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# 【52】Benchmarking next-generation ion-trap quantum computers

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Individual charged atoms stored in ion-traps are one of the most promising architectures to build a scalable quantum computer. This presentation will provide an overview of current developments to realize high-fidelity control of an arbitrary subset of qubits in a quantum register, recent cross-verification of quantum computers across several architectures (including photons and superconducting qubits), adaptations to realize ion-trap technologies according to industry-standards, and an outlook on how to connect distant ion-trap quantum computers using a telecom-compatible photonic interface.

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