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Resistivity Response to Stress and Strain of a Flexible Bi_2Te_3 Based Thermoelectric Material

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Here we report about the synthesis of Bi_2Te_3 based flexible thermoelectric materials and the response of the electrical resistivity to tensile and compressive stress. As a template fiber spun polymers have been used onto which a thin composite film of graphene and Bi_2Te_3 nanoplates was deposited. The Bi_2Te_3 nanoplates were synthesized using the polyol method. Upon straining the material, the resistivity dropped which is attributed to the increased contact between the individual wires.