

Device applications of graphene prepared by chemical vapor deposition transparent antennas and chemical sensors

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Graphene has attracted attention owing to its unique properties and possibilities for numerous practical device applications. Chemical vapor deposition (CVD) growth is a promising way to synthesize high-quality and large-area graphene sheets. We demonstrated CVD growth of single-crystal monolayer graphene on Ir(111)/sapphire substrates, and the reuse of the same substrates in multiple CVD growth [1]. We also demonstrated several device applications of the CVD graphene sheets including optically transparent dipole antennas operating at 20 GHz [2], luminescent graphene [3] and free residual chlorine sensor based on graphene field effect transistors.

References

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