

Electronic properties of novel two-dimensional materials

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Abstract (Arial 10)

Two-dimensional atomic crystals, best exemplified by graphene, have emerged as a new class of material that may impact future science and technology. Our group at Fudan University has been actively exploring new 2D materials with peculiar electronic properties. In this talk I will discuss two 2D materials that we found interesting – black phosphorus and 1T-TaS₂. These two layered materials have vastly different properties. We explore their electronic properties while the doping and dimensionality of the 2D systems are modulated.