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Scanning thermal atomic force microscopy of MoS$_2$
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Sungkyunkwan University — The morphology of MoS$_2$ flakes mechanically exfoliated onto a SiO$_2$ substrate was studied using scanning thermal atomic force microscopy. In the microscopy, the MoS$_2$ flake, protruded on a substrate at 300K, subsided by a few nm at 550K. However, as we lowered the substrate temperature to room temperature, the flake protruded again. This is due to the different convective heat loss on between MoS$_2$ and SiO$_2$ at 550K. Thermal properties of MoS$_2$ layer such as cross plane heat conduction and convective heat loss will be discussed further in this presentation.

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