

Press release

G-ray Medical and CSEM are set to continue the development of the latanium™ technology

Improving mammogram quality

Hauterive, Neuchatel, 26 February 2018 –G-ray Medical Sàrl, a Neuchâtel startup, is currently developing an ultra-high performance detector dedicated to medical applications and in particular mammography. These ultra-high performance detectors will be made in partnership with CSEM, based on G-ray's revolutionary latanium™ technology. Centred on particle-counting X-ray imaging, this unique solution is set to improve the quality of the images obtained from examinations such as breast cancer screening helping earlier detection and reducing the radiation doses currently needed for mammography.

Breast cancer is the most common form of cancer in women. Since the beginning of the 21st century, there has been a worrying increase in cases in young women. To maximise the chances of recovery, early and reliable diagnosis of the disease is crucial. G-Ray Medical Sàrl intends to offer the medical world a new generation of X-ray imagers based on its latanium™ electronic technology.

To do this G-ray will deepen its collaboration with CSEM. Having already collaborated in the Novipix project, supported by the Swiss National Foundation, the two partners have demonstrated the effectiveness of G-ray Medical's technologies, in particular the covalent bonding of two silicon wafers at low temperatures. Their collaboration has led to the finalisation of a pioneering X-ray detector.

"This new collaboration will enable us to demonstrate the huge potential of developing electronics for our detector," says Philippe Le Corre, CEO of G-ray Medical. "The main challenge is now miniaturising both the sensor's pixels and the system's energy consumption, whilst offering very high-quality X-ray imaging," explains Pierre-François Rüedi, Project Manager at CSEM.

According to Professor Daniel Rüfenacht, a radiology expert at the Hirslanden Group, the project's potential is considerable. "The development of the detector's electronic components must enable the information from the images to be captured in as much detail as possible, at speeds as fast as the human eye." In his opinion, this kind of progress is eagerly anticipated by the medical world, but could also be of benefit in other scientific fields.

Additional information

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About G-ray Medical Sàrl and G-ray Switzerland SA

G-ray Medical Sàrl is the medical arm of G-ray Switzerland SA, a company founded in 2014 in Neuchâtel. G-ray Switzerland is a developing company that has filed several revolutionary patents in the fields of X-ray imaging and new semiconductor assembly techniques. The company now boasts key skills in monolithic detectors with integrated high-resolution CMOS. These innovations apply to a wide range of industries such as medical imaging, automotive, microelectromechanical systems (MEMS), high energy and particle physics, aerospace, defence and security.

Further information is available at www.g-ray.ch

About CSEM

CSEM—technologies that make the difference

CSEM, founded in 1984, is a Swiss research and development center (public-private partnership) specializing in microtechnology, nanotechnology, microelectronics, system engineering, photovoltaics and communications technologies. Around 450 highly qualified specialists from various scientific and technical disciplines work for CSEM in Neuchâtel, Zurich, Muttenz, Alpnach, and Landquart.

Further information is available at www.csem.ch

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