Electronic Supplementary information

Multi-color electrochromism from coordination nanosheets based on terpyridine-Fe(II) complex

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Keywords: multi-color electrochromism, nanosheet, self-assembly, terpyridine, triphenylamine

Table S1. The energy dispersive spectrometer (EDS) data of the nanosheet

<table>
<thead>
<tr>
<th>element</th>
<th>C</th>
<th>N</th>
<th>O</th>
<th>F</th>
<th>Si</th>
<th>Fe</th>
<th>In</th>
<th>Sn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atomic percent</td>
<td>34.61%</td>
<td>2.37%</td>
<td>34.61%</td>
<td>5.46%</td>
<td>5.00%</td>
<td>0.46%</td>
<td>16.37%</td>
<td>1.12%</td>
</tr>
</tbody>
</table>
Fig. S1. UV-vis spectra of the nanosheets with different reaction time.

Fig. S2. The CV of the ligand performed by a three-compartment system in a solution of acetonitrile containing 0.1 M Bu$_4$NClO$_4$. 
Fig. S3. UV-vis spectrum of the monomer ligand TPA-TPY dissolved in dichloromethane.

Fig. S4. IR spectral of the nanosheet and the ligand TPA-TPY.
Fig. S5. Switching time of nanosheet with the reaction time for coloring of (a) 5 days, (b) 6 days, (c) 7 days and (d) 8 days.

Fig. S6. Switching time of discoloring of nanosheet with the reaction time for (a) 5 days, (b) 6 days, (c) 7 days and (d) 8 days.
**Fig. S7.** Switching time of (a) coloring and (b) discoloring of the solid-state electrochromic device.

**Fig. S8.** Thickness of the nanosheet with the reaction time for (a) 5 days, (b) 6 days, (c) 7 days and (d) 8 days used in Fig. S5 and S6.
Fig. S9. Three electrodes system of electrochromic measurement.