

Voucher Spotlight

Metallic depositions for 3D glass quantum devices

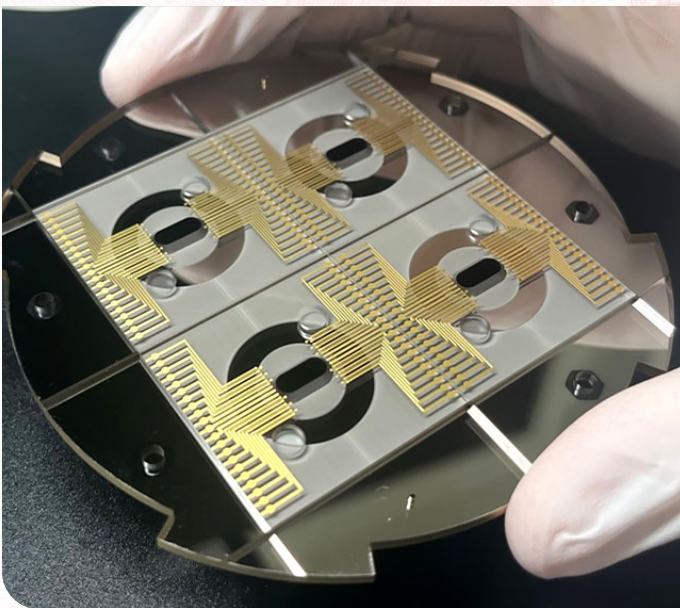
FEMTOPRINT is a leading player in the development of 3D ion traps, a highly promising technology for the generation of high performing qubits. Through the voucher call, FEMTOPRINT is able to make use of the CMi cleanroom at

EPFL to apply metallic coatings to glass-based quantum devices. This is a key enabling step for the industrial scalability of ion trap technologies.

Key aspects of the project are:

- Materials: choosing metals and alloys compatible with glass and suitable for quantum applications
- Coating: optimizing sputtering and evaporation custom processes
- Characterization: adhesion, thickness uniformity, electrical performance (resistivity, capacitance, insulation)
- Applications: manufacturing functional prototypes for quantum computing, sensing, and communication
- Scalability: developing reliable processes for larger production of various quantum geometries.

With the support of the Voucher, FEMTOPRINT combines materials science with quantum technology to create robust and efficient quantum devices for internal research and development and customer-related projects and is part of establishing a local supply chain for quantum technologies.



Printed Circuit Board with metal coating.
Image: University of Oxford, UK

