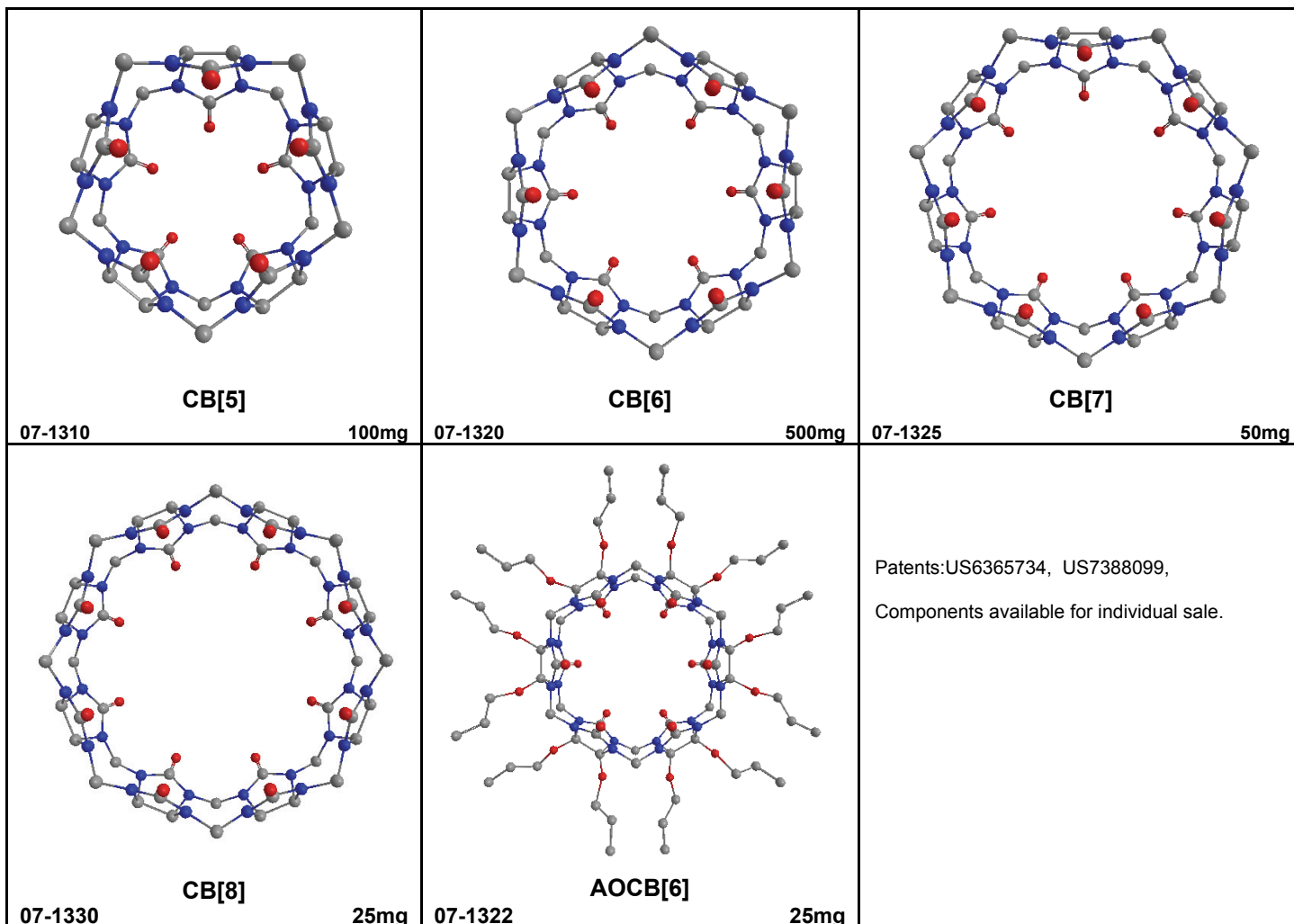


# STREM Cucurbituril Kit

metals · inorganics · organometallics · catalysts · ligands · custom synthesis · cGMP facilities · nanomaterials



<b>96-7054</b> <b>NEW→</b>	<b>Cucurbituril Kit</b> Contains the following:	1 kit
<b>07-1310</b> <b>NEW→</b>	<b>Cucurbit[5]uril (CB[5]) ammonium sulfate hydrate, 99+% [259886-49-2]</b> $C_{30}H_{30}N_{20}O_{10} \cdot (NH_4)_2SO_4 \cdot XH_2O$ ; FW: 962.83; white solid Note: Patent US 6365734	100mg
<b>07-1320</b> <b>NEW→</b>	<b>Cucurbit[6]uril (CB[6]) hydrate, 99+% [80262-44-8]</b> $C_{36}H_{36}N_{24}O_{12} \cdot XH_2O$ ; FW: 996.82; white solid	500mg
<b>07-1325</b> <b>NEW→</b>	<b>Cucurbit[7]uril (CB[7]) hydrate, 99+% [259886-50-5]</b> $C_{42}H_{42}N_{28}O_{14} \cdot XH_2O$ ; FW: 1162.96; white solid Note: Patent US 6365734	50mg
<b>07-1330</b> <b>NEW→</b>	<b>Cucurbit[8]uril (CB[8]) hydrate, 99+% [259886-51-6]</b> $C_{48}H_{48}N_{32}O_{16} \cdot H_2O$ ; FW: 1329.10; white solid Note: Patent US 6365734	25mg
<b>07-1322</b> <b>NEW→</b>	<b>Perallyloxycucurbit[6]uril (AOCCB[6]) potassium sulfate, 94+%</b> $C_{72}H_{84}N_{24}O_{24} \cdot XK_2SO_4$ ; FW: 1668.61; white solid Note: Patent US 7388099	25mg

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**Technical Note:**

Cucurbit[*n*]uril (CB[*n*], *n* = 5-10) is a family of macrocyclic compounds comprising *n* glycoluril units, self-assembled from an acid-catalyzed condensation reaction of glycoluril and formaldehyde.<sup>1-6</sup> The pumpkin-shaped CB molecules have a hydrophobic cavity and two identical carbonyl-laced portals. While the hydrophobic interior provides a potential inclusion site for nonpolar molecules, the polar ureido carbonyl groups at the portals allow CB[*n*] to bind ions and molecules through charge-dipole and hydrogen bonding interactions.<sup>3-5, 7</sup> The unique structure and recognition properties make CB[*n*] attractive not only as a synthetic receptor but also as a building block for the construction of supramolecular architectures.<sup>2,8,9</sup> Furthermore, a direct functionalization method<sup>10</sup> of CB[*n*] allowed the synthesis of a wide variety of tailor-made CB derivatives to study many applications. Ion channels, vesicles, polymers, nanomaterials, ion selective electrodes incorporating CB[*n*], and CB-immobilized solid surfaces and silica gel have been reported and numerous other applications are being explored.<sup>5</sup> Cucurbiturils thus became new important players in supramolecular chemistry in the new millennium as witnessed by the heightened interests in the field for the last several years, and have already reached a level that had never been reached with other synthetic host molecules.<sup>21, 25, 26, 28</sup>

**Applications:**

1. Chambers for chemical reactions.<sup>3, 11</sup>
2. Sensors for organic amines,<sup>12</sup> alkali metal ions, ammonium ions,<sup>13</sup> etc.
3. Utilities to reduce the air pollutions (gases such as NO<sub>x</sub>, CO<sub>2</sub>, CO, SO<sub>x</sub>, etc.)<sup>14, 15</sup> and water pollutions.<sup>16</sup>
4. Laser dye applications.<sup>17</sup>
5. Molecular machines.<sup>18</sup>
6. Gene and drug delivery vehicles.<sup>19-23</sup>
7. Useful for bio-related applications such as ion channel,<sup>24</sup> enzyme assay,<sup>25</sup> protein chip,<sup>27</sup> selective protein isolation.<sup>28</sup>

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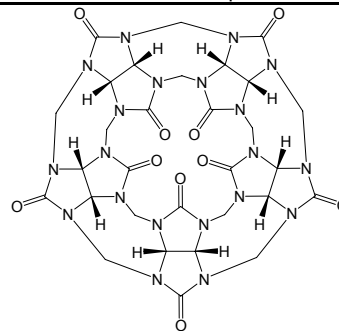
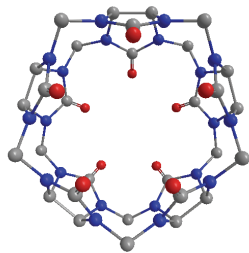
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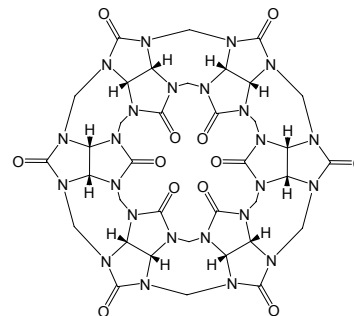
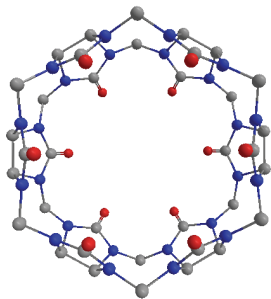
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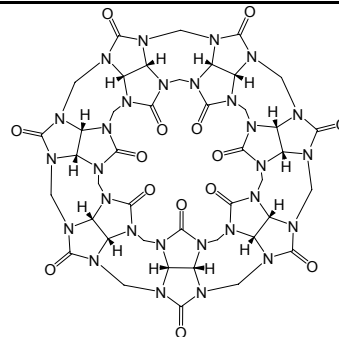
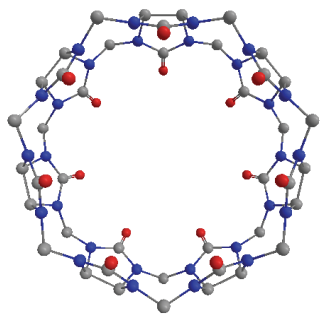
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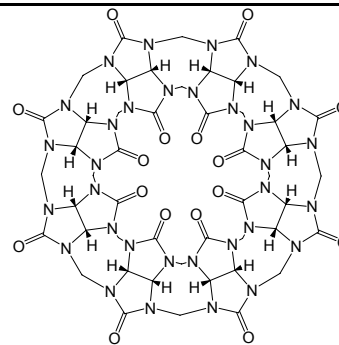
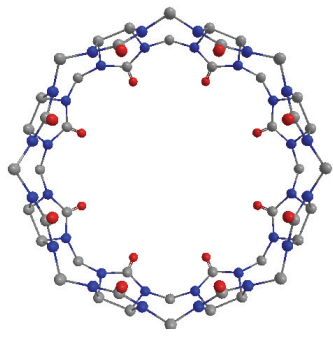
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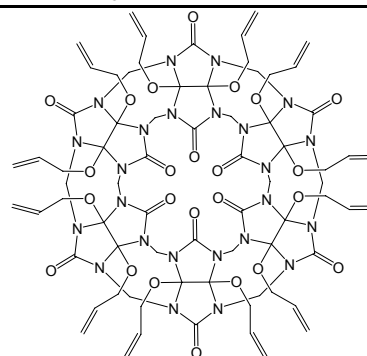
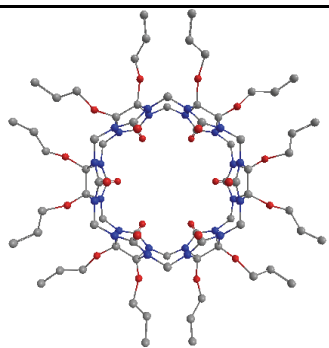
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