Two-dimensional (2D) Materials for Future Electronics

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Abstract

Two-dimensional (2D) materials offer unique and tunable physical, chemical, and mechanical properties ideal for a variety of applications including in high-performance transistors. Transition metal dichalcogenides (TMDs), in particular, have shown great potentials for applications in electronic devices owing to their atomically thin structures, tunable electronic structure, and high carrier mobility. In this talk. some of recent advances in atomic-scale engineering of 2D materials, their applications in electronic devices, as well as current challenges and research opportunities will be discussed.