

## **Two-Dimensional Materials Growth**

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The isolation of graphene now over a decade ago has given rise to the revitalization of many two-dimensional materials (2DM). The 2DM materials under investigation, in addition to graphene, include h-BN, semiconducting, metallic, and superconducting 2DM. While h-BN is an excellent 2D insulator, TMD materials provide what graphene and h-BN cannot, a bandgap that can be used to create new heterostructure devices. A number of devices structures are currently under evaluation to take advantage of the properties of these materials. Some of the devices are based on tunneling which can be used to lower the voltage and power dissipation of a logic gate. In this presentation I will present a few graphene- and TMD-based devices processes required to make these devices a reality.