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The effect of argon ion bombardment on multilayer graphene

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Multilayer graphene films were synthesized on copper foil by means of Low-Pressure Chemical Vapor Deposition (LPCVD) and characterized using Raman spectroscopy. Low energy argon bombardment with different doses is performed to form defective graphene. In order to investigate the effect of Argon bombardment on graphene, Raman spectroscopy, scanning electron microscopy and atomic force microscopy were used. Analysis before and after the bombardment revealed that the interaction of argon ions with graphene surface had a strong effect on the structure, morphology and roughness of graphene. Upon ion bombardment in the energy of 30 keV, formation of a damaged surface and a significant difference in the intensity of D band in Raman spectroscopy after ion bombardment was observed.

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