SPECTROSCOPY OF MODIFIED ISOTOPICALLY LABELED TURBOSTRATIC AND BERNAL STACKED GRAPHENE LAYERS

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Abstract

Spectroscopy of Modified Isotopically Labeled Turbostratic and Bernal Stacked Graphene LayersThe recent development of CVD growth of graphene allows to prepare isotopically labeled one layer graphene using 12CH4 and 13CH4 precursor gases. In addition isotopically labeled two layer graphene can be prepared either by a subsequent transfer of single layer graphene sheets on top of each other or by direct growth under the specific conditions. The direct growth of isotopically labeled two layer graphene also allows to obtain AB stacked layers. In this study we compare isotopically labeled turbostratic and AB stacked two layered graphene samples. We will review our results obtained on the analysis of the chemical modification of two layer graphene and the effects of the heat treatment on the top and bottom graphene layer.

Keywords: Graphene

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