

Recent advances in CVD graphene

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In the past few years, graphene has attracted the attention of a considerable number of scientists from different areas. The outstanding properties of this 2D material which include, high carrier mobility, electrical conductivity, transparency, thermal conductivity and mechanical strength, make graphene a good candidate for novel optoelectronic devices.

The commercialization of graphene still remains challenging, especially for high-end applications like complementary metal oxide semiconductors (CMOS) circuitry where high quality and high throughput are required. From the available growth techniques, which play an important role on the materials properties, chemical vapour deposition (CVD) has proved to meet the requirements for high-end applications and to provide an easy integration with current and future CMOS technology.

He we present some recent advances on CVD graphene technology, discussing the growth process scalability from 2" to 12" wafers size as well as presenting some future challenges for other 2D materials.