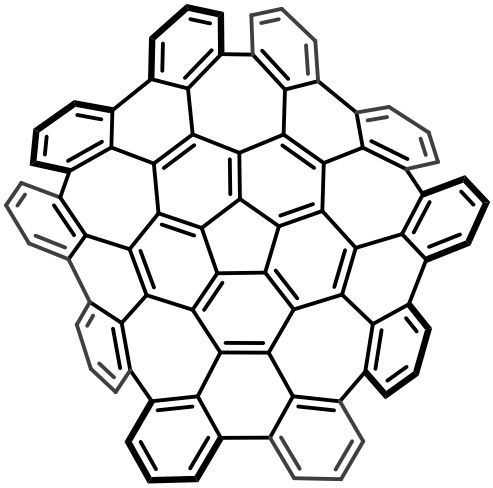
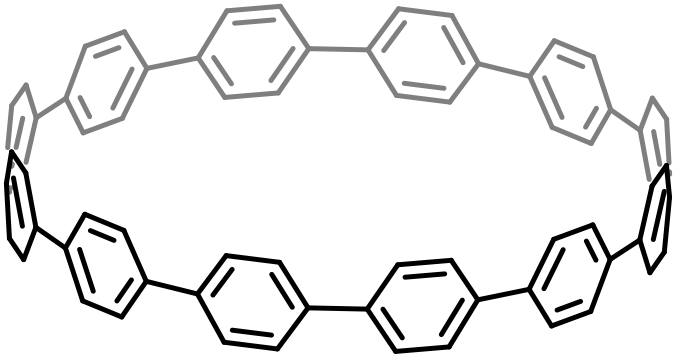
Carbon Nano Materials

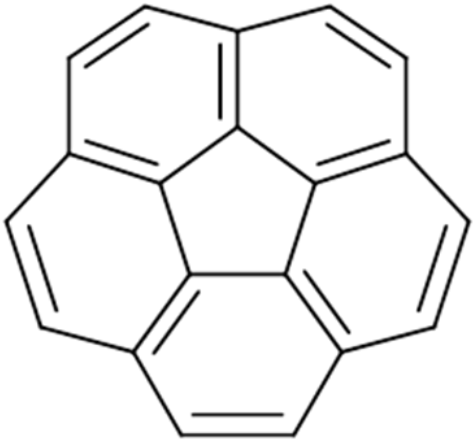
Kanto Reagents



Warped nanographene

Cycloparaphenylene





Corannulene

Warped nanographene ($C_{80}H_{30}$) New

Warped nanographene(WNG) is a new shaped carbon nanomaterial which has a grossly warped structure. WNG is a novel nanocarbon following the sphere-shaped fullerene, tube-shaped carbon nanotube and sheet-shaped graphene.

Research such as product development using this new carbon nanomaterial is expected since there is a possibility of having unknown characteristics besides optical and electrical characteristics.

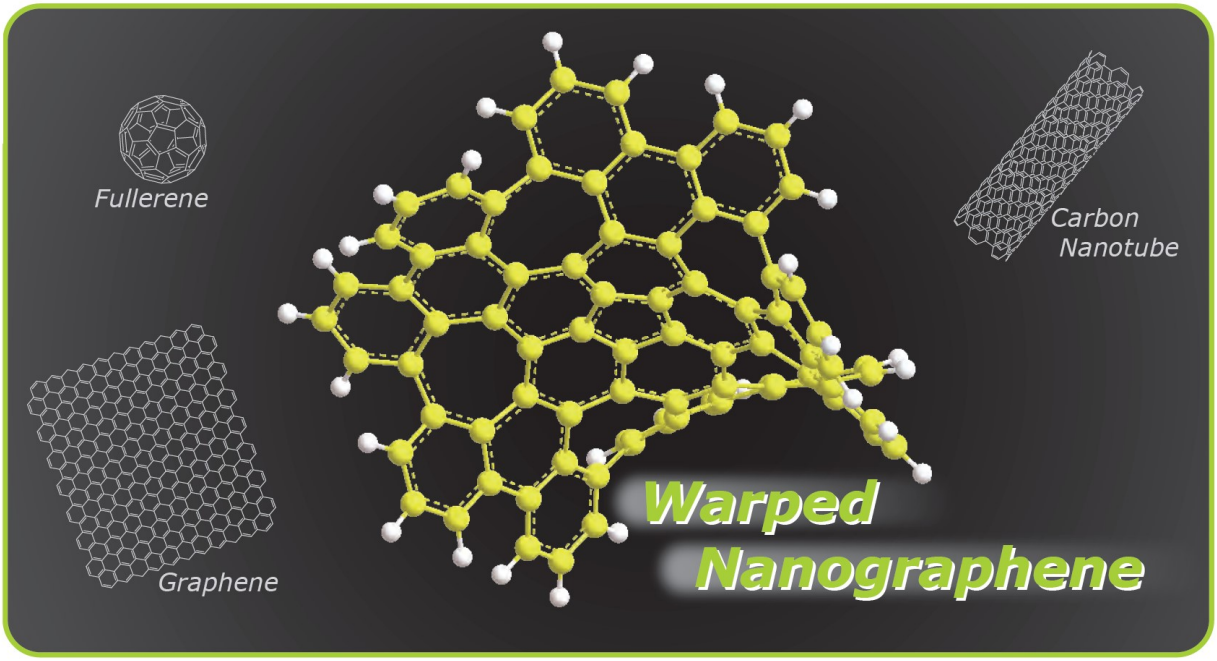
We Kanto Chemical launched WNG which was developed in the two-step synthesis method from Corannulene by Prof. Itami, Nagoya University, Institute of Transformative Bio-Molecules and Prof, Segawa Nagoya University, School of Science.

Features

- **Easily soluble in organic solvents**
  A combination of six, five and seven membered rings causes grossly warped structure which is more soluble in organic solvent than other carbon nanomaterials.
- **Have a fluorescent function**
  It emits green fluorescence when irradiated with ultraviolet rays.
- **It can put in and out electrons**

Product List

Cat.#	Product Name	Size
45043-65	Warped nanographene [1448513-72-1] $C_{80}H_{30}$ 	10 mg

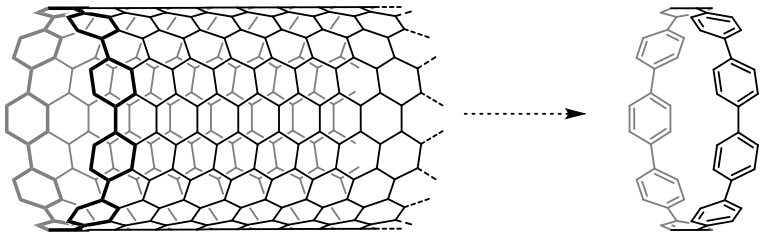


Cycloparaphenylene

Carbon Nanotube(CNT) is well-known as high potential materials which has high mechanical strength and highly conductivity.

Therefore, it is expected to be applies in a wide range of fields. However, Selective Synthesis method for target diameter and structure still has not been found. Prof. Itami, Nagoya University, Institute of Transformative Bio-Molecules and Prof, Segawa Nagoya University, School of Science successfully synthesized uniform CNTs by a bottom-up procedure starting from Cycloparaphenylen(CPP) as a template compound the first time in the world. The CPP attracted researchers in fundamental chemistry and material science, because it is a unit structure of CNT.

KANTO CHEMICAL offers [9],[12],[15]Cycloparaphenylen.



Armchair Carbon Nanotube

Cycloparaphenylene
(Carbon Nano Ring)

Product List

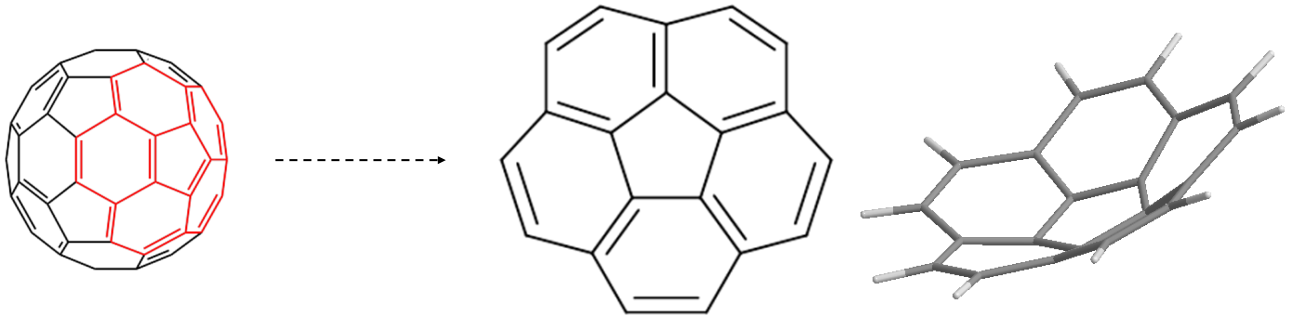
Cat.#	Product Name	Size
08131-35	[9]Cycloparaphenylene [1092522-74-1] $C_{54}H_{36}$ FW:684.86	20 mg
08132-35	[12]Cycloparaphenylene [1092522-75-2] $C_{72}H_{48}$ FW:913.15	20 mg
08137-65	[15]Cycloparaphenylene [1222565-89-0] $C_{90}H_{60}$ FW:1141.44	10 mg

Reference

- Omachi, H.; Segawa, Y.; Itami, K. *Acc. Chem. Res.* **2012**, *45*, 1378-1389.
- Segawa, Y.; Fukazawa, A.; Matsuura, S.; Omachi, H.; Yamaguchi, S.; Irle, S.; Itami, K. *Org. Biomol. Chem.* **2012**, *10*, 5979-5984.
- Omachi, H.; Nakayama, T.; Takahashi, E.; Segawa, Y.; Itami, K. *Nat. Chem.* **2013**, *5*, 572-576.

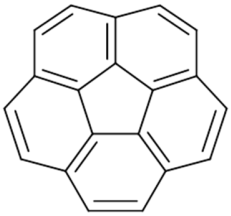
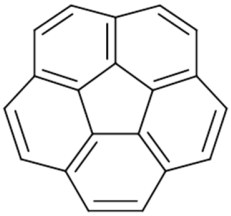
Corannulene

Corannulene, the so-called [5]circulene, is one of the polycyclic aromatic compounds. It has a condensed structure of five benzene rings. The corannulene is attractive as a nanocarbon material, because it is a unit structure of C60 fullerene. That attracted researchers in fundamental chemistry and material science.



C60 Fullerene　　Corannulene

Product List

Cat.#	Product Name	Size
07363-65	Corannulene ※Purity (HPLC) : >94.0% [5821-51-2] FW:250.30 	1 g
07363-35		25 g
07435-95	Corannulene, high purity ※Purity (HPLC) : >99.0% [5821-51-2] FW:250.30 	500 mg

Reference

- Wayne E. Barth; Richard G. Lawton. *J. Am. Chem. Soc.*, **1966**, *88* (2), 380-381.
- Anna M. Butterfield; Bruno Gilomen; Jay S. Siegel. *Org. Process Res. Dev.* **2012**, *16*, 664-676.

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