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LASER TECHNOLOGY COULD SOON BE AVAILABLE TO SNIFF-OUT EXPLOSIVES

Airport security staff could have new explosive detection technology at their fingertips within the next two years, according to a Scottish-based optoelectronic applications company.

Scientists at Cascade Technologies, the world-leader in the application of quantum cascade lasers (QCLs), have achieved ground-breaking performance with a sensor technology that has shown the potential to fingerprint explosives in a few milliseconds.

It is envisaged that such a sensor would be capable of detecting explosives like the TATP compound that was reported to have been part of the recent terror plots of London underground and the failed attempt to blow up passenger planes. Early results also predict that home-made highly volatile improvised explosive devices (IEDs) could be detected on cross contaminated materials, making the technology a strong contender to expose people who have recently handled such IED.

This 'fingerprinting' system could take the form of a hand-held portable screening unit, but it could also be deployed in airport portals or carousels, post rooms and check points.

John Fuller, chief executive of Cascade Technologies, believes that the technology, which has further applications in detecting chemical warfare agents, toxic industrial chemicals and narcotics, could elevate the detection of explosive agents to a new level – and have a huge impact in cutting queues at airport security points due to its fast response time.

"The technology is at a critical stage and prototype studies have shown that the instantaneous fingerprinting of explosive compounds is possible," he said.

The company – which recently announced it had secured an additional £2.5million of funding from Braveheart Ventures, Scottish Enterprise Scottish Co-investment Fund (SCF), Bank of Scotland Corporate's Growth Equity team and Partnerships UK – is revolutionising the use of QCLs from its base at Stirling Innovation Park.

And Fuller claims the technology is not simply a small improvement on

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other methods of vapour trace detection, but offers a major step change in sensitivity, speed of operation, fingerprinting capability, size and cost.

He said: "We have received significant private funding but the operational development of the technology in this sector could be accelerated if we were to gain further funding.

"The US government has invested about \$40million dollars in similar projects and \$18billion in total on airport security alone, Cascade has had a five figure sum from central government to help demonstrate the technology."

Erwan Normand, chief scientific officer, added: "There is a danger that this technical approach may take longer to get to market for want of further relatively small scale activity to validate the techniques for this important application. The company must receive further government support to have the product fully demonstrated as soon as possible".

Ends.

Notes to editors

- **Cascade Technologies** uses its revolutionary, patented core technology – based around the application of Quantum Cascade Lasers – to design, develop and supply innovative solutions for a wide range of global markets. These include the monitoring of greenhouse and general industrial emissions, hazardous gases, and explosives and drugs.

Based at Stirling University Innovation Park, Cascade Technologies currently has world-class scientists and engineers working under development and supply agreements on several revolutionary products for key blue chip clients, whilst further bespoke product development, manufacturing, marketing and distribution agreements are being sought with customers worldwide.

The company's technology provides highly specific and sensitive measurement, whilst its portable size offers cost savings compared to competitive offerings. It is also immune to many outside influences that typically affect sensors of this type.

Issued by Beattie Communications (www.beattiegroupp.com) on behalf of Cascade Technologies

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