

**Poster-2-2****Probing mono- and few-layer 1T-TaSe<sub>2</sub> with ARPES**

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Physical properties can change significantly when bulk materials are thinned down to a few atomic layers. Here, we study the intriguing example of the metallic charge density wave system 1T-TaSe<sub>2</sub>. Previous transport experiments on 1T-TaSe<sub>2</sub> found a metal to insulator transition at a thickness of 5 layers [1]. Monolayer 1T-TaSe<sub>2</sub> was proposed to be a Mott insulator and is a candidate quantum spin liquid [2]. We perform Angle resolved photoelectron spectroscopy (ARPES) measurements on ultra clean exfoliated few layer 1T-TaSe<sub>2</sub> to study this intriguing phase of matter.

[1] Tian, N., et al., National Science Review (2023): nwad144.

[2] Chen, Y., et al., Nat. Phys. 16, 218-224 (2020).