

What Are The Real Barriers For Graphene Development?

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Abstract (Century Gothic 11)

Graphene as one of the most promising materials has garnered tremendous attention because of its distinctive band structure and physical properties over the last decade. However, the graphene community is also questioned that what graphene can be really used for as so far although there are lots of application prototypes demonstrated, the development of graphene is slower than people ever expected. The reason is majorly attributed to the lack of a killer application. However, it should be pointed out that the role of material preparation is as important.

Although the graphene synthetic technique has been greatly developed, e.g., CVD technique for production of large-area graphene film and various techniques for production of large quantity of graphene flakes, the synthetic graphene is still far from its perfect structure. Other than the crystal size, which people have made great efforts to increase it as it is expected to have better quality than polycrystalline film, here I am going to talk about some other issues that affect graphene quality as well and may also lead to inaccurate interpretation on graphene growth mechanism and kinetics. The understand of these issues will increase the controllability of graphene synthesis.

Figure

