An experimental study of single layer graphene oxide deposited on Au/Mica substrate

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Abstract (Century Gothic 11)

Graphene oxide (GO) is used for the mass production of many graphene-type materials[1]. Moreover, large-scale GO membranes, owing to their unique properties, are used as filters, biomarkers and more [2]. For all these applications, the distribution of the functional groups over the film surface is required.
We demonstrate the clear picture with atomic resolution of single-layer graphene oxide films on Au/Mica substrate at room temperature. We measure the hexagonal lattice structure of unreduced graphene oxide using scanning tunneling microscopy and high-resolution transmission electron microscopy. We find that oxygen functional groups are concentrated in islands, while the rest of the material has the structure of pristine graphene.

References

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Figures

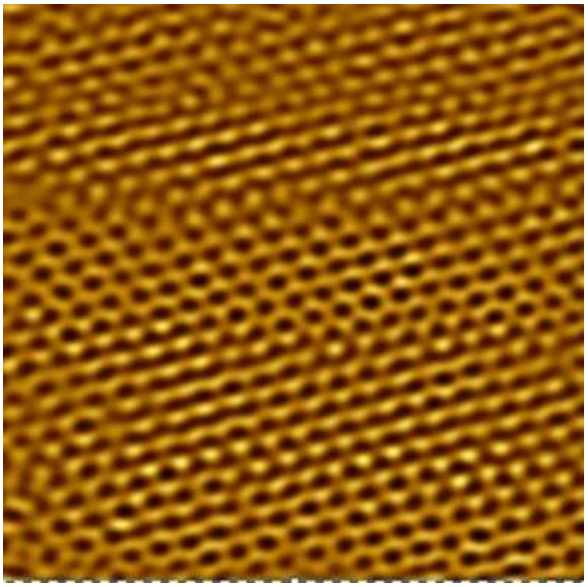

Figure 1: 10nmX10nm STM image of Graphene Oxide