Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information

Time-Evolution of the Electrical Characteristics of MoS_2 Field Effect Transistors After Electron Beam Irradiation

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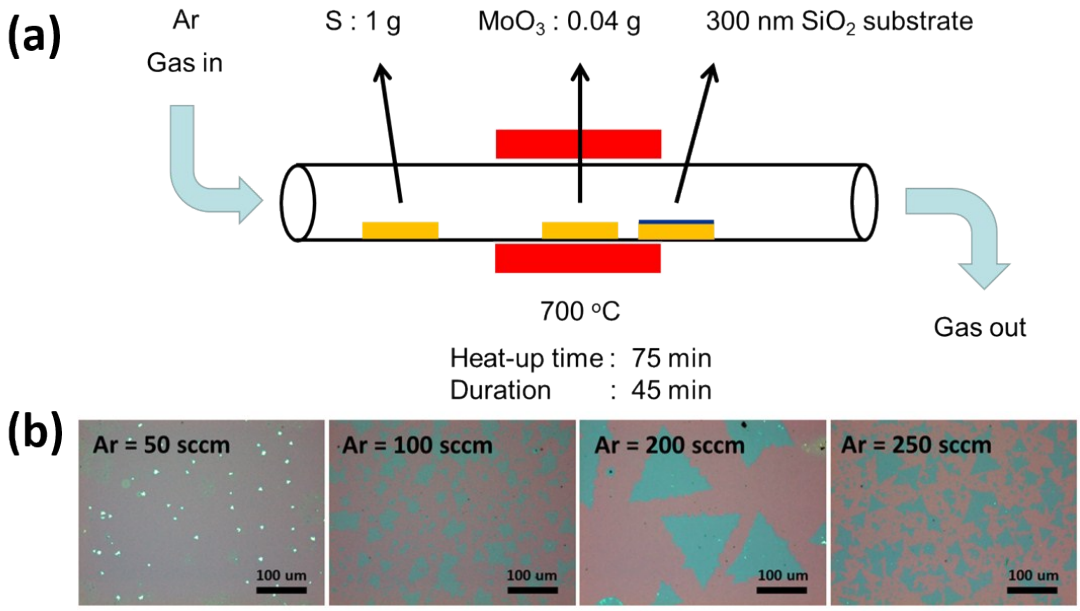

Figure S1 (a) Schematic representation of the setup for CVD growth of MoS_2 flakes. (b) OM images of MoS_2 flakes obtained at various Ar carrier gas flow rates.

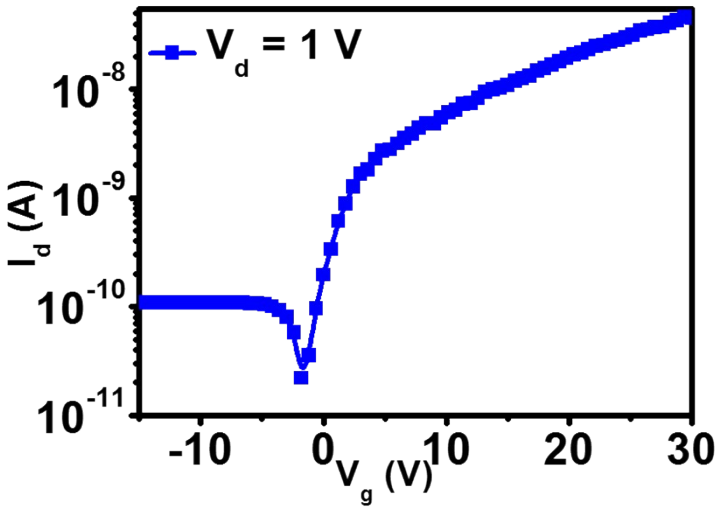

Figure S2 Transfer characteristic of a non-irradiated MoS_2 FET, measured at a value of V_d of 1 V, plotted on a logarithmic scale.

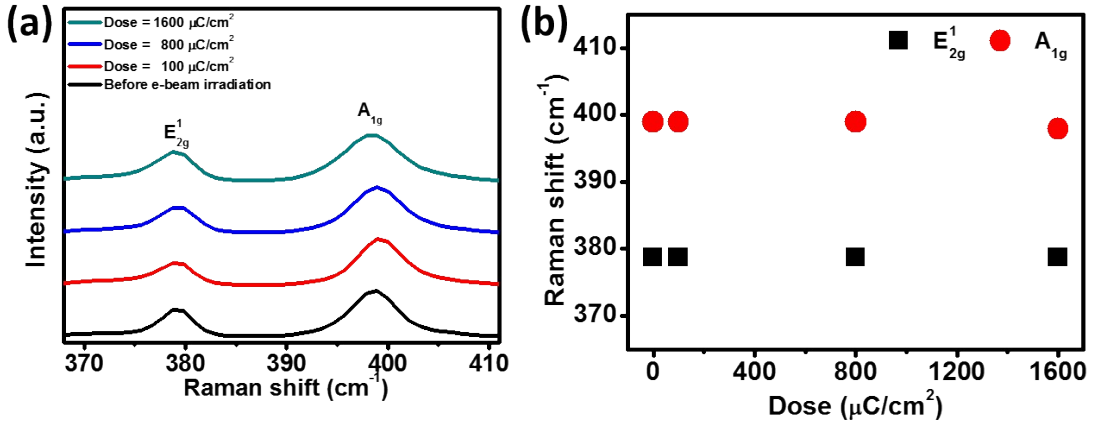

Figure S3 (a) Raman spectra of MoS_2 recorded before and after e-beam irradiation at various doses. (b) Positions of the E^1_{2g} and A_{1g} vibration modes of MoS_2 after e-beam irradiation at various doses; the positions are almost identical, indicating that the MoS_2 did not undergo any significant structural change.

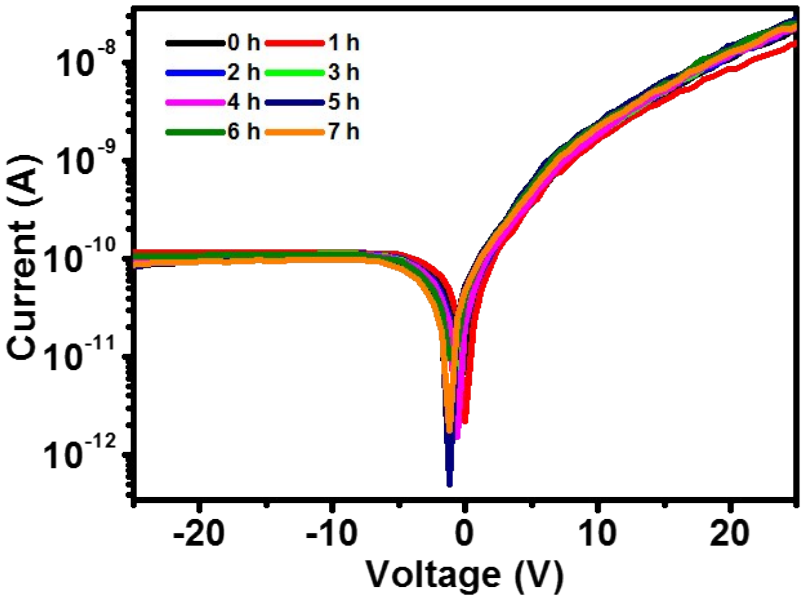

Figure S4 Transfer characteristics of a non-irradiated MoS_2 FET, measured after various periods of time.