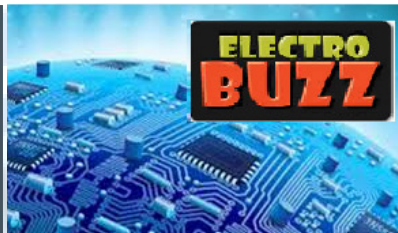




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Achievements

Automation Expo2018



A group of students comprising of EXTC and ETRX students presented 'Solar Hybrid Car' and awarded as the 'Best Innovation Platinum Award'.

TWO projects on 'Peltier based AirConditioner' and 'Peltier based Cooling system' from Department of

Electronics were selected for exhibition and displayed along with the Professional products.

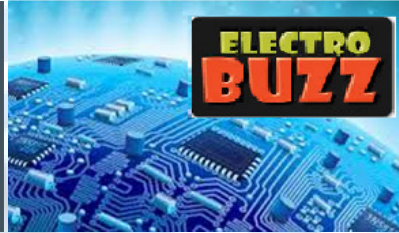


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Department of Electronics Engineering





Transparent Smartphone



How would it be like if you have a Smartphone that is literally transparent and in this case it would be a transparent computer? Some of the Inventors of Korean Advance Institute of Science and Technology, Jung Won Seo, Jae-Woo Park, Keong Su Lim, Ji-Hwan Yang and Sang Jung Kang, have worked over this concept to create world's first ever transparent computer chip. This chip is known as TRRAM that is transparent resistive random access memory, It is basically similar to the current existing chips CMOS or some semiconductor memory devices, which we use in modern electronics.

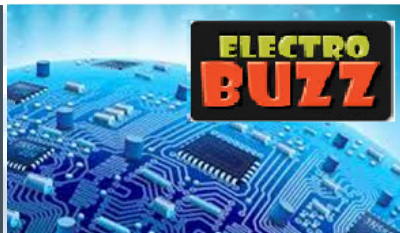
The basic difference between modern chips and TRRAM is that it is clear and transparent in nature of its physical properties. But is it really beneficial to have transparency in chips? Well according to the scientists it will set a new milestone in the world of electronic systems that will integrate TRRAM with many other electronic components and will create an embedded system in modern electronics. Far more to explain this technology will make your home into a fully equipped computer system as your window panes and mirrors could be used as transparent computers by the help of these chips.

<https://www.techmezone.com/top-10-news/latest-invention-studies-on-transparent-smartphones/>



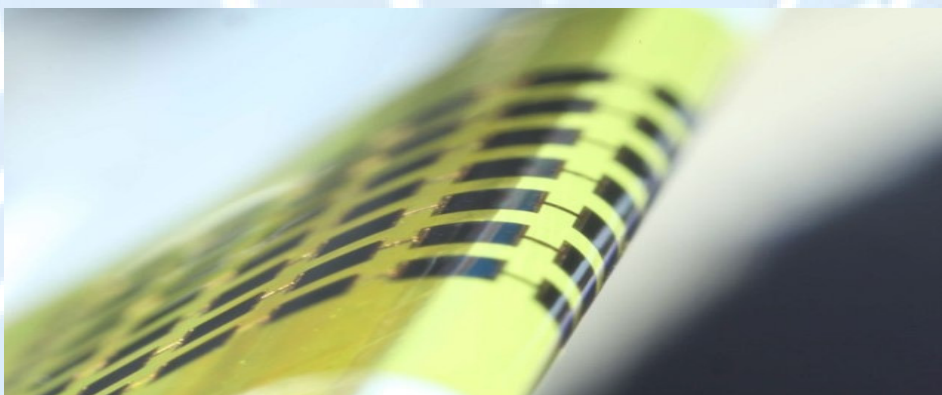
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Ultra thin Solar Cells is sufficiently adaptable to bend around a pencil

Researchers in South Korea have made ultra-flimsy photovoltaics sufficiently adaptable to wrap around the normal pencil. The bendy solar cells could control wearable gadgets like fitness trackers and smart glasses. . The analysts report the outcomes in the journal Applied Physics Letters, from AIP Publishing.



Slim materials flex more effortlessly than thick ones – think a bit of paper versus a cardboard shipping box.

The scientists made the ultra-slight sun powered cells from the semiconductor gallium arsenide. They stamped the cells straightforwardly onto an flexible substrate without utilizing a adhesive that would add to the material's thickness. The cells were then “cold welded” to the terminal on the substrate by applying pressure at 170 degrees Celsius and liquefying a top layer of material called photoresist that went about as a temporary adhesive. The photoresist was later peeled away, leaving the direct metal-to-metal bond.

The metal bottom layer additionally served as a reflector to direct stray photons back to the solar cells. The specialists tried the effectiveness of the device at changing over daylight to electricity and found that it was tantamount to comparative thicker photovoltaic. They performed bending tests and found the cells could wrap around a radius as little as 1.4 millimeters.

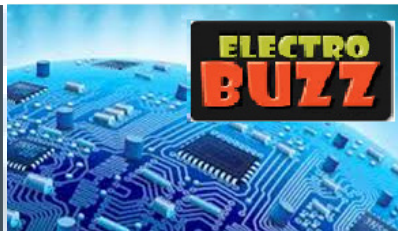
<https://www.techmezone.com/top-10-news/ultra-thin-solar-cells-is-sufficiently-adaptable-to-bend-around-a-pencil/>

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3D-printing technology

Researchers have figured out a way to place electronics directly onto a person's skin using a 3D printer, paving the way for wearable sensors and even solar cells that can charge electronics.



Researchers at the University of Minnesota developed the 3D-printing technique using ink containing conductive silver flakes, which can be peeled off the skin when the so-called electronic tattoo is no longer needed.

Potential uses for the new technology also include printing biological cells into wounds to help them heal, which the researchers believe could lead to new medical treatments for injuries and skin grafts.

<https://www.dailymail.co.uk/sciencetech/article-5664533/3D-printer-puts-electronics-directly-skin.html>

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