Tunable colors and white-light emission based on a microporous luminescent Zn(II)-MOF

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Fig. S1 The powder X-ray diffraction of JUC-113 at different temperatures.

Fig. S2 N₂ sorption isotherms of the guest-free JUC-113 at 77 K, 1 atm.
**Fig. S3** Gas sorption isotherms of the guest-free JUC-113 for CO₂ and CH₄ at 273K.

**Table S1** ICP analysis for Ln-encapsulated JUC-113

<table>
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<tr>
<th>Sample</th>
<th>Element</th>
<th>Concentration</th>
<th>Ln: Zn</th>
<th>Ln percent in weight</th>
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<td>JUC-113 ⊂ Tb1</td>
<td>Zn</td>
<td>14.5</td>
<td>1:100.69</td>
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<tr>
<td></td>
<td>Tb</td>
<td>0.144</td>
<td>/</td>
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<td>Eu</td>
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<td>/</td>
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<td>Tb</td>
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**Table S2** Selected bond lengths (Å) and angles (deg) for JUC-113

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<th>bond lengths and angles</th>
<th>Zn(1)-O(1)#1</th>
<th>Zn(1)-O(1)#3</th>
<th>Zn(1)-O(1)#4</th>
<th>Zn(1)-O(1)#2</th>
<th>Zn(1)-O(1)#5</th>
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<td>O(1)#1-Zn(1)-O(1)#3</td>
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Symmetry transformations used to generate equivalent atoms:

#1: -y+1, -x+1, -z+1/2; #2: x, x-y+1, -z+1/2; #3: -y+1, x-y+1, z; #4: -x+y, y, -z+1/2; #5: -x+y, -x+1, z; #6: -x+y, -x, z; #7: -y, x-y, z.