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## Photons on Demand

MELBOURNE, Australia, March 18, 2008 -- A device uses the unique properties of diamonds to produce single photons on demand at room temperature. Quantum Communications Victoria (QCV), part of the University of Melbourne's physics department, has developed the single-photon source, which can be accessed with a standard optical fiber connection.

QCV CEO Shane Huntington said, "The availability of a commercial single-photon source will enable many viable quantum technologies to reach the marketplace."

He said it has the potential to be used as a component in secure telecommunications systems, for quantum metrology and other quantum-based applications. Initially, it will be integrated into existing commercial quantum cryptosystems to improve their performance and provide "100-percent secure telecommunications," Huntington said. The company is also investigating applications such as microscopy and optical sensing.

QCV said it is considering partners and investors to participate in a startup to commercialize the single-photon source in various markets. The Melbourne-based development team is collaborating with Magiq Pty. Ltd., a Boston supplier of quantum encryption equipment, to integrate the source into quantum key distribution systems.

QCV is supported by a state infrastructure grant in Victoria.

For more information, visit: [www.unimelb.edu.au](http://www.unimelb.edu.au)

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