

Development of quantum repeater utilizing cavity QED.(Nanofiber Quantum Technologies, Inc.)



City	Year of Establishment	Founder
Shinjyu-ku, Tokyo	2022	Masashi Hirose Takao Aoki Akihisa Goban
Partner VC	Latest round of Fundraising	Valuation
-	Series A	Non-Disclosure

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○ Business Plan
Quantum interconnects are essential for multi-unit quantum computing and quantum communication. This project develops the nanofiber cavity-QED based quantum interconnect, which serves both local quantum interconnects and remote quantum networks.

○ Research Outline
This project focuses on the remote-networking direction. It aims to advance NanoQT's platform from demo-ready cavity and atomic systems toward system-level demonstrations of remote entanglement manipulation and application development. By the end of the project period, NanoQT aims to establish:

- Stable production of ultra-low-loss nanofiber cavities
- Two-node remote entanglement generation, manipulation, and distillation
- Development of a multiple-atom entanglement system for quantum communication
- Use case identification and partnership development toward commercialization

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Information & Communication	PCA 2026～2027FY	JPY 915 million	U.S.A.

○International collaborative technology demonstration

- Contract with local partners

NanoQT Inc.:
Market research, site survey, and feasibility study on the U.S. market environment and technology demonstration.

Massachusetts Institute of Technology (MIT):
Theoretical research on improving the precision of quantum repeater functions toward large-scale quantum networks.