



On-Body Flexible Medical Devices get the newly developed Epidermal Display Screens

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A recent development by researchers from China's Nanjing University could open up doors for the already existing flexible medical devices with respect to their ability to display relevant biomedical information. The team of researchers has successfully developed a technique through which displays can be placed directly on the skin of humans. Their technique ensures safety as much as the flexibility it offers and interestingly, its consumption of battery is rather low.

The major difference in the researchers' technique and that of the flexible

alternating-current electroluminescent displays that were used previously is that the latter happens to demand high voltages. The issue with high voltage is that it can turn into a threat for the user and the apparent disadvantage being that they consume a lot of power.

Encasing a layer of a stretchable dielectric material with light-emitting microparticles seeded throughout, the device developed by the researchers of Nanjing University is made of silver nanowire electrodes. A combination of ceramic nanoparticles and polymer which is stretchy makes up the dielectric. With the objective of boosting brightness, the nanoparticles used here work with the one that emit light. The reason for this is to facilitate the user to view the screen with lighting indoor turned on.

A screen that displayed time was stuck to the skin of a volunteer by the team of researchers. For much higher resolution, it is apparent that the technology devised by them can be shrunk down in a hassle free manner which will help in offering live data from on- body medical devices and health care trackers. Additionally, reading related to a patient can also be displayed which will serve to be a boon for hospitals everywhere.

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