Supplementary material for

Migration, reactivity, and sulfur tolerance of copper species in SAPO-34 zeolite toward NOx reduction with ammonia

Xuesong Liu\textsuperscript{a,b}, Xiaodong Wu\textsuperscript{b,**}, Duan Weng\textsuperscript{b}, Zhichun Si\textsuperscript{c}, Rui Ran\textsuperscript{b}

\textsuperscript{a} College of Chemistry and Chemical Engineering, Shaoxing University, Zhejiang 312000, PR China

\textsuperscript{b} Key Laboratory of Advanced Materials of Ministry of Education, School of Materials Science and Engineering, Tsinghua University, Beijing 100084, PR China

\textsuperscript{c} Advanced Materials Institute, Graduate School at Shenzhen, Tsinghua University, Shenzhen 518055, China

* Corresponding author. E-mail address: xuesongliu@usx.edu.cn (X. Liu);

** Corresponding author. E-mail address: wuxiaodong@tsinghua.edu.cn (X. Wu)
Fig. S1 TEM images and EDX spectra of (a) CuiF, (b) CuiF-s, (c) CuiA, (d) CuiA-s, (e) CueF, (f) CueF-s, (g) CueA and (h) CueA-s catalysts.
Fig. S2. H$_2$-TPR curves of Cu/SAPO-34 catalysts.
Fig. S3. DRIFT spectra of (a) CuiF, (b) CuiA, (c) CueF and (d) CueA catalysts exposed to NH₃/N₂ at different temperatures.