

Supporting Information

Electron beam lithography for direct patterning of MoS₂ on PDMS substrates

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Figure S1. Photograph of the MoS₂ film grown on 10x10 cm glass substrate.

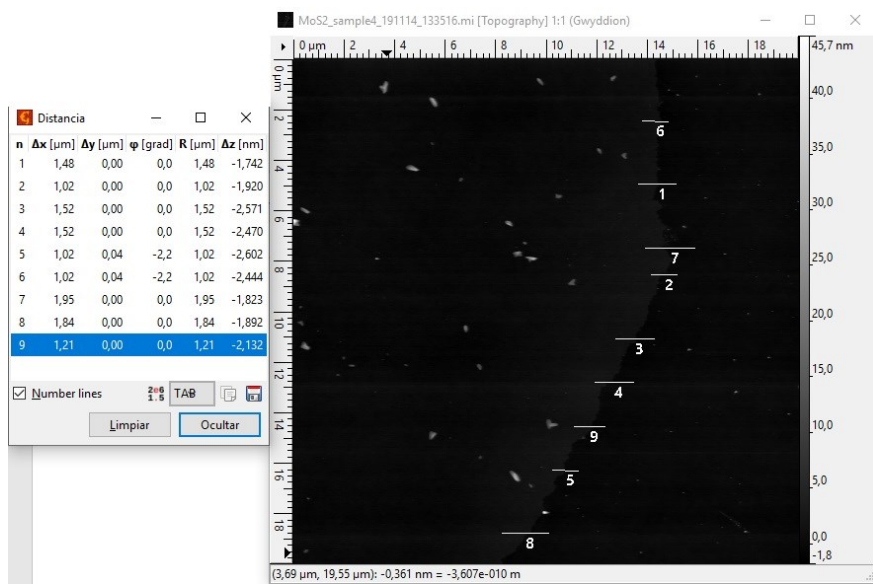


Figure S2. Atomic force microscopy measurements of the thickness of the MoS₂ film.

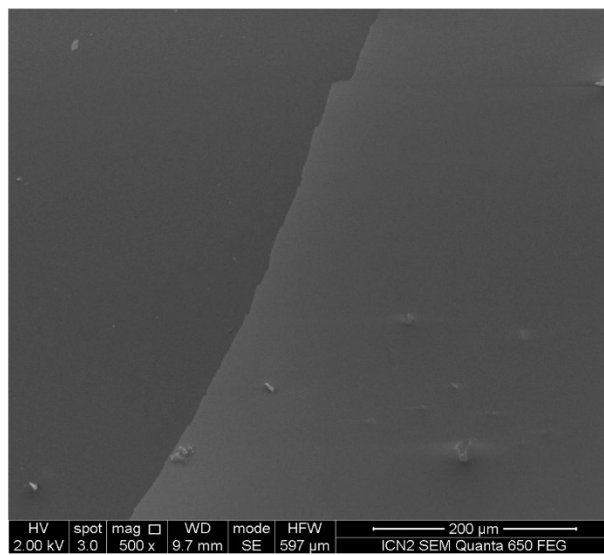


Figure S3. Scanning microscope image of the MoS₂ film grown on glass substrate.

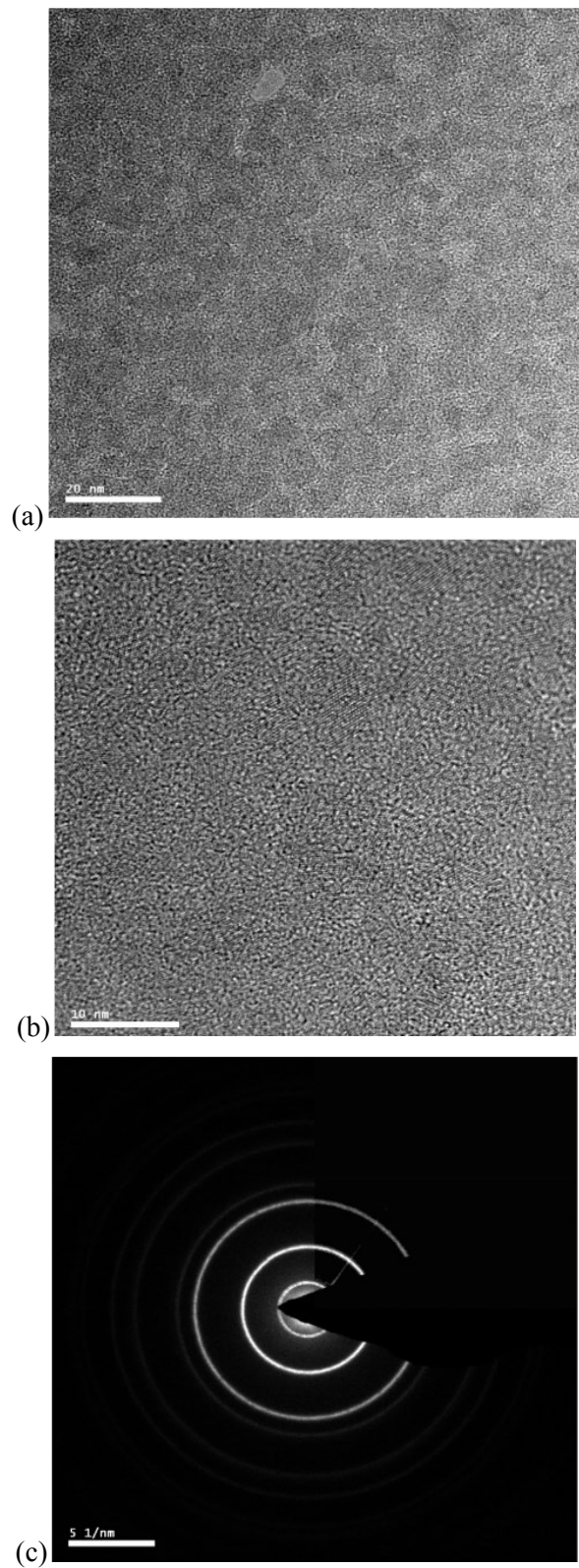


Figure S4. (a),(b)Transmission electron microscopy images and (c) diffraction pattern of the MoS₂ film, showing its clear polycrystalline structure.

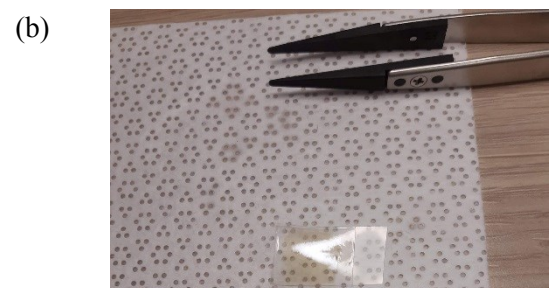


Figure S5. Wet transfer of MoS₂ from the original glass substrate. (a) PDMS directly in contact with MoS₂ on glass, a drop of DI water being placed at the interface (b) MoS₂ transferred to PDMS.

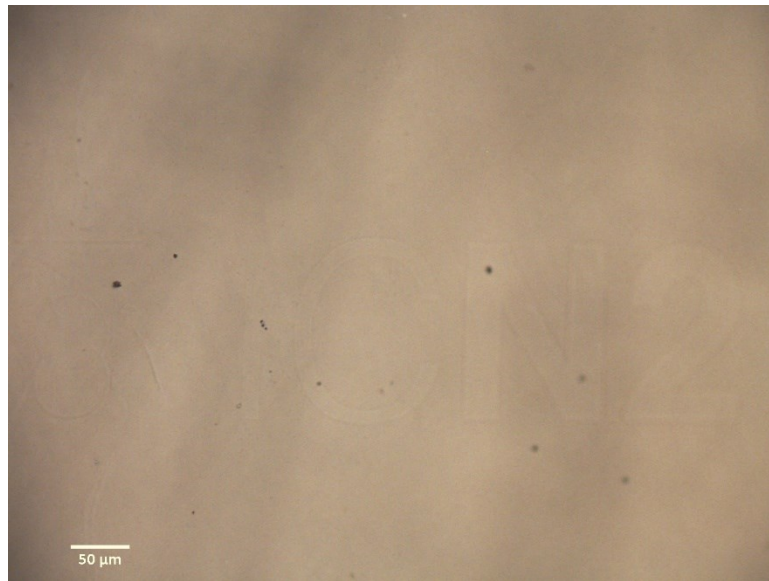


Figure S6. Example of the ICN2 logo exposed on PDMS/MoS₂ using 10 kV acceleration voltage and 300 μC/cm² dose.



Figure S7. Dry transfer from the PDMS after EBL to the PET substrate.

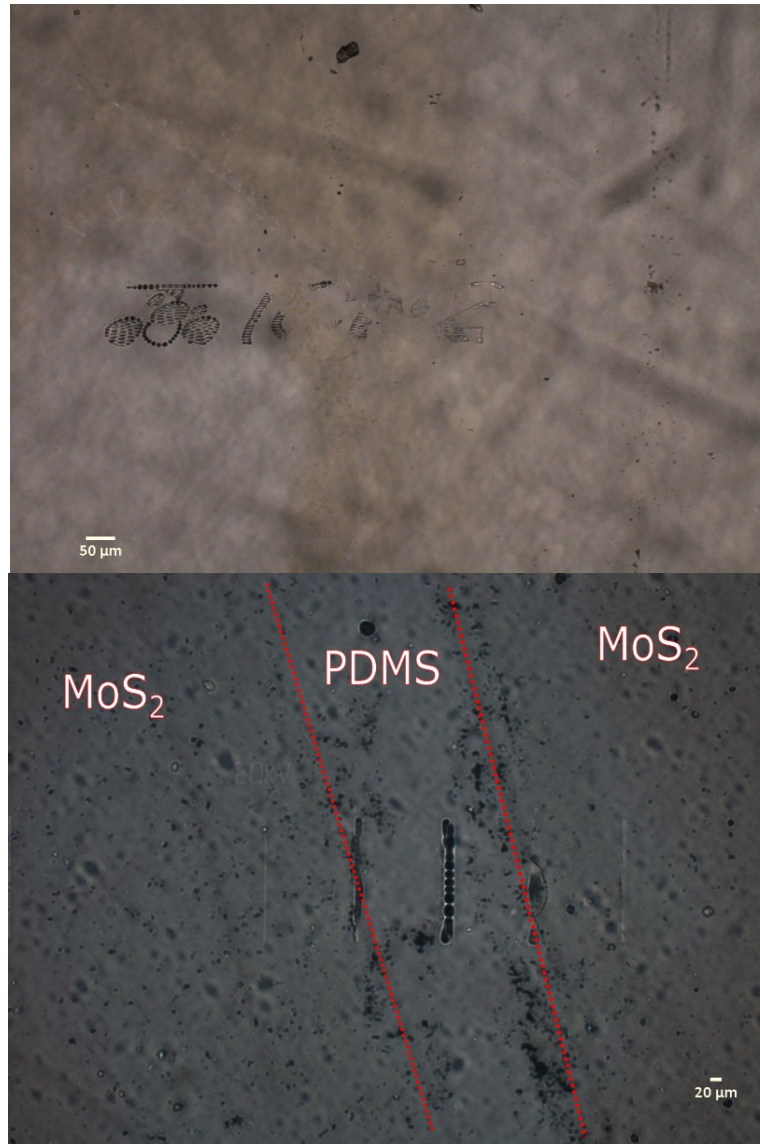


Figure S8. Examples of the EBL on MoS₂/PDMS. The exposures of PDMS only results in black, not well defined patterns. The exposures of MoS₂/PDMS yield well defined patterns. Top:10 kV acceleration voltage and 400 μC/cm² dose. Bottom:20 kV acceleration voltage and 700 μC/cm² dose.

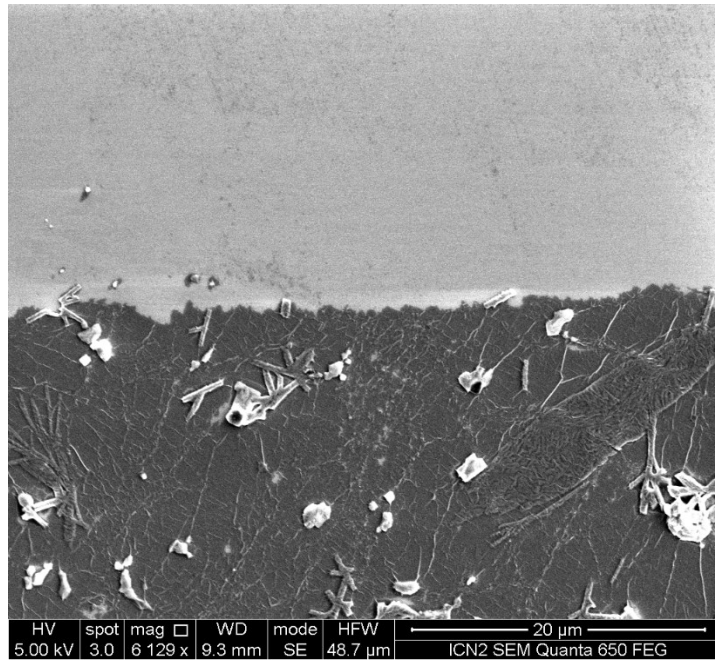


Figure S9. Example of an unsuccessful transfer of MoS₂ from PDMS to Si/SiO₂. The MoS₂ is clearly wrinkled and broken.