

Synthesis of few layered graphene using an electrochemical method

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The scalable production of graphene is necessary for the various applications. Here we report a facile and scalable method for the preparation few layered graphene using an electrochemical method. This method is very easy and environmentally friendly nature to produce graphene. The resulting graphene was characterized by X-ray diffraction, Raman spectroscopy, transmission electron microscopy and scanning electron microscopy. The crystalline domain size was found to be smaller (~ 14.40 nm) as compared to the graphite sheet (~ 22.4 nm) for the 002 plane. SAED pattern obtain from the TEM shows the polycrystalline behavior of the graphene. The synthesis reported in this work is expected to yield mass production of graphene material suitable for the energy and environmental applications.