

## Supporting Information

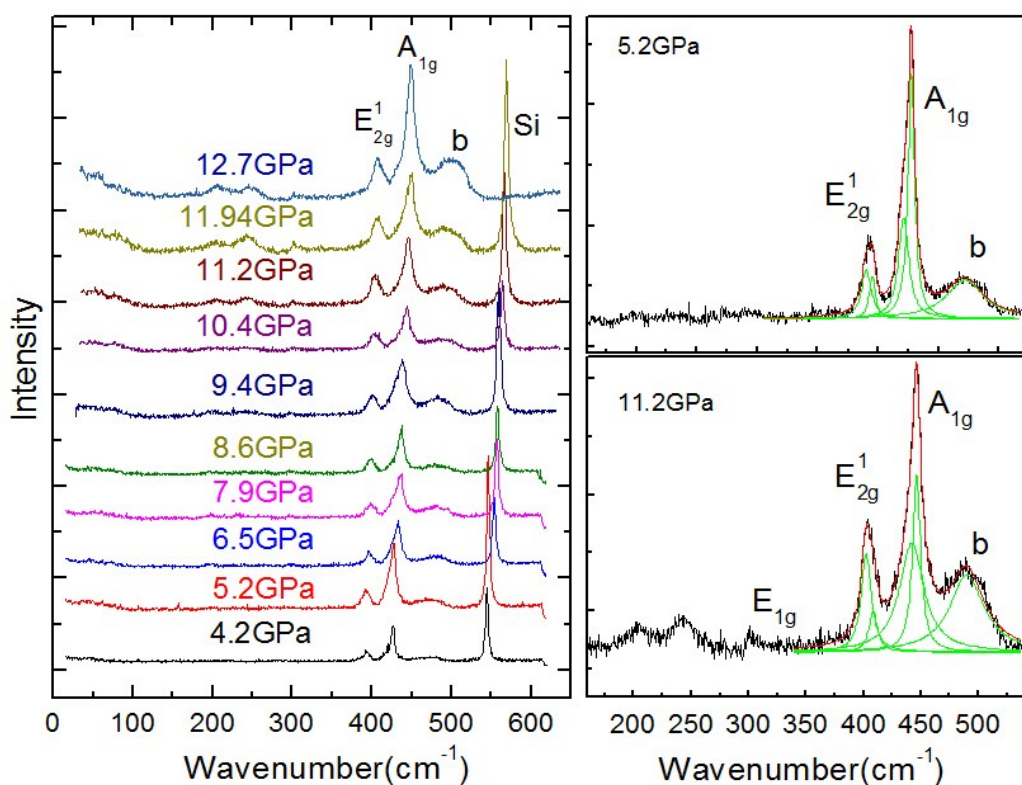
### Pressure confinement effect in MoS<sub>2</sub> monolayers

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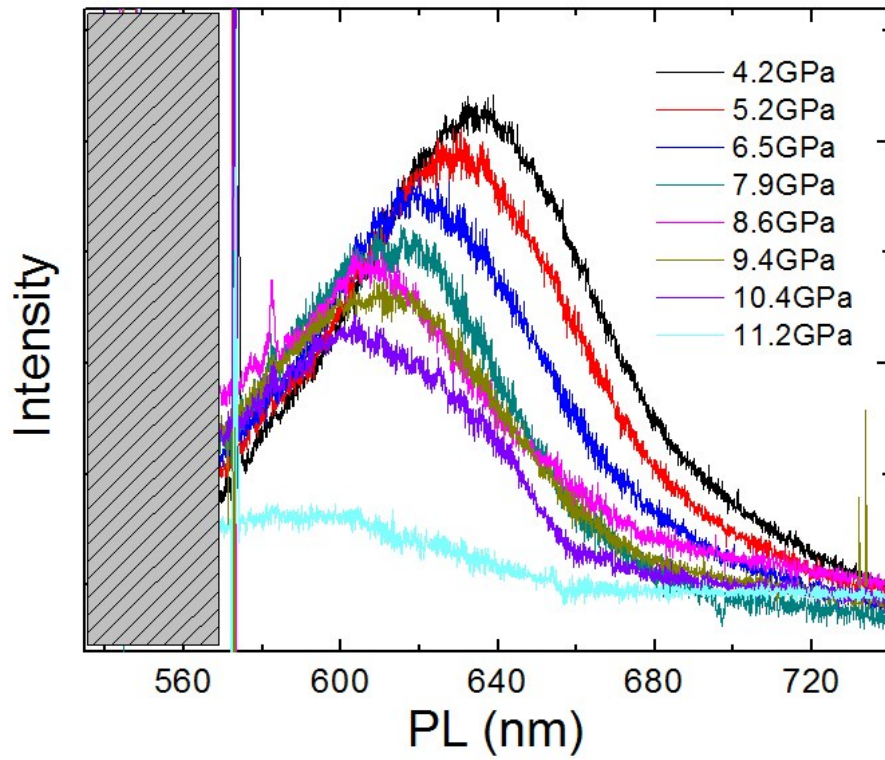
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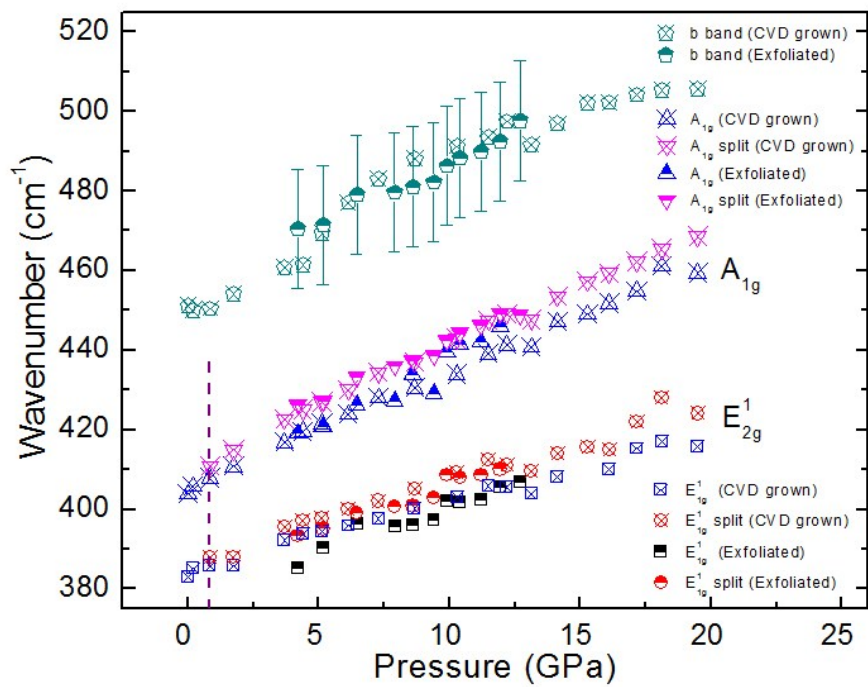


**Fig. S1** High pressure Raman of Exfoliated monolayer

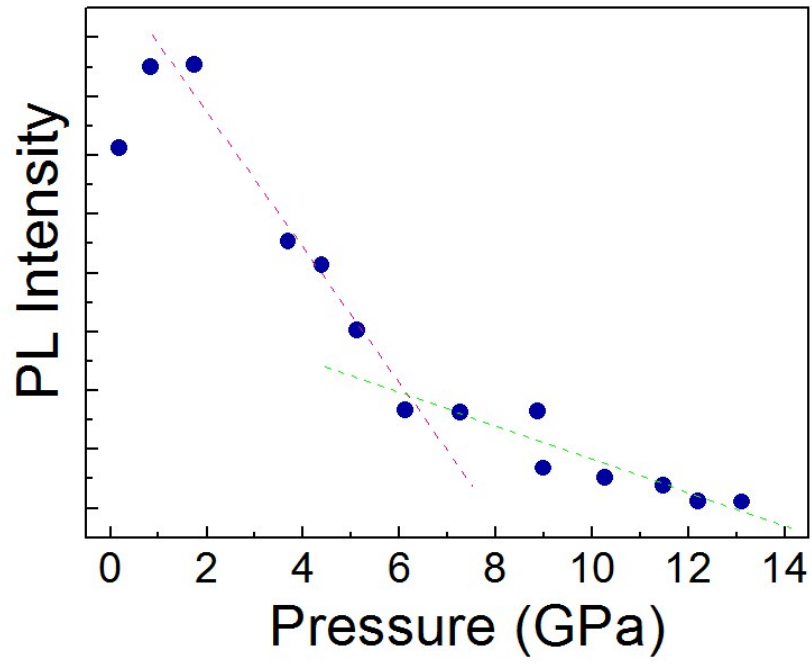
High pressure Raman spectra of exfoliated monolayer(2<sup>nd</sup> sample), liquid Ar was used as the pressure transmitting medium, and Ar is sealed at a initial pressure of 4.2GPa.



**Fig. S2** High pressure PL spectra of exfoliated monolayer



**Fig. S3** Pressure dependence of Raman frequency for different Raman modes from the samples studied in this work.



**Fig. S4** Pressure dependence of PL intensity of CVD grown monolayer MoS<sub>2</sub>.