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Scanning Electronic Microscopy for Analysis of the Effects of Surfactants on De-Wrinkling and Dispersion of Graphene

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Abstract : Graphene was dispersed using a tip sonicator and the effect of surfactants were analysed. Sodium Dodecyl Sulphate (SDS) and Polyvinyl Alcohol (PVA) were compared to observe whether or not they had any effect on any de-wrinkling, and secondly whether they aided to achieve better dispersions. There is a huge demand for wrinkle free graphene as this will greatly increase its usefulness in various engineering applications. A comprehensive literature on de-wrinkling graphene has been discussed. Low magnification Scanning Electronic Microscopy (SEM) was conducted to assess the quality of graphene de-wrinkling. The utilization of the PVA has a significant effect on de-wrinkling whereas SDS had minimal effect on the de-wrinkling of graphene.

Keywords : Graphene, de-wrinkling, dispersion, surfactants, scanning electronic microscopy
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