2D layered materials have emerged as promising candidates for future electronic and optoelectronic devices, such as solar cells, field effect transistors, photo-detectors, and valleytronic devices, owing to their unique optical/electronic/thermal properties and their strong interactions with light. The key members of the 2D material family include the semi-metallic graphene, semiconducting transition metal dichalcogenides (TMDs), insulating hexagonal boron nitride (h-BN), emerging semiconducting phosphorene with bulked structure and strongly anisotropic properties, and so on.