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Novel 2D devices based on graphene, BP and perovskite

In this talk, I will introduce several novel 2D devices beyond graphene. The first part is related to graphene devices. Tunable graphene LED [1] and graphene artificial throat [2] has been demonstrated. The second part is related to 2D perovskite devices. Record low operation current 2D perovskite-RRAM has been demonstrated [3]. Great stability has also been demonstrated via hBN-2D perovskite stacking [4]. The third part is related to BP devices. Reconfigurable BP-SnSe synapse has been demonstrated [5]. Moreover, the reconfigurable BP p-n junctions have been demonstrated with ideality factor close to 1 [6].

References

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