Supporting information

Self-assembled tubular nanotuctures of tris(8-quinolinolato)gallium(III)

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Supplemental figures:

**Fig. S1** TEM image of Ga₃ sub-microtubes.
**Fig. S2** The energy-dispersive spectroscopy (EDS) analysis of Ga₃ tubes, and the inset table is the element contents of Ga₃ sub-microtubes.

<table>
<thead>
<tr>
<th>Element</th>
<th>Wt%</th>
<th>At%</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>46.92</td>
<td>57.78</td>
</tr>
<tr>
<td>O</td>
<td>10.19</td>
<td>9.42</td>
</tr>
<tr>
<td>N</td>
<td>28.09</td>
<td>29.66</td>
</tr>
<tr>
<td>Ga</td>
<td>14.81</td>
<td>3.14</td>
</tr>
</tbody>
</table>

**Fig. S3** (A) Fourier transform infrared spectroscopy (FTIR) spectrum and (B) powder X-ray diffraction (XRD) pattern of Ga₃ sub-microtubes.
Captions:
Step 1: formation of crystal seeds and aggregation to the regularly hexagonal pad
Step 2: pad growth accompanying by the etching or dissolution at its center
Step 3: gradual formation of Gaq₃ tubes

Fig. S4 Schematic representation for the formation growth process of the Gaq₃ sub-microtubes.

Fig. S5 The SEM image of Gaq₃ irregular solid structures fabricated at 328K.

Fig S6 The SEM image of grown Gaq₃ structures when the concentration of Gaq₃ solution is 45
Fig. S7 The SEM image of grown $\text{Ga}_3$ structures when the concentration of $\text{Ga}_3$ solution is 10 mg/ml.

Fig. S8 The SEM image of grown $\text{Ga}_3$ rods rather than tubes are made in the absence of ethanol when the concentration of $\text{Ga}_3$ solution is 36 mg/ml.