

The Potential of Next-generation Graphene for THz Applications

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Abstract: Atomically thin planes of carbon atoms, graphene, were isolated in 2004, and the two discoverers received Nobel Prizes. Graphene flakes and powders are being increasingly used in car tyres, paint, concrete, running shoes, tennis racquets, etc. However, widespread manufactured graphene electronic devices do not exist because of the lack of high-quality large-area graphene.

This talk will introduce our next-generation large-area graphene, which is free from metallic contamination and transfer problems, and can be produced on a variety of substrates (sapphire, Si, GaN, etc.). The first proof-of-concept product made from this graphene, a magnetic Hall-effect sensor will be described. The potential of our next-generation graphene for THz applications will be discussed.