

Supplementary Information for:

**Non-mercury catalytic acetylene hydrochlorination over the NH_4F -
Urea-modified Pd/HY catalyst for vinyl chloride monomer
production**

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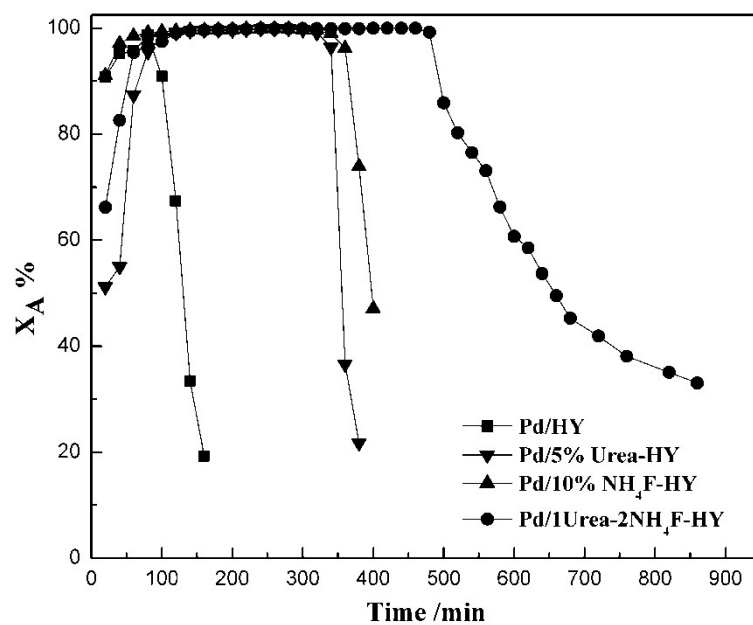


Fig. S1. The C_2H_2 conversion (a) and selectivity to VCM (b) over Pd-based catalysts; Reaction condition: Temperature = 160 °C, feed volume ratio $V_{\text{HCl}}:V_{\text{C}_2\text{H}_2} = 1.25$, C_2H_2 GHSV = 110 h^{-1} .

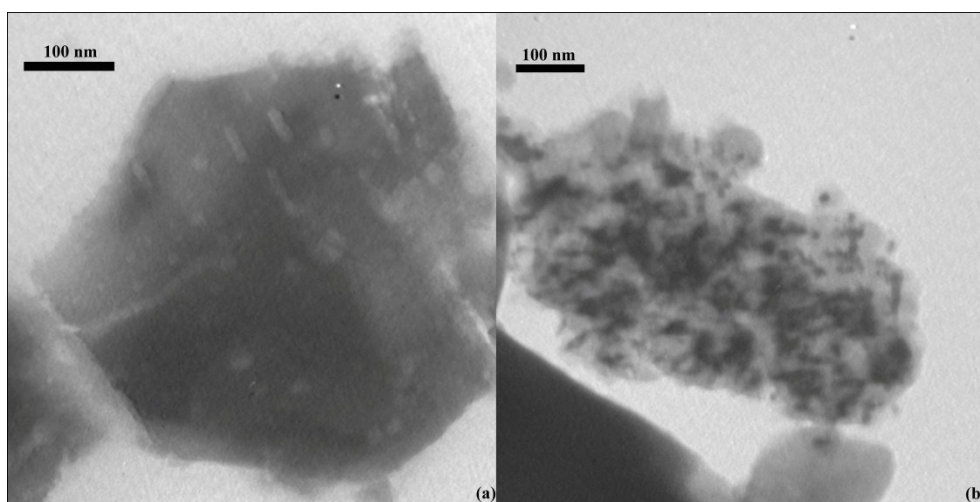


Fig. S2. The TEM images of fresh Pd/ HY (a) and Pd/NH₄F-Urea-HY (b).

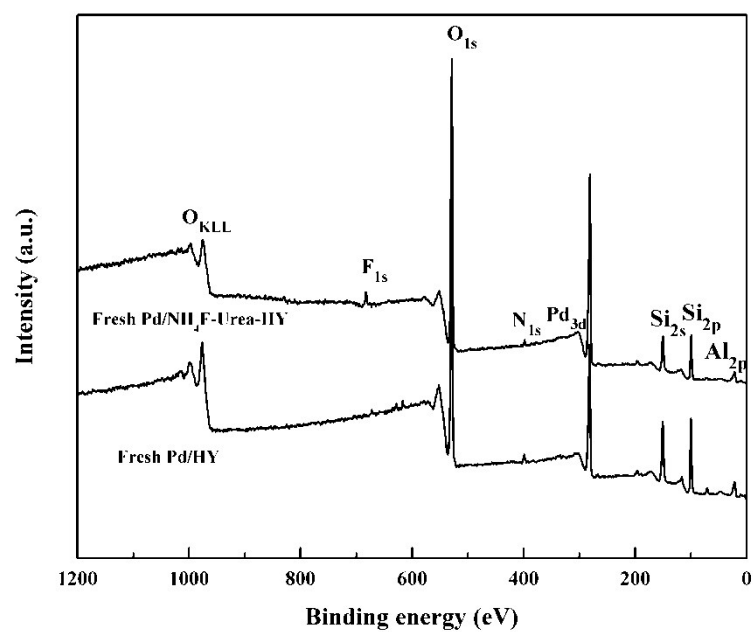


Fig. S3. Wide scan spectra of XPS in fresh Pd/HY and Pd/NH₄F-Urea-HY catalyst.

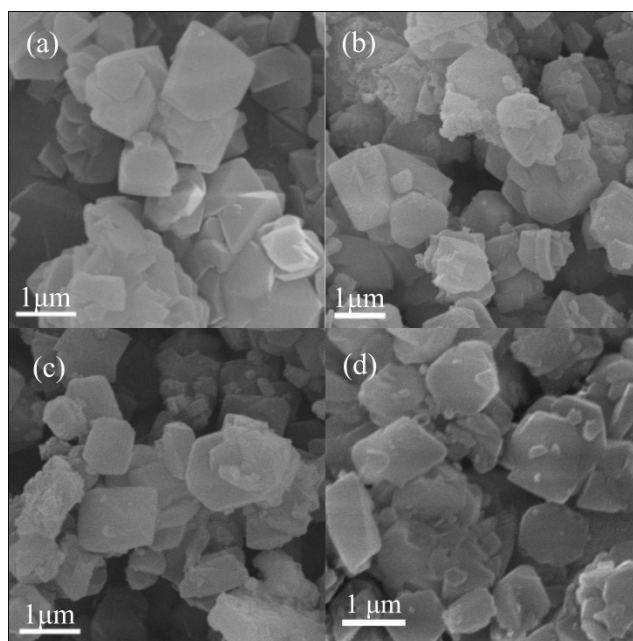


Fig. S4. The SEM images of HY (a), the NH_4F -Urea-HY (b), the fresh Pd/ NH_4F -Urea-HY (c) and the used Pd/ NH_4F -Urea-HY (d).