Electronic Supplementary Information for

# Enhanced Rh-Anchoring by the Composite Metal Phosphate $Y_{0.33}Zr_2(PO_4)_3$ in Three-Way Catalysis

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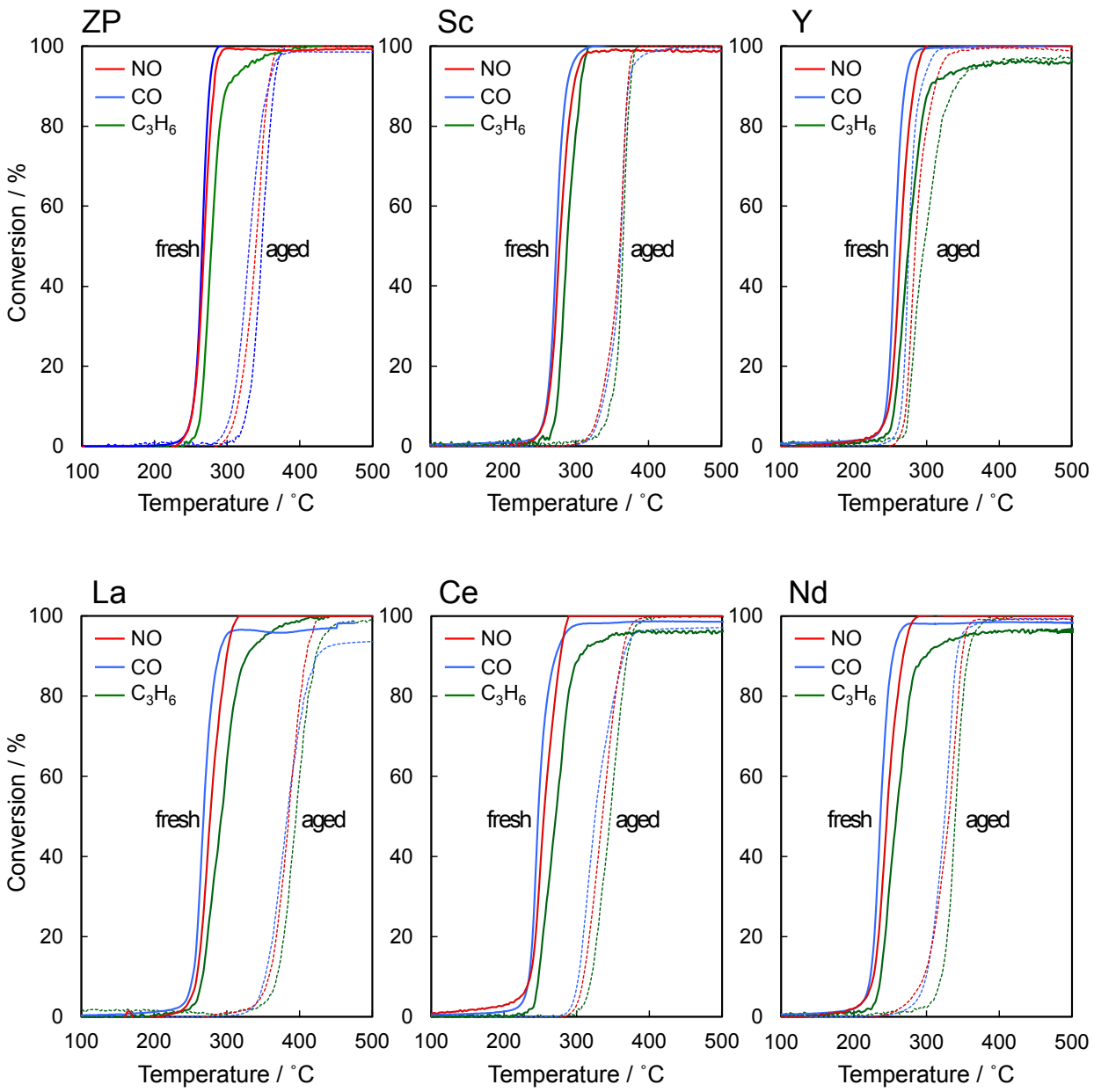


**Figure S1**. Light-off curves for NO, CO, and $C_3H_6$ for Rh catalysts (0.4 wt% loading) supported on ZP and $Ln_{0.33}Zr_2(PO_4)_3$ as-prepared (fresh) and after thermal ageing at 900 °C for 25 h in 10% $H_2O$/air.

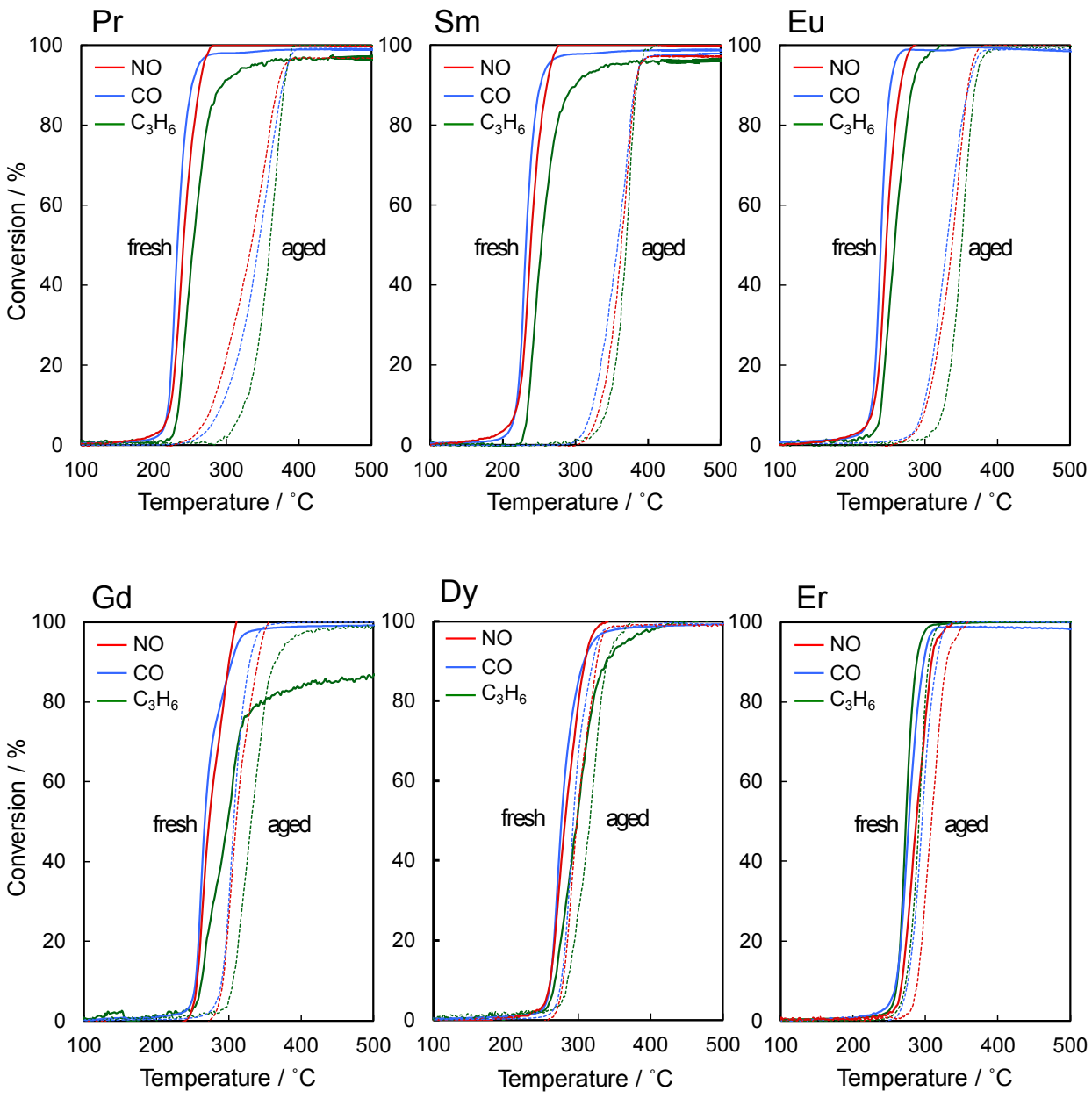


**Figure S1 (Continued)**. Light-off curves for NO, CO, and $C_3H_6$ for Rh catalysts (0.4 wt% loading) supported on ZP and $Ln_{0.33}Zr_2(PO_4)_3$ as-prepared (fresh) and after thermal ageing at 900 °C for 25 h in 10% $H_2O$/air.

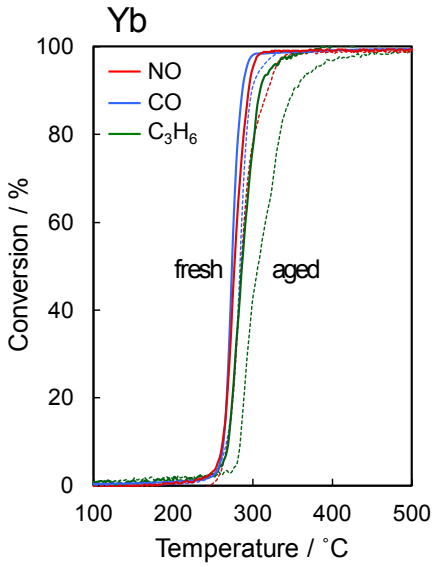


**Figure S1 (Continued)**. Light-off curves for NO, CO, and $C_3H_6$ for Rh catalysts (0.4 wt% loading) supported on ZP and $Ln_{0.33}Zr_2(PO_4)_3$ as-prepared (fresh) and after thermal ageing at 900 °C for 25 h in 10% $H_2O$/air.

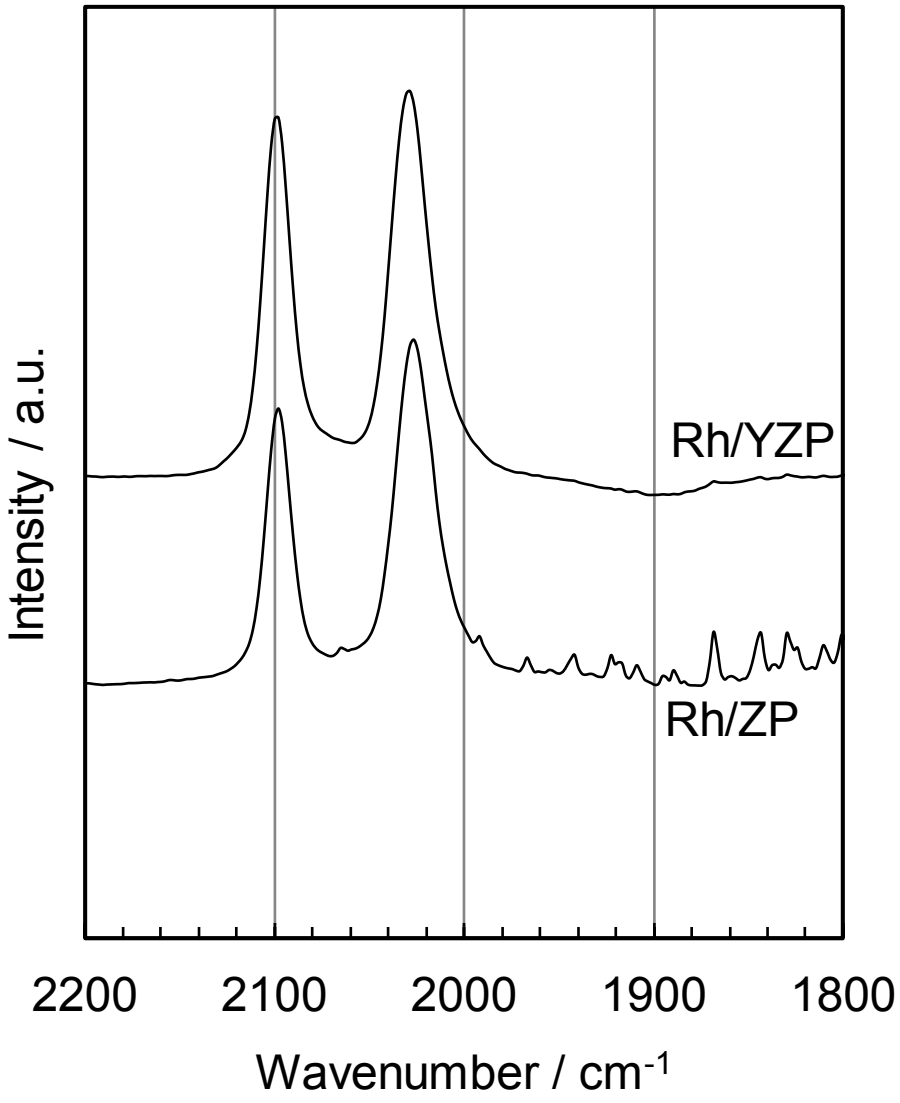


**Figure S2**. *In situ* FT-IR spectra for CO adsorbed on Rh/YZP and Rh/ZP at 200 °C. Before CO adsorption, the catalysts were reduced by $H_2$ at 200 °C.

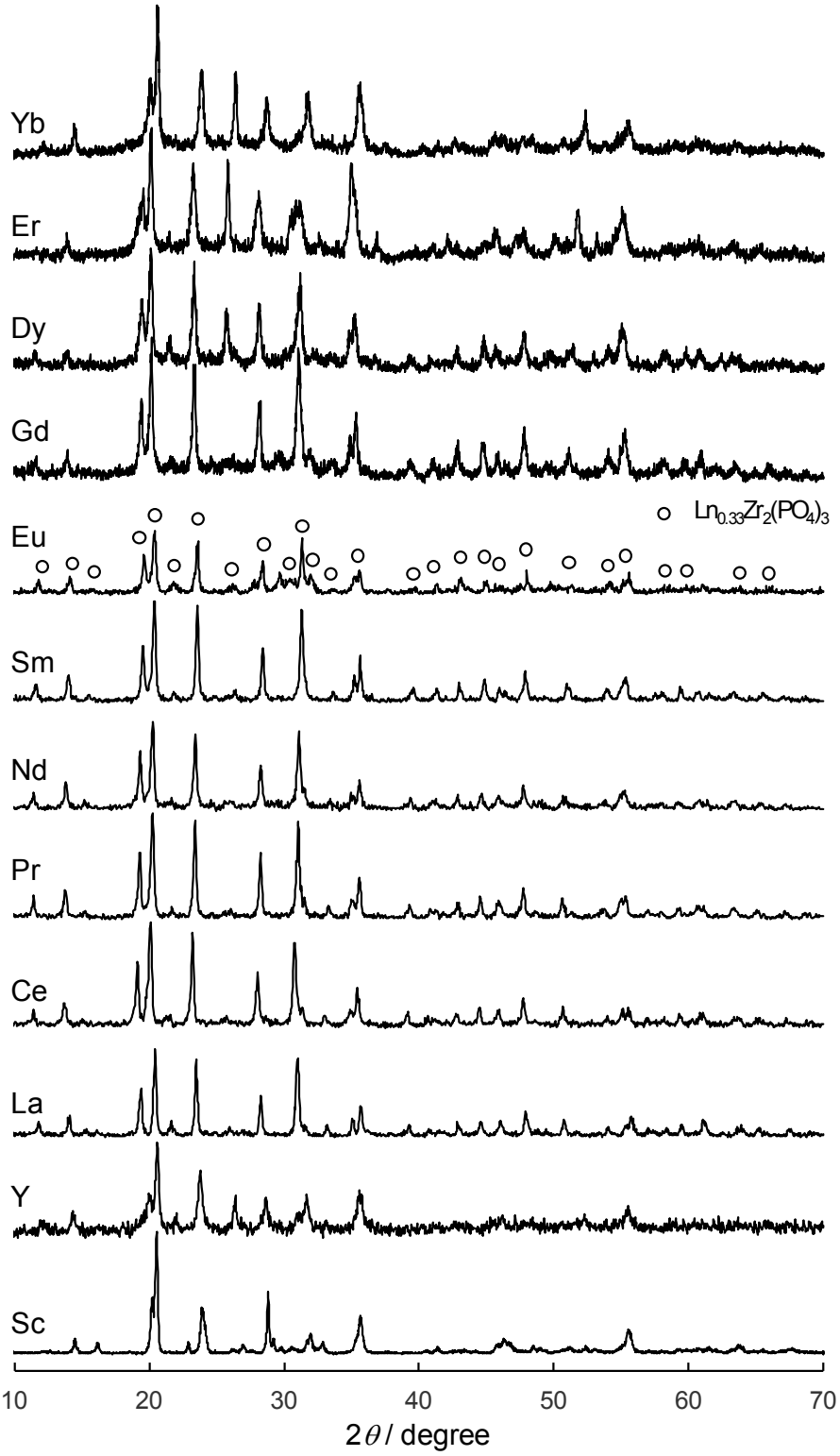


**Figure S3**. XRD patterns of $Ln_{0.33}Zr_2(PO_4)_3$ as calcined in air at 900 °C.