Spin-out in cutting-edge light source technology

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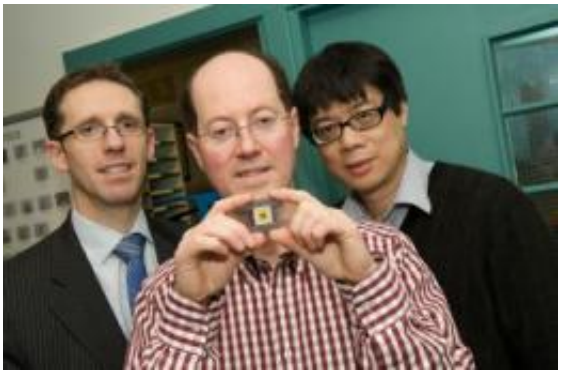

The photo shows, left to right: Dr. Jim Bonar, Chief Executive of mLED; Professor Martin Dawson Director of Research of the Institute of Photonics at the University of Strathclyde, and Dr. Erdan Gu, Associate Director of the Institute of Photonics at the University of Strathclyde, with an array of micro light-emitting diodes licensed by mLED. Credit: University of Strathclyde

The University of Strathclyde in Glasgow, Scotland has secured a spin-out deal to form a company working in the field of novel next-generation light source technology, which could open up a range of opportunities in multi-billion dollar applications including neuroscience, microscopy and communications.

mLED Ltd specialises in micro light-emitting diodes (microLEDs), devices made up of thousands of tiny emitters producing light in a compact, integrated package. Unlike other micro-display technologies,

microLEDs are dense arrays of miniature light sources which are pattern programmable and do not require a plethora of external components, such as optics and switching matrices, to modulate the light pattern, thereby making them more compact and efficient.

Braveheart Investment Group led the £150,000 funding round into mLED, investing via both the Strathclyde Innovation Fund (SIF) and the Alpha EIS Fund. Scottish Enterprise's Scottish Seed Fund also participated in the round.

Dr Jim Bonar, Chief Executive of mLED, said: "This is a very exciting international area of technology but there are only a few companies in the world which have recognised the opportunity and demonstrated capability in this area. We are producing a platform technology that is compact, robust, reliable and versatile.

"MicroLEDs have particularly strong potential for evolving life science markets such as neuroscience and for the emerging telecoms market of pico projectors, as well as for printing, microscopy and next-generation general lighting arrangements. The power density, versatility and compactness of microLEDs makes them ideally suited for these applications.

"Each of the microLEDs has enough light output to affect other materials, allowing actions such as the active illumination and stimulation of cells. They also have a switching speed fast enough for use in communications or in fluorescence lifetime imaging, which can be used to study cells. We have demonstrator kits available for sale so that developers can see if the micro-LEDs fit with their own innovative applications - we aim to be delivering to customers very soon.

"The University, and its Institute of Photonics, have been extremely supportive throughout the process of setting up mLED. Excellent

technology has been developed at the Institute, which is recognised as the world leader in microLEDs, and the University's Department of Research and Knowledge Exchange Services has been hugely helpful in enabling us to realise our ambitions so far."

The technology has been developed at Strathclyde's Institute of Photonics by a research team led by Professor Martin Dawson, the Institute's Director of Research, Associate Director Dr Erdan Gu and Research Technologist Dr Gareth Valentine, all of whom will act as consultants to mLED.

Major funding to create this opportunity was also obtained by the University from the Scottish Enterprise Proof of Concept Fund and from the Engineering and Physical Sciences Research Council (EPSRC). Dr Bonar was initially contracted by the University as Chief Executive Designate through the Technology Talent Initiative, partially funded by the European Regional Development Fund.

Simon Andrews, Business Development Manager at the Institute of Photonics, said: "We have had great pleasure in supporting Jim Bonar in the creation of mLED. He has a wealth of experience in photonics start-ups and we believe the company has the potential to be a market leader in the photonics sector, which offers exciting research and business opportunities worldwide.

"The Institute recognised some time ago that microLEDs were a very promising area of technology and considerable research investment was made by public sources while we continued to develop the equipment. Research in new areas will carry on and we look forward to working with mLED in bringing this advancing technology to rapidly-expanding marketplaces."

The spin-out of mLED follows the recent launch of SU2P, a Strathclyde-

led partnership between academic institutions in Scotland and California, capitalising on the academic and commercial strengths of the photonics sector. SU2P is funded by EPSRC, through the RCUK Science Bridges awards, the Scottish Funding Council and Scottish Enterprise.

The University of Strathclyde was recently rated as one of the UK's top 10 universities to work with by the business community. The University has formed more than 50 spin-out companies.

Provided by University of Strathclyde