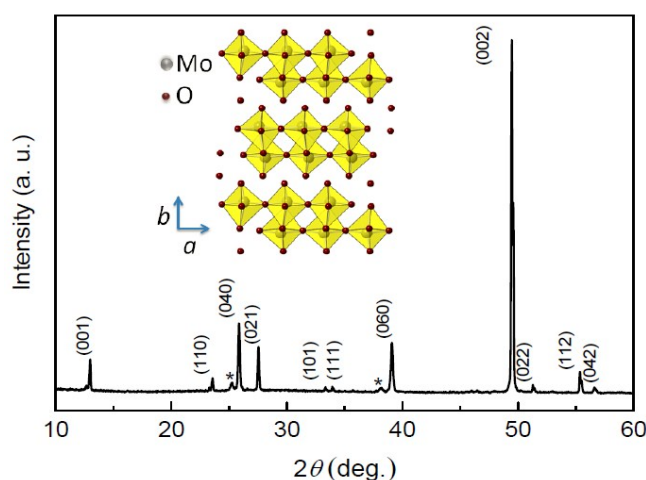


## Supplementary Information

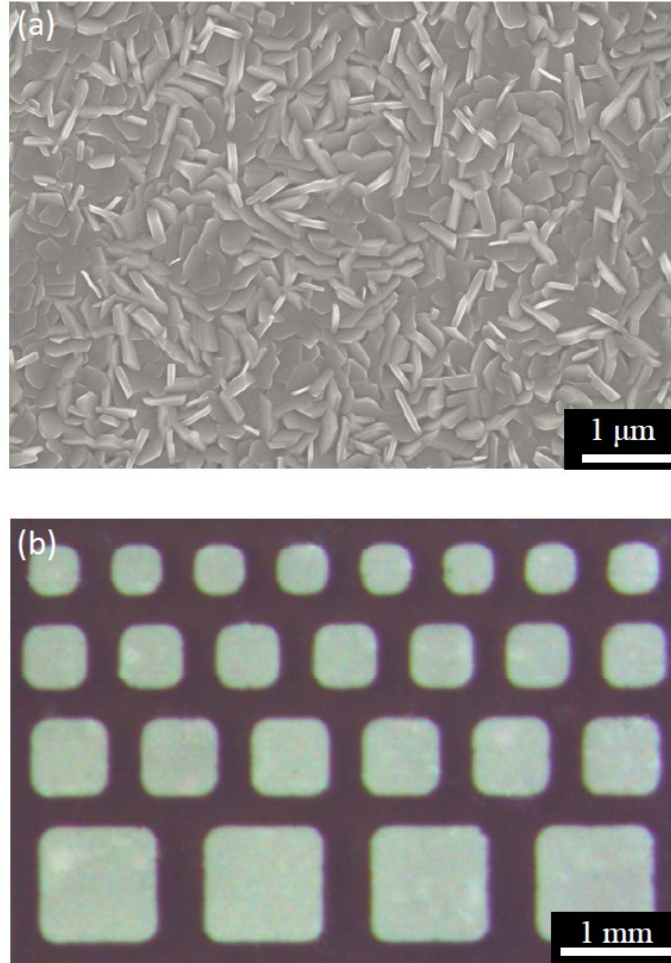
### Moisture effects on the electrochemical reaction and resistance switching at silver/molybdenum oxide interfaces

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**Fig. S1** Structure and morphology of the MoO<sub>3-x</sub> (x~0.2) film. (a) The XRD pattern of the film. The symbol (\*) indicates the peak positions of FTO substrate. The inset shows the orthorhombic polycrystalline structure with layers consisting of distorted MoO<sub>6</sub> octahedral.



**Fig. S2** (a) Top-view SEM image of the prepared MoO<sub>3-x</sub> film. It shows a polycrystalline microstructure with plate-shaped grains randomly piled up together. (b) Photography of the measured cells with different top electrode sizes.