Supplemental files

Poisoning effects of phosphorus, potassium and lead on V_2O_5-WO_3/TiO_2 catalysts for selective catalytic reduction with NH_3

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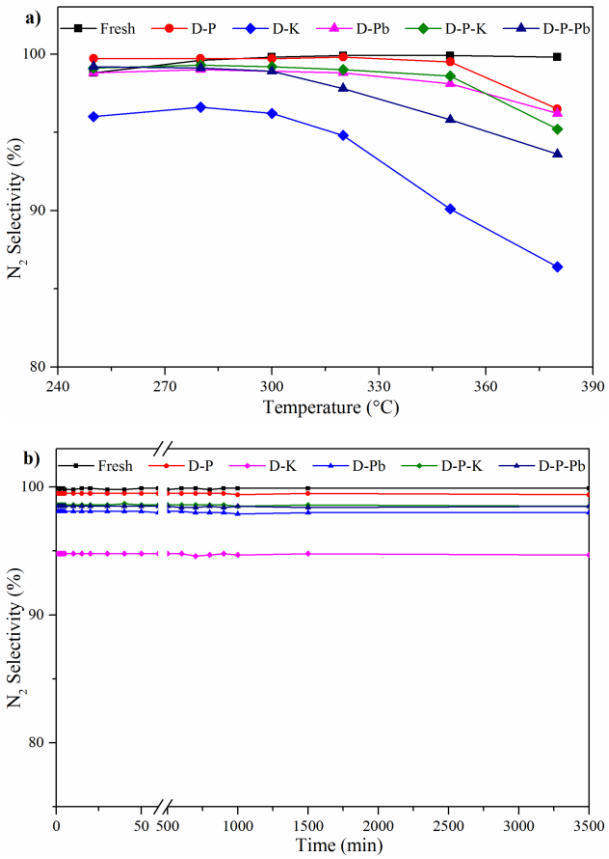

Figure S1. a) The N_2 selectivity of Fresh and poisoned samples; b) The N_2 selectivity of Fresh and poisoned samples at 350 °C with time

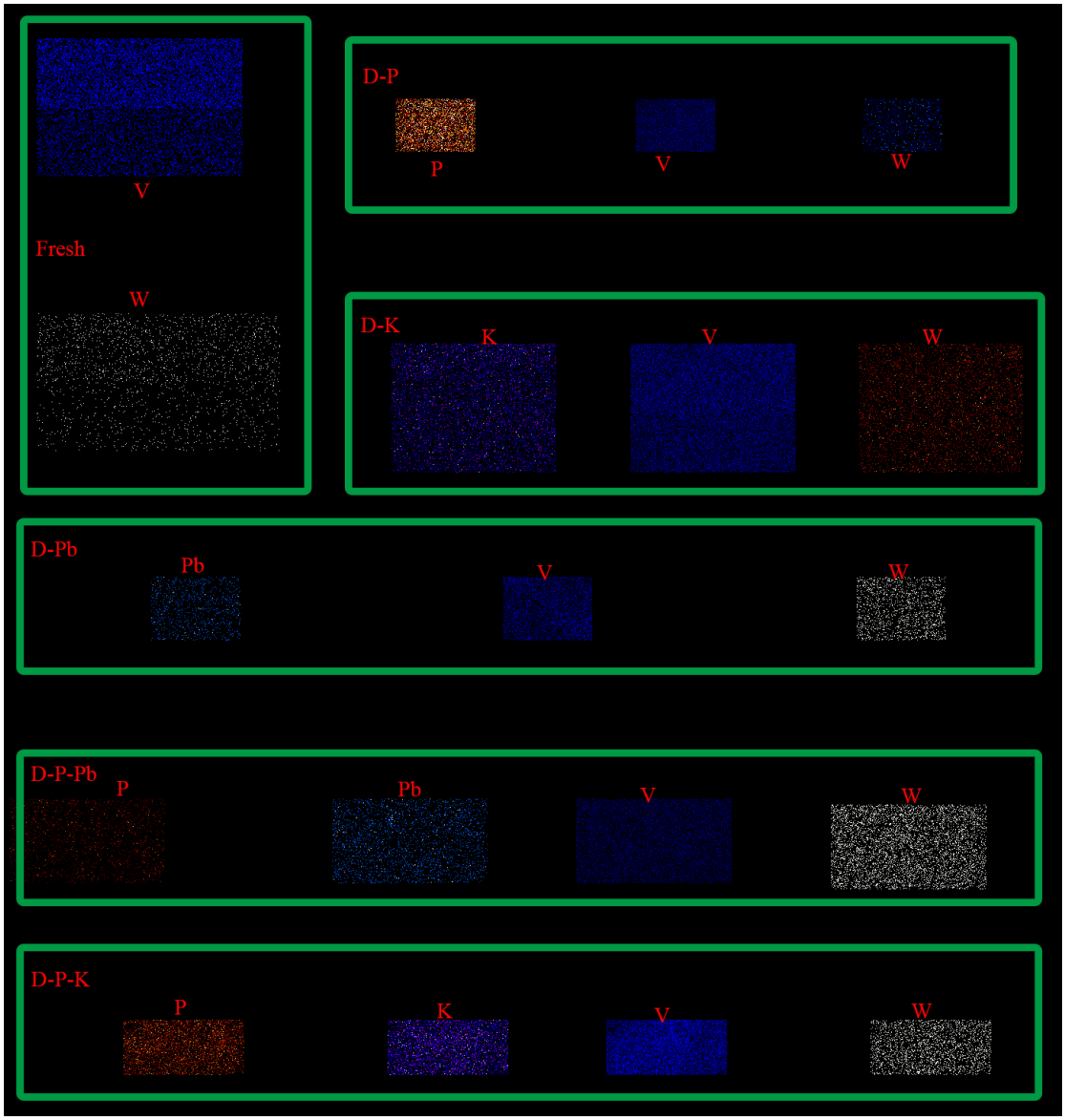

Figure S2. The SEM-EDS images of Fresh and poisoned catalyst.

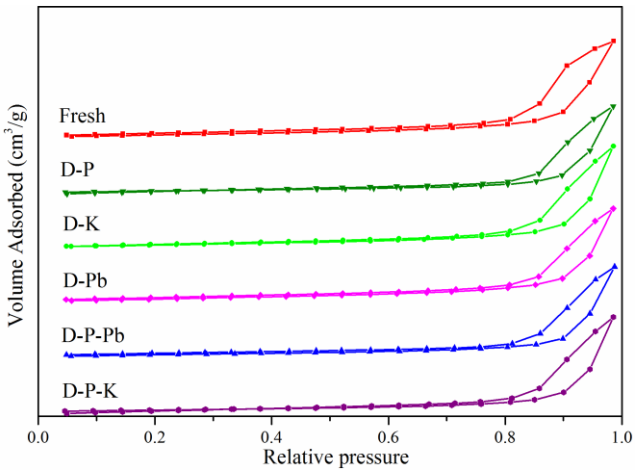

Figure S3. N_2 adsorption-desorption isotherm of Fresh and poisoned samples.

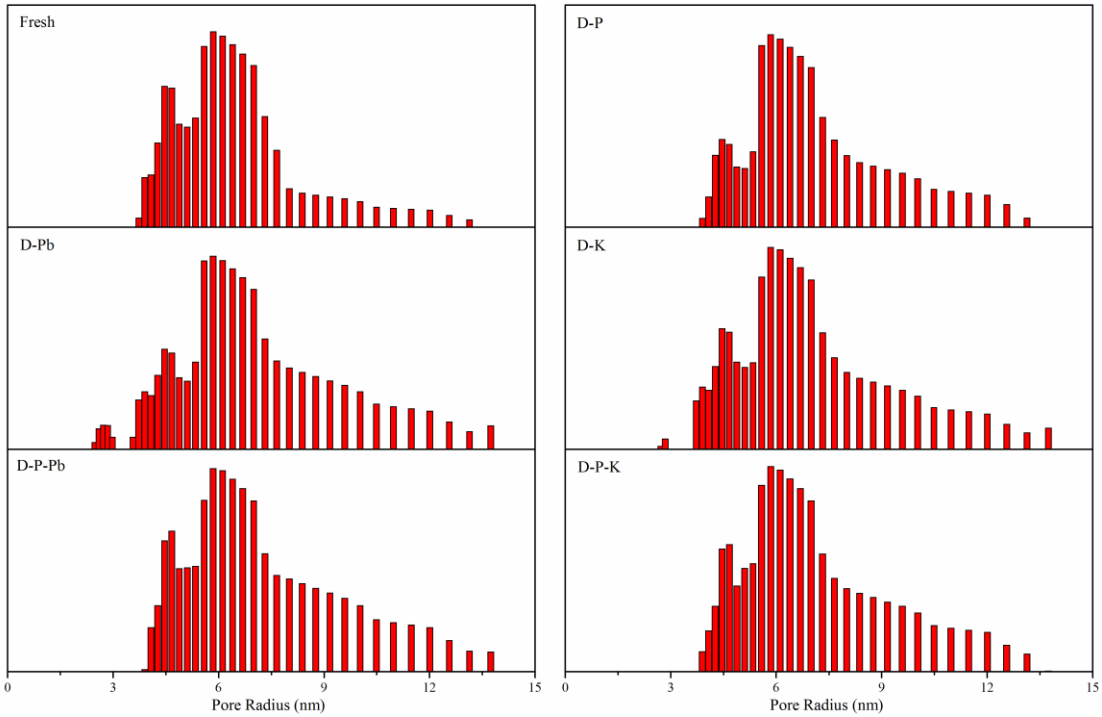

Figure S4. The pore size distribution of fresh and poisoned samples.

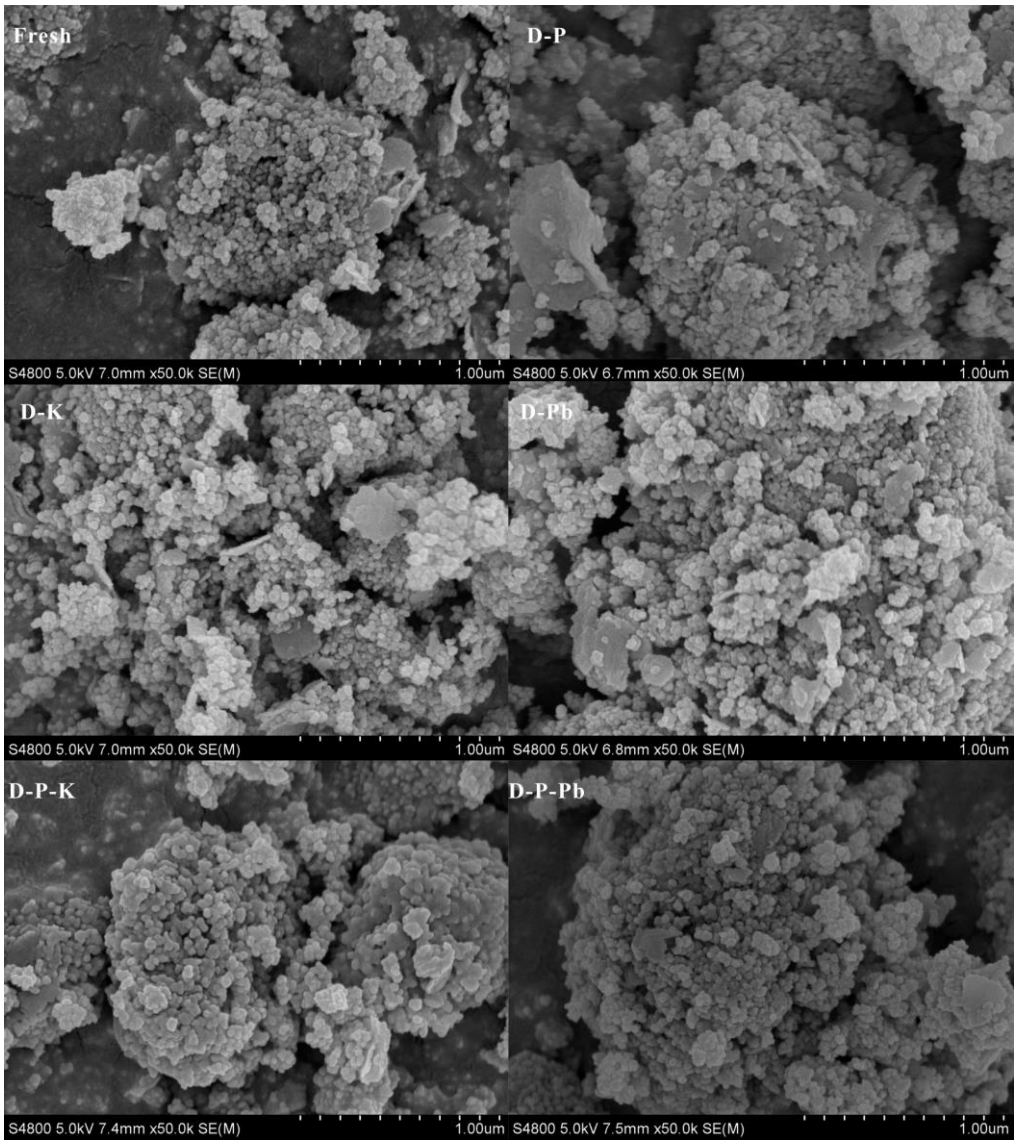

Figure S5. The SEM images of Fresh catalysts and poisoned samples.

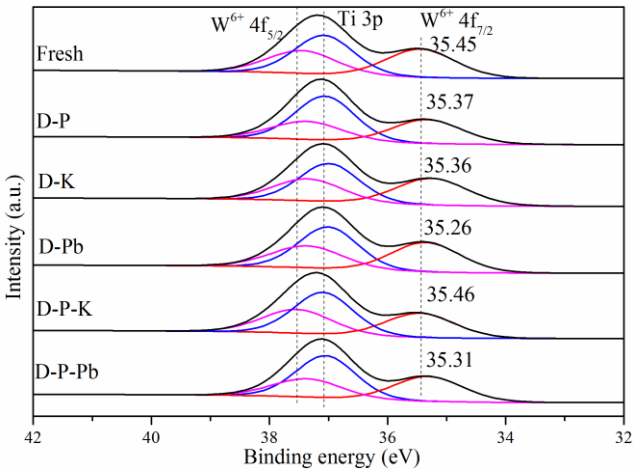

Figure S6. XPS spectra of the W 4f of Fresh and poisoned samples.

Figure S6 shows the W 4f XPS spectrum of fresh catalyst and poisoned samples. The peak

located at 37.1 eV is corresponding to Ti 3p and the binding energies at 35.26-35.46 eV and 37.33-37.53 eV are attributed to W^{6+} $4f_{7/2}$ and W^{6+} $4f_{5/2}$. It indicates that tungsten oxide exists as hexavalent state under oxygen conditions. The binding energy changes a little after poisoning by P, K or Pb. It indicates that P, K or Pb has little effect on the W species.