Title:	Enhanced electrical transport through wrinkles in turbostratic graphene films.
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Abstract:	Formation of wrinkles is a common phenomenon in the large area growth of two-dimensional (2D) layered materials on metallic substrates. Wrinkles can significantly affect the working of 2D materials based large scale electronic devices, and therefore, it is of utmost importance to investigate local electrical properties of such wrinkled/folded structures on 2D materials. Here, we report local conductivity measurements by conducting atomic force microscopy and surface potential mapping by Kelvin probe force microscopy on large area wrinkled turbostratic graphene films grown on nickel foils. We show that the electrical transport current is several orders of magnitude higher on the wrinkles than that on the flat regions of the graphene films. Therefore, our results suggest that controlled engineering of such wrinkles on graphene may facilitate development of superior graphene-based nano-electronic devices, where transport of high current through narrow channels is desired.
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