Selective catalytic reduction of NO with NH$_3$ over TiO$_2$ supported metal sulfate catalysts prepared via a sol-gel protocol

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<table>
<thead>
<tr>
<th>Sample</th>
<th>Weak acid sites</th>
<th>Medium strong acid sites</th>
<th>Strong acid sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cu-S/Ti</td>
<td>51.1</td>
<td>37.5</td>
<td>11.4</td>
</tr>
<tr>
<td>Fe-S/Ti</td>
<td>33.0</td>
<td>37.4</td>
<td>29.6</td>
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<tr>
<td>Mn-S/Ti</td>
<td>20.7</td>
<td>40.9</td>
<td>38.4</td>
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<tr>
<td>Ce-S/Ti</td>
<td>27.7</td>
<td>40.3</td>
<td>32.0</td>
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<tr>
<td>Co-S/Ti</td>
<td>33.1</td>
<td>48.8</td>
<td>18.1</td>
</tr>
</tbody>
</table>
Figure S1. FT-IR result of each metal sulfate catalyst.
Cu-S/Ti

Pretreated by NH₃ for 15 min and purged by N₂ for 15 min

NO + O₂ 2 min
4 min
8 min
12 min
Purged by N₂ for 10 min

1900 1800 1700 1600 1500 1400 1300 1200 1100
Wavenumber (cm⁻¹)

Fe-S/Ti

Pretreated by NH₃ for 15 min and purged by N₂ for 15 min

NO + O₂ 2 min
4 min
8 min
12 min
Purged by N₂ for 10 min

1900 1800 1700 1600 1500 1400 1300 1200 1100
Wavenumber (cm⁻¹)
Figure S2. *In situ* DRIFTS of NO + O$_2$ on metal sulfate catalysts pretreated by NH$_3$ at 350 °C.