

# Superconducting Quantum Circuit Prototyping Facility

## Qufab

- Prototyping line for devices & circuits in superconducting quantum computers.
- Supports prototyping of superconducting qubits, circuits & 3D integration.
- From R&D to circuits prototyping for commercial apps.

## Device Fabrication Service

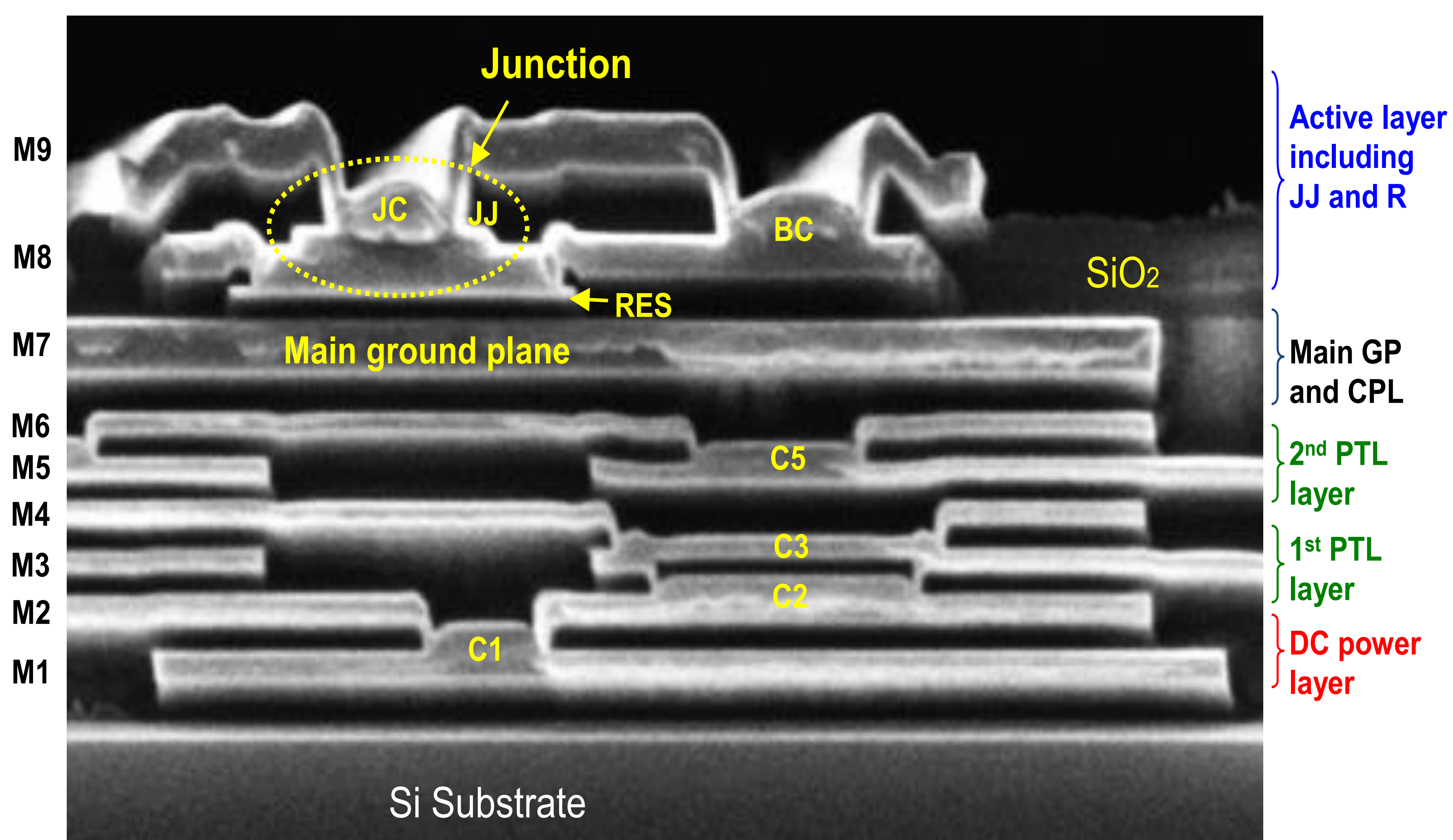
- Cleanroom: 720 m<sup>2</sup>, Class: Mainly 1000
- 4-inch prototyping line
- Key process and measurement equipment: > 50 units
- Thin film : Nb, Al, Pd, Mo, etc.
- Superconducting qubits fabricated by angled deposition
- i-line stepper and electron beam lithography (lithography down to 20 nm)
- Etching systems for fluorine- and chlorine-based processes, compatible with various materials



Qufab facility (partial view)

## Lineup of Prototyping Services

- 9-layer superconducting multilayer interconnects
- TSV (Through-Silicon Via)
- Superconducting bump bonding
- Superconducting 3D integration



Oblique angle deposition system

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