Ultrathin ZnTi-LDH nanosheets for photocatalytic aerobic oxidation of aniline based on coordination activation

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Fig. S1 N$_2$-sorption isotherms (A) and pore size distribution (B) of ZnTi-LDHs.
Fig. S2 UV-vis DRS spectra and corresponding Tauc plot of ZnTi-LDHs.
Fig. S3 Mott-Schottky plots of ZT-2/1(A), ZT-4/1(B) and ZT-6/1(C).
**Fig. S4** The reused of ZT-2/1 for five cycles.

**Fig. S5** The XRD patterns of ZT-2/1 before and after five photocatalytic reactions.
**Fig. S6** The effect of solvents on photocatalytic activity for ZT-2/1.

**Fig. S7** Photocurrent measurements of aniline-adsorbed ZnTi-LDHs under visible light irradiation.
**Table S1.** Comparison of various photocatalysts for the conversion of aniline and selectivity of nitrosobenzene.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Catalysts</th>
<th>Reaction condition</th>
<th>Light source</th>
<th>Sele.</th>
<th>Conv.</th>
<th>Refer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pt/P25</td>
<td>O₂, 12h, toluene as the solvent.</td>
<td>a Xe lamp, λ &gt; 450 nm</td>
<td>79.5%</td>
<td>No calculation, but very low</td>
<td>[1]</td>
</tr>
<tr>
<td>2</td>
<td>MgO/TiO₂</td>
<td>O₂, 6h, toluene as the solvent,</td>
<td>a 300 W Xe lamp, λ &gt; 400 nm</td>
<td>76%</td>
<td>No calculation, but very low</td>
<td>[2]</td>
</tr>
<tr>
<td>3</td>
<td>SrO/TiO₂</td>
<td>O₂, 4h, ethyl acetate as the solvent,</td>
<td>a 300 W Xe lamp, λ &gt; 400 nm</td>
<td>80%</td>
<td>29.6%</td>
<td>[3]</td>
</tr>
<tr>
<td>4</td>
<td>ZT-2/1</td>
<td>O₂, 4h, acetonitrile as the solvent,</td>
<td>a 300 W Xe lamp, λ &gt; 400 nm</td>
<td>76.7%</td>
<td>33.5%</td>
<td>This work</td>
</tr>
</tbody>
</table>

**Reference**

