

Supporting informing for

Ammonoxidation of Ethane to Acetonitrile and Ethylene: Reaction Transient Analysis for Co/HZSM-5 Catalyst

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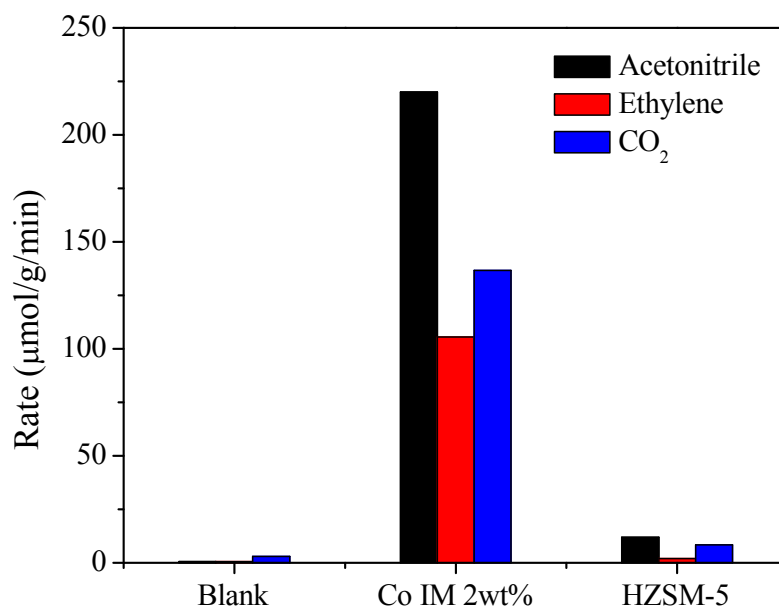


Figure S1. Rate for the formation of acetonitrile, ethylene and CO₂ during ethane ammonoxidation over Co modified HZSM-5 catalyst, pure HZSM-5 sample, and blank test. Reaction conditions: 10% C₂H₆, 10% NH₃, and 6.4% O₂, balanced with Ar, total flow rate 80 ml/min; $T = 475\text{ }^{\circ}\text{C}$, $W = 0.2\text{ g}$ or without catalyst.

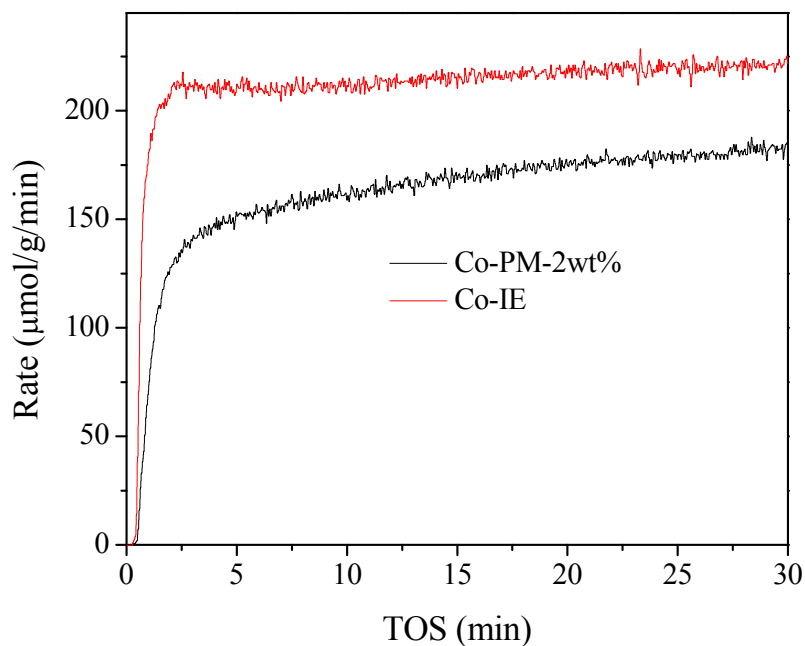


Figure S2. Comparison of rate of acetonitrile formation (during the initial 30 min time-on-stream) on the Co-IE and Co-PM-2wt% catalysts.

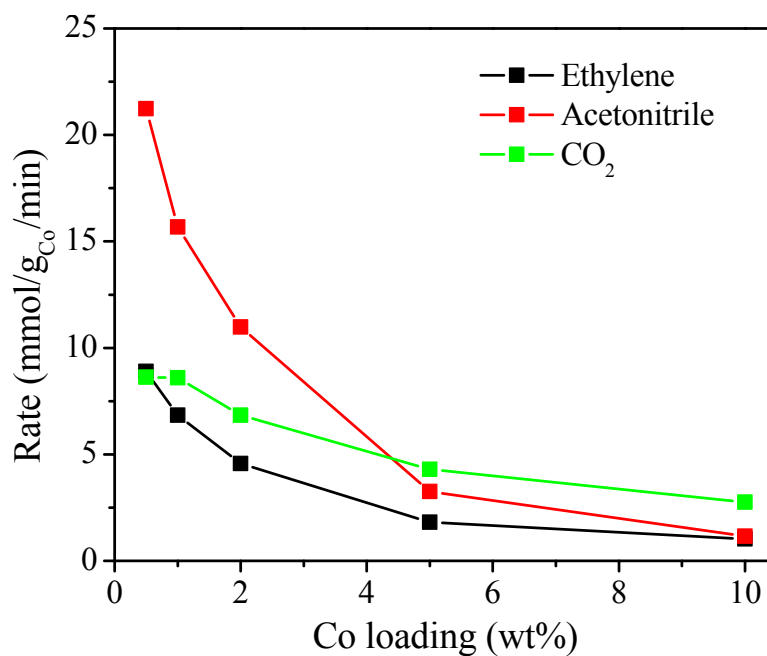


Figure S3. Influence of Co loading on the rate (normalized with the mass of Co) for ethylene, acetonitrile, and CO_2 formation.

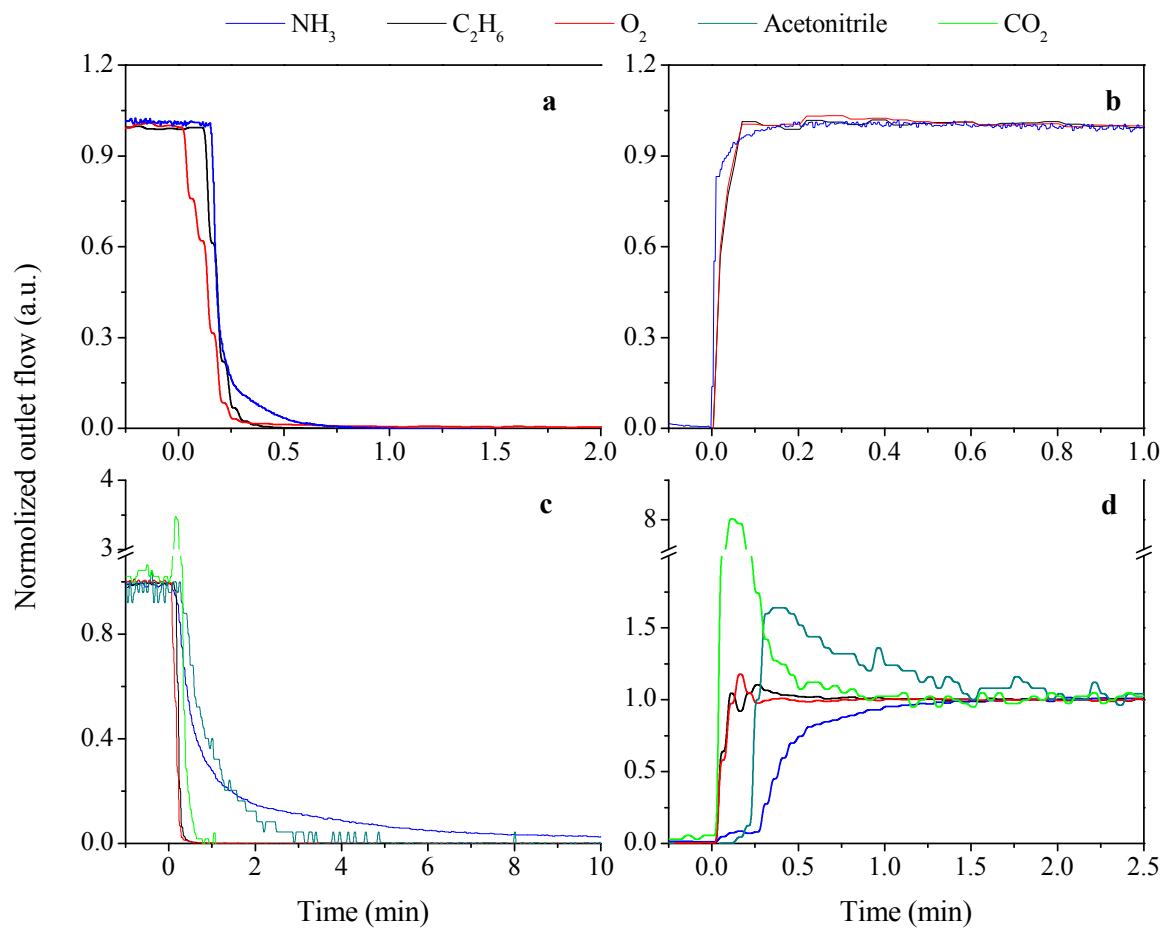


Figure S4. Transient response during blank test (a) and (b), and over the pure HZSM-5 sample (c) and (d). (a) and (c): back-transient decay, (b) and (d) early-stage features of delay.

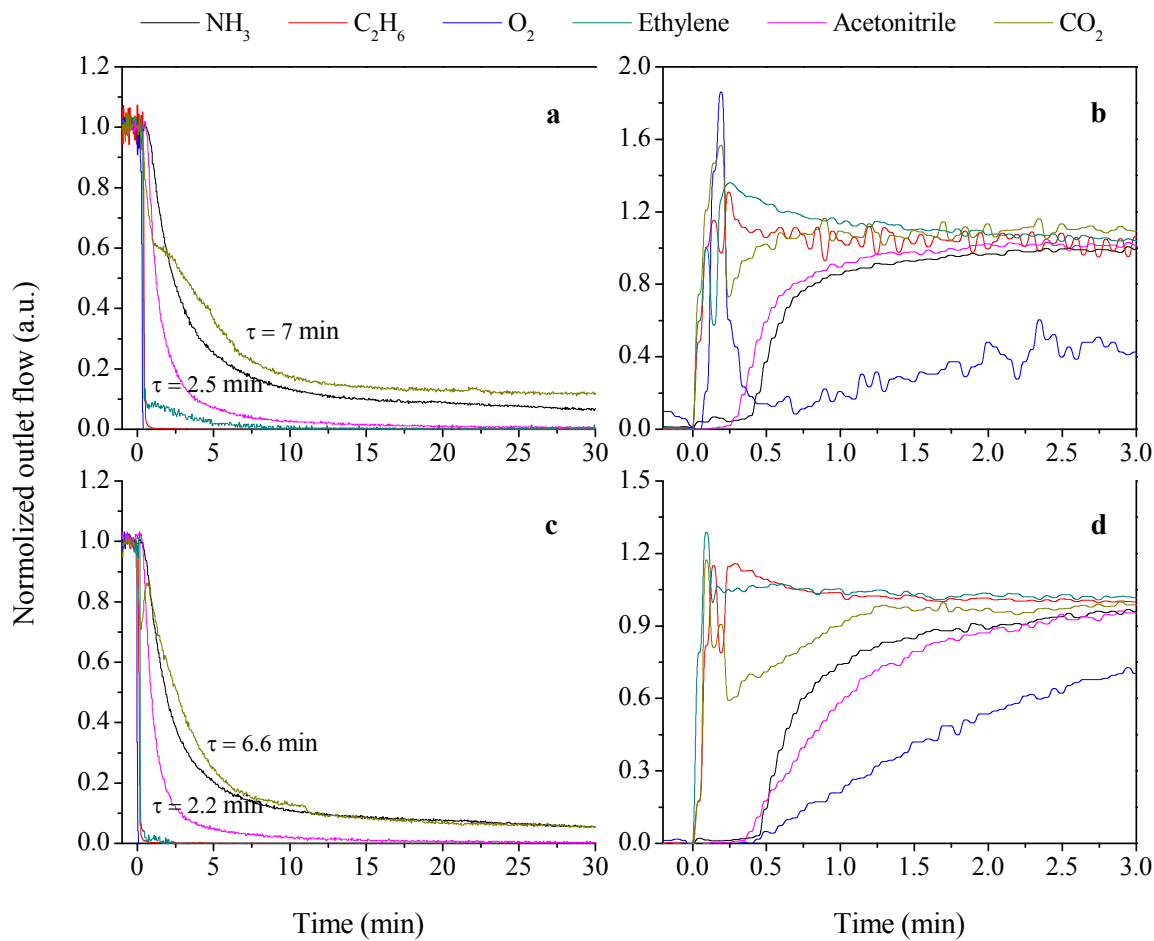


Figure S5. Transient response over the Co-IE (a and b) and Co-PM-2wt% (c and d) catalysts. (a) and (c): back-transient decay, (b) and (d) early-stage features of delay.