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2D Ultrathin Carbon Films

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Message from the Guest Editors

Although a number of 2D ultrathin carbon films have been the focus of research for quite a long time now, such as nanometer-thick amorphous carbon films for hard drive protective coating application, the field has recently experienced a surge in activity with new promising materials arising, such as twisted bi-layer graphene (2LG) and diamanoids. The outstanding physical properties of these 2D carbon materials, such as superconductivity in twisted 2LG and tunable semiconducting behavior in wide band-gap diamanoids, combined with high potentiality for green mass-production, opens the door to significant advances in a wide range of key technologies, where they can compete with more complex materials, which are more challenging to manufacture, such as transition metal dichalcogenides.



