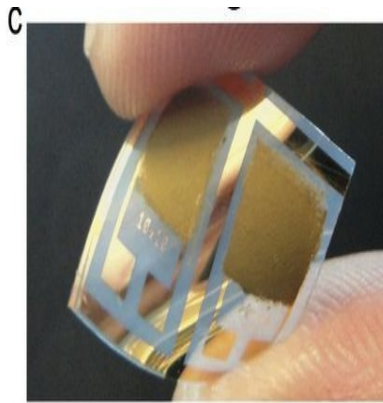




New Sensor Could Offer Low Cost Medical Imaging



Researchers in the UK have developed a 'multispectral' light sensor that detects the full spectrum of light, from ultra-violet (UV), to visible and near infrared light.

Their research, just published in Nature's Scientific Reports, identifies a new kind of light sensor that could allow medical and security imaging using low cost cameras.

Near infrared light is a noninvasive tool, which can be used to perform medical procedures, such as detecting cancers and measuring the oxygen level in tissue. It is routinely used in security camera systems and for quality control in the agriculture and food industry. The researchers are of the opinion that having a single low cost near infrared system has many possibilities.

Lead researcher Dr. Richard Curry from the University of Surrey's Advanced Technology Institute observed that up to now many different kinds of sensors have been needed to measure different ranges of the light spectrum, which is costly. The new type of sensor could allow surgeons to 'see' inside tissue to find tumours before surgery. Dr. Curry added that it could potentially be used in cameras and mobile phones, which have night imaging options. This facility may eventually enable parents to simply monitor a child's blood or tissue oxygenation level via a smartphone camera which could be linked to healthcare professionals.

The sensors are very flexible and can be produced at low cost with a laser printer like ones used in homes and offices. They can be produced without the need for specialised manufacturing conditions.

Source: University of Surrey, UK

Image credit: Nature Publishing Group, Creative Commons

Image caption: Photograph of two typical C60 nanorod photoconductor devices fabricated on a flexible PEN substrate. The active area covers the region of interdigitated electrodes which measures 5 × 5 mm.

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