

2016 National Research Infrastructure Roadmap Capability Issues Paper

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Question 1: Are there other capability areas that should be considered?

Australian research and future commercialization in the area of quantum communications would benefit greatly from improved capabilities in advanced and precision optical fabrication. In particular, key to the deployment of a quantum communication network is the development of integrated photonic processors. These processors will require advanced low loss planar optical waveguide technology, integrating quantum sources, detectors and modulators.

Australia has a strong research effort in various planar waveguide technologies. Combining and enhancing these efforts through improved lithography and hybridisation capabilities will greatly assist the field of optical quantum technologies in Australia.