

Conductive and Stretchable Graphene Nanoribbon Coated Textiles

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Abstract : A conductive and stretchable cotton fabric was prepared in this study through coating the graphene nanoribbon onto the cotton fabric. The mechanical and electrical properties of the prepared cotton fabric were then investigated. As shown in the results, the graphene nanoribbon coated cotton fabric had an improvement in both mechanical strength and electrical conductivity. Moreover, the resistance of the cotton fabric had a linear dependence on the strain applied to it. The prepared graphene nanoribbon coated cotton fabric has great application potentials in smart textile industry.

Keywords : conductive fabric, graphene nanoribbon, coating, enhanced properties

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