Electronic supplementary information (ESI)

Enhanced adsorption of CO_2 at steps of ultrathin ZnO: the importance of Zn-O geometry and coordination

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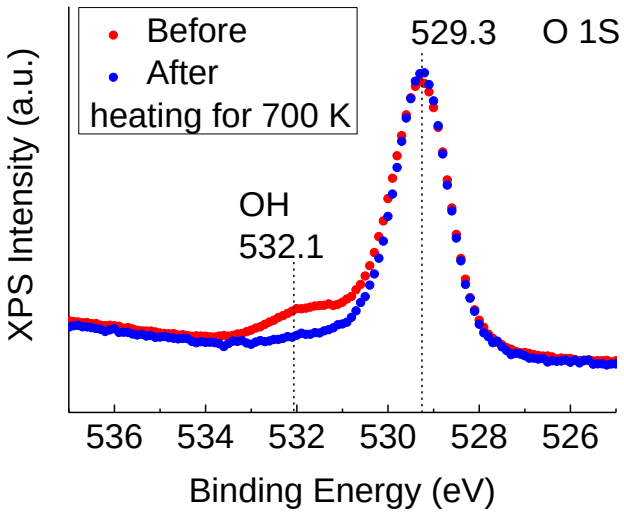

Fig. S1 O 1s XP spectra of as-prepared 1.7 MLE ZnO(L2-L3) and after heating to 700 K, showing the removal of hydroxyls.

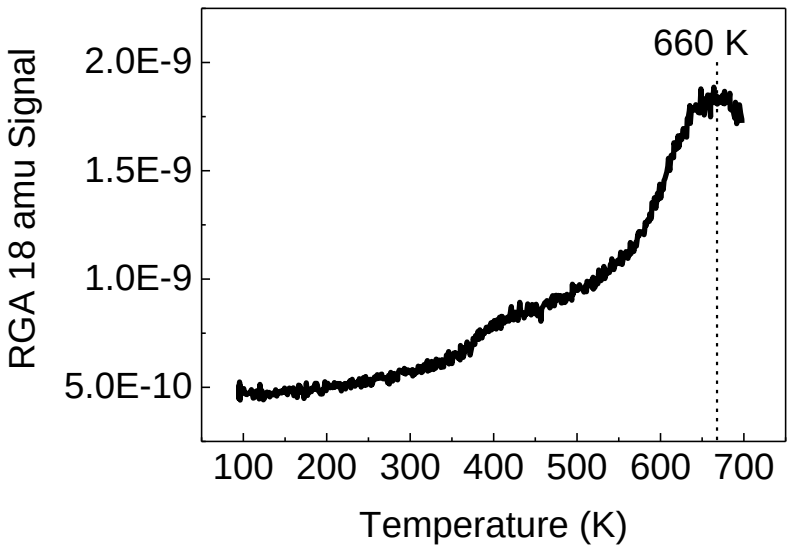

Fig. S2 TPD spectrum of H_2O (m/z = 18) from as-prepared 1.7 MLE ZnO(L2-L3), showing the hydroxyl removal via recombinative desorption as water occurring at T = 660 K (heating rate 2 K/s).

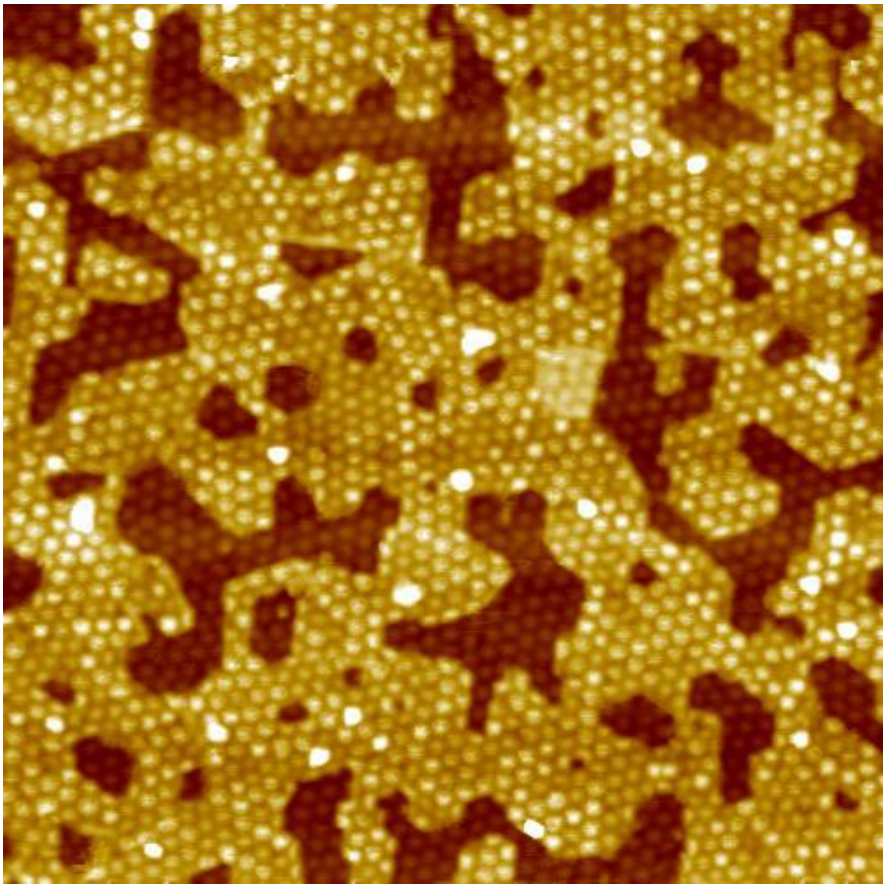

Fig. S3 STM image of 2.3 MLE ZnO(L2-L3) (100 × 100 nm^2, V = 1.5 V, I = 50 pA).

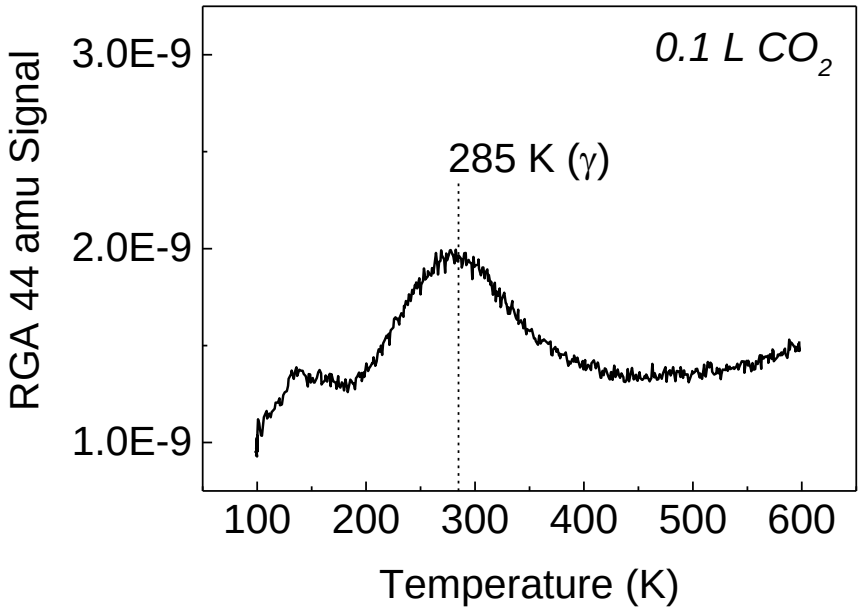

Fig. S4 TPD spectrum of CO_2 (m/z = 44) from 2.3 MLE ZnO(L2-L3) following the CO_2 exposure of 0.1 L (1 L = 1.33×10^{-6} mbar·s) at T = 100 K (heating rate 2 K/s).