Fabrication of homogeneously Cu$^{2+}$/La$^{3+}$-doped CeO$_2$ nanosheets
and their application in CO oxidation

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Supporting Information

Figure S1. TGA curve of BTA-Ce with a ramp of 10 °C·min$^{-1}$ under air flow.
Figure S2. SEM images of BTA-Ce precursors under various magnifications.

Figure S3. SEM (a), TEM (b) and HRTEM (c) images of CeO$_2$.

Figure S4. SEM images of La$_{0.05}$Ce$_{0.95}$O$_{2-\delta}$ (a), La$_{0.1}$Ce$_{0.9}$O$_{2-\delta}$ (b) and Cu$_{0.04}$Ce$_{0.96}$O$_{2-\delta}$ (c).
Figure S5. SEM images (1), mapping analyses of Ce (2) and La or Cu (3), and TEM images (4) of La$_{0.05}$Ce$_{0.95}$O$_{2-\delta}$ (a), La$_{0.1}$Ce$_{0.9}$O$_{2-\delta}$ (b) and Cu$_{0.04}$Ce$_{0.96}$O$_{2-\delta}$ (c).

Figure S6. TEM images of CP precursor of La$_{0.1}$Ce$_{0.9}$O$_{2-\delta}$.
Figure S7. HRTEM images of La$_{0.1}$Ce$_{0.9}$O$_{2\delta}$.

Figure S8. XRD patterns of La-doped ceria and theoretical pattern at bottom.
Figure S9. XPS spectra of Ce 3d in Cu$_{0.1}$Ce$_{0.9}$O$_{2-δ}$ after catalytic reaction.

Figure S10. Nitrogen adsorption-desorption isotherm of ceria.

Table S1. Metal contents in the doped ceria detected by ICP-MS.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Metal</th>
<th>M (mol%)</th>
<th>Ce (mol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>La$<em>{0.05}$Ce$</em>{0.95}$O$_{2-δ}$</td>
<td>La</td>
<td>4.7</td>
<td>95.3</td>
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<tr>
<td>La$<em>{0.1}$Ce$</em>{0.9}$O$_{2-δ}$</td>
<td>La</td>
<td>10.2</td>
<td>89.8</td>
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<tr>
<td>Cu$<em>{0.04}$Ce$</em>{0.96}$O$_{2-δ}$</td>
<td>Cu</td>
<td>4.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Cu$<em>{0.1}$Ce$</em>{0.9}$O$_{2-δ}$</td>
<td>Cu</td>
<td>9.9</td>
<td>90.1</td>
</tr>
</tbody>
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