Growth and Application of Meter-sized Single-crystal Graphene

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Abstract: Graphene is of only one atomic layer thick and its property is therefore very sensitive to the interfacial interaction with other materials. By designing and utilizing this interfacial interaction, we have lots of opportunity in engineering the growth and applications of graphene. In this talk I will introduce several our recent works on this topic, including ultrafast graphene growth [1, 2], epitaxial meter-sized single-crystal graphene growth [3], and ultrafast broadband charge collection [4].

Key words: Graphene, Growth, Physics

Reference:

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[2] Can Liu, Jie Xiong*, Feng Ding*, Kaihui Liu*, et al. “Kinetic modulation of graphene growth by fluorine through spatially confined decomposition of metal fluorides”, Nature Chemistry (accepted)

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[4] Hao Hong, Kaihui Liu* et al., “Ultrafast Broadband Charge Collection from Clean Graphene/$CH_3NH_3PbI_3$ Interface”, JACS 2018, online