



Nanoscale

ARTICLE

Electronic Supplementary Material

Large area chemical vapor deposition of monolayer transition metal dichalcogenides and their Temperature Dependent Raman Spectroscopy studies

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Figure S1:

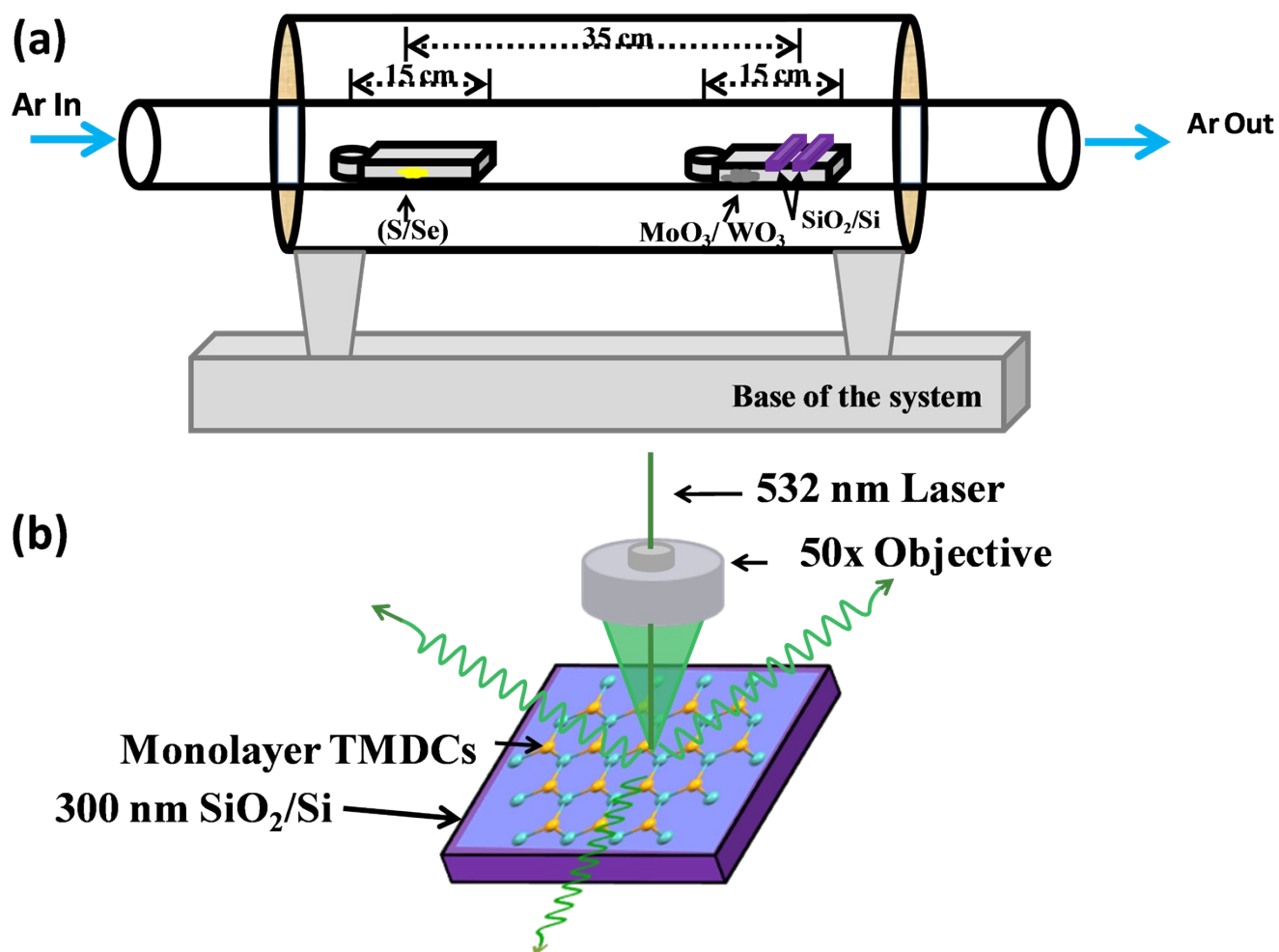
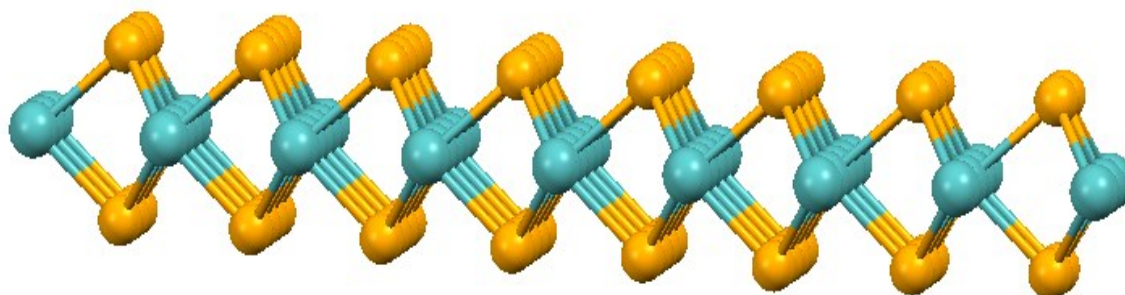
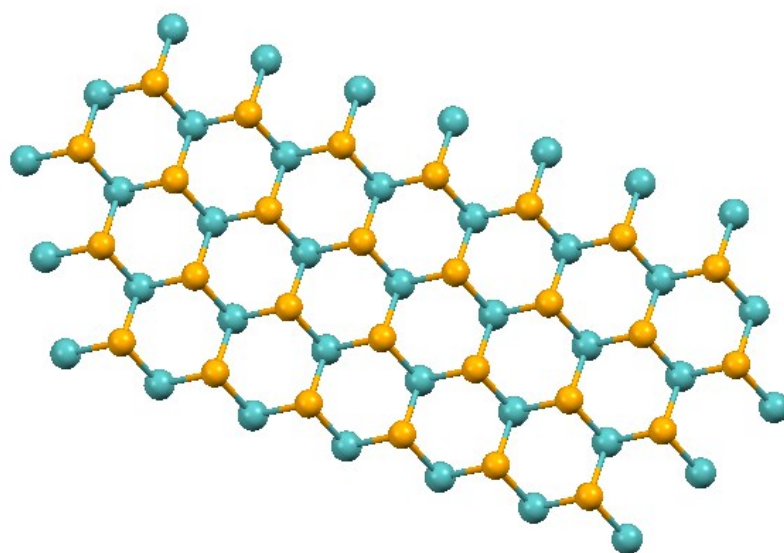


Figure S1: Experimental set up of (a) chemical vapor deposition and (b) Temperature dependant Raman Spectroscopy.

Figure S2:**(a)****(b)**

● : S/Se

● : Mo/W

Figure S2: Three dimensional Representations of single layer TMDCs (a) side view (b) top view.

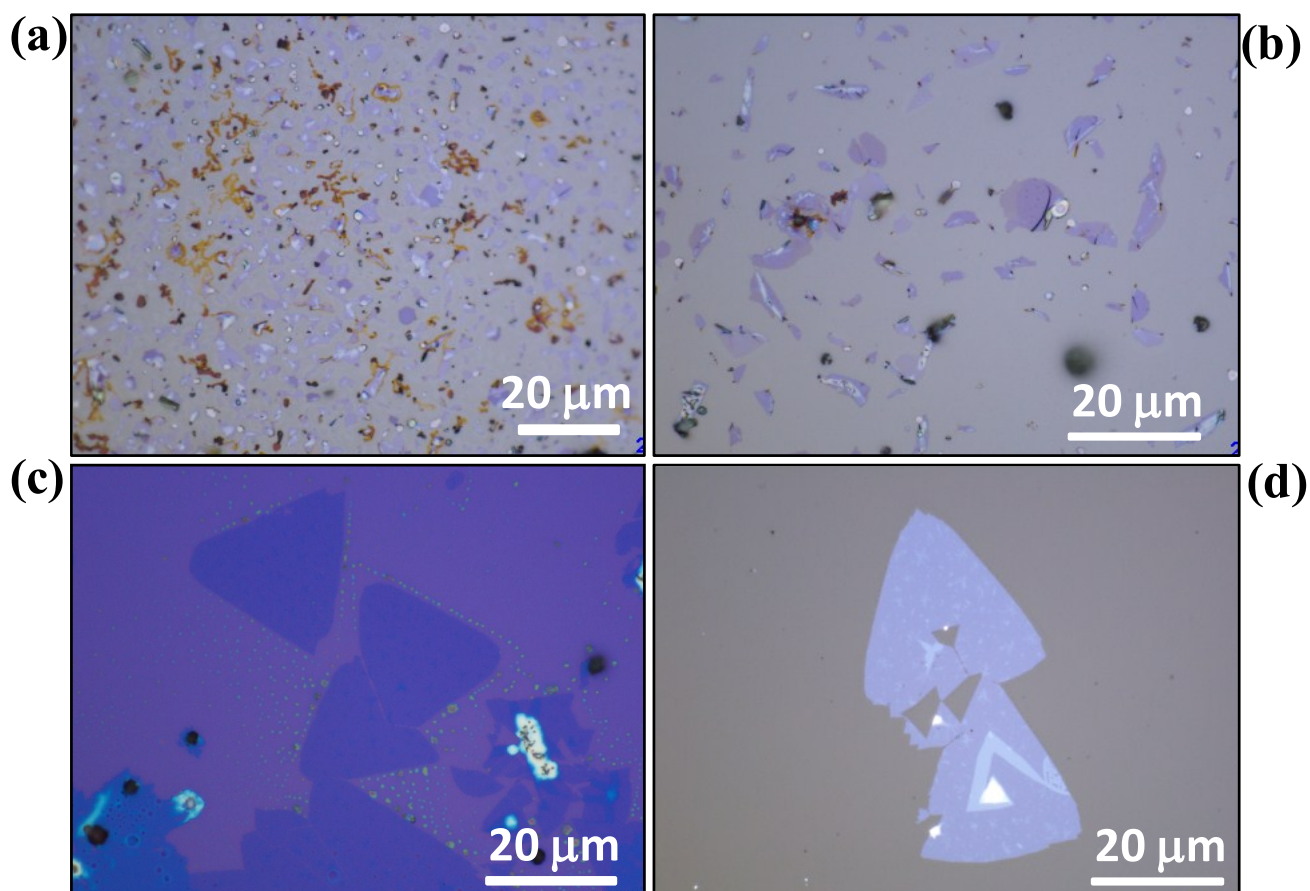
Figure S3:

Figure S3: Optical image for CVD grown MoS₂ monolayer sample on various substrate (a) *n*-Si (b) *p*-Si (c) SiO₂/Si and (d) quartz.

Figure S4:

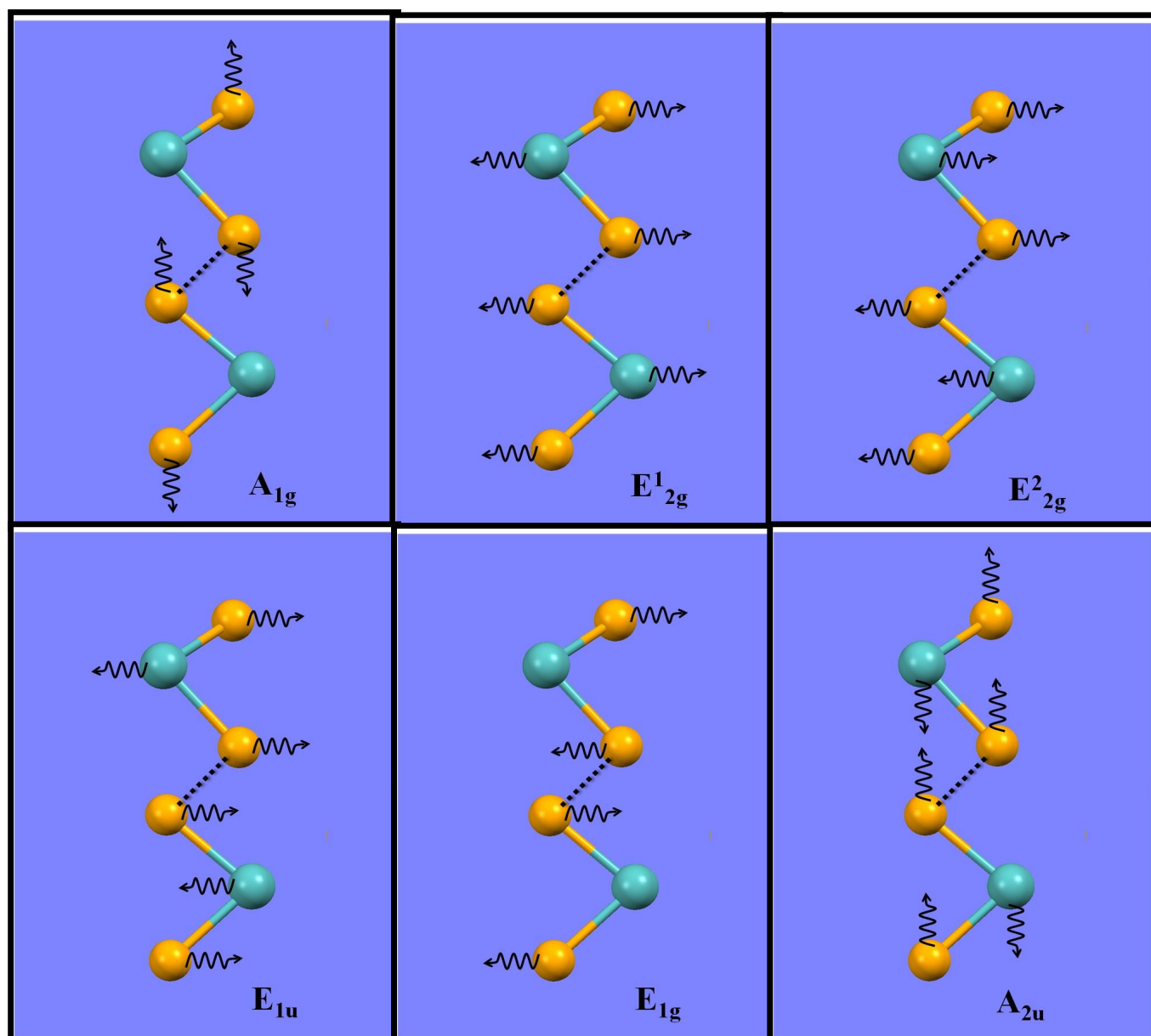


Figure S4: Possible vibrational modes (A_{1g} , E^1_{2g} , E^2_{2g} , E_{1u} , E_{1g} and A_{2u}) for transition metal dichalcogenides.

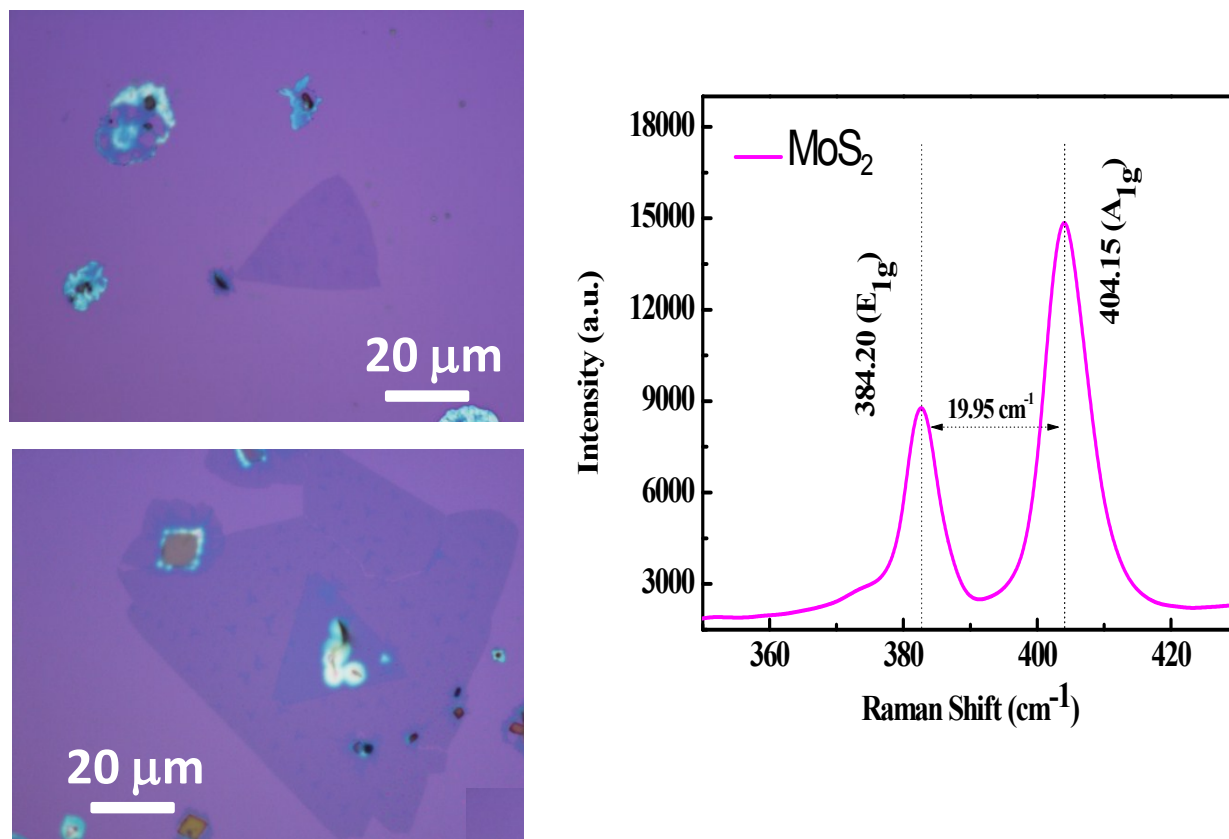
Figure S5:**Figure S5:** Typical optical microscope image and Raman spectra of large area CVD grown monolayer MoS₂.

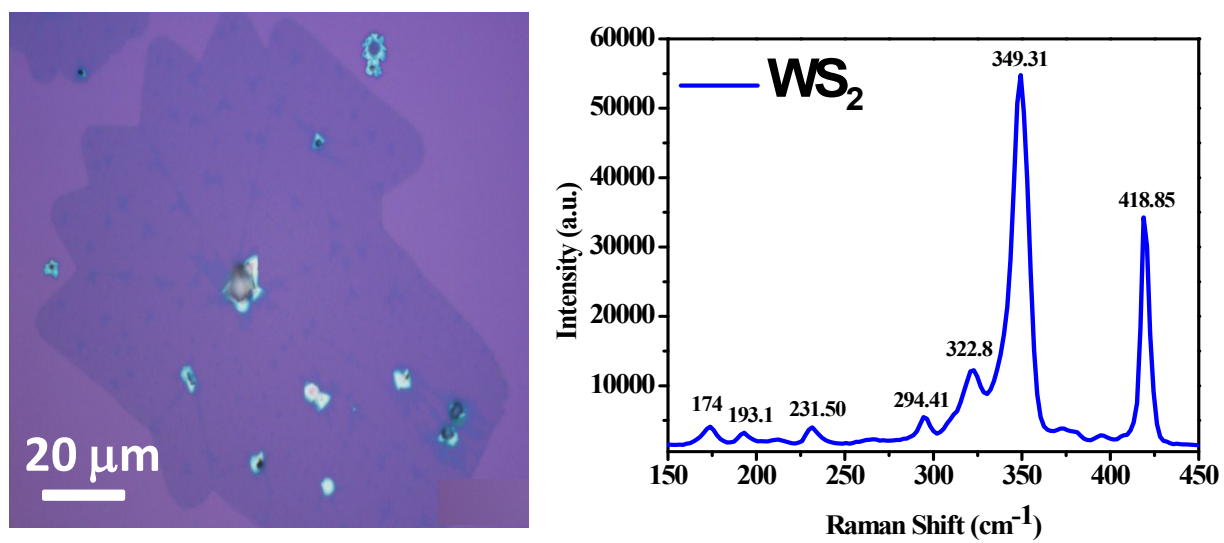
Figure S6:

Figure S6: Typical optical microscope image and Raman spectra of large area CVD grown monolayer WS₂.

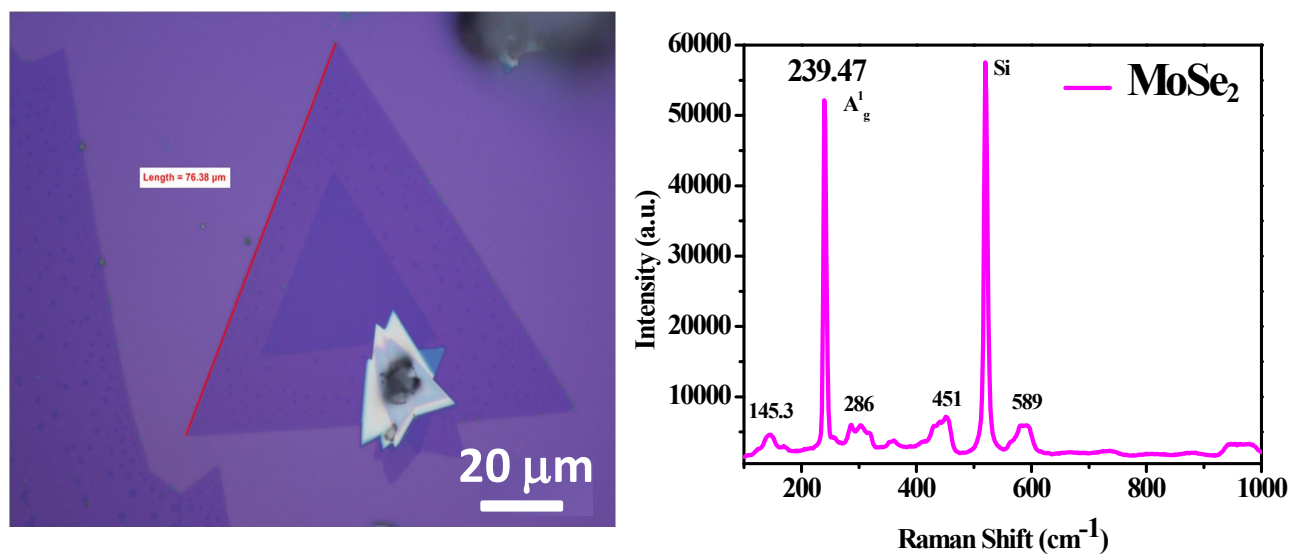
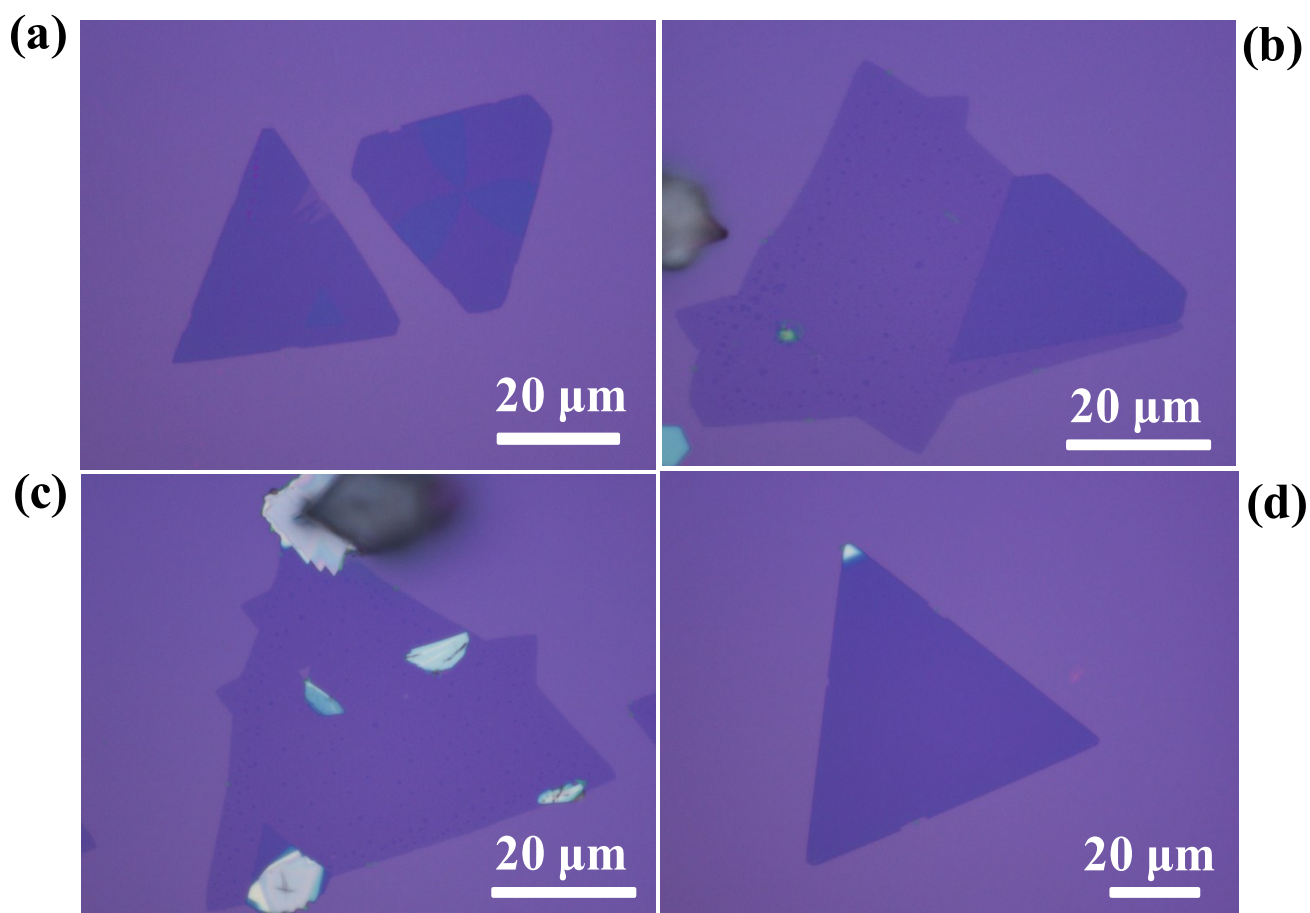
Figure S7:**Figure S7:** Typical optical microscope image and Raman spectra of large area CVD grown monolayer MoSe₂.

Figure S8:**Figure S8 (a-d):** Typical optical images for CVD grown MoSe₂ nanosheets.