Shell Hole Spin Qubits

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We characterize the Ge/Si core/shell nanowires extracting their field effect mobility for various growth parameters. For this, COMSOL simulations are performed to calculate numerically the backgate-to-nanowire capacitance of a realistic device. The observation of sweet spots of the Hahn-echo coherence time of a qubit formed in such a nanowire suggests the presence of low-frequency charge noise. We work on improving nanowire materials to enhance the spin coherence for a new generation of qubit experiments.

Theoretical Work

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