

Supporting Information for

Surface oxygen vacancies over Co_3O_4 mediated catalytic formaldehyde oxidation at room temperature

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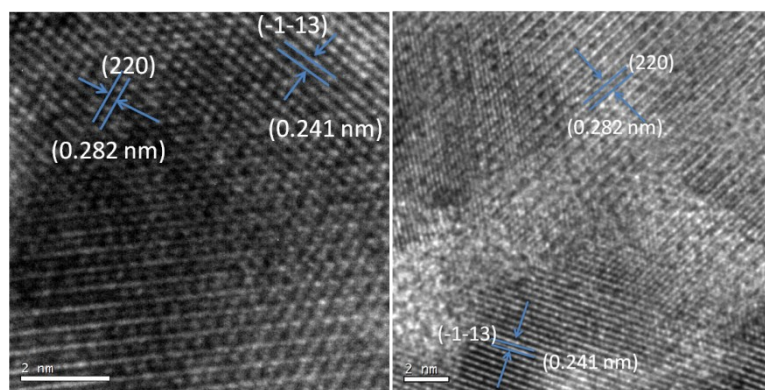


Figure S1. HRTEM images of Co_3O_4 nanobelts.

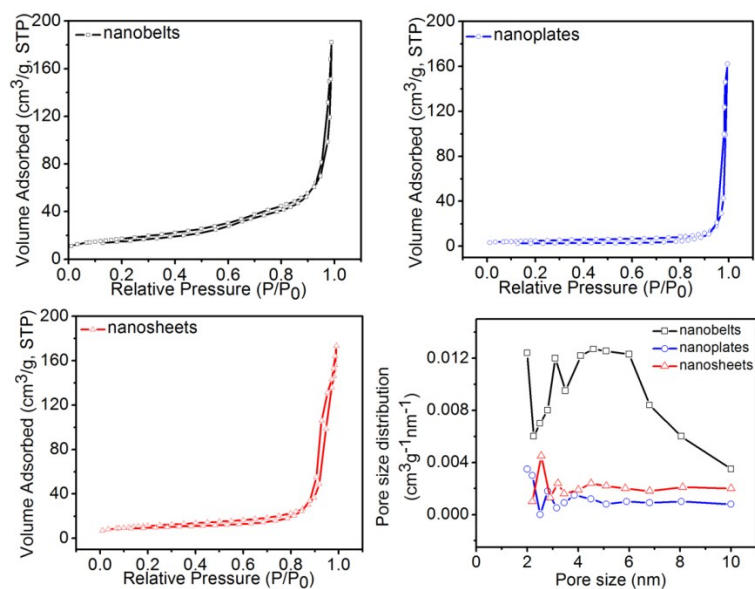


Figure S2. Nitrogen adsorption-desorption isotherms of different Co_3O_4 catalysts with corresponding pore-size distribution.

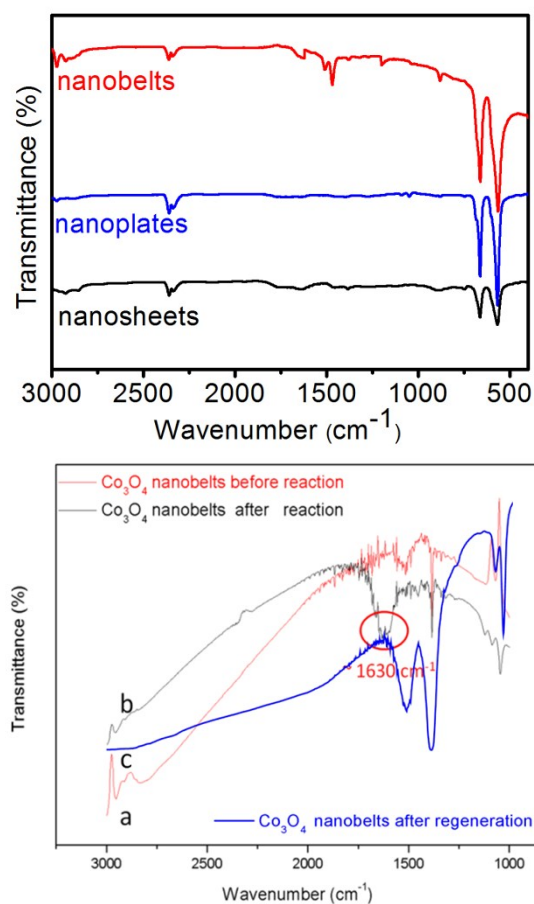


Figure S3. FTIR spectra of three Co₃O₄ catalysts

FTIR spectra of nanobelts before (a) and after (b) reaction, after regeneration (c)

For all the samples, the two absorption bands at 565 cm⁻¹ and 661 cm⁻¹ can be ascribed to the stretching vibration of Co³⁺-O and Co²⁺-O bond, confirming the formation of Co₃O₄.

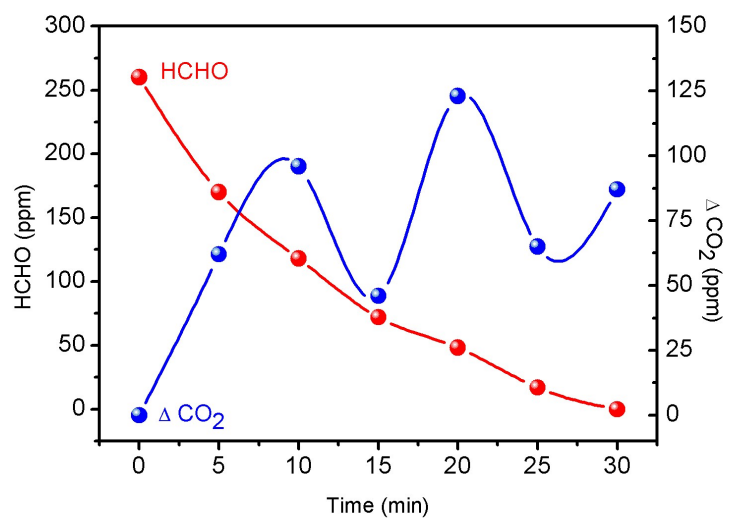


Figure S4. Respective concentration changes of formaldehyde and carbon dioxide as a function of time over Co_3O_4 nanobelts.