Supporting Information for

Versatile van der Waals Epitaxy-like Growth of Crystal Films Using Two-dimensional Nanosheets as a Seed Layer: Oorientation Tuning of SrTiO₃ Films along Three Important Axes on Glass Substrate

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*To whom correspondence should be addressed. Fax: +81-29-854-9061; Tel: +81-29-860-4950; Email: <u>sasaki.takayoshi@nims.go.jp</u> **Fig. S1** In-plane XRD data for the nanosheet films as a seed and the top view of the nanosheet structure for $Ca_2Nb_3O_{10}^-$, $Ti_{0.87}O_2^{0.52^-}$, and $MoO_2^{\delta^-}$. Indices for $MoO_2^{\delta^-}$ are based on 2D orthorhombic unit cell. The 2D lattice is indicated by red on each nanosheet structure. The blue line on $MoO_2^{\delta^-}$ nanosheet indicates the pseudo-hexagonal cell.



Fig. S2 (a) Low-magnification TEM image of $SrTiO_3$ thin film deposited on a bare glass substrate. The inset shows the ED pattern from the film. (b) Enlarged HRTEM image of $SrTiO_3$ layer in the vicinity of the glass substrate.

