Supplementary information

The Role and Activity of Various Adsorbed Ammonia Species on Cu/SAPO-34 Catalyst during Passive-SCR Process

Yingfeng Duan, a Jun Wang, a Tie Yu, a Meiqing Shen, *a,b,c and Jianqiang Wang *a

a Key Laboratory for Green Chemical Technology of State Education Ministry, School of Chemical Engineering & Technology, Tianjin University, Tianjin 300072, PR China

b Collaborative Innovation Center of Chemical Science and Engineering (Tianjin), Tianjin 300072, PR China

c State Key Laboratory of Engines, Tianjin University, Tianjin 300072, PR China

* Corresponding author: Meiqing Shen, Jianqiang Wang

Postal address:
School of Chemical Engineering and Technology, Tianjin University, 92 Weijin Road, Nankai District, Tianjin 300072, China

Email: jianqiangwang@tju.edu.cn; mqshen@tju.edu.cn

Tel. /Fax. : (+86) 22-27407002
1. XRD results

Fig. S1 XRD results of H/SAPO-34 support and Cu/SAPO-34 catalyst

2. ICP results

Table S1 ICP results of H/SAPO-34 support and Cu/SAPO-34 catalyst

<table>
<thead>
<tr>
<th>Sample</th>
<th>Concentration (w.t. %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Al</td>
</tr>
<tr>
<td>H/SAPO-34</td>
<td>21.6</td>
</tr>
<tr>
<td>Cu/SAPO-34</td>
<td>21.4</td>
</tr>
</tbody>
</table>
3. Blank experiments for reliability

Fig. S2 blank experiment before adsorbed NH$_3$ titration by NO+O$_2$

Fig. S3 DRIFTS spectra of Cu/SAPO-34 purged by Ar/He after NH$_3$ saturation (10 min, 20 min and 30 min)