



Supplementary Figure 1. Data giving quantification of the accuracy of the 3D reconstructions. (a) Superimposition of TEM (greyscale) and 3D reconstruction (green) images for the same tilt angle ($T = 45^\circ$), showing that the 3D reconstruction reproduces the actual TEM images without noticeable distortion. (b-c) Lateral accuracy of the 3D reconstructions for nearly vertical dislocation segments, evaluated by comparing the apparent width (≈ 5 nm) of the segment measured from TEM images (in grey) acquired in $\vec{g} \cdot n\vec{g}$ conditions ($n \approx 3-4$) (b), with the width (≈ 12 nm) of the same dislocation line on the 3D reconstruction in the most unfavorable tilt condition ($T = 90^\circ$). From this comparison, the lateral accuracy of the 3D reconstruction is thus

of the order of 2-3 times that of our microscope. (d) Dislocation labelled 2 in images (a-b) positioned edge-on (e-i), giving an orientation of the habit plane of $70^{\circ} \pm 5^{\circ}$, the uncertainty coming mainly from the non-planar morphology of the dislocation line.