

## Supplementary Information

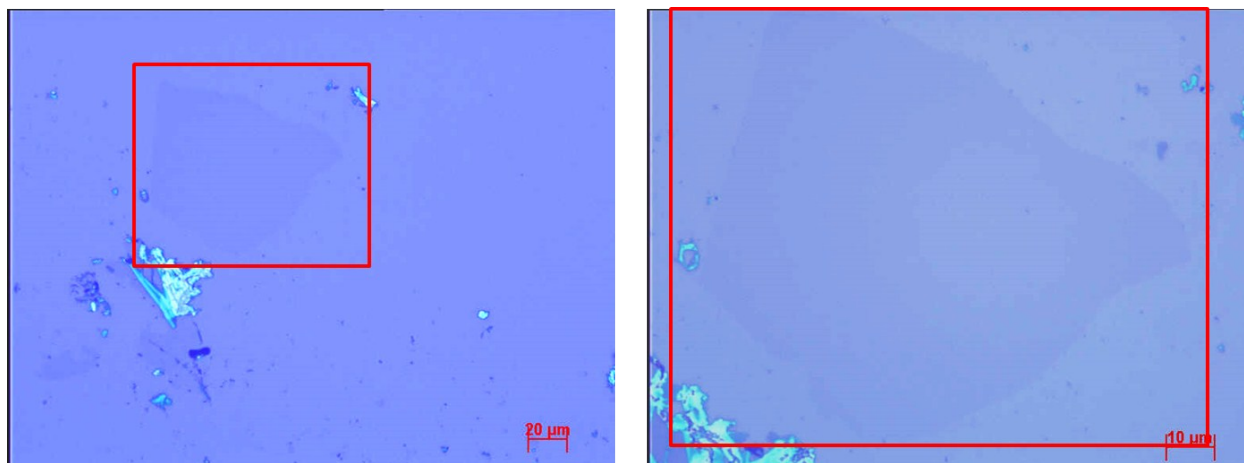


Figure 1 Optical images of before & after annealing on the same flake: a) before annealing, b) after annealing.

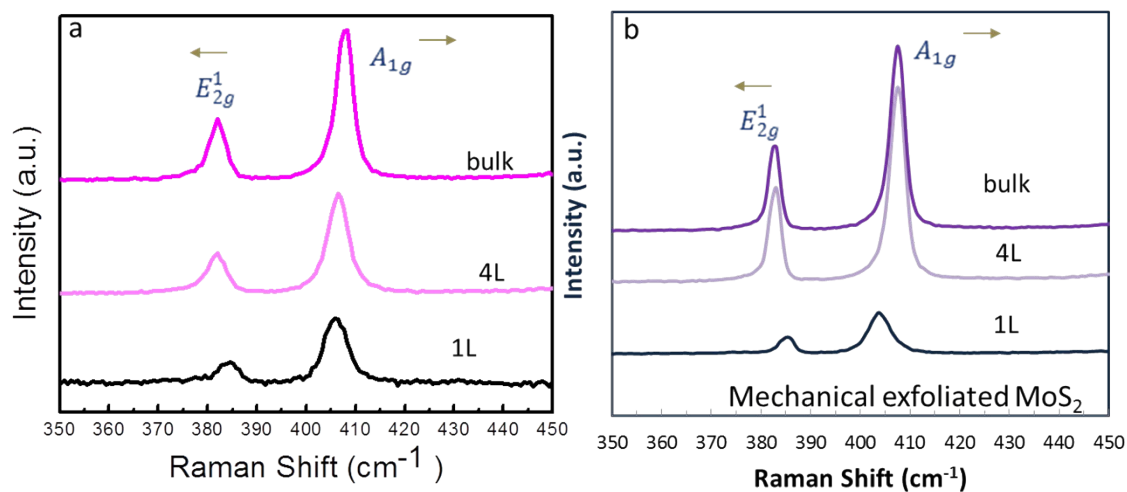


Figure 2 Raman spectra of ML, 4L and bulk MoS<sub>2</sub> obtained a) this work, b) mechanical exfoliation.