Graphene and 2D Materials for Display Technology

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Abstract
Two-dimensional (2D) materials, graphene and transition metal dichalcogenides (TMDCs), have attracted tremendous research activities worldwide as innovative materials for application to next-generation displays due to their unique properties such as versatile electrical conductivity, optical transparency, and mechanical flexibility and stretchability. During the last decade, we have demonstrated that the integration of graphene and TMDCs enables the implementation of 2D materials-based front panel and back-plane devices for flexible or stretchable displays [1-3]. In this talk, I will present recent advances in the synthesis of 2D materials [4] and applications to future display technology [5-6] and will discuss the technical issues to be addressed for the applications to real display devices.

References