

Supporting Information

Support-Facet-Dependent Morphology of Small Pt Particles on Ceria

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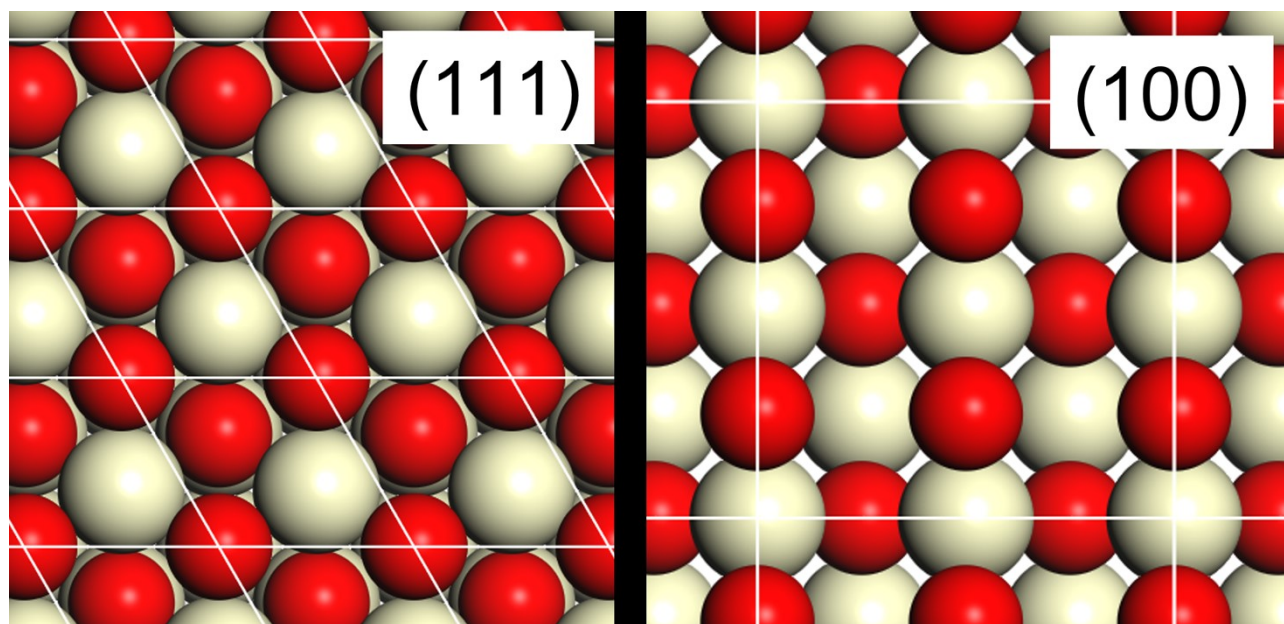


Figure S1: The surface termination chosen for the two CeO₂ facets.

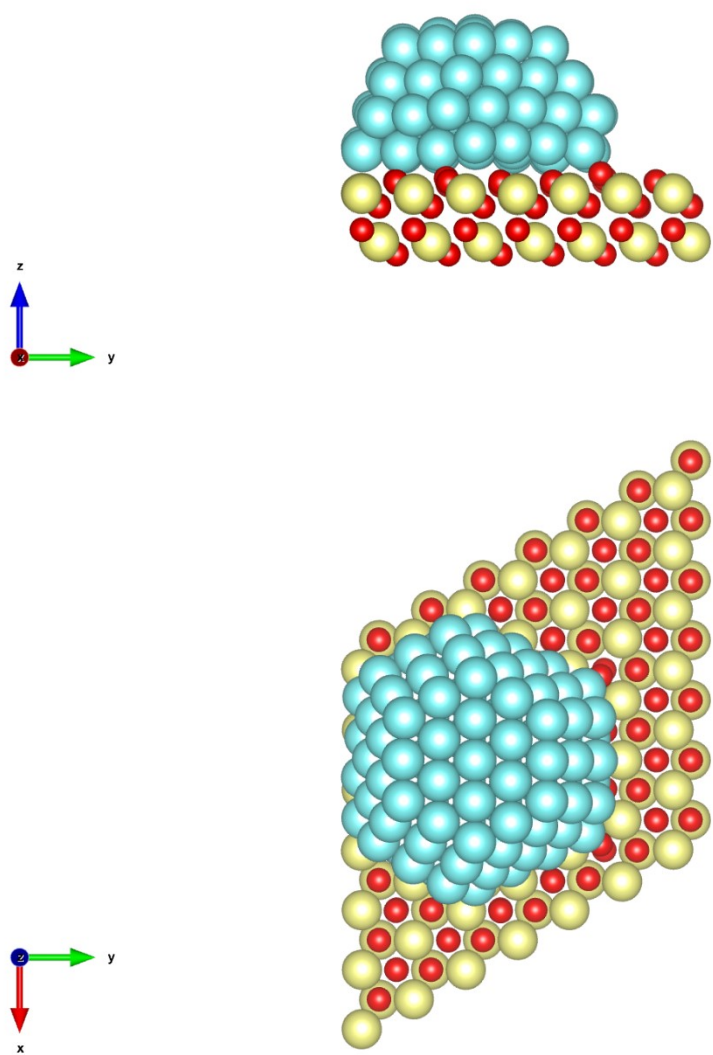


Figure S2: Symmetric Pt₁₁₉ structure with a stability of 0.64 eV/atom, slightly higher than for the asymmetric 118-atom particles in Fig. 2 of the main text. Color code: Cyan – Pt, Eggshell – Ce, Red – O.

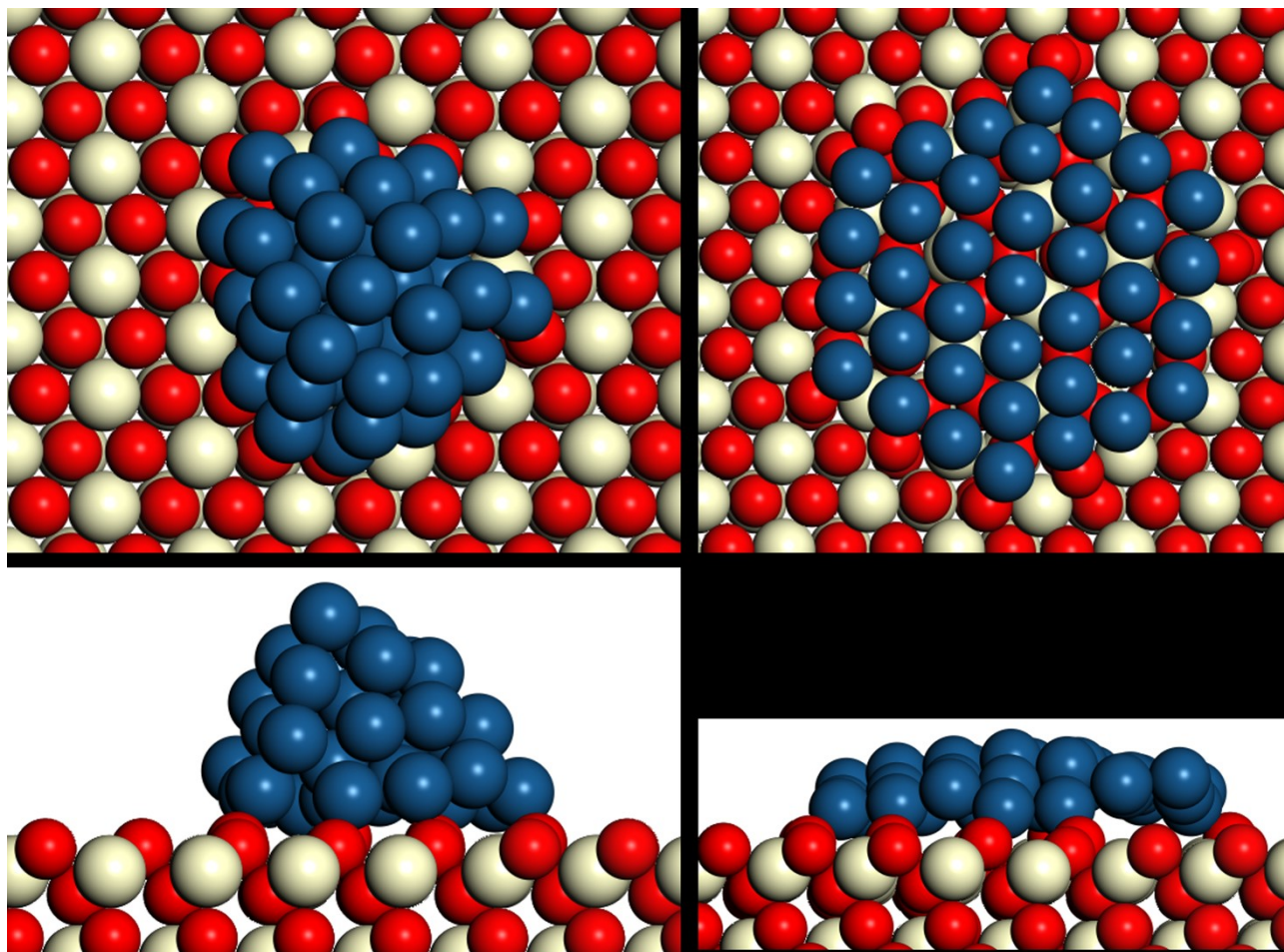


Figure S3: Pt₃₇ supported in a three- and one-dimensional fashion on CeO₂(111). The 3D structure is preferred by 5.5 eV.

Color code: Blue – Pt, Eggshell – Ce, Red – O.

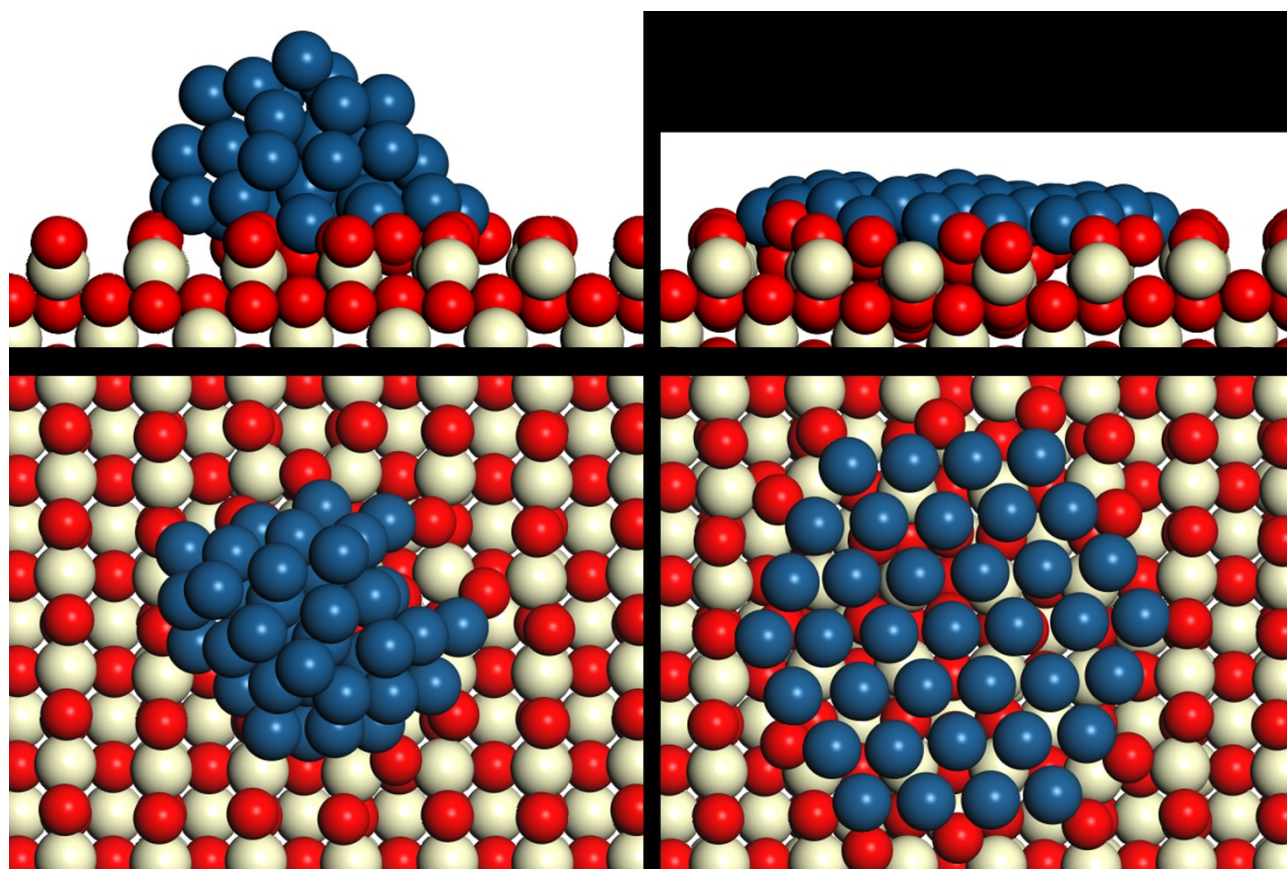


Figure S4: Pt₃₇ supported in a three- and one-dimensional fashion on CeO₂(100). The 2D structure is preferred by 3.9 eV.

Color code: Blue – Pt, Eggshell – Ce, Red – O.

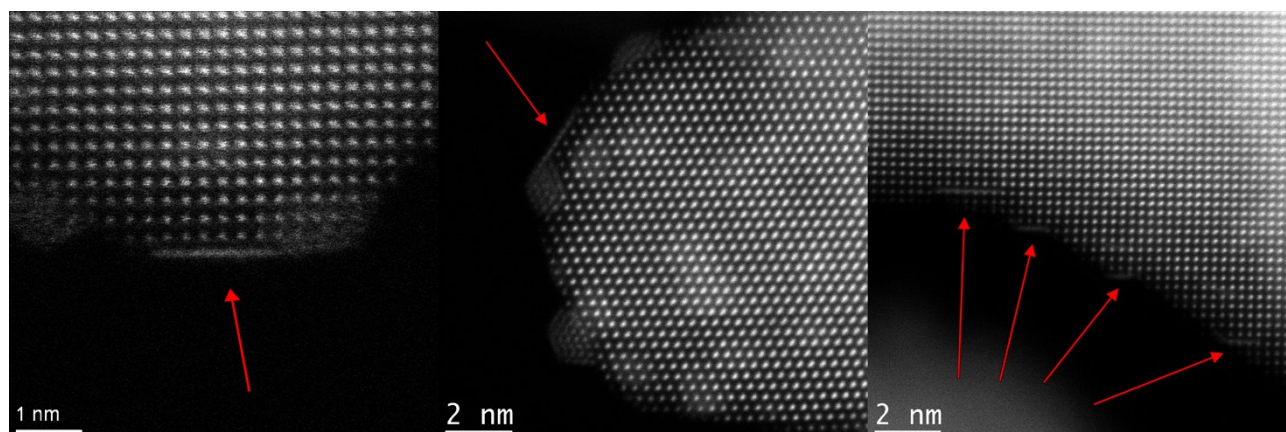


Figure S5: Examples of 2D Pt structures on CeO₂(100). These Pt particles were not deposited by cluster beam deposition, but by regular magnetron sputtering and therefore have a random size.

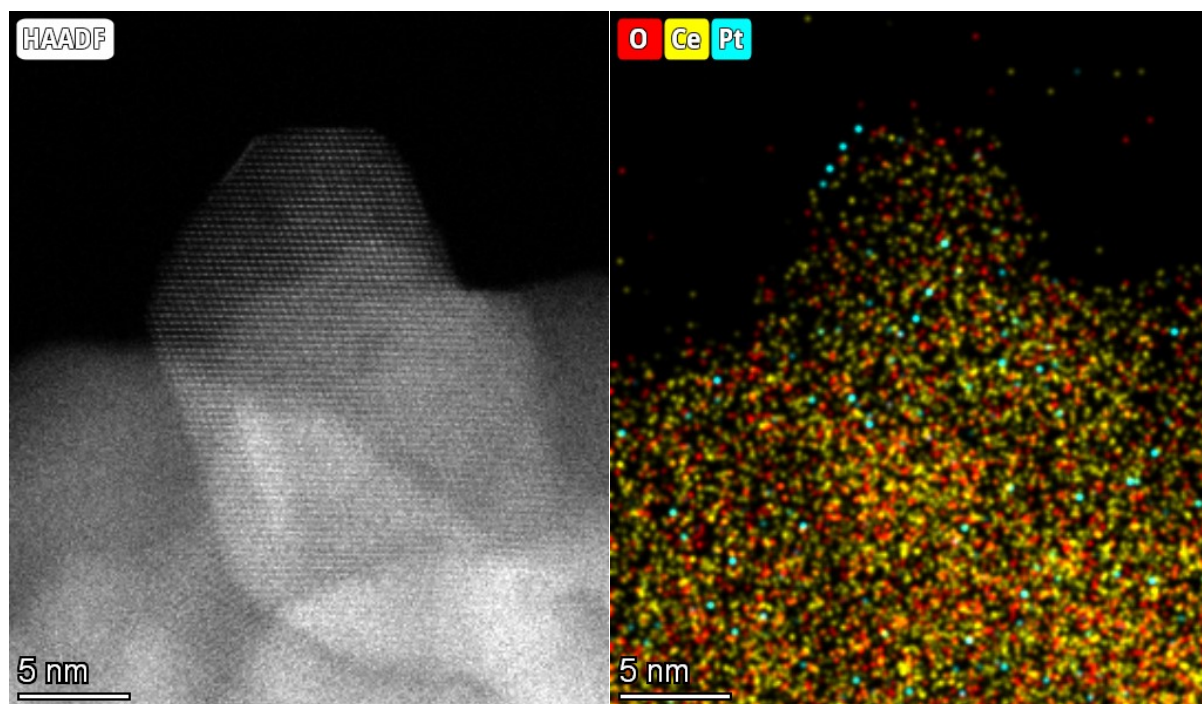


Figure S6: HAADF-STEM image and corresponding EDX map of the region in Fig. 1 of the main text, mirrored. There are a few Pt counts at the raft structure.

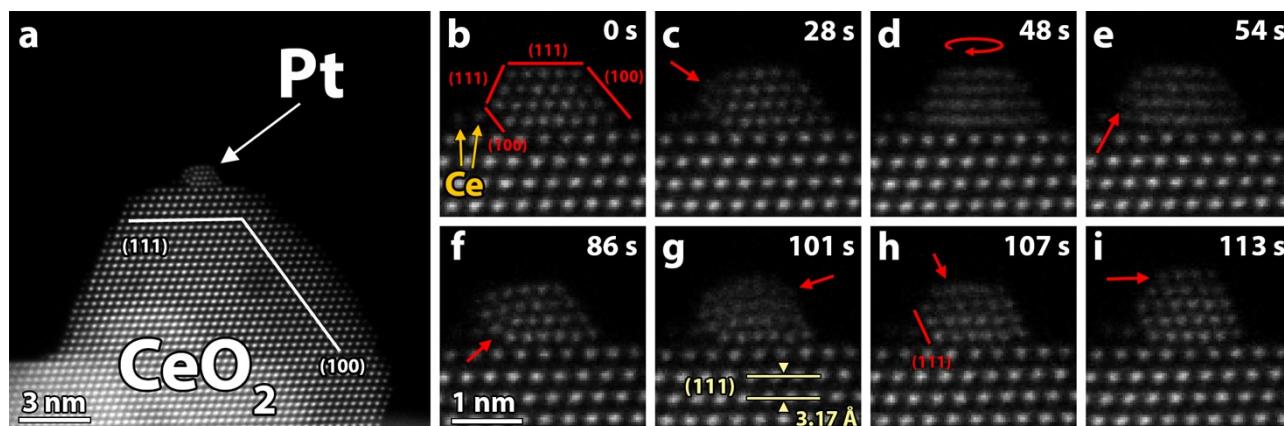


Figure S7: Grayscale version of Figure 1 in the main text.

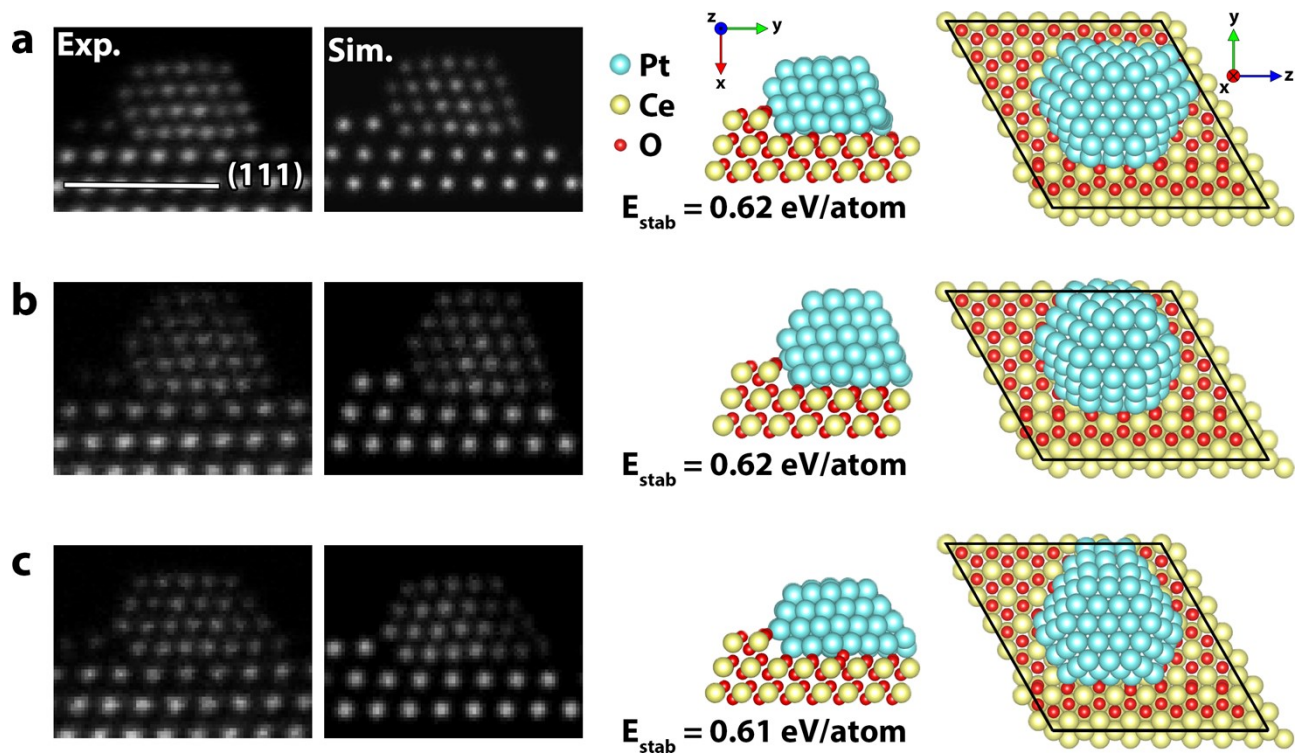


Figure S8: Grayscale version of Figure 2 in the main text.

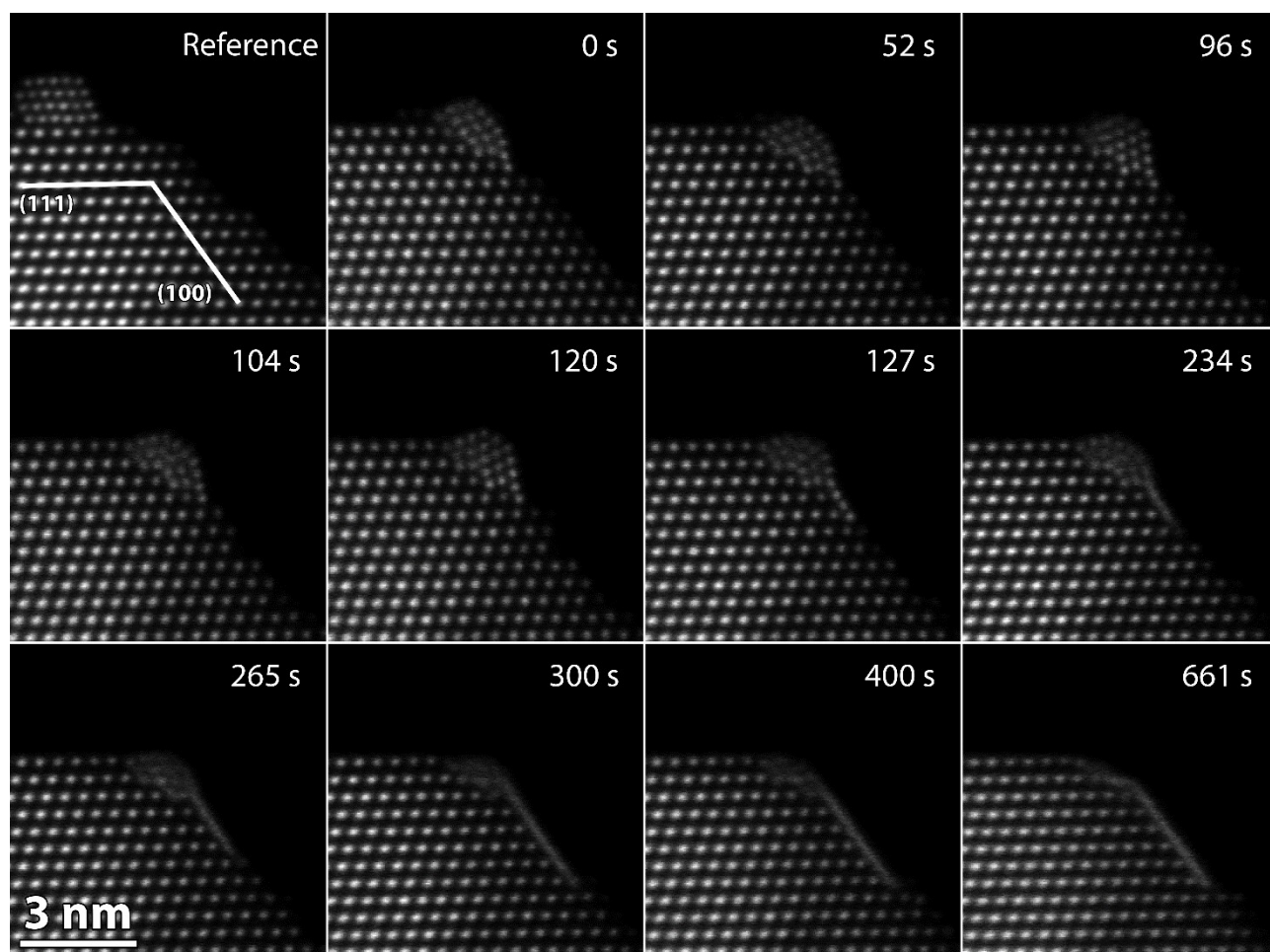


Figure S9: Grayscale version of Figure 3 in the main text.

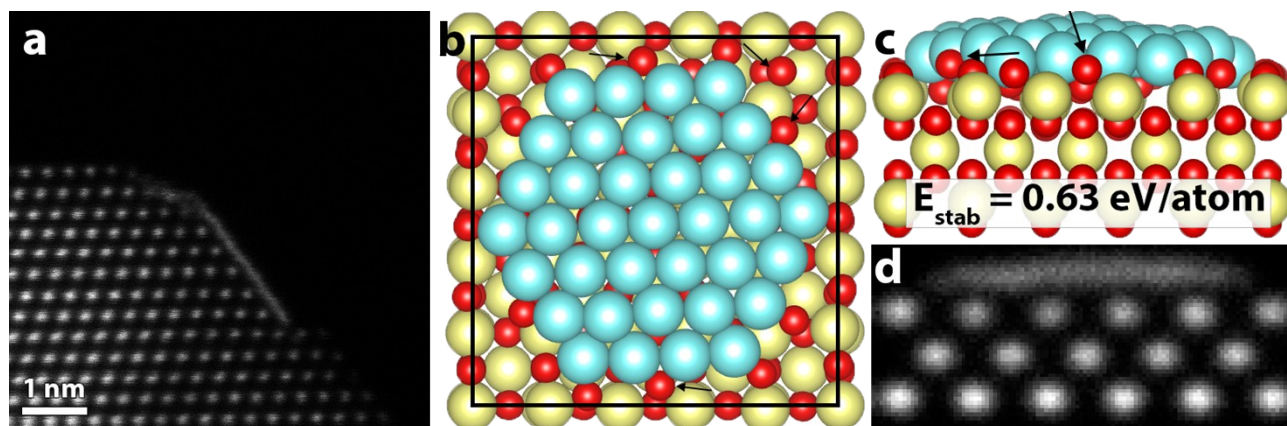


Figure S10: Grayscale version of Figure 4 in the main text.