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Flexible and stretchable circuits for smart wearables (Article)

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Abstract

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Flexible and stretchable circuits have recently gained traction in the market due to the popularity of wearables and the rapid advancement in microsensors, big data and the Internet of Everything. For devices to be truly wearable, they need to conform to the shape of the human body, allowing ease of use, with sensors being pervasive but not intrusive. To allow this, electronics engineers need to shift their mindsets of manufacturing transistors, circuits and sensors on rigid planar surfaces to flexible, multidimensional and free-form substrates. This review manuscript describes the motivation for designing such circuits, its fabrication techniques, design considerations, performance evaluation and applications. It is expected that stretchable circuits will be a new way forward for integrated circuit technology and will continue to push the boundaries of manufacturing processes in the years to come.

Author keywords

Flexible circuit Smart wearables Stretchable circuit

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