

Abstract Submitted
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Electronic Transport in Ultra-Thin 1T'-WTe₂ VALLA FATEMI, SARANESH PREMBABU, MIT, MAZHAR N. ALI, Princeton, KENJI WATANABE, TAKASHI TANIGUCHI, Advanced Materials Laboratory, National Institute for Materials Science, Tsukuba, Japan, ROBERT J. CAVA, Princeton, PABLO JARILLO-HERRERO, MIT — We report low-temperature electronic transport measurements of 1T'-WTe₂ in the few-layer limit. Thin layers of WTe₂ are obtained by the mechanical exfoliation technique and are subsequently encapsulated between thin hexagonal Boron Nitride crystals via a dry crystal transfer technique. These devices are fabricated entirely inside an inert-atmosphere glove box to avoid degradation. We report on the temperature, magnetic field, and electrostatic gate voltage dependence of these devices for several different thicknesses.

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