

Manipulation of graphenelayered structures and functionalization for achieving maximum thermalconductivity

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Abstract

Graphene, due to its exceptional mechanical, optical, electrical, physical and thermal properties, has attracted strong interest for both fundamental studies and real applications. Among all these properties, the extraordinary high in-plane thermal conductivity makes graphene an ideal heat spreading and thermal management material for power devices and systems. This talk presents recent results regarding atomic and nanoscale manipulation of graphene layered structures and tailor-made functionalization for achieving maximum thermal conductivity in heat spreader and thermal management applications.