Au 和Ti厚度的研究

1（Langmuir_2区）

Exfoliation and Characterization of MoS_2 on Au. Figure 1a shows a macroscopic optical image of MoS_2 exfoliated on a 7.5 nm-thick Au (111) grown by physical vapor deposition (PVD) on a SiO_2/Si wafer with a 1 nm Ti adhesion layer. MoS_2 monolayers reach lateral dimensions

were oil-free, and the residual gas environment was continuously monitored by mass spectrometry prior to the sputtering. Depositions were done at room temperature under a 5 SCCM Ar flow at partial pressure of 10^{-3} Torr. A Ti adhesion layer was deposited at 15° incidence at a rate of 0.5 Å s^{-1} before the Au deposition. The Au layer was deposited at a 33° incidence at a rate of 1.5 Å s^{-1}. Both targets

2（物理化学快报3区）

pared using an electron beam evaporation system (Ei-5z, ULVAC Inc.). Prior to deposition, 4-inch silicon wafers (Innotronix Technologies Co., Ltd) were ultrasonically cleaned with acetone, isopropanol (IPA) and deionized (DI) water, followed by blow-drying with a nitrogen gas gun. The ultimate vacuum of the deposition chamber is 2×10^{-3} Torr. A 10 nm Ti adhesion layer was deposited before 40 nm Au deposition. The deposition rates of Ti and Au are 1 and 0.5 Å/s, respectively. Subsequently, the gold-coated wafers were kept in ambient conditions for more than 7 days. The Au 'tape' for exfoliation was obtained by

3（ACS_nano）

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