

**COMPOUND  
SEMICONDUCTOR  
TECHNOLOGIES**



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For immediate release.

**CST Global receives £131,600 funding to develop wafer-based, Mid-Wave, IR imagers with the University of Glasgow.**

CST Global, a wholly-owned subsidiary of Sivers IMA Holdings AB and the UK's leading, independent, III-V opto-electronic, semi-conductor foundry, will lead the 'active matrix, single-photon technologies on GaAs' project, in collaboration with the University of Glasgow and Gas Sensing Solutions. The project will develop light-weight, monolithic, mid-wave infrared (MWIR) imagers, capable of detecting a single photon of IR light. This is primarily used to image gasses and diagnose their composition. The potential uses of this technology are widespread, once commercially viable.

Dr Laura Meriggi, device development engineer at CST Global and project lead, explains, "Current, commercially available, MWIR imaging systems require expensive, cryogenic cooling to operate. They are bulky, use high-cost materials and are difficult to produce. However, if produced in a lower cost format, they have the potential to be used to improve human health and safety in a wide range of markets, such as biomedical imaging and environmental monitoring.

Potential applications range from military, home safety and the oil and gas industries, through to the monitoring of urban air quality and pollution.”

The Micro-System Technology (MST) group at the University of Glasgow, with commercial partners, QuantIC and Gas Sensing Solutions (GSS), have previously developed IndiPix™. This is a pioneering, MWIR imager which integrates indium antimonide (InSb) photodiodes (PDs) with gallium arsenide (GaAs) metal semiconductor field effect transistors (MESFETs) to individually address each pixel. IndiPix™ was able to successfully detect and image carbon dioxide concentration. It also operates at room temperature and eliminates the need for flip-chip bonding, the costly and low-yield manufacturing process previously used.

Laura added, “The MWIR imaging project at CST Global will transfer the current monolithic, MWIR imager technology into a compact, commercially viable, 4” wafer format. This will make it a highly cost-effective way of imaging trace gases.”

The MWIR imaging project is government-funded through Innovate UK and the Engineering and Physical Sciences Research Council (EPSRC). CST Global is the project leader and will receive £131,600 contribution over 18 months from October 2017, with a total project fund value of £320,271.

Contact CST Global on 01698 722072 or visit [www.CSTGlobal.uk](http://www.CSTGlobal.uk) for more information.

## **Ends**

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**CST Global Ltd**

4 Stanley Boulevard

Hamilton International Technology Park

Blantyre, Glasgow, G72 0BN

Tel: +44 (0) 1698 722072

Web: [www.CSTGlobal.uk](http://www.CSTGlobal.uk)

email: [enquiries@cstglobal.uk](mailto:enquiries@cstglobal.uk)