

# Catalog 2012~2013



-  OPV, OLED, OTFT
-  Nanotechnology
-  Supramolecular Chemistry
-  Organometallics
-  Conducting Polymers
-  Bioanalytics
-  Medical Diagnostics

Please visit

[www.sunatech.com](http://www.sunatech.com)

for easier access to our searchable on-line catalog and for new product information

Please meet us at the following events in 2012 



**SunaTech Inc.**

*A chemistry company that keeps its eyes on innovative technologies*

## Events in 2012

### January



**2012 China International OLEDs Summit**  
January 12-13, 2012  
Beijing, P. R. China

**Chinese New Year**  
January 22-31, 2012  
Business Shutdown

### February



### March

**2012 Beijing International LED Exposition**  
March 19-21

### April



**2012 MRS Spring Meeting**  
April 9-13, 2012 Moscone  
West Convention Center - San  
Francisco, California, USA



**28th CCS Congress**  
April 13-16, 2012  
Chengdu, Sichuan, P. R. China

### May



Georgia Tech  
December 10th  
Organic Photonics  
and Electronics

PLETRONICS  
Light. Power. Circuitry™

**6th Solvay~COPE  
Symposium on Organic Electronics**

Hosted by Plextronics, Inc.  
May 10-11, 2012 Pittsburgh, Pennsylvania, USA

### June



**2012 LOPE-C**  
June 19-21, 2012  
Munich, Germany

### July



**International Conference on  
Science and Technology of  
Synthetic Metals 2012**

July 8-13, 2012  
Atlanta, Georgia, USA

### August

Printed Electronics Korea  
Printed Electronics Tech & Industry Expo



**Printed Electronics Korea 2012  
Nano Korea 2012**  
August 16-18, 2012, Seoul, Korea

**244th ACS National Meeting &  
Exposition**  
August 19-23, 2012  
Philadelphia, Pennsylvania, USA

### September



### October

**Chinese National Day**  
October 1-7, 2012  
Business Shutdown

**SunaTech's year end clearance sales**

### November



**Printed Electronics  
Conference**

### December



**Photovoltaics  
Conference**

**SunaTech Inc.**, located in Suzhou Industrial Park, Jiangsu, China, is committed to providing support to the research and development of advanced technologies that ultimately benefit our environment and health. To this end, SunaTech produces and supplies high quality chemicals & materials and offers problem-solving solutions to the worldwide R&D activities related to energy-savings, renewable energy, life sciences and medical diagnostics. Since its incorporation, SunaTech has become a leading developer and supplier of luminescent metal complexes and intermediates of low bandgap OPV materials. While serving its customers, ranging from academia to industry and from organic electronics to bioanalytics, SunaTech is also building its expertise and developing technologies in multiple sectors.

As a small start-up company, SunaTech has a number of Ph.D. scientists with working experience in the North America, Europe, Japan and China, and energetic well-trained junior chemists, who are routinely carrying out complex, multi-step synthesis and solving difficult chemistry problems. Together with the sales staffs, they have enabled SunaTech to establish strong and trusted client relationship with many prestigious research organizations and industrial leaders.

With strong technical and information supports from its shareholders, SunaTech Inc. not only supplies chemicals and materials, but also offers cost-effective solutions to meet customers' research, development, scale-up and production needs.

Innovation doesn't have to start from scratch – try to start from SunaTech Inc., a chemistry company that keeps its eyes on innovative technologies.

### Custom Synthesis

Delivering products made to customers' specification represents a significant part of SunaTech's business. With experienced chemists performing complex and multi-step synthesis, SunaTech offers syntheses of simple small molecules and complex compounds of quantities ranging from milligrams to kilograms at competitive prices in a timely manner. This may involve the following steps.

- Signing non-disclosure agreement (NDA)
- Performing literature & database searches

- Brainstorming for efficient synthetic routes
- Synthesizing target molecules
- Characterizing the synthesized molecules
- Conducting scale-up, if required
- Preparing MSDS and other safety related documents

SunaTech understands its customers' desires in confidentiality and has established policy to protect its customers' interest in the way it protects its own interest. To inquire, please submit a CAS Registration Number, structure, or chemical name to our distributors /representatives/agents or our sales department.

### Fee-for-Service Project

Fee-for-Service (FFS) mode is currently applied to the R&D of bioanalytical methods involving the use of SunaTech's proprietary reagents (such as SunaTag™) for labeling antibodies or proteins based on customers' requirements.

### Contract Research

Whether making a low band gap OPV polymer or proving an OLED device structure or developing an assay protocol, complex problem solving requires several factors working closely together. SunaTech has a facile access to state-of-the-art research and analytical equipment of Chinese Academy of Sciences. SunaTech's in-house scientists will be dedicated to client solutions during the contract period in the strictest confidence. Our efficient teamwork will contribute to the success of your project.

### Searching Chemicals from SunaTech's Website

This catalog does not provide up-to-date information about SunaTech's products. Searching SunaTech's chemical/materials from its website ([www.sunatech.com](http://www.sunatech.com)) is easy. You can simply type, e.g., a partial key word such as "irid", "carba", "thiop" or "dibromo" to find all the chemicals with iridium(III) atom(s), carbazole group(s), thiophene group(s) or two bromine atoms in their structures. You may also find technical data or price information from SunaTech's product promotional flyers.

### Important Notices:

1. Treat all chemicals as if they were hazardous.
2. The storage conditions of many chemicals/materials produced by SunaTech are not available or have not

been well realized, please treat them carefully.

3. Custom synthesized chemicals/materials covered by a NDA will not be disclosed in any manner.
4. SunaTech Inc. maintains certain quantities of chemicals in stock, but could not guarantee each listed chemical is available at any time. If we are unable to provide you with the requested items, please accept our apologies. You may also find an alternate solution by talking to our technical team.
5. The structural and spectroscopic data of some chemicals are made available on SunaTech's website. These data are for reference purpose only. NMR data of specified lots are available on request.
6. Chemicals or materials in this catalog are categorized according to their likely uses or chemical natures. SunaTech Inc. makes no representations and extends no warranties of any kind, either expressed or implied, including any warranty of merchantability or fitness for a particular purpose, or warranty that the use of the material will not infringe any patent, copyright, trademark.
7. It is likely that uses of some chemicals or materials listed in this catalog are protected by valid patents in some countries. Buyers shall bear all risk of and liability for patent infringements when using the chemicals or materials for a purpose patented by a third party.
8. The products listed in this catalog are produced in China. The shipment and exportation of chemicals are governed by some laws and regulations, which may cause some delay, despite the stock availability.
9. Most of our chemicals/materials are packed in glass vials/bottles, which are wrapped with aluminum bags. It is possible that the governmental agencies of exportation/importation countries may open the packages for inspection. If this is the case and if you have any concerns about the impact on the product quality, please do not hesitate to contact us.

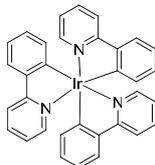
# Organic Electronics

## OLED Phosphorescent Dopants

**Tris(2-phenylpyridine-C<sup>2</sup>,N')iridium(III), 98%**

**Ir(ppy)<sub>3</sub>**

**CAT# IR504**

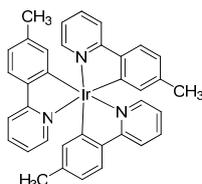


CAS# [94928-86-6]  
 Formula C<sub>33</sub>H<sub>24</sub>IrN<sub>3</sub>  
 FW 654.78  
 $\lambda_{ab}$  243, 283, 377 nm (CH<sub>2</sub>Cl<sub>2</sub>)  
 $\lambda_{em}$  512 nm (CH<sub>2</sub>Cl<sub>2</sub>)

**Tris(2-(p-tolyl)pyridine-C<sup>2</sup>,N')iridium(III), 98%**

**Ir(mppy)<sub>3</sub>**

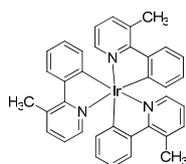
**CAT# IR506**



CAS# [149005-33-4]  
 Or [800394-58-5]  
 Formula C<sub>36</sub>H<sub>30</sub>IrN<sub>3</sub>  
 FW 696.86  
 $\lambda_{ab}$  248, 288, 373 nm (CH<sub>2</sub>Cl<sub>2</sub>)  
 $\lambda_{em}$  513 nm (CH<sub>2</sub>Cl<sub>2</sub>)

**Tris(3-methyl-2-phenylpyridine)iridium(III), 98%**

**CAT# IR507**

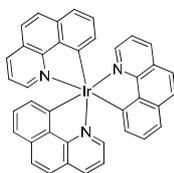


CAS# [359014-71-4]  
 Formula C<sub>36</sub>H<sub>30</sub>IrN<sub>3</sub>  
 FW 696.86

**Tris(2-benzo[h]quinoline-C<sup>2</sup>,N')iridium(III)**

**Ir(bzq)<sub>3</sub>**

**CAT# IR615**

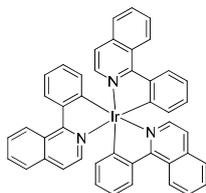


CAS# [337526-98-4]  
 Formula C<sub>39</sub>H<sub>24</sub>IrN<sub>3</sub>  
 FW 726.84

**Tris(1-phenylisoquinoline-C<sup>2</sup>,N')iridium(III), 98%**

**Ir(piq)<sub>3</sub>**

**CAT# IR711**

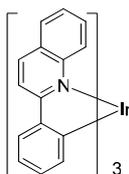


CAS# [435293-93-9]  
 Formula C<sub>45</sub>H<sub>30</sub>N<sub>3</sub>Ir  
 FW 804.96  
 $\lambda_{ab}$  321, 425 nm (CH<sub>2</sub>Cl<sub>2</sub>)  
 $\lambda_{em}$  619 nm (CH<sub>2</sub>Cl<sub>2</sub>)

**Tris(2-phenylquinoline-C<sup>2</sup>,N')iridium(III), 98%**

**Ir(2-phq)<sub>3</sub>**

**CAT# IR728**

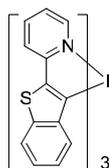


CAS# [911142-72-8]  
 Formula C<sub>45</sub>H<sub>30</sub>N<sub>3</sub>Ir  
 FW 804.96  
 $\lambda_{ab}$  271, 406 nm (THF)  
 $\lambda_{em}$  578 nm (THF)

**Tris(2-(benzo[b]tbiophen-2-yl)pyridinato-C<sup>2</sup>,N')iridium(III), 98%**

**Fac-Ir(btpy)<sub>3</sub>**

**CAT# IR803**

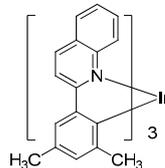


CAS# [405289-74-9]  
 Formula C<sub>39</sub>H<sub>24</sub>N<sub>3</sub>S<sub>3</sub>Ir  
 FW 823.04

**Tris(2-(3,5-dimethylphenyl)quinoline -C<sup>2</sup>,N')iridium(III), 98%**

**Ir(dmpq)<sub>3</sub>**

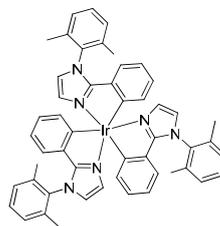
**CAT# IR810**



CAS# [1152418-56-8]  
 Formula C<sub>51</sub>H<sub>42</sub>N<sub>3</sub>Ir  
 FW 889.13

**Tris[1-(2,6-dimethyl phenyl)-2-phenyl-1H-imidazole] iridium(III), 98%**

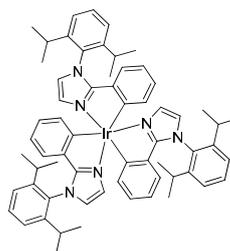
**CAT# IR812**



CAS# [914394-12-0]  
 Formula C<sub>51</sub>H<sub>45</sub>IrN<sub>6</sub>  
 FW 934.16

**Tris[1-(2,6-diisopropylphenyl)-2-phenyl-1H-imidazole] iridium(III), 98%**

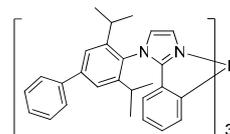
**CAT# IR816**



CAS# [914394-25-5]  
 Formula C<sub>63</sub>H<sub>69</sub>N<sub>6</sub>Ir  
 FW 1102.48

**Tris[1-(3,5-diisopropylbiphenyl-4-yl)-2-phenyl-1H-imidazole] iridium(III), 98%**

**CAT# IR817**

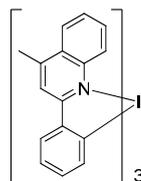


CAS# [1272505-63-1]  
 Formula C<sub>81</sub>H<sub>81</sub>N<sub>6</sub>Ir  
 FW 1330.77

**Tris[4-methyl-2-phenylquinoline] iridium(III), 98%**

**Ir(mphq)<sub>3</sub>**

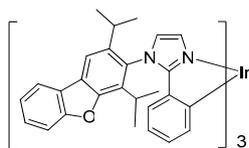
**CAT# IR819**



CAS#  
 Formula C<sub>48</sub>H<sub>36</sub>IrN<sub>3</sub>  
 FW 847.04

**Tris[1-(2,4-diisopropylbenzo[b,d]furan-3-yl)-2-phenyl-1H-imidazole] iridium(III), 98%**

**CAT# IR820**

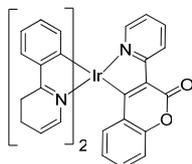


CAS# [1331833-06-7]  
Formula  $C_{81}H_{75}IrN_6O_3$   
FW 1372.72

**Bis(2-phenylpyridine)(3-(pyridin-2-yl)-2H-chromen-2-onate)iridium(III), 98%**

**Ir(ppy)<sub>2</sub>pc**

**CAT# IR508**



CAS# [1003562-42-2]  
Formula  $C_{36}H_{28}IrN_3O_2$   
FW 726.84

**Tris(3,5-difluoro-2-(2-pyridyl)phenyl-C<sup>2</sup>,N')iridium(III), 98%**

**CAT# IR606**

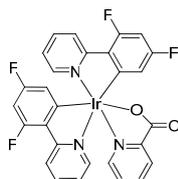


CAS# [387859-70-3]  
Formula  $C_{33}H_{18}F_6IrN_3$   
FW 762.72

**Bis(3,5-difluoro-2-(2-pyridyl)phenyl-(2-carboxypyridyl))iridium(III), 98%**

**FlrPic**

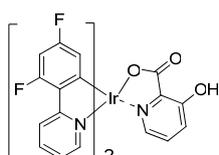
**CAT# IR607**



CAS# [376367-93-0]  
Formula  $C_{28}H_{16}N_3O_2F_4Ir$   
FW 694.67  
 $\lambda_{ab}$  256, 380 nm ( $CH_2Cl_2$ )  
 $\lambda_{em}$  468 nm ( $CH_2Cl_2$ )

**Bis(3,5-difluoro-2-(2-pyridyl)phenyl-(3-hydroxy-2-carboxypyridyl))iridium(III), 98%**

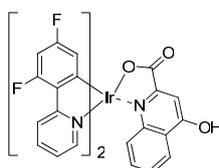
**CAT# IR608**



CAS# [376367-93-0]  
Formula  $C_{28}H_{16}F_4IrN_3O_3$   
FW 710.67

**Bis(3,5-difluoro-2-(2-pyridyl)phenyl-(2-carboxy-4-hydroxyquinoline))iridium(III), 98%**

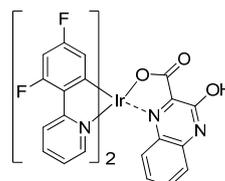
**CAT# IR609**



CAS# [376367-93-0]  
Formula  $C_{32}H_{18}F_4IrN_3O_3$   
FW 760.73

**Bis(3,5-difluoro-2-(2-pyridyl)phenyl-(2-carboxy-3-hydroxyquinoxaline))iridium(III), 98%**

**CAT# IR610**

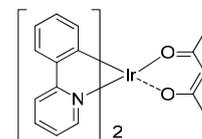


CAS# [337526-85-9]  
Formula  $C_{31}H_{17}F_4IrN_4O_3$   
FW 761.71

**Bis(2-phenylpyridine-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(ppy)<sub>2</sub>(acac)**

**CAT# IR505**

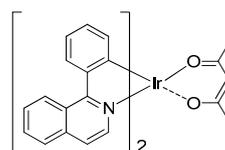


CAS# [337526-85-9]  
Formula  $C_{27}H_{23}N_2O_2Ir$   
FW 599.7  
 $\lambda_{ab}$  259 nm (THF)  
 $\lambda_{em}$  378, 524 nm (THF)  
522 nm (acetonitrile)

**Bis(1-phenylisoquinoline-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(piq)<sub>2</sub>(acac)**

**CAT# IR713**

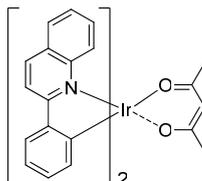


CAS# [435294-03-4]  
Formula  $C_{35}H_{27}N_2O_2Ir$   
FW 699.82  
 $\lambda_{ab}$  234, 282, 342, 478 nm (acetonitrile)  
 $\lambda_{em}$  624 nm (acetonitrile)

**Bis(2-phenylquinoline-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(2-phq)<sub>2</sub>(acac)**

**CAT# IR729**

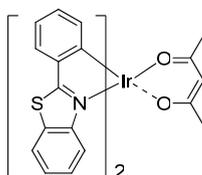


CAS# [1173886-71-9]  
Formula  $C_{35}H_{27}N_2O_2Ir$   
FW 699.82  
 $\lambda_{ab}$  279, 344 nm (THF)  
 $\lambda_{em}$  590 nm (THF)

**Bis(2-phenylbenzothiazole-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(bt)<sub>2</sub>(acac)**

**CAT# IR733**

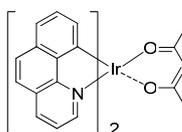


CAS# [337526-88-2]  
Formula  $C_{31}H_{23}N_2O_2S_2Ir$   
FW 711.86  
 $\lambda_{ab}$  325, 356, 441 nm (acetonitrile)  
 $\lambda_{em}$  562 nm (acetonitrile)

**Bis(2-benzo[h]quinoline-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(bzq)<sub>2</sub>(acac)**

**CAT# IR800**

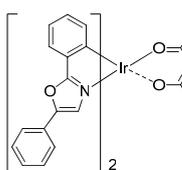


CAS# [337526-87-1]  
Formula  $C_{31}H_{23}N_2O_2Ir$   
FW 647.86

**Bis(2,5-diphenyloxazole-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(dpo)<sub>2</sub>(acac)**

**CAT# IR801**

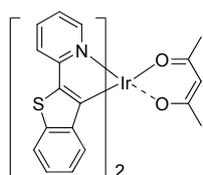


CAS# [344796-05-0]  
Formula  $C_{35}H_{27}N_2O_4Ir$   
FW 731.82

**Bis(2-(benzo[b]thiophen-2-yl)pyridine-C<sup>2</sup>,N')(acetylacetonato)iridium(III), 98%**

**Ir(btpy)<sub>2</sub>(acac)**

**CAT# IR802**

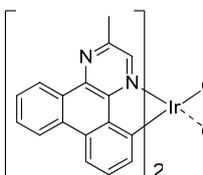


CAS# [343978-79-0]  
 Formula  $C_{31}H_{23}N_2O_2S_2Ir$   
 FW 711.86  
 $\lambda_{ab}$  279, 324, 472 nm (acetonitrile)  
 $\lambda_{em}$  611 nm (acetonitrile)

**Bis(2-methyldibenzo[f,h]quinoxaline-C<sup>2</sup>,N<sup>1</sup>)(acetylacetonato)iridium(III), 98%**

**Ir(MDQ)<sub>2</sub>(acac)**

**CAT# IR804**

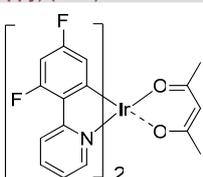


CAS# [536755-34-7]  
 Formula  $C_{39}H_{29}N_4O_2Ir$   
 FW 778.22

**Bis(2,4-difluorophenylpyridine-C<sup>2</sup>,N<sup>1</sup>)(acetylacetonato)iridium(III), 98%**

**Ir(f-ppy)<sub>2</sub>(acac)**

**CAT# IR805**

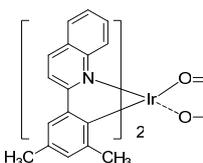


CAS# [376367-95-2]  
 Formula  $C_{27}H_{19}N_2O_2F_4Ir$   
 FW 672.12

**Bis(2-(3,5-dimethylphenyl)quinoline-C<sup>2</sup>,N<sup>1</sup>)(acetylacetonato)iridium(III), 98%**

**Ir(dmpq)<sub>2</sub>(acac)**

**CAT# IR811**

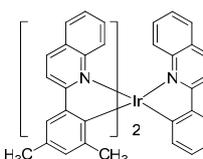


CAS# [1056874-46-4]  
 Formula  $C_{39}H_{35}N_2O_2Ir$   
 FW 755.94

**Bis(2-(3,5-dimethylphenyl)quinoline-C<sup>2</sup>,N<sup>1</sup>)(2-phenylquinoline)iridium(III), 98%**

**Ir(dmpq)<sub>2</sub>(2-phq)**

**CAT# IR813**



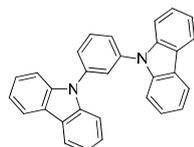
CAS# [1056874-46-4]  
 Formula  $C_{49}H_{38}N_3Ir$   
 FW 861.06

## Phosphorescent Host Materials

**1,3-Bis(carbazol-9-yl)benzene, 98%**

**MCP**

**CAT# PH001**

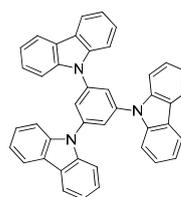


CAS# [550378-78-4]  
 Formula  $C_{30}H_{20}N_2$   
 FW 408.49

**1,3,5-Tris(carbazol-9-yl)benzene, 98%**

**TCP**

**CAT# PH002**

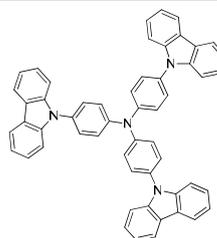


CAS# [148044-07-9]  
 Formula  $C_{42}H_{27}N_3$   
 FW 573.68

**4,4',4''-Tris(carbazol-9-yl)triphenylamine, 98%**

**TcTa**

**CAT# PH003**

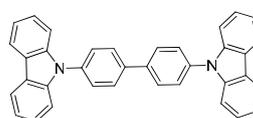


CAS# [139092-78-7]  
 Formula  $C_{54}H_{36}N_4$   
 FW 740.89

**4,4'-Bis(carbazol-9-yl)biphenyl, 98%**

**CBP**

**CAT# PH004**

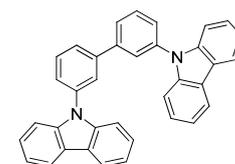


CAS# [58328-31-7]  
 Formula  $C_{36}H_{24}N_2$   
 FW 484.59

**3,3'-Di(9H-carbazol-9-yl)biphenyl, 97%**

**mCBP**

**CAT# PH005**

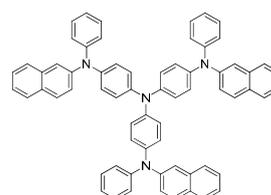


CAS# [342638-54-4]  
 Formula  $C_{36}H_{24}N_2$   
 FW 484.59

**4,4',4''-Tris[2-naphthyl(phenyl)amino]triphenylamine**

**2-TNATA**

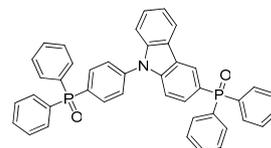
**CAT# PH010**



CAS# [185690-41-9]  
 Formula  $C_{66}H_{48}N_4$   
 FW 897.11

**3-(Diphenylphosphoryl)-9-(4(diphenylphosphoryl)phenyl)-9-carbazole**

**CAT# PH017**



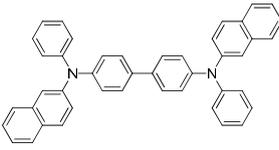
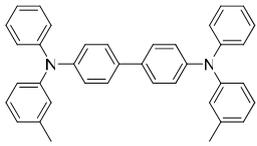
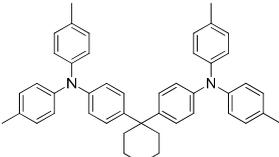
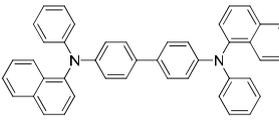
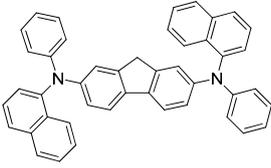
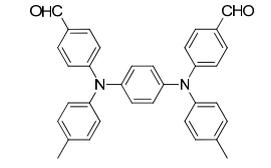
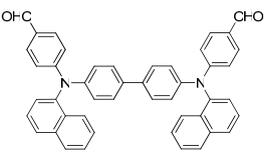
CAS# [1226860-68-9]  
 Formula  $C_{42}H_{31}NO_2P_2$   
 FW 643.65

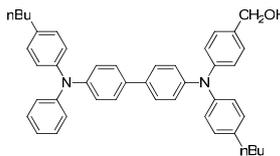
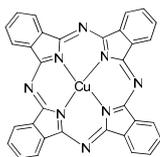
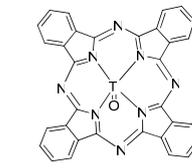
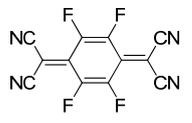
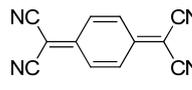
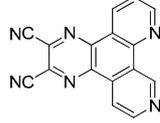
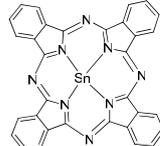
## Hole Transport Layer Materials

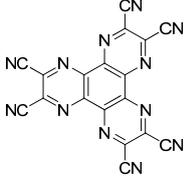
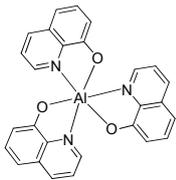
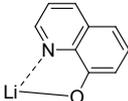
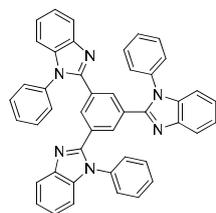
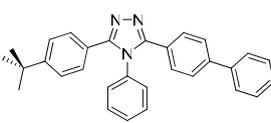
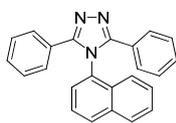
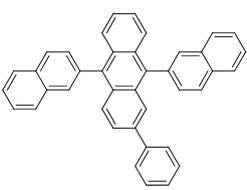
**N,N'-Bis(naphthalen-2-yl)-N,N'-bis(phenyl)-benzidine**

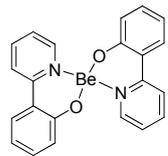
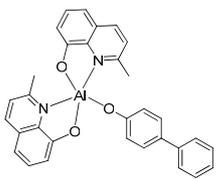
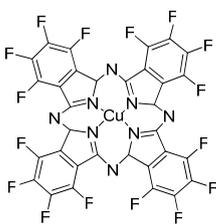
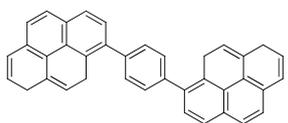
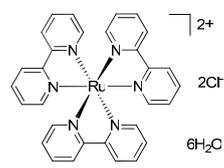
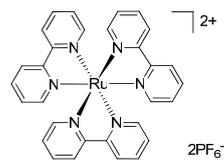
**$\beta$ -NPB**

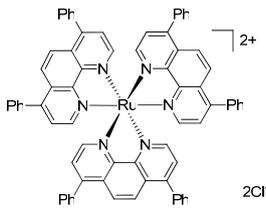
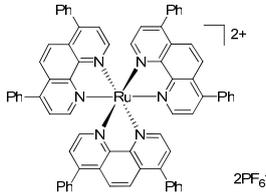
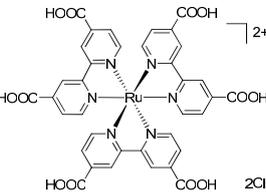
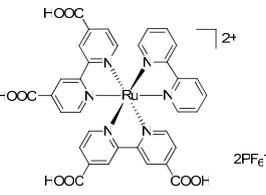
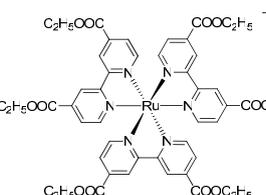
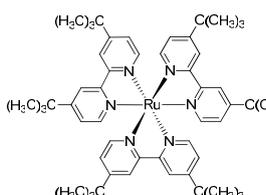
**CAT# HT005**

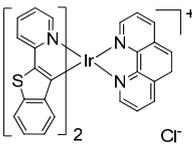
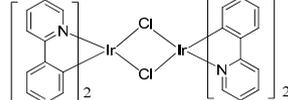
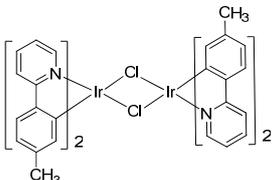
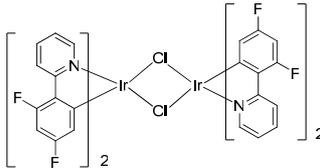
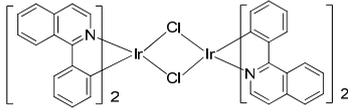
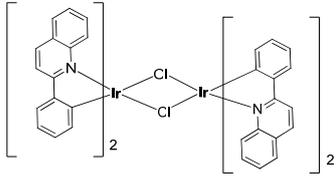
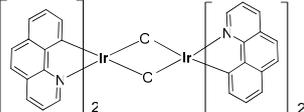
	CAS# [139255-17-7] Formula C <sub>44</sub> H <sub>32</sub> N <sub>2</sub> FW 588.74 λ <sub>ab</sub> 349 nm (THF) λ <sub>em</sub> 416 nm (THF)
<b>N,N'-Bis(naphthalene-1-yl)-N,N'-bis(phenyl)-benzidine</b>	
<b>TPD</b>	<b>CAT# HT006</b>
	CAS# [65181-78-4] Formula C <sub>38</sub> H <sub>32</sub> N <sub>2</sub> FW 516.7
<b>1,1'-Bis(4-(dip-tolylamino)phenyl)cyclohexane</b>	
<b>TAPC</b>	<b>CAT# HT007</b>
	CAS# [58473-78-2] Formula C <sub>46</sub> H <sub>46</sub> N <sub>2</sub> FW 626.87
<b>N,N'-Bis(naphthalen-1-yl)-N,N'-bis(phenyl)-benzidine</b>	
<b>α-NPB</b>	<b>CAT# HT008</b>
	CAS# [123847-85-8] Formula C <sub>44</sub> H <sub>32</sub> N <sub>2</sub> FW 588.74
<b>N,N'-Di(naphthalen-1-yl)-N,N'-diphenyl-9H-fluorene-2,7-diamine</b>	
<b>CAT# HT010</b>	
	CAS# [273381-61-6] Formula C <sub>45</sub> H <sub>32</sub> N <sub>2</sub> FW 600.75
<b>4,4'-(1,4-Phenylenebis(p-tolylazanediy))dibenzaldehyde</b>	
<b>CAT# IN1301</b>	
	CAS# [131660-39-4] Formula C <sub>34</sub> H <sub>28</sub> N <sub>2</sub> O <sub>2</sub> FW 496.60
<b>4,4'-(Biphenyl-4,4'-diylbis(naphthalen-1-ylazanediy))dibenzaldehyde</b>	
<b>CAT# IN1303</b>	
	CAS# [854938-56-0] Formula C <sub>46</sub> H <sub>32</sub> N <sub>2</sub> O <sub>2</sub> FW 644.76
<b>(4-((4-Butylphenyl)(4'-(4-butylphenyl)(phenyl)amino)biphenyl-4-yl)amino)phenyl)methanol, 98%</b>	

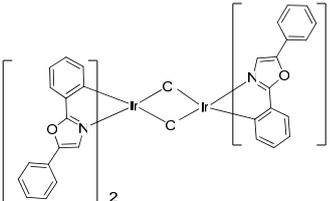
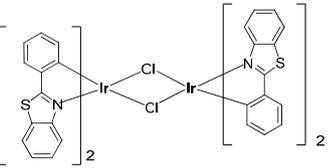
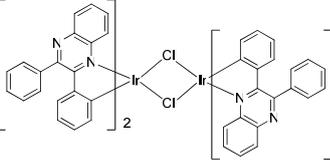
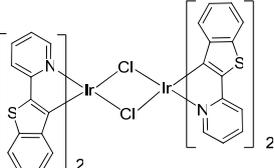
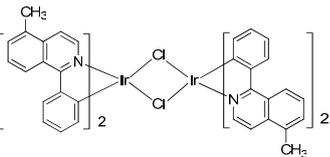
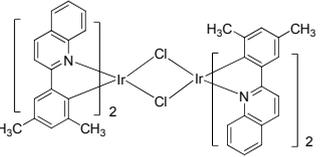
	CAS# [275793-98-1] Formula C <sub>45</sub> H <sub>46</sub> N <sub>2</sub> O FW 630.9
<b>Phthalocyanine Copper complex, 98%</b>	
<b>CuPc</b>	<b>CAT# HI001</b>
	CAS# [147-14-8] Formula C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Cu FW 576.07
<b>Titanium oxide phthalocyanine, 98%</b>	
<b>TioPc</b>	<b>CAT# HI002</b>
	CAS# [26201-32-1] Formula C <sub>12</sub> H <sub>4</sub> N <sub>4</sub> O FW 576.39
<b>2,3,5,6-Tetrafluoro-7,7,8,8-tetracyanoquinodimethane, 98%</b>	
<b>F4-TCNQ</b>	<b>CAT# HI003</b>
	CAS# [29261-33-4] Formula C <sub>12</sub> F <sub>4</sub> N <sub>4</sub> FW 276.15
<b>(2,5-Cyclohexadiene-1,4-diyldiene)-dimalononitrile, 98%</b>	
<b>TCNQ</b>	<b>CAT# HI004</b>
	CAS# [1518-16-7] Formula C <sub>12</sub> H <sub>4</sub> N <sub>4</sub> FW 204.19
<b>Pyrazino[2,3-f][1,10]phenanthroline-2,3-dicarbonitrile, 98%</b>	
<b>PPDN</b>	<b>CAT# HI005</b>
	CAS# [215611-93-1] Formula C <sub>16</sub> H <sub>6</sub> N <sub>8</sub> FW 282.26
<b>Tin(II) Phthalocyanine, 98%</b>	
<b>SnPc</b>	<b>CAT# HI006</b>
	CAS# [15304-57-1] Formula C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Sn FW 631.23
<b>(4-((4-Butylphenyl)(4'-(4-butylphenyl)(phenyl)amino)biphenyl-4-yl)amino)phenyl)methanol, 98%</b>	

<b>Hexaazatriphenylenehexacarbonitrile</b>	
<b>HAT-CN</b>	<b>CAT# HI010</b>
	CAS# [105598-27-4] Formula C <sub>18</sub> N <sub>12</sub> FW 384.27
<b>Electron Transport Layer Materials</b>	
<b>Tris(8-hydroxyquinolino)aluminum, &gt;99%</b>	
<b>Alq3</b>	<b>CAT# ET001</b>
	CAS# [2085-33-8] Formula C <sub>27</sub> H <sub>18</sub> AlN <sub>3</sub> O <sub>3</sub> FW 459.43
<b>8-Hydroxyquinolinolato-lithium, 98%</b>	
<b>Liq</b>	<b>CAT# ET002</b>
	CAS# [850918-68-2] Formula C <sub>9</sub> H <sub>6</sub> LiNO FW 151.09
<b>2,2',2''-(1,3,5-Benzinetriyl)-tris(1-phenyl-1-H-benzimidazole), 98%</b>	
<b>TPBi</b>	<b>CAT# ET003</b>
	CAS# [192198-85-9] Formula C <sub>45</sub> H <sub>30</sub> N <sub>6</sub> FW 654.76
<b>3-(4-Biphenyl)-4-phenyl-5-tert-butylphenyl-1,2,4-triazole, 98%</b>	
<b>TAZ</b>	<b>CAT# ET004</b>
	CAS# [150405-69-9] Formula C <sub>30</sub> H <sub>27</sub> N <sub>3</sub> FW 429.56
<b>4-(Naphthalen-1-yl)-3,5-diphenyl-4H-1,2,4-triazole, 98%</b>	
<b>NTAZ</b>	<b>CAT# ET005</b>
	CAS# [16152-10-6] Formula C <sub>24</sub> H <sub>17</sub> N <sub>3</sub> FW 347.41
<b>2-Phrnyl-9,10-di(naphthalen-2-yl)-anthracene</b>	
<b>PADN</b>	<b>CAT# ET006</b>
	CAS# [865435-20-7] Formula C <sub>40</sub> H <sub>26</sub> FW 506.63 λ <sub>ab</sub> 284 nm (CH <sub>2</sub> Cl <sub>2</sub> ) λ <sub>em</sub> 440 nm (CH <sub>2</sub> Cl <sub>2</sub> )

<b>Bis(2-(2-hydroxyphenyl)-pyridine)beryllium</b>	
<b>Be(PP)<sub>2</sub></b>	<b>CAT# ET007</b>
	CAS# [220694-90-6] Formula C <sub>22</sub> H <sub>16</sub> BeN <sub>2</sub> O <sub>2</sub> FW 349.39
<b>Bis(2-methyl-8-quinolinolato-N1,O8)-(1,1'-Biphenyl-4-olato)aluminum</b>	
<b>BAIq3</b>	<b>CAT# ET008</b>
	CAS# [146162-54-1] Formula C <sub>32</sub> H <sub>25</sub> AlN <sub>2</sub> O <sub>3</sub> FW 512.54
<b>OTFT/OFET Materials</b>	
<b>Copper(II)1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25-hexadecafluoro-29H,31H-phthalocyanine</b>	
<b>F16CuPC</b>	<b>CAT# OE001</b>
	CAS# [14916-87-1] Formula C <sub>32</sub> N <sub>8</sub> F <sub>16</sub> Cu FW 863.92 λ <sub>em</sub> 590 nm (THF)
<b>Fluorescent Host Materials</b>	
<b>1,4-Di(pyren-1-yl)benzene</b>	
	<b>CAT# FH001</b>
	CAS# [475460-77-6] Formula C <sub>38</sub> H <sub>22</sub> FW 478.58
<b>LEEC (Light Emitting Electrochemical Cell)</b>	
<b>Tris(2,2'-bipyridyl)ruthenium(II) dichloride hexahydrate</b>	
	<b>CAT# RU001001001Cl</b>
	CAS# [50525-27-4] Formula C <sub>30</sub> H <sub>24</sub> Cl <sub>2</sub> N <sub>6</sub> Ru · 6H <sub>2</sub> O FW 748.62
<b>Tris(2,2'-bipyridyl)ruthenium(II) bishexafluorophosphate</b>	
	<b>CAT# RU001001001PF6</b>
	CAS# [60804-74-2] Formula C <sub>30</sub> H <sub>24</sub> F <sub>12</sub> N <sub>6</sub> P <sub>2</sub> Ru FW 859.54
<b>Tris(4,7-diphenyl-1,10-phenanthroline)ruthenium(II) dichloride</b>	
	<b>CAT# RU088088088Cl</b>

	CAS# [36309-88-3] Formula $C_{72}H_{48}N_6Cl_2Ru$ FW 1169.17
<b>Tris(4,7-diphenyl-1,10-phenanthroline)ruthenium(II) bishexafluorophosphate</b> CAT# RU08808808PF6	
	CAS# [123148-15-2] Formula $C_{72}H_{48}F_{12}N_6P_2Ru$ FW 1388.19
<b>Tris(4,4'-dicarboxylicacid-2,2'-bipyridyl)ruthenium(II) dichloride</b> CAT# RU029029029Cl	
	CAS# [97333-46-5] Formula $C_{36}H_{24}N_6O_{12}Cl_2Ru$ FW 904.59
<b>Tris(4,4'-diethoxycarbonyl-2,2'-bipyridyl)ruthenium(II) dichloride</b> CAT# RU001029029PF6	
	CAS# [123148-15-2] Formula $C_{72}H_{48}F_{12}N_6P_2Ru$ FW 1388.19
<b>Tris(4,4'-diethoxycarbonyl-2,2'-bipyridyl)ruthenium(II) dichloride</b> CAT# RU037037037PF6	
	CAS# [123148-15-2] Formula $C_{48}H_{48}F_{12}N_6O_{12}P_2Ru$ FW 1291.92
<b>Tris(4,4'-di-tertbutyl-2,2'-bipyridyl)ruthenium(II) dichloride</b> CAT# RU030030030Cl	
	CAS# [123148-15-2] Formula $C_{54}H_{72}N_6Cl_2Ru$ FW 977.18
<b>Bis(2-(benzo[b]thiophen-2-yl)pyridyl-C<sup>2</sup>,N')(2-Benzo[h]quinoline)iridium(III) chloride</b>	

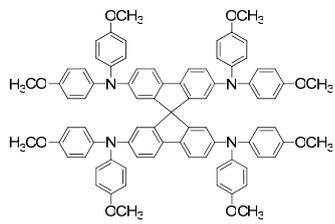
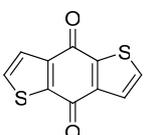
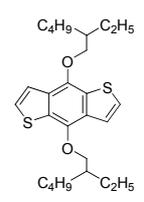
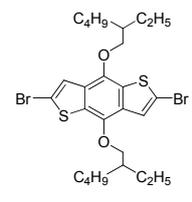
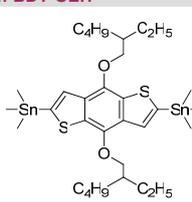
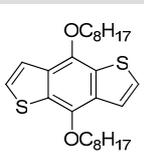
	CAT# IR068629629Cl CAS# [123148-15-2] Formula $C_{38}H_{24}N_4S_2ClIr$ FW 828.1 $\lambda_{em}$ 522 nm (acetonitrile)
<b>Tetrakis(2-phenylpyridine-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR601	
	CAS# [92220-65-0] Formula $C_{44}H_{32}Cl_2Ir_2N_4$ FW 1072.09
<b>Tetrakis(2-(p-tolyl)pyridine-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR602	
	CAS# [123148-15-2] Formula $C_{48}H_{40}Cl_2Ir_2N_4$ FW 1128.22
<b>Tetrakis(2,4-difluorophenylpyridine-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR604	
	CAS# [562824-27-5] Formula $C_{44}H_{24}Cl_2Ir_2N_4F_8$ FW 1216.02
<b>Tetrakis(1-phenylisoquinoline-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR617	
	CAS# [123148-15-2] Formula $C_{60}H_{40}Cl_2Ir_2N_4$ FW 1272.33
<b>Tetrakis(2-phenylquinoline-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR618	
	CAS# [123148-15-2] Formula $C_{60}H_{40}Cl_2Ir_2N_4$ FW 1272.33
<b>Tetrakis(1-phenylisoquinoline-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR621	
	CAS# [123148-15-2] Formula $C_{52}H_{32}Cl_2Ir_2N_4$ FW 1168.18
<b>Tetrakis(2,5-diphenyloxazole-C<sup>2</sup>,N')(μ-dichloro)diiridium(III)</b> CAT# 2IR624	

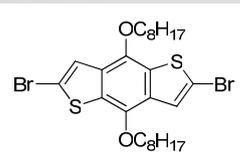
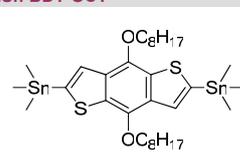
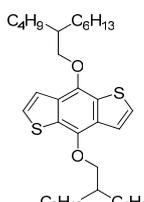
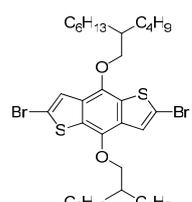
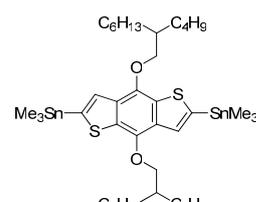
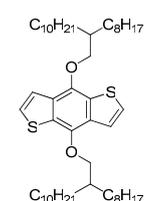
	CAS# Formula $C_{60}H_{40}Cl_2Ir_2N_4O_4$ FW 1336.32
<b>Tetrakis(2-phenylbenzothiazole-C<sup>2</sup>,N<sup>1</sup>)(μ-dichloro)diiridium(III)</b> CAT# 2IR625	
	CAS# Formula $C_{52}H_{32}Cl_2Ir_2N_4S_4$ FW 1296.44
<b>Tetrakis(2,3-diphenylquinoxaline-C<sup>2</sup>,N<sup>1</sup>)(μ-dichloro)diiridium(III)</b> , CAT# 2IR628	
	CAS# Formula $C_{80}H_{52}Cl_2Ir_2N_8$ FW 1580.66
<b>Tetrakis(2-(benzo[b]thiophen-2-yl)pyridine-C<sup>2</sup>,N<sup>1</sup>)(μ-dichloro)diiridium(III)</b> CAT# 2IR629	
	CAS# Formula $C_{52}H_{32}Cl_2Ir_2N_4S_4$ FW 1296.44
<b>Tetrakis(5-methyl-1-phenylisoquinoline-C<sup>2</sup>,N<sup>1</sup>)(μ-dichloro)diiridium(III)</b> CAT# 2IR632	
	CAS# Formula $C_{64}H_{48}Cl_2Ir_2N_4$ FW 1328.46
<b>Tetrakis(2-(3,5-Dimethylphenyl)quinoline-C<sup>2</sup>,N<sup>1</sup>)(μ-dichloro)diiridium(III)</b> CAT# 2IR633	
	CAS# Formula $C_{68}H_{56}Cl_2Ir_2N_4$ FW 1384.54

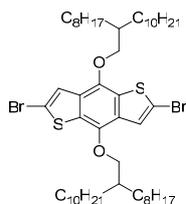
*The optimist sees this page as half full.*

*The pessimist sees this page as half empty.*

*The chemist sees this page as completely full; half have been synthesized while half are opportunities.*

<h1>Organic Photovoltaics</h1>	
<b>2,2',7,7'-Tetrakis(N,N-p-dimethoxyphenylamino)-9,9'-spirobifluorene</b>	
<b>Spiro-MeOTAD</b>	<b>CAT# OP001</b>
	CAS# [207739-72-8] Formula: C <sub>61</sub> H <sub>68</sub> N <sub>4</sub> O <sub>8</sub> FW: 1225.43
<b>BDT Series</b>	
<b>4,8-Dihydrobenzo[1,2-b:4,5-b']dithiophen-4,8-dione</b>	
<b>BDT</b>	<b>CAT# OC1016</b>
	CAS# [32281-36-0] Formula C <sub>10</sub> H <sub>4</sub> O <sub>2</sub> S <sub>2</sub> FW 220.27
<b>4,8-Bis(2-ethylhexyloxy)benzo[1,2-b:4,5-b'] dithiophene</b>	
<b>BDT-OEH</b>	<b>CAT# IN1055</b>
	CAS# [1160823-77-7] Formula C <sub>26</sub> H <sub>38</sub> O <sub>2</sub> S <sub>2</sub> FW 446.71
<b>2,6-Dibromo-4,8-bis(2-ethylhexyloxy)benzo[1,2-b:4,5-b'] dithiophene</b>	
<b>2Br-BDT-OEH</b>	<b>CAT# IN1056</b>
	CAS# [1226782-13-3] Formula C <sub>26</sub> H <sub>36</sub> Br <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 604.50
<b>2,6-Bis(trimethyltin)-4,8-bis(2-ethylhexyloxy)benzo[1,2-b:4,5-b'] dithiophene</b>	
<b>2Sn-BDT-OEH</b>	<b>CAT# IN1016</b>
	CAS# [1160823-78-8] Formula C <sub>32</sub> H <sub>54</sub> O <sub>2</sub> S <sub>2</sub> Sn <sub>2</sub> FW 772.32
<b>4,8-Dioctyloxybenzo[1,2-b:3,4-b']dithiophene</b>	
<b>BDT-OCT</b>	<b>CAT# IN1130</b>
	CAS# [1098102-94-3] Formula C <sub>26</sub> H <sub>38</sub> O <sub>2</sub> S <sub>2</sub> FW 446.71
<b>2,6-Dibromo-4,8-bis(octyloxy)benzo[1,2-b:4,5-b']dithiophene</b>	

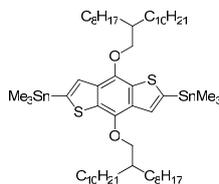
<b>2Br-BDT-OCT</b>		<b>CAT# IN1131</b>
	CAS# [1294515-75-5] Formula C <sub>26</sub> H <sub>36</sub> Br <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 604.50	
<b>2,6-Bis(trimethyltin)-4,8-dioctyloxybenzo[1,2-b:3,4-b']dithiophene</b>		<b>CAT# IN1132</b>
	CAS# [1098102-95-4] Formula C <sub>32</sub> H <sub>54</sub> O <sub>2</sub> S <sub>2</sub> Sn <sub>2</sub> FW 772.32	
<b>4,8-Bis((2-butyl)octyloxy)benzo[1,2-b:4,5-b']dithiophene</b>		<b>CAT# IN1140</b>
	CAS# [1321590-78-6] Formula C <sub>34</sub> H <sub>54</sub> O <sub>2</sub> S <sub>2</sub> FW 558.92	
<b>2,6-Dibromo-4,8-bis((2-butyl)octyloxy)benzo[1,2-b:4,5-b'] dithiophene</b>		<b>CAT# IN1141</b>
	CAS# [1336893-15-2] Formula C <sub>34</sub> H <sub>52</sub> Br <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 716.71	
<b>(4,8-Bis((2-butyl)octyloxy)benzo[1,2-b:4,5-b']dithiophene-2,6-diyl) bis(trimethylstannane)</b>		<b>CAT# IN1142</b>
	CAS# [1271439-08-7] Formula C <sub>40</sub> H <sub>70</sub> O <sub>2</sub> S <sub>2</sub> Sn <sub>2</sub> FW 884.53	
<b>4,8-Bis((2-octyldodecyl)oxy)benzo[1,2-b:4,5-b']dithiophene</b>		<b>CAT# IN1160</b>
	CAS# [1320201-19-1] Formula C <sub>50</sub> H <sub>86</sub> O <sub>2</sub> S <sub>2</sub> FW 783.35	
<b>2,6-Dibromo-4,8-bis((2-octyldodecyl)oxy)benzo[1,2-b:4,5-b'] dithiophene</b>		<b>CAT# IN1161</b>



CAS#  
Formula  $C_{50}H_{84}Br_2O_2S_2$   
FW 941.14

**(4,8-Bis((2-octyldecyl)oxy)benzo[1,2-b:4,5-b']dithiophene-2,6-diyl)bis(trimethylstannane)**

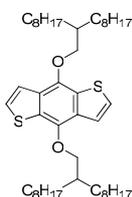
**2Sn-BDT-OODD** CAT# IN1162



CAS# [1320201-22-6]  
Formula  $C_{56}H_{102}O_2S_2Sn_2$   
FW 1108.96

**4,8-Bis((2-octyldecyl)oxy)benzo[1,2-b:4,5-b']dithiophene**

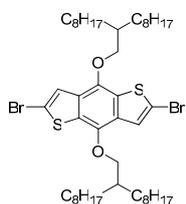
**BDT-OOD** CAT# IN1150



CAS#  
Formula  $C_{48}H_{78}O_2S_2$   
FW 727.24

**2,6-Dibromo-4,8-bis((2-octyldecyl)oxy)benzo[1,2-b:4,5-b']dithiophene**

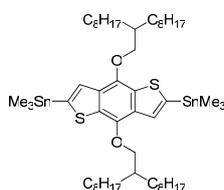
**2Br-BDT-OOD** CAT# IN1151



CAS#  
Formula  $C_{48}H_{76}Br_2O_2S_2$   
FW 885.03

**(4,8-Bis((2-octyldecyl)oxy)benzo[1,2-b:4,5-b']dithiophene-2,6-diyl)bis(trimethylstannane)**

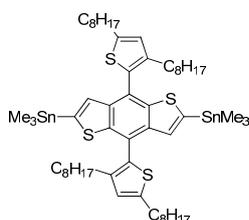
**2Sn-BDT-OOD** CAT# IN1152



CAS#  
Formula  $C_{52}H_{94}O_2S_2Sn_2$   
FW 1052.85

**(4,8-Bis(2-(3,5-dioctyl)thiophene)benzo[1,2-b:4,5-b']dithiophene-2,6-diyl)bis(trimethylstannane)**

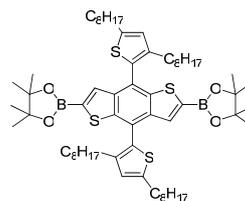
CAT# IN1182



CAS#  
Formula  $C_{56}H_{90}S_4Sn_2$   
FW 1128.99

**2,6-Bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-(4,8-bis(2-(3,5-dioctyl)thiophene)benzo[1,2-b:4,5-b']dithiophene**

CAT# IN1185

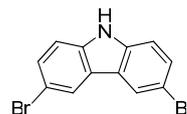


CAS# [1221254-05-2]  
Formula  $C_{62}H_{98}B_2O_4S_4$   
FW 1055.31

**Carbazole Series**

**3,6-Dibromo-9H-carbazole**

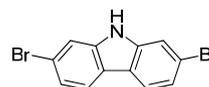
CAT# IN1001



CAS# [6825-20-3]  
Formula  $C_{12}H_7Br_2N$   
FW 325.00

**2,7-Dibromo-9H-carbazole**

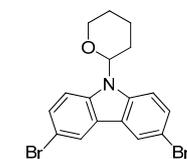
CAT# IN1003



CAS# [136630-39-2]  
Formula  $C_{12}H_7Br_2N$   
FW 325.00

**3,6-Dibromo-9-(tetrahydro-2H-pyran-2-yl)-9H-carbazole**

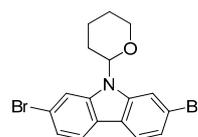
CAT# IN1002



CAS#  
Formula  $C_{17}H_{15}Br_2NO$   
FW 409.12

**2,7-Dibromo-9-(tetrahydro-2H-pyran-2-yl)-9H-carbazole**

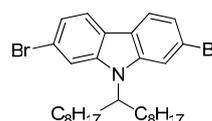
CAT# IN1004



CAS#  
Formula  $C_{17}H_{15}Br_2NO$   
FW 409.12

**2,7-Dibromo-9-(1-octylonyl)-9H-carbazole, 98%**

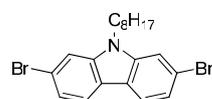
CAT# IN1008



CAS# [955964-73-5]  
Formula  $C_{29}H_{41}Br_2N$   
FW 563.45

**2,7-Dibromo-9-octyl-9H-carbazole**

CAT# IN1029

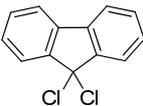
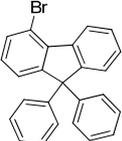


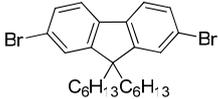
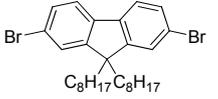
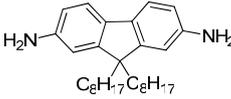
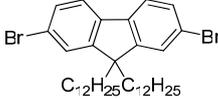
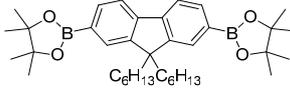
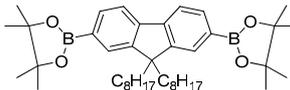
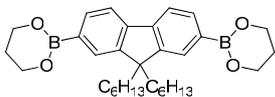
CAS# [726169-75-1]  
Formula  $C_{20}H_{25}Br_2N$   
FW 437.21

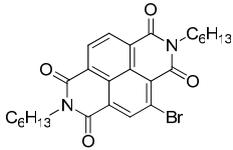
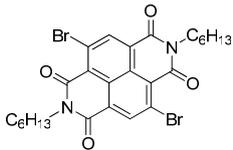
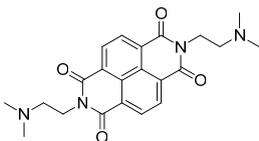
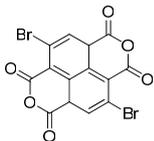
**2,7-Bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-N-9-Heptadecan**

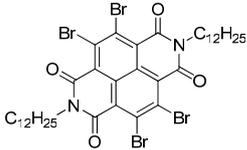
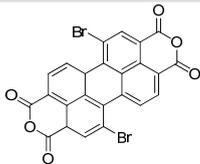
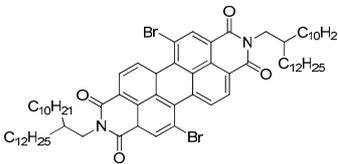
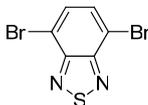
<b>ylcarbazole, 98%</b>		<b>CAT# IN1009</b>	
	CAS#	[958261-51-3]	
	Formula	C <sub>41</sub> H <sub>65</sub> B <sub>2</sub> NO <sub>4</sub>	
	FW	657.58	
<b>2,7-Bis(4',4',5',5'-tetramethyl-1',3',2'-dioxaborolan-2'-yl)-N-9"-octylcarbazole</b>		<b>CAT# IN1048</b>	
	CAS#	[406726-92-9]	
	Formula	C <sub>32</sub> H <sub>47</sub> B <sub>2</sub> NO <sub>4</sub>	
	FW	531.34	
<b>9-(Henticosan-11-yl)-2,7-bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9H-carbazole</b>		<b>CAT# IN1129</b>	
	CAS#	[711026-06-1]	
	Formula	C <sub>45</sub> H <sub>73</sub> B <sub>2</sub> NO <sub>4</sub>	
	FW	713.69	
<b>Fluorene Series</b>			
<b>2-Bromo-9H-fluorene</b>		<b>CAT# IN1224</b>	
	CAS#	[1133-80-8]	
	Formula	C <sub>13</sub> H <sub>9</sub> Br	
	FW	245.12	
<b>2,7-Dibromo-9H-fluorene</b>		<b>CAT# IN1225</b>	
	CAS#	[16433-88-8]	
	Formula	C <sub>13</sub> H <sub>8</sub> Br <sub>2</sub>	
	FW	324.01	
<b>2-Nitro-9H-fluorene</b>		<b>CAT# IN1229</b>	
	CAS#	[607-57-8]	
	Formula	C <sub>13</sub> H <sub>9</sub> NO <sub>2</sub>	
	FW	211.22	
<b>2,7-Di-tert-butyl-9H-fluorene</b>		<b>CAT# IN1222</b>	
	CAS#	[58775-05-6]	
	Formula	C <sub>21</sub> H <sub>26</sub>	
	FW	278.43	
<b>9,9-Dimethyl-9H-fluorene</b>		<b>CAT# IN1241</b>	
	CAS#	[4569-45-3]	
	Formula	C <sub>15</sub> H <sub>14</sub>	
	FW	194.27	

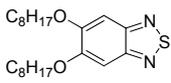
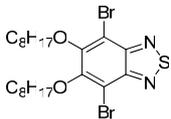
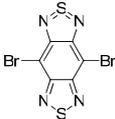
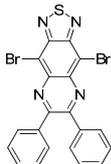
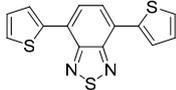
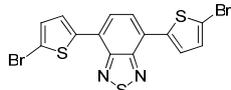
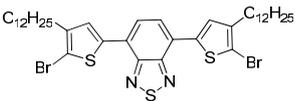
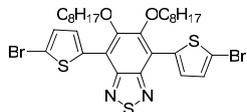
<b>9,9-Dimethyl-9H-fluoren-2-amine</b>		<b>CAT# IN1230</b>	
	CAS#	[108714-73-4]	
	Formula	C <sub>15</sub> H <sub>15</sub> N	
	FW	209.29	
<b>4-Bromo-9,9-dimethyl-9H-fluorene</b>		<b>CAT# IN1218</b>	
	CAS#	[942615-32-9]	
	Formula	C <sub>15</sub> H <sub>13</sub> Br	
	FW	273.17	
<b>2-Bromo-9,9-dimethyl-9H-fluorene</b>		<b>CAT# IN1220</b>	
	CAS#	[28320-31-2]	
	Formula	C <sub>15</sub> H <sub>13</sub> Br	
	FW	273.17	
<b>2,7-Dibromo-9,9-dimethyl-9H-fluorene</b>		<b>CAT# IN1223</b>	
	CAS#	[28320-32-3]	
	Formula	C <sub>15</sub> H <sub>12</sub> Br <sub>2</sub>	
	FW	352.06	
<b>3,3'-(2,7-Dibromo-9H-fluorene-9,9-diyl)bis(N,N-dimethylpropan-1-amine)</b>		<b>CAT# IN1217</b>	
	CAS#		
	Formula	C <sub>23</sub> H <sub>30</sub> Br <sub>2</sub> N <sub>2</sub>	
	FW	494.31	
<b>2-Bromo-9H-fluorenone</b>		<b>CAT# IN1228</b>	
	CAS#	[3096-56-8]	
	Formula	C <sub>13</sub> H <sub>7</sub> BrO	
	FW	259.10	
<b>2,7-Dibromo-9H-fluoren-9-one</b>		<b>CAT# IN1226</b>	
	CAS#	[14348-75-5]	
	Formula	C <sub>13</sub> H <sub>6</sub> Br <sub>2</sub> O	
	FW	337.99	
<b>9H-Fluorene</b>		<b>CAT# IN1227</b>	
	CAS#	[1689-64-1]	
	Formula	C <sub>13</sub> H <sub>10</sub> O	
	FW	182.22	
<b>9,9-Dichloro-9H-fluorene</b>			

CAT# IN1231		
	CAS# Formula FW	[25023-01-2] C <sub>13</sub> H <sub>8</sub> Cl <sub>2</sub> 235.11
4-Bromo-9,9-diphenyl-9H-fluorene		
CAT# IN1233		
	CAS# Formula FW	[713125-22-5] C <sub>25</sub> H <sub>17</sub> Br 397.31
2-Bromo-9,9-diphenyl-9H-fluorene		
CAT# IN1235		
	CAS# Formula FW	[474918-32-6] C <sub>25</sub> H <sub>17</sub> Br 397.31
2,7-Dibromo-9,9-diphenyl-9H-fluorene		
CAT# IN1236		
	CAS# Formula FW	[186259-63-2] C <sub>25</sub> H <sub>16</sub> Br <sub>2</sub> 476.20
2-Bromo-9,9'-spirobi[fluorene]		
CAT# IN1234		
	CAS# Formula FW	[171408-76-7] C <sub>25</sub> H <sub>15</sub> Br 395.29
2,7-Dibromo-9,9'-spirobi[fluorene]		
CAT# IN1237		
	CAS# Formula FW	[171408-84-7] C <sub>25</sub> H <sub>14</sub> Br <sub>2</sub> 474.19
2,2'-Dibromo-9,9'-spirobi[fluorene]		
CAT# IN1238		
	CAS# Formula FW	[67665-47-8] C <sub>25</sub> H <sub>14</sub> Br <sub>2</sub> 474.19
2,2',7,7'-Tetrabromo-9,9'-spirobi[fluorene]		
CAT# IN1239		
	CAS# Formula FW	[128055-74-3] C <sub>25</sub> H <sub>12</sub> Br <sub>4</sub> 631.98

6,6'-(9H-fluorene-9,9-diyl)dinaphthalen-2-ol		
CAT# IN1260		
	CAS# Formula FW	[934557-66-1] C <sub>33</sub> H <sub>22</sub> O <sub>2</sub> 450.53
2,7-Dibromo-9,9-dihexyl-9H-fluorene		
CAT# IN1219		
	CAS# Formula FW	[189367-54-2] C <sub>25</sub> H <sub>32</sub> Br <sub>2</sub> 492.33
2,7-Dibromo-9,9-dioctyl-9H-fluorene		
CAT# IN1221		
	CAS# Formula FW	[198964-46-4] C <sub>29</sub> H <sub>40</sub> Br <sub>2</sub> 548.44
9,9-Dioctyl-9H-fluorene-2,7-diamine		
CAT# IN1012		
	CAS# Formula FW	[851042-10-9] C <sub>29</sub> H <sub>44</sub> N <sub>2</sub> 420.67
2,7-Dibromo-9,9-didodecyl-9H-fluorene		
CAT# IN1232		
	CAS# Formula FW	[286438-45-7] C <sub>37</sub> H <sub>56</sub> Br <sub>2</sub> 660.65
2,2'-(9,9-Dihexyl-9H-fluorene-2,7-diyl)bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolane)		
CAT# IN1123		
	CAS# Formula FW	[254755-24-3] C <sub>37</sub> H <sub>56</sub> B <sub>2</sub> O <sub>4</sub> 584.46
2,7-Bis(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-9,9-di-n-octylfluorene		
CAT# IN1125		
	CAS# Formula FW	[196207-58-6] C <sub>41</sub> H <sub>64</sub> B <sub>2</sub> O <sub>4</sub> 642.57
2,2'-(9,9-Dihexyl-9H-fluorene-2,7-diyl)bis(1,3,2-dioxaborinane)		
CAT# IN1126		
	CAS# Formula FW	[250597-29-6] C <sub>31</sub> H <sub>44</sub> B <sub>2</sub> O <sub>4</sub> 502.31

NDI Series	
<b>4-Bromo-2,7-dihexylbenzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1020	 <p>CAS# [1315605-26-5]            Formula C<sub>26</sub>H<sub>28</sub>BrN<sub>2</sub>O<sub>4</sub>            FW 513.42</p>
<b>4,9-Dibromo-2,7-dihexylbenzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1021	 <p>CAS# [1239327-73-1]            Formula C<sub>26</sub>H<sub>26</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>4</sub>            FW 592.32</p>
<b>4,9-Dibromo-2,7-bis(2-decyltetradecyl)benzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1022	 <p>CAS# [1088205-04-2]            Formula C<sub>62</sub>H<sub>100</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>4</sub>            FW 1097.28</p>
<b>4,9-Dibromo-2,7-bis(2-octyldecyl)benzo[Imn][3,8]phenanthroline-1,3,6,8(2H,7H)-tetraone</b> CAT# IN1023	 <p>CAS# [1100243-35-3]            Formula C<sub>54</sub>H<sub>84</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>4</sub>            FW 985.06</p>
<b>2,7-Bis(2-(dimethylamino)ethyl)benzo[Imn][3,8]phenanthroline-1,3,6,8(2H,7H)-tetraone</b> CAT# IN1071	 <p>CAS# [22291-04-9]            Formula C<sub>22</sub>H<sub>24</sub>N<sub>4</sub>O<sub>4</sub>            FW 408.45</p>
<b>5,10-dibromoisochromeno[6,5,4-def]isochromene-1,3,6,8-tetraone</b> CAT# IN1072	 <p>CAS#            Formula C<sub>14</sub>H<sub>4</sub>Br<sub>2</sub>O<sub>6</sub>            FW 427.99</p>
<b>4,5,9,10-Tetrabromoisochromeno[6,5,4-def]isochromene-1,3,6,8-tetraone</b> CAT# IN1073	

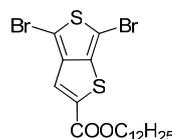
 <p>CAS# [299962-88-2]            Formula C<sub>14</sub>Br<sub>4</sub>O<sub>6</sub>            FW 583.76</p>	
<b>4,5,9,10-Tetrabromo-2,7-didodecylbenzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1074	
 <p>CAS#            Formula C<sub>38</sub>H<sub>50</sub>Br<sub>4</sub>N<sub>2</sub>O<sub>4</sub>            FW 918.43</p>	
<b>4,5,9,10-Tetrabromo-2,7-bis(2-octyldecyl)benzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1075	
 <p>CAS# [1219501-17-3]            Formula C<sub>54</sub>H<sub>82</sub>Br<sub>4</sub>N<sub>2</sub>O<sub>4</sub>            FW 1142.86</p>	
<b>4,5,9,10-Tetrabromo-2,7-dioctylbenzo[Imn][3,8]phenanthroline-1,3,6,8-tetraone</b> CAT# IN1076	
 <p>CAS# [954374-43-7]            Formula C<sub>30</sub>H<sub>34</sub>Br<sub>4</sub>N<sub>2</sub>O<sub>4</sub>            FW 806.22</p>	
<b>PDI Series</b>	
<b>1,7-Dibromoperylene-3,4:9,10-tetracarboxylic acid dianhydride</b> CAT# IN1211	
 <p>CAS#            Formula C<sub>24</sub>H<sub>8</sub>Br<sub>2</sub>O<sub>6</sub>            FW 552.12</p>	
<b>N,N'-Bis(2-decyl-tetradecyl)-1,7-dibromo-3,4,9,10-perylene diimide</b> CAT# IN1213	
 <p>CAS#            Formula C<sub>72</sub>H<sub>106</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>4</sub>            FW 1223.43</p>	
<b>Thiadiazole Series</b>	
<b>4,7-Dibromobenzo[c][1,2,5]thiadiazole, 98%</b> CAT# IN1006	
 <p>CAS# [15155-41-6]            Formula C<sub>6</sub>H<sub>2</sub>Br<sub>2</sub>N<sub>2</sub>S            FW 294.0</p>	

<b>5,6-Bis(octyloxy)benzo-2,1,3-thiadiazole</b>		<b>CAT# IN1037</b>
	CAS# [1254353-37-1] Formula $C_{22}H_{36}N_2O_2S$ FW 392.60	
<b>4,7-Dibromo-5,6-bis(octyloxy)benzo-2,1,3-thiadiazole</b>		<b>CAT# IN1038</b>
	CAS# [1192352-08-1] Formula $C_{22}H_{34}Br_2N_2O_2S$ FW 550.39	
<b>4,8-Dibromo-benzo[1,2-c;4,5-c']bis[1,2,5]thiadiazole</b>		<b>CAT# IN1201</b>
	CAS# [165617-59-4] Formula $C_6Br_2N_4S_2$ FW 352.03	
<b>4,9-Dibromo-6,7-diphenyl-[1,2,5]thiadiazolo[3,4-g]quinoxaline</b>		<b>CAT# IN1203</b>
	CAS# [165617-59-4] Formula $C_{20}H_{10}Br_2N_4S$ FW 498.19	
<b>4,7-Di(thiophen-2-yl)benzo[c][1,2,5]thiadiazole</b>		<b>CAT# IN1079</b>
	CAS# [165190-76-1] Formula $C_{14}H_8N_2S_3$ FW 300.42	
<b>4,7-Bis(2-bromo-5-thienyl)-2,1,3-benzothiadiazole</b>		<b>CAT# IN1069</b>
	CAS# [288071-87-4] Formula $C_{14}H_8Br_2N_2S_3$ FW 458.21	
<b>4,7-Bis(5-bromo-4-dodecylthiophen-2-yl)benzo[c][1,2,5]thiadiazole</b>		<b>CAT# IN1243</b>
	CAS# [1179993-72-6] Formula $C_{38}H_{54}Br_2N_2S_3$ FW 794.85	
<b>4,7-Bis(5-bromothiophen-2-yl)5,6-bis(octyloxy)benzo-2,1,3-thiadiazole</b>		<b>CAT# IN1039</b>
	CAS# [1192352-10-5] Formula $C_{30}H_{36}Br_2N_2O_2S_3$ FW 714.64	

## Thiophene Series

## Dodecyl 4,6-dibromothieno[3,4-b]thiophene-2-carboxylate, 98%

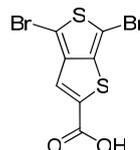
CAT# IN1007



CAS# [1098102-93-2]  
Formula  $C_{19}H_{26}Br_2O_2S_2$   
FW 510.3

## 4,6-Dibromo-thieno[3,4-b]thiophene-2-carboxylic acid

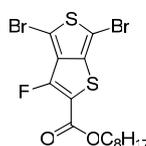
CAT# IN1014



CAS# [1024594-86-2]  
Formula  $C_7H_2Br_2O_2S_2$   
FW 342.03

## Octyl 4,6-dibromo-3-fluorothieno[3,4-b]thiophene-2-carboxylate

CAT# IN1017



CAS# [1160823-76-6]  
Formula  $C_{15}H_{17}Br_2FO_2S_2$   
FW 472.23

## 4,6-Dibromo-3-fluorothieno[3,4-b]thiophene-2-carboxylic acid

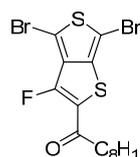
CAT# IN1019



CAS# [1160823-76-6]  
Formula  $C_7HBr_2FO_2S_2$   
FW 360.02

## 1-(4,6-Dibromo-3-fluorothieno[3,4-b]thiophen-2-yl)nonan-1-one

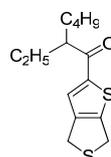
CAT# IN1052



CAS# [1160823-76-6]  
Formula  $C_{15}H_{17}Br_2FOS_2$   
FW 456.23

## 1-(4,6-Dihydrothieno[3,4-b]thiophen-2-yl)-2-ethylhexan-1-one

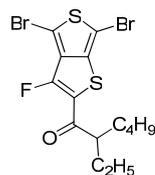
CAT# IN1054



CAS# [1194605-72-5]  
Formula  $C_{14}H_{20}OS_2$   
FW 268.44

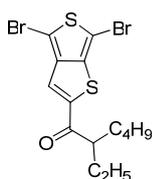
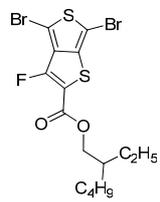
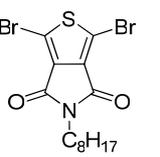
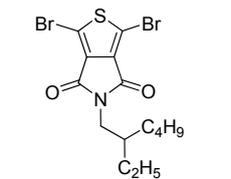
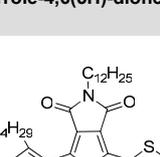
## 1-(4,6-Dibromo-3-fluorothieno[3,4-b]thiophen-2-yl)-2-ethylhexan-1-one

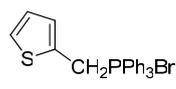
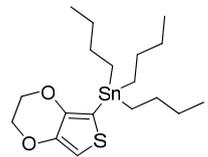
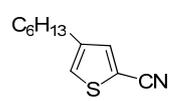
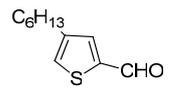
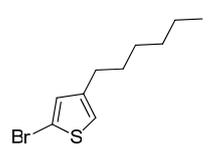
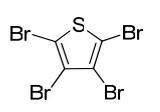
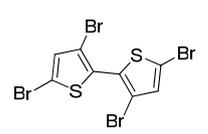
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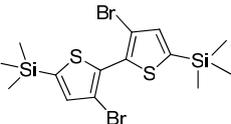
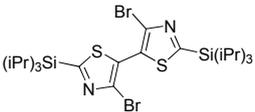
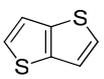
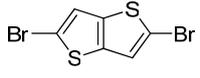
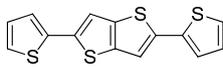
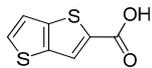
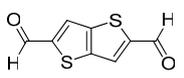
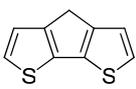


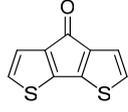
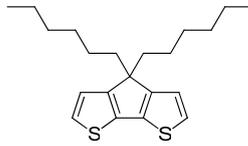
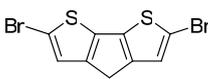
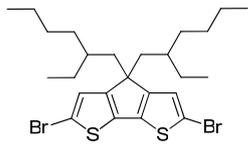
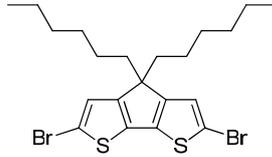
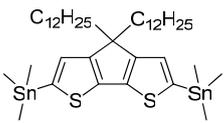
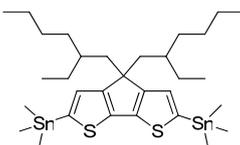
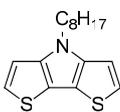
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FW 442.20

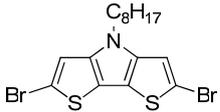
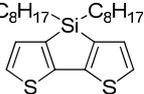
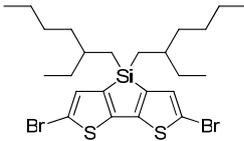
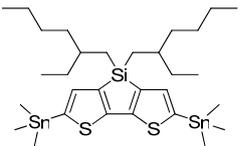
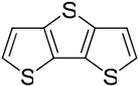
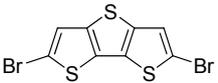
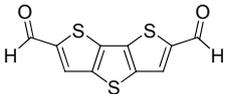
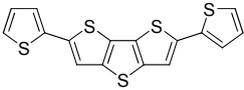
## 1-(4,6-Dibromothieno[3,4-b]thiophen-2-yl)-2-ethylhexan-1-one

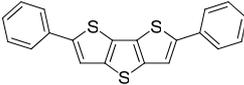
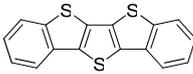
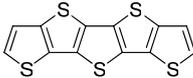
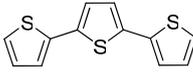
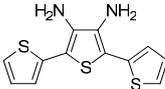
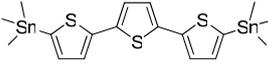
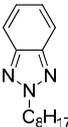
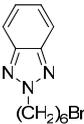
<b>CAT# IN1091</b>	
	CAS# [1194605-76-9] Formula $C_{14}H_{16}Br_2OS_2$ FW 424.21
<b>2-(2-Ethyl-1,1-difluorohexyl)thieno[3,4-b]thiophene</b>	
<b>CAT# IN1092</b>	
	CAS# [1237479-38-7] Formula $C_{15}H_{17}Br_2FO_2S_2$ FW 472.23
<b>2-Ethylhexyl-4,6-dibromo-3-fluorothieno[3,4-b]thiophene-2-carboxylate</b>	
<b>CAT# IN1094</b>	
	CAS# [566939-58-0] Formula $C_{14}H_{17}Br_2NO_2S$ FW 423.16
<b>1,3-Dibromo-5-octyl-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
<b>CAT# IN1053</b>	
	CAS# [1231160-83-0] Formula $C_{14}H_{17}Br_2NO_2S$ FW 423.16
<b>1,3-Dibromo-5-(2-ethylhexyl)-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
<b>CAT# IN1095</b>	
	CAS# [125143-53-5] Formula $C_{54}H_{85}Br_2NO_2S_3$ FW 1036.26
<b>1,3-Bis(5-bromo-3-tetradecylthiophen-2-yl)-5-dodecyl-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
<b>CAT# IN1208</b>	
	CAS# [1015423-45-6] Formula $C_6Br_2O_3S$ FW 311.94
<b>4,6-Dibromothieno[3,4-c]furan-1,3-dione</b>	
<b>CAT# IN1122</b>	

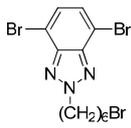
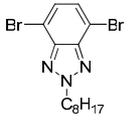
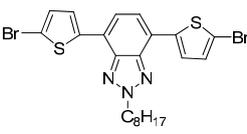
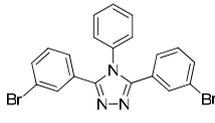
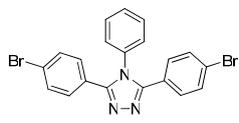
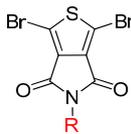
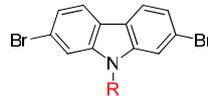
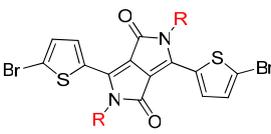
<b>2-Thienyltriphenylphosphonium bromide</b>	
<b>CAT# IN1045</b>	
	CAS# [23259-98-5] Formula $C_{23}H_{20}BrPS$ FW 439.35
<b>Tributyl(2,3-dihydrothieno[3,4-b][1,4]dioxin-5-yl)stannane</b>	
<b>CAT# IN1110</b>	
	CAS# [175922-79-9] Formula $C_{18}H_{32}O_2SSn$ FW 431.22
<b>4-Hexylthiophene-2-carbonitrile</b>	
<b>CAT# IN1112</b>	
	CAS# [1224430-39-0] Formula $C_{11}H_{15}NS$ FW 193.31
<b>4-Hexylthiophene-2-carbaldehyde</b>	
<b>CAT# IN1113</b>	
	CAS# [222554-30-5] Formula $C_{11}H_{16}OS$ FW 196.31
<b>2-Bromo-4-hexylthiophene</b>	
<b>CAT# IN1114</b>	
	CAS# [210705-84-3] Formula $C_{10}H_{16}BrS$ FW 247.20
<b>Tetrabromothiophene</b>	
<b>CAT# IN1070</b>	
	CAS# [3958-03-0] Formula $C_4Br_4S$ FW 399.72
<b>3,3',5,5'-Tetrabromo-2,2'-bithiophene</b>	
<b>CAT# IN1024</b>	
	CAS# [125143-53-5] Formula $C_8H_2Br_4S_2$ FW 481.85
<b>3,3'-Dibromo-2,2'-bithiophene</b>	
<b>CAT# IN1025</b>	
	CAS# [51751-44-1] Formula $C_8H_2Br_2S_2$ FW 324.05

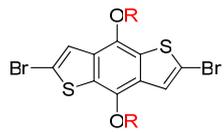
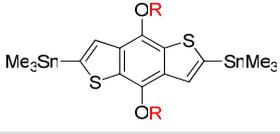
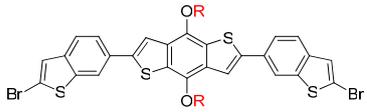
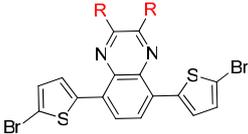
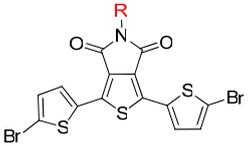
<b>3,3'-Dibromo-5,5'-bis-trimethylsilyl-2,2'-bithiophene</b>		<b>CAT# IN1013</b>
	CAS# [207742-50-5] Formula C <sub>14</sub> H <sub>20</sub> Br <sub>2</sub> S <sub>2</sub> Si <sub>2</sub> FW 468.42	
<b>2,2'-Bis-triisopropylsilyl-4,4'-dibromo-5,5'-dithiazole</b>		<b>CAT# IN1015</b>
	CAS# [1223559-98-5] Formula C <sub>24</sub> H <sub>42</sub> Br <sub>2</sub> N <sub>2</sub> S <sub>2</sub> Si <sub>2</sub> FW 638.71	
<b>Thieno[3,2-b]thiophene</b>		<b>CAT# IN1102</b>
	CAS# [251-41-2] Formula C <sub>6</sub> H <sub>4</sub> S <sub>2</sub> FW 140.23	
<b>2,5-Dibromothieno[3,2-b]thiophene</b>		<b>CAT# IN1103</b>
	CAS# [25121-87-3] Formula C <sub>6</sub> H <sub>2</sub> Br <sub>2</sub> S <sub>2</sub> FW 298.02	
<b>2,5-Di(thiophen-2-yl)thieno[3,2-b]thiophene</b>		<b>CAT# IN1105</b>
	CAS# [21210-90-2] Formula C <sub>14</sub> H <sub>8</sub> S <sub>4</sub> FW 304.47	
<b>Thieno[3,2-b]thiophene-2-carboxylic acid</b>		<b>CAT# IN1108</b>
	CAS# [1723-27-9] Formula C <sub>7</sub> H <sub>4</sub> O <sub>2</sub> S <sub>2</sub> FW 184.24	
<b>Thieno[3,2-b]thiophene-2,5-dicarbaldehyde</b>		<b>CAT# IN1109</b>
	CAS# [37882-75-0] Formula C <sub>8</sub> H <sub>4</sub> O <sub>2</sub> S <sub>2</sub> FW 196.25	
<b>4H-Cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# OC1017</b>
	CAS# [389-58-2] Formula C <sub>8</sub> H <sub>6</sub> S <sub>2</sub> FW 178.27	
<b>4-Hydrobenzo[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# OC1015</b>

	CAS# [25796-77-4] Formula C <sub>9</sub> H <sub>4</sub> OS <sub>2</sub> FW 192.26	
<b>4,4-Dihexyl-4H-cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# IN1250</b>
	CAS# [365547-21-3] Formula C <sub>25</sub> H <sub>36</sub> S <sub>2</sub> FW 366.59	
<b>2,6-Dibromo-3,4-dithia-7H-cyclopenta[a]pentalene</b>		<b>CAT# IN1011</b>
	CAS# [258527-25-2] Formula C <sub>9</sub> H <sub>4</sub> Br <sub>2</sub> S <sub>2</sub> FW 336.07	
<b>2,6-Dibromo-4,4-bis(2-ethylhexyl)-4H-cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# IN1010</b>
	CAS# [365547-21-3] Formula C <sub>25</sub> H <sub>36</sub> Br <sub>2</sub> S <sub>2</sub> FW 560.49	
<b>2,6-Dibromo-4,4-dihexyl-4H-cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# IN1252</b>
	CAS# [365547-21-3] Formula C <sub>21</sub> H <sub>28</sub> Br <sub>2</sub> S <sub>2</sub> FW 504.39	
<b>2,6-Bis(trimethyltin)-4,4-bis(2-dodecylbenzo)-4H-cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# IN1240</b>
	CAS# [1201921-81-4] Formula C <sub>39</sub> H <sub>70</sub> S <sub>2</sub> Sn <sub>2</sub> FW 840.52	
<b>2,6-Bis(trimethyltin)-4,4-bis(2-ethylhexyl)-4H-cyclopenta[2,1-b:3,4-b<sup>0</sup>]dithiophene</b>		<b>CAT# IN1242</b>
	CAS# [920504-00-3] Formula C <sub>31</sub> H <sub>54</sub> S <sub>2</sub> Sn <sub>2</sub> FW 728.31	
<b>N-octyl-dithieno[3,2-b:2,3-d]pyrrole</b>		<b>CAT# IN1040</b>
	CAS# [141029-75-6] Formula C <sub>16</sub> H <sub>21</sub> NS <sub>2</sub> FW 291.47	
<b>2,6-Dibromo-N-octyl-dithieno[3,2-b:2,3-d]pyrrole</b>		

<b>CAT# IN1041</b>	
	CAS# Formula FW
	$C_{16}H_{18}Br_2NS_2$ 449.27
<b>4,4'-Bis(octyl)-dithieno[3,2-b:2',3'-d]silole</b>	
<b>CAT# IN1046</b>	
	CAS# Formula FW
	[1160106-12-6] $C_{24}H_{36}S_2Si$ 418.77
<b>4,4'-Bis(2-ethyl-hexyl)-5,5'-dibromo-dithieno[3,2-b:2',3'-d]silole</b>	
<b>CAT# IN1254</b>	
	CAS# Formula FW
	[1089687-05-7] $C_{24}H_{36}Br_2S_2Si$ 576.57
<b>4,4'-Bis(2-ethyl-hexyl)-5,5'-bis(trimethyltin)-dithieno[3,2-b:2',3'-d]silole</b>	
<b>CAT# IN1255</b>	
	CAS# Formula FW
	[1089687-06-8] $C_{30}H_{54}S_2SiSn_2$ 744.39
<b>Dithieno[3,2-b:2',3'-d]thiophene</b>	
<b>CAT# OC1018</b>	
	CAS# Formula FW
	[3593-75-7] $C_8H_4S_3$ 196.31
<b>2,6-Dibromo-dithieno[3,2-b:2',3'-d]thiophene</b>	
<b>CAT# IN1068</b>	
	CAS# Formula FW
	[67061-69-2] $C_8H_2Br_2S_3$ 354.10
<b>Dithieno[3,2-b:2',3'-d]thiophene-2,6-dicarbaldehyde</b>	
<b>CAT# IN1117</b>	
	CAS# Formula FW
	[67061-73-8] $C_{10}H_4O_2S_3$ 252.33
<b>2,6-Dithiophen-2-yl-dithieno[3,2-b:2',3'-d]thiophene</b>	
<b>CAT# IN1115</b>	
	CAS# Formula FW
	[910788-24-8] $C_{16}H_6S_5$ 360.56
<b>2,6-Diphenyldithieno[3,2-b:2',3'-d]thiophene</b>	

<b>CAT# IN1116</b>	
	CAS# Formula FW
	[881838-94-4] $C_{20}H_{12}S_3$ 348.50
<b>Dibenzodithieno[3,2-b;4,5-b']dithiophene</b>	
<b>CAT# IN1119</b>	
	CAS# Formula FW
	[241-13-4] $C_{16}H_8S_3$ 296.43
<b>Dithieno[2,3-d:2',3'-d']thieno[3,2-b:4,5-b']dithiophene</b>	
<b>CAT# IN1120</b>	
	CAS# Formula FW
	[124796-79-8] $C_{12}H_6S_5$ 308.49
<b>2,5-Di(2-thienyl)thiophene</b>	
<b>CAT# IN1204</b>	
	CAS# Formula FW
	[1081-34-1] $C_{12}H_6S_3$ 248.38
<b>2,5-Bis(2-thienyl)-3,4-diaminothiophene</b>	
<b>CAT# IN1205</b>	
	CAS# Formula FW
	[185691-91-2] $C_{12}H_{10}N_2S_3$ 278.42
<b>2,5-Bis[(5-trimethyltin)-2-thienyl]thiophene</b>	
<b>CAT# IN1206</b>	
	CAS# Formula FW
	$C_{18}H_{24}S_3Sn_2$ 574.00
<b>Triazole Series</b>	
<b>2-Octyl-1,2,3-benzotriazole</b>	
<b>CAT# IN1027</b>	
	CAS# Formula FW
	[112642-69-0] $C_{14}H_{21}N_3$ 231.34
<b>2-(6-Bromohexyl)benzotriazole</b>	
<b>CAT# IN1032</b>	
	CAS# Formula FW
	[890704-00-4] $C_{12}H_{16}BrN_3$ 282.18
<b>2-(6-Bromohexyl)-4,7-dibromobenzotriazole</b>	
<b>CAT# IN1033</b>	

	CAS# [890704-02-6] Formula $C_{12}H_{14}Br_3N_3$ FW 439.97
<b>4,7-Dibromo-2-octyl-1,2,3-benzotriazole</b>	
<b>CAT# IN1026</b>	
	CAS# [960509-83-5] Formula $C_{14}H_{19}Br_2N_3$ FW 389.13
<b>2-Octyl-4,7-di(5-bromo-thiophen-2-yl)-2H-benzo[d][1,2,3]triazole</b>	
<b>CAT# IN1047</b>	
	CAS# [1254062-39-9] Formula $C_{22}H_{23}Br_2N_3S_2$ FW 553.38
<b>3,5-Bis(3-bromophenyl)-4-phenyl-4H-1,2,4-triazole</b>	
<b>CAT# IN1066</b>	
	CAS# [1198843-27-4] Formula $C_{20}H_{13}Br_2N_3$ FW 455.15
<b>3,5-Bis(4-bromophenyl)-4-phenyl-4H-1,2,4-triazole</b>	
<b>CAT# IN1067</b>	
	CAS# [208124-25-8] Formula $C_{20}H_{13}Br_2N_3$ FW 455.15
<b>1,3-Bis(5-bromothiophen-2-yl)-5R-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
<b>CAT# IN1067</b>	
<b>Examples of Customized Products</b>	
<b>1,3-Dibromo-5R-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
	<b>Custom synthesis Please inquire</b>
<b>2,7-Dibromo-9R-carbazole</b>	
	<b>Custom synthesis Please inquire</b>
<b>3,6-Bis(5-bromothiophen-2-yl)-2,5-di[R][3,4-c]pyrrole-1,4-dione</b>	
	<b>Custom synthesis Please inquire</b>
<b>2,6-Dibromo-4,8-bis[R]benzo[1,2-b:4,5-b']dithiophene</b>	

	<b>Custom synthesis Please inquire</b>
<b>2,6-Bis(trimethyltin)-4,8-bis[R]benzo[1,2-b:4,5-b']dithiophene</b>	
	<b>Custom synthesis Please inquire</b>
<b>2,6-Bis(2-bromobenzo[b]thiophene)-4,8-bis[R]benzo[1,2-b:4,5-b']dithiophene</b>	
	<b>Custom synthesis Please inquire</b>
<b>5,8-Bis(5-bromothiophen-2-yl)-2,3-di[R]quinoxaline</b>	
	<b>Custom synthesis Please inquire</b>
<b>1,3-Bis(5-bromothiophen-2-yl)-5R-4H-thieno[3,4-c]pyrrole-4,6(5H)-dione</b>	
	<b>Custom synthesis Please inquire</b>

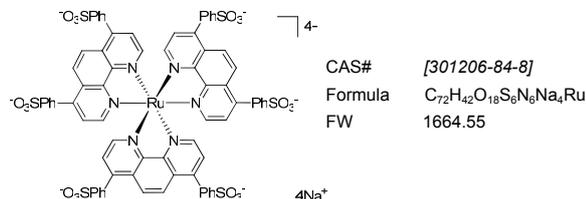
# Life Sciences

## Protein Staining Agents

**Tris(bathophenanthroline disulfonate)ruthenium(II) tetrasodium salt**

**RuBPS**

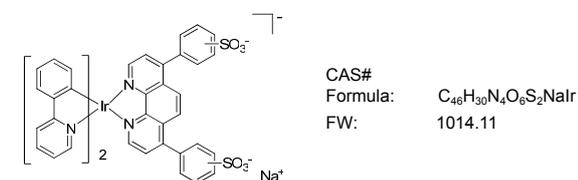
**CAT# RU092092092Na**



**Bis(2-phenylpyridine-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(ppy)<sub>2</sub>BPS**

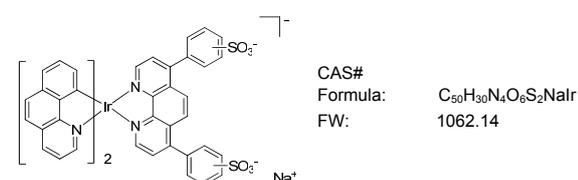
**CAT# IR601601092Na**



**Bis(benzo[h]quinoline-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(bzq)<sub>2</sub>BPS**

**CAT# IR621621092Na**



**Bis(2-phenylbenzothiazole-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(bt)<sub>2</sub>BPS**

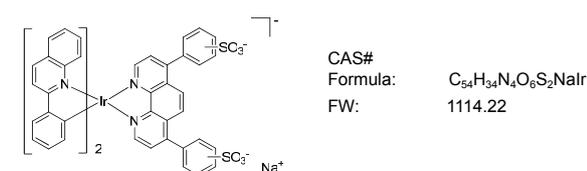
**CAT# IR625625092Na**



**Bis(2-phenylquinoline-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(2-phq)<sub>2</sub>BPS**

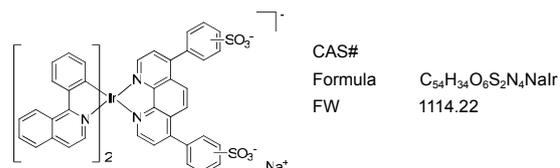
**CAT# IR618618092Na**



**Bis(1-phenylisoquinoline-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(piq)<sub>2</sub>BPS**

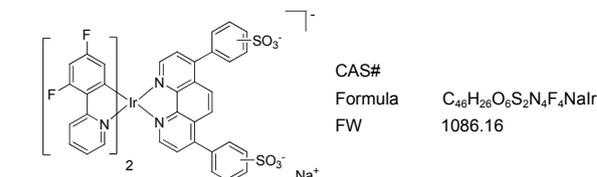
**CAT# IR617617092Na**



**Bis(2,4-difluorophenylpyridine-C<sup>2</sup>,N') (bathophenanthroline disulfonate) iridium(III)**

**Ir(f-ppy)<sub>2</sub>BPS**

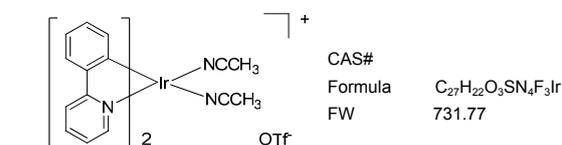
**CAT# IR604604092Na**



**Bis(2-phenylpyridine-C<sup>2</sup>,N')-bis(acetonitrile) iridium(III) trifluoromethanesulfonate**

**Ir(ppy)<sub>2</sub>MECN**

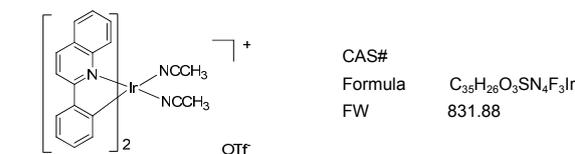
**CAT# IR601601MECN**



**Bis(2-phenylquinoline-C<sup>2</sup>,N')-bis(acetonitrile) iridium(III) trifluoromethanesulfonate**

**Ir(2-phq)<sub>2</sub>MECN**

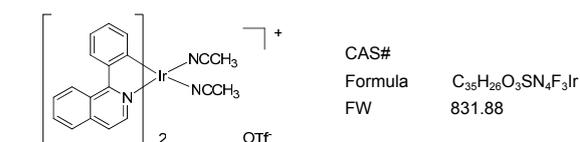
**CAT# IR618618MECN**



**Bis(1-phenylisoquinoline-C<sup>2</sup>,N')-bis(acetonitrile) iridium(III) trifluoromethanesulfonate**

**Ir(piq)<sub>2</sub>MECN**

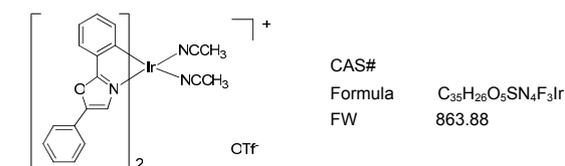
**CAT# IR617617MECN**



**Bis(2,5-diphenyloxazole-C<sup>2</sup>,N')-bis(acetonitrile) iridium(III) trifluoromethanesulfonate**

**Ir(dpo)<sub>2</sub>MECN**

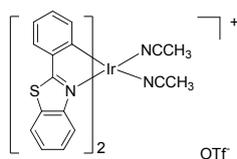
**CAT# IR624624MECN**



**Bis(2-phenylbenzothiazole-C<sup>2</sup>,N')-bis(acetonitrile) iridium(III) trifluoromethanesulfonate**

**Ir(bt)<sub>2</sub>MECN**

**CAT# IR625625MECN**

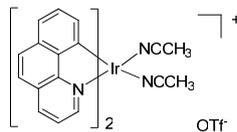


CAS#  
Formula  $C_{31}H_{22}O_3S_3N_4F_3Ir$   
FW 843.94

OTf

**Bis(2-benzo[h]quinoline- $C^2,N'$ )-bis(acetonitrile)iridium(III) trifluoromethanesulfonate**

**Ir(bzq)<sub>2</sub>MECN** CAT# IR621621MECN

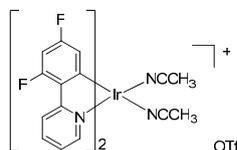


CAS#  
Formula  $C_{27}H_{22}O_3SN_4F_3Ir$   
FW 779.81

OTf

**Bis(2,4-difluorophenylpyridine- $C^2,N'$ )-bis(acetonitrile)iridium(III) trifluoromethanesulfonate**

**Ir(f-ppy)<sub>2</sub>MECN** CAT# IR604604MECN

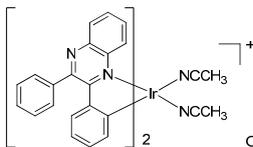


CAS#  
Formula:  $C_{27}H_{18}N_4O_3SF_7Ir$   
FW: 803.73

OTf

**Bis(2,3-diphenylquinoxaline- $C^2,N'$ )-bis(acetonitrile)iridium(III) trifluoromethanesulfonate**

**Ir(dpq)<sub>2</sub>MECN** CAT# IR628628MECN

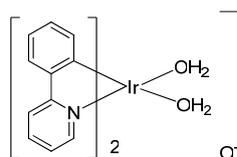


CAS#  
Formula:  $C_{45}H_{32}N_6O_3SF_3Ir$   
FW: 986.07

OTf

**Bis(2-phenylpyridine- $C^2,N'$ )-bis(aquo)iridium(III) trifluoromethanesulfonate**

CAT# IR601601H2O

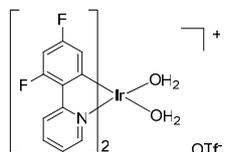


CAS#  
Formula:  $C_{23}H_{20}N_2O_5SF_3Ir$   
FW: 685.65

OTf

**Bis(2,4-difluorophenylpyridine- $C^2,N'$ )-bis(aquo)iridium(III) trifluoromethanesulfonate**

CAT# IR604604H2O

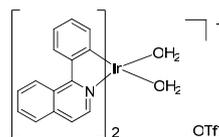


CAS#  
Formula:  $C_{23}H_{16}N_2O_5SF_7Ir$   
FW: 757.65

OTf

**Bis(1-phenylisoquinoline- $C^2,N'$ )-bis(aquo)iridium(III) trifluoromethanesulfonate**

CAT# IR617617H2O



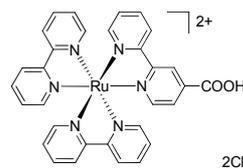
CAS#  
Formula:  $C_{31}H_{24}N_2O_5SF_3Ir$   
FW: 785.81

OTf

## Labeling Reagents

### Ru Complexes

**Bis(2,2'-bipyridyl)(4-carboxyl-2,2'-bipyridyl)ruthenium(II) dichloride**  
CAT# RU401001001Cl

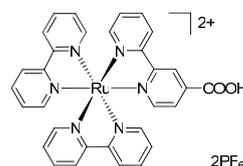


CAS#  
Formula  $C_{31}H_{24}O_2N_6Cl_2Ru$   
FW 684.55

2Cl<sup>-</sup>

**Bis(2,2'-bipyridyl)(4-carboxyl-2,2'-bipyridyl)ruthenium(II) bishexafluorophosphate**

CAT# RU401001001PF6

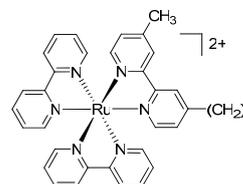


CAS#  
Formula  $C_{31}H_{24}O_2F_{12}N_6P_2Ru$   
FW 903.56

2PF<sub>6</sub><sup>-</sup>

**Bis(2,2'-bipyridyl)(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)ruthenium(II) bishexafluorophosphate**

CAT# RU402001001PF6

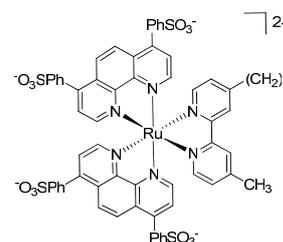


CAS#  
Formula  $C_{35}H_{32}O_2F_{12}N_6P_2Ru$   
FW 959.67

2PF<sub>6</sub><sup>-</sup>

**Bis(bathophenanthroline disulfonate)(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)ruthenium(II) disodium salt**

CAT# RU402092092Na

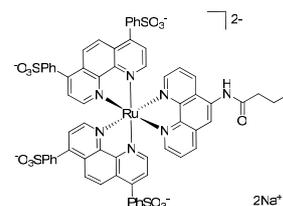


CAS#  
Formula  $C_{63}H_{44}O_{14}S_4N_6Na_2Ru$   
FW 1384.36

2Na<sup>+</sup>

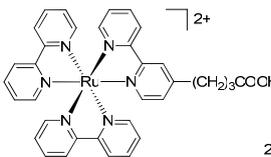
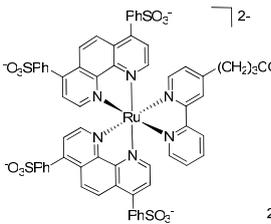
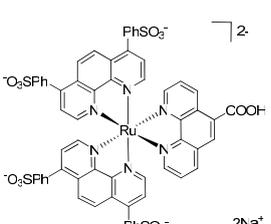
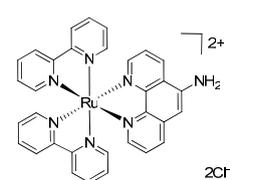
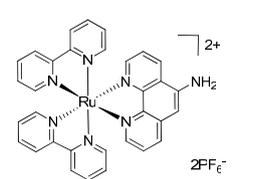
**Bis(bathophenanthroline disulfonate)[5-(1,10-phenanthroline-5-yl amino)-5-oxopentanoic acid]ruthenium(II) disodium salt**

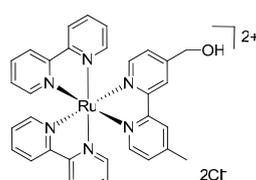
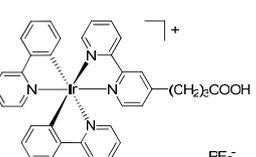
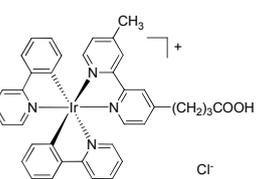
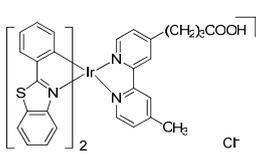
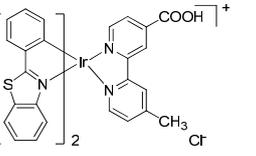
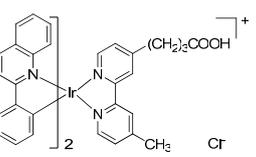
CAT# RU422092092Na

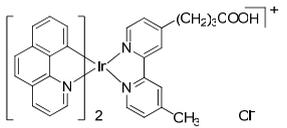
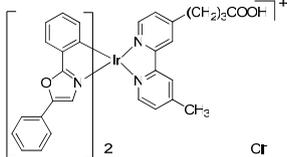
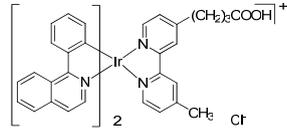
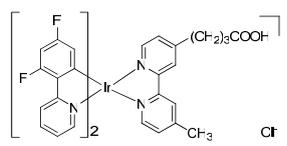
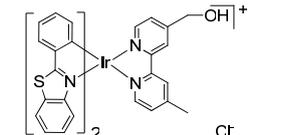
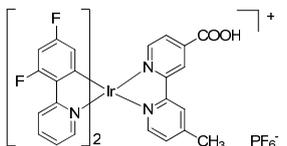


CAS#  
Formula  $C_{65}H_{43}O_{15}S_4N_7Na_2Ru$   
FW 1437.38

2Na<sup>+</sup>

<b>Bis(2,2'-bipyridyl)(4-carboxypropyl-2,2'-bipyridyl)ruthenium(II) dichloride</b> CAT# RU403001001Cl	
	CAS# Formula $C_{34}H_{30}O_2N_6Cl_2Ru$ FW 726.62
<b>Bis(bathophenanthroinedisulfonate)(4-carboxypropyl-2,2'-bipyridyl)ruthenium(II) disodium salt</b> CAT# RU403092092Na	
	CAS# Formula $C_{82}H_{42}O_{14}S_4N_6Na_2Ru$ FW 1370.31
<b>Bis(bathophenanthroinedisulfonate)(4-carboxy-1,10-phenanthroline)ruthenium(II) disodium salt</b> CAT# RU408092092Na	
	CAS# Formula $C_{61}H_{36}O_{14}S_4N_6Na_2Ru$ FW 1352.08
<b>Bis(2,2'-bipyridyl)(5-amino-1,10-phenanthroline)ruthenium(II) dichloride</b> CAT# RU082001001Cl	
	CAS# Formula $C_{32}H_{25}N_7Cl_2Ru$ FW 679.1
<b>Bis(2,2'-bipyridyl)(5-amino-1,10-phenanthroline)ruthenium(II) bishexafluorophosphate</b> CAT# RU082001001PF6	
	CAS# Formula $C_{32}H_{25}N_7P_2F_{12}Ru$ FW 899.0
<b>Bis(2,2'-bipyridyl)(4'-methyl-2,2'-bipyridin-4-yl)methanol ruthenium(II) dichloride</b> CAT# RU520001001Cl	

	CAS# Formula $C_{32}H_{28}N_6ORuCl_2$ FW 684.1
<b>Ir Complexes</b>	
<b>Bis(2-phenylpyridine-C<sup>2</sup>,N')(4-carboxypropyl-2,2'-bipyridyl)iridium(III) hexafluorophosphate</b> CAT# IR403601601PF6	
	CAS# Formula $C_{36}H_{30}O_2F_6N_4PIr$ FW 887.85
<b>Bis(2-phenylpyridine-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402601601Cl	
	CAS# Formula $C_{37}H_{32}O_2N_4ClIr$ FW 792.35 $\lambda_{em}$ 583 nm (acetonitrile)
<b>Bis(2-phenylbenzothiazole-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402625625Cl	
	CAS# Formula $C_{41}H_{32}O_2N_4S_2ClIr$ FW 904.52
<b>Bis(2-phenylbenzothiazole-C<sup>2</sup>,N')(4-methyl-4'-carboxy-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR406625625Cl	
	CAS# Formula $C_{38}H_{26}O_2N_4S_2ClIr$ FW 862.44 $\lambda_{em}$ 529 nm (acetonitrile) 565 nm (acetonitrile)
<b>Bis(2-phenylquinoline-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402618618Cl	
	CAS# Formula $C_{45}H_{36}O_2N_4ClIr$ FW 892.48
<b>Bis(2-benzo[h]quinoline-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402621621Cl	

	CAS# Formula C <sub>41</sub> H <sub>32</sub> N <sub>4</sub> O <sub>2</sub> ClIr FW 840.39
<b>Bis(2,5-diphenyloxazole-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402624624Cl	
	CAS# Formula C <sub>45</sub> H <sub>36</sub> N <sub>4</sub> O <sub>2</sub> ClIr FW 924.46
<b>Bis(1-phenylisoquinoline)(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402617617Cl	
	CAS# Formula C <sub>45</sub> H <sub>36</sub> N <sub>4</sub> O <sub>2</sub> ClIr FW 892.46 λ <sub>em</sub> 593 nm (methanol)
<b>Bis(2,4-difluorophenylpyridine-C<sup>2</sup>,N')(4-methyl-4'-carboxypropyl-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR402604604Cl	
	CAS# Formula C <sub>37</sub> H <sub>28</sub> N <sub>4</sub> O <sub>2</sub> F <sub>4</sub> ClIr FW 864.31 λ <sub>em</sub> 525 nm (acetonitrile)
<b>Bis(2-phenylbenzothiazole-C<sup>2</sup>,N')(4-methyl-2,2'-bipyridin-4-yl)methanol)iridium(III) chloride</b> CAT# IR520625625Cl	
	CAS# Formula C <sub>38</sub> H <sub>24</sub> N <sub>4</sub> S <sub>2</sub> ClIr FW 828.1
<b>Bis(2,4-difluorophenylpyridine-C<sup>2</sup>,N')(4-methyl-4'-carboxy-2,2'-bipyridyl)iridium(III) chloride</b> CAT# IR406604604PF6	
	CAS# Formula C <sub>34</sub> H <sub>22</sub> F <sub>10</sub> IrN <sub>4</sub> O <sub>2</sub> P FW 931.75

*The optimist sees this page as half full.*

*The pessimist sees this page as half empty.*

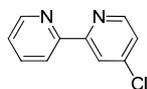
*The chemist sees this page as completely full; half have been synthesized while half are opportunities.*

# Ligands

## N<sup>^</sup>N Diimine Ligands

### 4-Chloro-2,2'-bipyridine

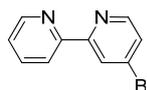
CAT# BIPY002



CAS# [14162-94-8]  
Formula C<sub>10</sub>H<sub>7</sub>ClN<sub>2</sub>  
FW 190.63

### 4-Bromo-2,2'-bipyridine

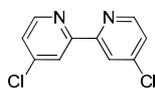
CAT# BIPY003



CAS# [14162-95-9]  
Formula C<sub>10</sub>H<sub>7</sub>BrN<sub>2</sub>  
FW 235.08

### 4,4'-Dichloro-2,2'-bipyridine

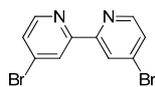
CAT# BIPY016



CAS# [1762-41-0]  
Formula C<sub>10</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>2</sub>  
FW 225.07

### 4,4'-Dibromo-2,2'-bipyridine

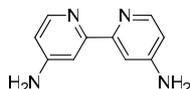
CAT# BIPY017



CAS# [18511-71-2]  
Formula C<sub>10</sub>H<sub>6</sub>Br<sub>2</sub>N<sub>2</sub>  
FW 313.98

### 4,4'-Diamino-2,2'-bipyridine

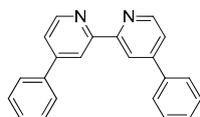
CAT# BIPY019



CAS# [18511-65-8]  
Formula C<sub>10</sub>H<sub>10</sub>N<sub>4</sub>  
FW 186.21

### 4,4'-Diphenyl-2,2'-bipyridine

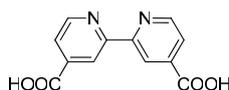
CAT# BIPY026



CAS# [6153-92-0]  
Formula C<sub>22</sub>H<sub>16</sub>N<sub>2</sub>  
FW 308.38

### 4,4'-Dicarboxy-2,2'-bipyridine

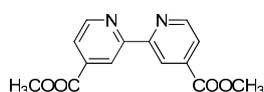
CAT# BIPY029



CAS# [6813-38-3]  
Formula C<sub>12</sub>H<sub>8</sub>N<sub>2</sub>O<sub>4</sub>  
FW 244.20

### 4,4'-Bis(methoxycarbonyl)-2,2'-bipyridine

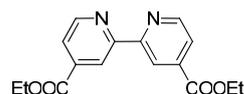
CAT# BIPY034



CAS# [71071-46-0]  
Formula C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>4</sub>  
FW 272.26

### 4,4'-Bis(ethoxycarbonyl)-2,2'-bipyridine

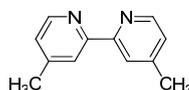
CAT# BIPY037



CAS# [1762-42-1]  
Formula C<sub>16</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>  
FW 300.31

### 4,4'-Dimethyl-2,2'-bipyridine

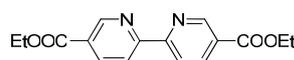
CAT# BIPY050



CAS# [1134-35-6]  
Formula C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>  
FW 184.24

### 5,5'-Bis(ethoxycarbonyl)-2,2'-bipyridine

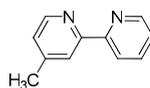
CAT# BIPY051



CAS# [1762-46-5]  
Formula C<sub>16</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>  
FW 300.31

### 4-Methyl-2,2'-bipyridine

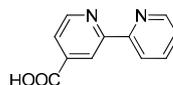
CAT# BIPY400



CAS# [56100-19-7]  
Formula C<sub>11</sub>H<sub>10</sub>N<sub>2</sub>  
FW 170.21

### 4-Carboxy-2,2'-bipyridine

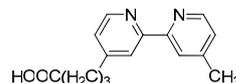
CAT# BIPY401



CAS# [1748-89-6]  
Formula C<sub>11</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>  
FW 200.19

### 4-Methyl-4'-(3-carboxypropyl)-2,2'-bipyridine

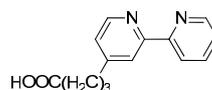
CAT# BIPY402



CAS# [114527-28-5]  
Formula C<sub>15</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>  
FW 256.30

### 4-(3-Carboxypropyl)-2,2'-bipyridine

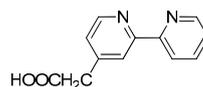
CAT# BIPY403



CAS# [114527-28-5]  
Formula C<sub>14</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>  
FW 242.27

### 2,2'-Bipyridine-4-acetic acid

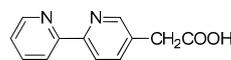
CAT# BIPY404



CAS# [114527-28-5]  
Formula C<sub>12</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>  
FW 214.22

### 2,2'-Bipyridine-5-acetic acid

CAT# BIPY405



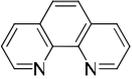
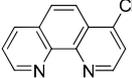
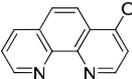
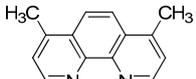
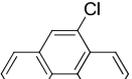
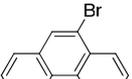
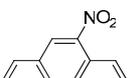
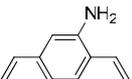
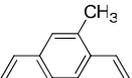
CAS# [917874-25-0]  
Formula C<sub>12</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>  
FW 214.22

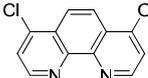
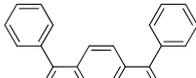
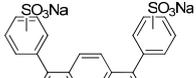
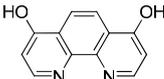
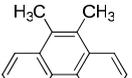
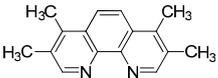
### 4-Methyl-4'-carboxy-2,2'-bipyridine

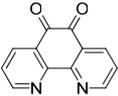
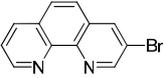
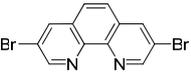
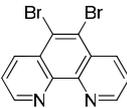
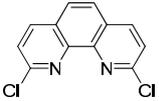
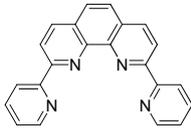
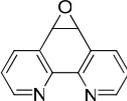
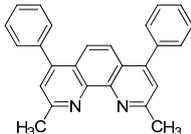
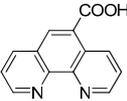
CAT# BIPY406

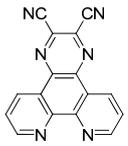
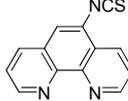
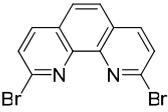
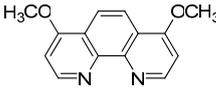
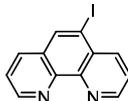
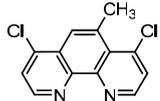
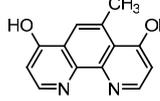
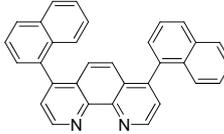
	CAS# Formula FW	[103946-54-9] $C_{12}H_{10}N_2O_4$ 214.22
<b>5,5'-Dicarboxy-2,2'-bipyridine</b>		
<b>CAT# BIPY429</b>		
	CAS# Formula FW	[1802-30-8] $C_{12}H_{16}N_2O_4$ 244.20
<b>2,2'-Bipyridine-4,4'-dibutanoic acid</b>		
<b>CAT# BIPY442</b>		
	CAS# Formula FW	[447450-80-8] $C_{18}H_{20}N_2O_4$ 328.36
<b>5-Carboxy-2,2'-bipyridine</b>		
<b>CAT# BIPY443</b>		
	CAS# Formula FW	[1970-80-5] $C_{11}H_8N_2O_2$ 200.19
<b>5-Methyl-2,2'-bipyridine</b>		
<b>CAT# BIPY444</b>		
	CAS# Formula FW	[56100-20-0] $C_{11}H_{10}N_2$ 170.21
<b>4,4'-Dioctyl-2,2'-bipyridine</b>		
<b>CAT# BIPY515</b>		
	CAS# Formula FW	[258262-75-8] $C_{26}H_{40}N_2$ 380.61
<b>4,4'-Dinonyl-2,2'-bipyridine</b>		
<b>CAT# BIPY516</b>		
	CAS# Formula FW	[142646-58-0] $C_{26}H_{44}N_2$ 408.66
<b>4-Bromomethyl-4'-methyl-2,2'-bipyridine</b>		
<b>CAT# BIPY517</b>		
	CAS# Formula FW	[81998-05-2] $C_{12}H_{11}BrN_2$ 263.13
<b>6-Bromo-2,2'-bipyridine</b>		
<b>CAT# BIPY518</b>		
	CAS# Formula FW	[10495-73-5] $C_{10}H_7BrN_2$ 235.08
<b>5-Chloro-2,2'-bipyridine</b>		
<b>CAT# BIPY519</b>		

	CAS# Formula FW	[162612-08-0] $C_{10}H_7ClN_2$ 190.63
<b>(4'-Methyl-2,2'-bipyridin-4-yl)methanol</b>		
<b>CAT# BIPY520</b>		
	CAS# Formula FW	[81998-04-1] $C_{12}H_{12}N_2O$ 200.1
<b>4-(4'-Methyl-2,2'-bipyridin-4-yl)butan-2-ol</b>		
<b>CAT# BIPY521</b>		
	CAS# Formula FW	[870078-13-0] $C_{16}H_{18}N_2O$ 242.1
<b>Tetraethyl 2,2'-bipyridine-4,4'-diylbis(methylene)diphosphonate</b>		
<b>CAT# BIPY525</b>		
	CAS# Formula FW	[176220-38-5] $C_{20}H_{30}N_2O_6P_2$ 456.41
<b>Tetraethyl 2,2'-bipyridine-4,4'-diyl diphosphonate</b>		
<b>CAT# BIPY526</b>		
	CAS# Formula FW	[174397-53-4] $C_{18}H_{26}N_2O_6P_2$ 428.36
<b>4,4'-Bis(bromomethyl)-2,2'-bipyridine</b>		
<b>CAT# BIPY527</b>		
	CAS# Formula FW	[134457-14-0] $C_{12}H_{10}Br_2N_2$ 342.03
<b>5,5'-Dibromo-2,2'-bipyridine</b>		
<b>CAT# BIPY528</b>		
	CAS# Formula FW	[15862-18-7] $C_{10}H_6Br_2N_2$ 313.98
<b>5,5'-(Dithiophen-2-yl)-2,2'-bipyridine</b>		
<b>CAT# BIPY529</b>		
	CAS# Formula FW	[182631-76-1] $C_{18}H_{12}N_2S_2$ 320.43
<b>3,10-Di(thiophen-2-yl)-6,7-dihydrodipyrrodo[1,2-a:2',1'-c]pyrazine-5,8-diiumbromide</b>		
<b>CAT# BIPY530</b>		
	CAS# Formula FW	[10495-73-5] $C_{20}H_{16}N_2S_2Br_2$ 508.29
<b>3,10-Di(thiophen-2-yl)-6,7-dihydrodipyrrodo[1,2-a:2',1'-c]pyrazine-5,8-diiumbromide</b>		
<b>CAT# BIPY530</b>		

<b>1,10-Phenanthroline</b>		<b>CAT# PHEN068</b>	
	CAS#	[66-71-7]	
	Formula	C <sub>12</sub> H <sub>8</sub> N <sub>2</sub>	
	FW	180.21	
<b>4-Chloro-1,10-phenanthroline</b>		<b>CAT# PHEN072</b>	
	CAS#	[1891-14-1]	
	Formula	C <sub>12</sub> H <sub>7</sub> ClN <sub>2</sub>	
	FW	214.65	
<b>4-Methyl-1,10-phenanthroline</b>		<b>CAT# PHEN073</b>	
	CAS#	[31301-28-7]	
	Formula	C <sub>13</sub> H <sub>10</sub> N <sub>2</sub>	
	FW	194.23	
<b>4,7-Dimethyl-1,10-phenanthroline</b>		<b>CAT# PHEN074</b>	
	CAS#	[3248-05-3]	
	Formula	C <sub>14</sub> H <sub>12</sub> N <sub>2</sub>	
	FW	208.26	
<b>5-Chloro-1,10-phenanthroline</b>		<b>CAT# PHEN079</b>	
	CAS#	[4199-89-7]	
	Formula	C <sub>12</sub> H <sub>7</sub> ClN <sub>2</sub>	
	FW	214.65	
<b>5-Bromo-1,10-phenanthroline</b>		<b>CAT# PHEN080</b>	
	CAS#	[40000-20-2]	
	Formula	C <sub>12</sub> H <sub>7</sub> BrN <sub>2</sub>	
	FW	259.10	
<b>5-Nitro-1,10-phenanthroline</b>		<b>CAT# PHEN081</b>	
	CAS#	[4199-88-6]	
	Formula	C <sub>12</sub> H <sub>7</sub> N <sub>3</sub> O <sub>2</sub>	
	FW	225.20	
<b>5-Amino-1,10-phenanthroline</b>		<b>CAT# PHEN082</b>	
	CAS#	[54258-41-2]	
	Formula	C <sub>12</sub> H <sub>8</sub> N <sub>3</sub>	
	FW	195.22	
<b>5-Methyl-1,10-phenanthroline</b>		<b>CAT# PHEN083</b>	
	CAS#	[3002-78-6]	
	Formula	C <sub>13</sub> H <sub>10</sub> N <sub>2</sub>	
	FW	194.23	

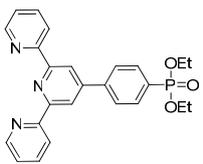
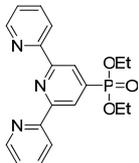
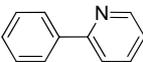
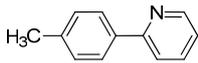
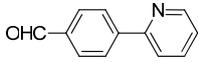
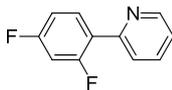
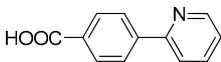
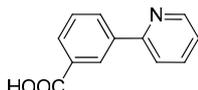
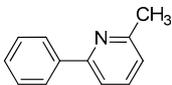
<b>4,7-Dichloro-1,10-phenanthroline</b>		<b>CAT# PHEN087</b>	
	CAS#	[5394-23-0]	
	Formula	C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> N <sub>2</sub>	
	FW	249.09	
<b>4,7-Diphenyl-1,10-phenanthroline</b>		<b>CAT# PHEN088</b>	
	CAS#	[1662-01-7]	
	Formula	C <sub>24</sub> H <sub>16</sub> N <sub>2</sub>	
	FW	332.40	
	λ <sub>ab</sub>	272 nm(THF)	
	λ <sub>em</sub>	379 nm(THF)	
<b>4,7-Bis(4-bromophenyl)-1,10-phenanthroline</b>		<b>CAT# PHEN089</b>	
	CAS#	[97802-08-9]	
	Formula	C <sub>24</sub> H <sub>14</sub> Br <sub>2</sub> N <sub>2</sub>	
	FW	490.19	
<b>4,7-Bis(biphenyl)-1,10-phenanthroline</b>		<b>CAT# PHEN091</b>	
	CAS#	[96710-07-5]	
	Formula	C <sub>36</sub> H <sub>24</sub> N <sub>2</sub>	
	FW	484.59	
<b>Bathophenanthroline disulphonic acid disodium</b>		<b>CAT# PHEN092</b>	
	CAS#	[53744-42-6] Or [52746-49-3]	
	Formula	C <sub>24</sub> H <sub>14</sub> N <sub>2</sub> Na <sub>2</sub> O <sub>6</sub> S <sub>2</sub>	
	FW	536.49	
<b>4,7-Dihydroxyl-1,10-phenanthroline</b>		<b>CAT# PHEN094</b>	
	CAS#	[3922-40-5]	
	Formula	C <sub>12</sub> H <sub>8</sub> N <sub>2</sub> O <sub>2</sub>	
	FW	212.20	
<b>5,6-Dimethyl-1,10-phenanthroline</b>		<b>CAT# PHEN099</b>	
	CAS#	[3002-81-1]	
	Formula	C <sub>14</sub> H <sub>12</sub> N <sub>2</sub>	
	FW	208.26	
<b>3,4,7,8-Tetramethyl-1,10-phenanthroline</b>		<b>CAT# PHEN100</b>	
	CAS#	[1660-93-1]	
	Formula	C <sub>16</sub> H <sub>16</sub> N <sub>2</sub>	
	FW	236.31	
<b>1,10-Phenanthroline-5,6-dione</b>		<b>CAT# PHEN110</b>	

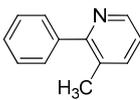
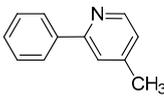
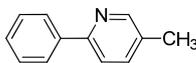
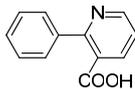
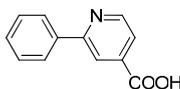
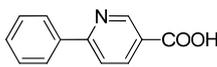
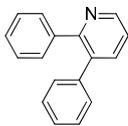
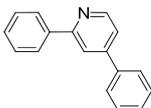
	CAS# [27318-90-7] Formula C <sub>12</sub> H <sub>8</sub> N <sub>2</sub> O <sub>2</sub> FW 210.19
<b>3-Bromo-1,10-phenanthroline</b>	<b>CAT# PHEN401</b>
	CAS# [66127-01-3] Formula C <sub>12</sub> H <sub>7</sub> BrN <sub>2</sub> FW 259.10
<b>3,8-Dibromo-1,10-phenanthroline</b>	<b>CAT# PHEN402</b>
	CAS# [100125-12-0] Formula C <sub>12</sub> H <sub>6</sub> Br <sub>2</sub> N <sub>2</sub> FW 338.00
<b>5,6-Dibromo-1,10-phenanthroline</b>	<b>CAT# PHEN403</b>
	CAS# [56290-06-3] Formula C <sub>12</sub> H <sub>6</sub> Br <sub>2</sub> N <sub>2</sub> FW 338.00
<b>2,9-Dichloro-1,10-phenanthroline</b>	<b>CAT# PHEN404</b>
	CAS# [29176-55-4] Formula C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> N <sub>2</sub> FW 249.09
<b>2,9-Di-(2'-pyridyl)-1,10-phenanthroline</b>	<b>CAT# PHEN405</b>
	CAS# [773883-32-2] Formula C <sub>22</sub> H <sub>14</sub> N <sub>4</sub> FW 334.37
<b>5,6-Epoxy-5,6-dihydro-1,10-phenanthroline</b>	<b>CAT# PHEN406</b>
	CAS# [65115-91-5] Formula C <sub>12</sub> H <sub>8</sub> N <sub>2</sub> O FW 196.20
<b>2,9-Dimethyl-4,7-diphenyl-1,10-phenanthroline</b>	<b>CAT# PHEN407</b>
<b>BCP</b>	
	CAS# [4733-39-5] Formula C <sub>26</sub> H <sub>20</sub> N <sub>2</sub> FW 360.45 λ <sub>ab</sub> 277 nm (THF) λ <sub>em</sub> 386 nm (THF)
<b>5-Carboxy-1,10-phenanthroline</b>	<b>CAT# PHEN408</b>
	CAS# [630067-06-0] Formula C <sub>13</sub> H <sub>8</sub> N <sub>2</sub> O <sub>2</sub> FW 224.21

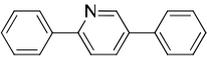
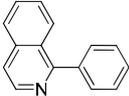
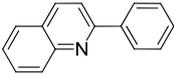
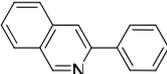
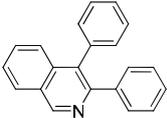
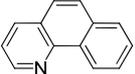
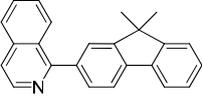
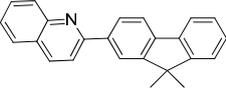
<b>Pyrazino[2,3-f]-1,10-phenanthroline-2,3-dicarbonitrile</b>	<b>CAT# PHEN409</b>
	CAS# [215611-93-1] Formula C <sub>16</sub> H <sub>6</sub> N <sub>6</sub> FW 282.26
<b>5-Isothiocyanato-1,10-phenanthroline</b>	<b>CAT# PHEN410</b>
	CAS# [75618-99-4] Formula C <sub>13</sub> H <sub>7</sub> N <sub>3</sub> S FW 237.28
<b>2,9-Dibromo-1,10-phenanthroline</b>	<b>CAT# PHEN412</b>
	CAS# [39069-02-8] Formula C <sub>12</sub> H <sub>6</sub> Br <sub>2</sub> N <sub>2</sub> FW 338.00
<b>4,7-Dimethoxy-1,10-phenanthroline</b>	<b>CAT# PHEN413</b>
	CAS# [92149-07-0] Formula C <sub>14</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> FW 240.26
<b>5-Iodo-1,10-phenanthroline</b>	<b>CAT# PHEN414</b>
	CAS# [630067-12-8] Formula C <sub>12</sub> H <sub>7</sub> IN <sub>2</sub> FW 306.0
<b>4,7-Dichloro-5-methyl-1,10-phenanthroline</b>	<b>CAT# PHEN415</b>
	CAS# [503864-02-6] Formula C <sub>13</sub> H <sub>8</sub> Cl <sub>2</sub> N <sub>2</sub> FW 262.0
<b>4,7-Dihydroxyl- 5-methyl-1,10-phenanthroline</b>	<b>CAT# PHEN416</b>
	CAS# [1215007-80-9] Formula C <sub>13</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub> FW 226.1
<b>4,7-Di(naphthalen-1-yl)-1,10-phenanthroline</b>	<b>CAT# PHEN417</b>
	CAS# [1215007-80-9] Formula C <sub>32</sub> H <sub>20</sub> N <sub>2</sub> FW 432.2
<b>4,7-Dim-tolyl-1,10-phenanthroline</b>	<b>CAT# PHEN418</b>

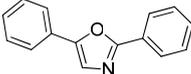
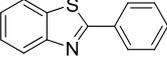
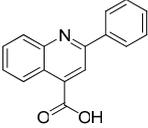
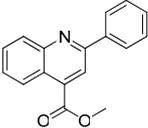
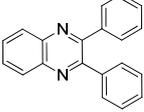
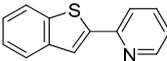
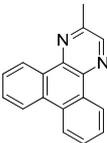
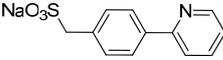
	CAS# Formula FW	 $C_{26}H_{20}N_2$ 360.45
<b>4,7-Dio-tolyl-1,10-phenanthroline</b>		
<b>CAT# PHEN419</b>		
	CAS# Formula FW	 $C_{26}H_{20}N_2$ 360.45
<b>4,7-Bis(4-methoxyphenyl)-1,10-phenanthroline</b>		
<b>CAT# PHEN420</b>		
	CAS# Formula FW	 [95950-20-2] $C_{26}H_{20}N_2O_2$ 392.25
<b>4,7-Di(9H-carbazol-9-yl)-1,10-phenanthroline</b>		
<b>CAT# PHEN421</b>		
	CAS# Formula FW	 [676542-82-8] $C_{36}H_{22}N_4$ 510.25
<b>5-(1,10-Phenanthroline-5-ylamino)-5-oxopentanoic acid</b>		
<b>CAT# PHEN422</b>		
	CAS# Formula FW	 [163628-20-4] $C_{17}H_{15}N_3O_3$ 309.32
<b>3,8-(Dithiophen-2-yl)-1,10-phenanthroline</b>		
<b>CAT# PHEN423</b>		
	CAS# Formula FW	 [753491-32-6] $C_{20}H_{12}N_2S_2$ 344.45
<b>2,9-di(thiophen-2-yl)-5,6-dihydropyrazino[1,2,3,4-lmn][1,10]phenanthroline-4,7-diiumbromide</b>		
<b>CAT# PHEN424</b>		
	CAS# Formula FW	 $C_{22}H_{16}Br_2N_2S_2$ 532.31
<b>4-((1,10-phenanthroline-3-yl)ethynyl)-N,N-dimethylaniline</b>		
<b>CAT# PHEN425</b>		
	CAS# Formula FW	 $C_{22}H_{17}N_3$ 323.39
<b>2-(4-(dimethylamino)phenyl)ethynyl-5,6-dihydropyrazino[1,2,3,4-lmn][1,10]phenanthroline-4,7-diiumbromide</b>		

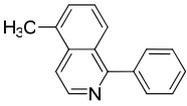
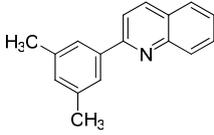
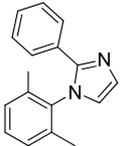
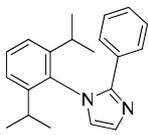
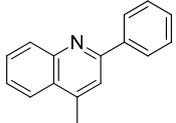
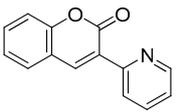
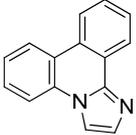
	CAS# Formula FW	 $C_{24}H_{21}N_3Br_2$ 511.25
<b>4,4'-(1,10-phenanthroline-3,8-diyl)bis(ethyne-2,1-diyl)bis(N,N-dimethylaniline)</b>		
<b>CAT# PHEN426</b>		
	CAS# Formula FW	 [250635-23-5] $C_{32}H_{26}N_4$ 466.58
<b>3,8-Di(9H-carbazol-9-yl)-1,10-phenanthroline</b>		
<b>CAT# PHEN427</b>		
	CAS# Formula FW	 [796847-41-1] $C_{38}H_{22}N_4$ 510.59
<b>3,8-Bis(2,3-dihydrothieno[3,4-b][1,4]dioxin-5-yl)-1,10-phenanthroline</b>		
<b>CAT# PHEN428</b>		
	CAS# Formula FW	 [1001330-07-9] $C_{24}H_{16}N_2O_4S_2$ 460.52
<b>3,8-Bis(5-(2,3-dihydrothieno[3,4-b][1,4]dioxin-5-yl)thiophen-2-yl)-1,10-phenanthroline</b>		
<b>CAT# PHEN429</b>		
	CAS# Formula FW	 $C_{32}H_{20}N_2O_4S_4$ 624.77
<b>4-Bromo-2,2:6,2-terpyridine</b>		
<b>CAT# PHEN430</b>		
	CAS# Formula FW	 [149817-62-9] $C_{15}H_{10}BrN_3$ 312.17
<b>4-(4-Bromophenyl)-2,2:6,2-terpyridine</b>		
<b>CAT# TEPY003</b>		
	CAS# Formula FW	 [89972-76-9] $C_{21}H_{14}BrN_3$ 388.26
<b>Diethyl-4-(4-phenylphosphone)-2,2:6,2-terpyridine</b>		
<b>CAT# TEPY004</b>		
	CAS# Formula FW	 $C_{21}H_{14}BrN_3$ 388.26
<b>Diethyl-4-(4-phenylphosphone)-2,2:6,2-terpyridine</b>		
<b>CAT# TEPY005</b>		

	CAS# Formula FW	[194800-58-3] C <sub>25</sub> H <sub>24</sub> N <sub>3</sub> O <sub>3</sub> P 445.45
<b>Diethyl 4-phosphonate-2,2,6,2-terpyridine</b>		
<b>CAT# TEPY006</b>		
	CAS# Formula FW	[161583-75-1] C <sub>19</sub> H <sub>20</sub> N <sub>3</sub> O <sub>3</sub> P 369.35
<b>C^N Cyclometalating Ligands</b>		
<b>2-Phenylpyridine</b>		
<b>CAT#CN601</b>		
	CAS# Formula FW	[1008-89-5] C <sub>11</sub> H <sub>9</sub> N 155.20
<b>2-(4-Tolyl)pyridine</b>		
<b>CAT# CN602</b>		
	CAS# Formula FW	[4467-06-5] C <sub>12</sub> H <sub>11</sub> N 169.22
<b>4-(2-Pyridyl)benzaldehyde</b>		
<b>CAT# CN603</b>		
	CAS# Formula FW	[127406-56-8] C <sub>12</sub> H <sub>9</sub> NO 183.21
<b>2-(2,4-Difluorophenyl)pyridine</b>		
<b>CAT# CN604</b>		
	CAS# Formula FW	[391604-55-0] C <sub>11</sub> H <sub>7</sub> NF <sub>2</sub> 191.18
<b>4-Pyridin-2-yl-benzoic acid</b>		
<b>CAT# CN605</b>		
	CAS# Formula FW	[4385-62-0] C <sub>12</sub> H <sub>9</sub> NO <sub>2</sub> 199.21
<b>3-Pyridin-2-yl-benzoic acid</b>		
<b>CAT# CN606</b>		
	CAS# Formula FW	[4467-07-6] C <sub>12</sub> H <sub>9</sub> NO <sub>2</sub> 199.21
<b>2-Methyl-6-phenylpyridine</b>		
<b>CAT# CN607</b>		
	CAS# Formula FW	[46181-30-0] C <sub>12</sub> H <sub>11</sub> N 169.22

<b>3-Methyl-2-phenylpyridine</b>		
<b>CAT# CN608</b>		
	CAS# Formula FW	[10273-90-2] C <sub>12</sub> H <sub>11</sub> N 169.22
<b>4-Methyl-2-phenylpyridine</b>		
<b>CAT# CN609</b>		
	CAS# Formula FW	[3475-21-6] C <sub>12</sub> H <sub>11</sub> N 169.22
<b>5-Methyl-2-phenylpyridine</b>		
<b>CAT# CN610</b>		
	CAS# Formula FW	[27012-22-2] C <sub>12</sub> H <sub>11</sub> N 169.22
<b>2-Phenylpyridine-3-carboxylic acid</b>		
<b>CAT# CN611</b>		
	CAS# Formula FW	[33421-39-5] C <sub>12</sub> H <sub>9</sub> NO <sub>2</sub> 199.21
<b>2-Phenylpyridine-4-carboxylic acid</b>		
<b>CAT# CN612</b>		
	CAS# Formula FW	[55240-51-2] C <sub>12</sub> H <sub>9</sub> NO <sub>2</sub> 199.21
<b>6-Phenylpyridine-3-carboxylic acid</b>		
<b>CAT# CN613</b>		
	CAS# Formula FW	[29051-44-3] C <sub>12</sub> H <sub>9</sub> NO <sub>2</sub> 199.21
<b>2,3-Diphenylpyridine</b>		
<b>CAT# CN614</b>		
	CAS# Formula FW	[33421-53-3] C <sub>17</sub> H <sub>13</sub> N 231.29
<b>2,4-Diphenylpyridine</b>		
<b>CAT# CN615</b>		
	CAS# Formula FW	[26274-35-1] C <sub>17</sub> H <sub>13</sub> N 231.29
<b>2,5-Diphenylpyridine</b>		
<b>CAT# CN616</b>		

	CAS# [15827-72-2] Formula C <sub>17</sub> H <sub>13</sub> N FW 231.29
<b>1-Phenylisoquinoline</b>	<b>CAT# CN617</b>
	CAS# [3297-72-1] Formula C <sub>15</sub> H <sub>11</sub> N FW 205.25
<b>2-Phenylquinoline</b>	<b>CAT# CN618</b>
	CAS# [612-96-4] Formula C <sub>15</sub> H <sub>11</sub> N FW 205.25
<b>3-Phenylisoquinoline</b>	<b>CAT# CN619</b>
	CAS# [37993-76-3] Formula C <sub>15</sub> H <sub>11</sub> N FW 205.25
<b>3,4-Diphenylisoquinoline</b>	<b>CAT# CN620</b>
	CAS# [52839-45-9] Formula C <sub>21</sub> H <sub>15</sub> N FW 281.35
<b>Benzo[h]quinoline</b>	<b>CAT# CN621</b>
	CAS# [230-27-3] Formula C <sub>13</sub> H <sub>9</sub> N FW 179.22
<b>1-(9,9-Dimethyl-9H-fluoren-2-yl)-isoquinoline</b>	<b>CAT# CN622</b>
	CAS# [435277-99-9] Formula C <sub>24</sub> H <sub>19</sub> N FW 321.41
<b>2-(9,9-Dimethyl-9H-fluoren-2-yl)-quinoline</b>	<b>CAT# CN623</b>
	CAS# [889750-37-2] Formula C <sub>24</sub> H <sub>19</sub> N FW 321.41
<b>2,5-Diphenyloxazole</b>	<b>CAT# CN624</b>

	CAS# [92-71-7] Formula C <sub>15</sub> H <sub>11</sub> NO FW 221.25
<b>2-Phenylbenzothiazole</b>	<b>CAT# CN625</b>
	CAS# [883-93-2] Formula C <sub>13</sub> H <sub>9</sub> NS FW 211.0
<b>2-Phenylquinoline acid</b>	<b>CAT# CN626</b>
	CAS# [132-60-5] Formula C <sub>16</sub> H <sub>11</sub> NO <sub>2</sub> FW 249.26
<b>Methyl-2-phenyl-4-quinolinecarboxylate</b>	<b>CAT# CN627</b>
	CAS# [4546-48-9] Formula C <sub>17</sub> H <sub>13</sub> NO <sub>2</sub> FW 263.29
<b>2,3-Diphenylquinoxaline</b>	<b>CAT# CN628</b>
	CAS# [1684-14-6] Formula C <sub>20</sub> H <sub>14</sub> N <sub>2</sub> FW 282.12
<b>2-(Benzo[b]thiophen-2-yl)pyridine</b>	<b>CAT# CN629</b>
	CAS# [38210-35-4] Formula C <sub>13</sub> H <sub>9</sub> NS FW 211.28
<b>2-Methyldibenzo[f,h]quinoxaline</b>	<b>CAT# CN630</b>
	CAS# [536753-86-3] Formula C <sub>17</sub> H <sub>12</sub> N <sub>2</sub> FW 244.29
<b>(4-(Pyridin-2-yl)phenyl)methane sodium sulfonate</b>	<b>CAT# CN631</b>
	CAS# [121-45-1] Formula C <sub>12</sub> H <sub>10</sub> NO <sub>3</sub> Na FW 271.26
<b>5-Methyl-1-phenylisoquinoline</b>	<b>CAT# CN632</b>

	CAS# [700380-16-1] Formula C <sub>16</sub> H <sub>13</sub> N FW 219.28
<b>CAT# CN633</b>	
	CAS# [1056451-44-5] Formula C <sub>17</sub> H <sub>15</sub> N FW 233.31
<b>CAT# CN634</b>	
	CAS# [914306-48-2] Formula C <sub>17</sub> H <sub>16</sub> N <sub>2</sub> FW 248.32
<b>CAT# CN635</b>	
	CAS# [914306-50-6] Formula C <sub>21</sub> H <sub>24</sub> N <sub>2</sub> FW 304.43
<b>CAT# CN636</b>	
	CAS# [4789-76-8] Formula C <sub>16</sub> H <sub>13</sub> N FW 219.28
<b>CAT# CN637</b>	
	CAS# [837-97-8] Formula C <sub>14</sub> H <sub>9</sub> NO <sub>2</sub> FW 223.23
<b>CAT# CN638</b>	
	CAS# [37694-95-4] Formula C <sub>15</sub> H <sub>10</sub> N <sub>2</sub> FW 218.25
<b>CAT# CN640</b>	

*The optimist sees this page as half full.*

*The pessimist sees this page as half empty.*

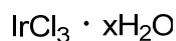
*The chemist sees this page as completely full; half have been synthesized while half are opportunities.*

## Other Chemicals

### Iridium(III) Chloride hydrate

IrCl<sub>3</sub>

CAT# IR101

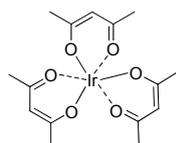


CAS# [14996-61-3]  
Formula IrCl<sub>3</sub>·xH<sub>2</sub>O  
FW 298.57 (as anhydrous)

### Tris(pentane-2,4-dionato-O,O')iridium

Ir(acac)<sub>3</sub>

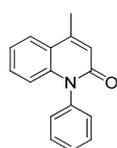
CAT# IR102



CAS# [15635-87-7]  
Formula C<sub>15</sub>H<sub>21</sub>IrO<sub>6</sub>  
FW 489.54

### 4-Methyl-1-phenyl-2(1H)-quinolone

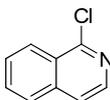
CAT# OC1001



CAS# [2540-30-9]  
Formula C<sub>16</sub>H<sub>13</sub>NO  
FW 235.28

### 1-Chloroisoquinoline

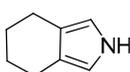
CAT# OC1002



CAS# [19493-44-8]  
Formula C<sub>9</sub>H<sub>6</sub>ClN  
FW 163.60

### 4,5,6,7-Tetrahydro-2H-isoindole

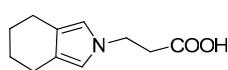
CAT# OC1003



CAS# [51649-35-5]  
Formula C<sub>8</sub>H<sub>11</sub>N  
FW 121.18

### 3-(4,5,6,7-Tetrahydro-2H-isoindol-2-yl)propanoic acid

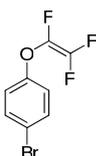
CAT# OC1004



CAS# [19493-44-8]  
Formula C<sub>11</sub>H<sub>15</sub>NO<sub>2</sub>  
FW 193.24

### 1-Bromo-4-(1,2,2-trifluorovinyl)benzene

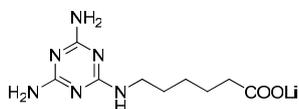
CAT# OC1006



CAS# [184910-53-0]  
Formula C<sub>8</sub>H<sub>4</sub>BrF<sub>3</sub>O  
FW 253.02

### lithium 6-(4,6-diamino-1,3,5-triazin-2-ylamino)hexanoate

CAT# OC1007

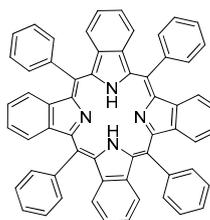


CAS# [19493-44-8]  
Formula C<sub>9</sub>H<sub>15</sub>LiN<sub>6</sub>O<sub>2</sub>  
FW 246.19

### Tetraphenyltetrabenzoporphyrin, 98%

TPBP

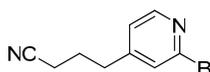
CAT# OC1008



CAS# [80528-89-8]  
Formula C<sub>60</sub>H<sub>38</sub>N<sub>4</sub>  
FW 814.99

### 4-(2-Bromopyridin-4-yl)butanenitrile

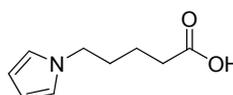
CAT# OC1009



CAS# [19493-44-8]  
Formula C<sub>9</sub>H<sub>6</sub>BrN<sub>2</sub>  
FW 225.09

### 5-(1H-pyrrol-1-yl)pentanoic acid

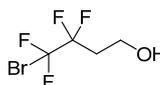
CAT# OC1010



CAS# [145511-35-9]  
Formula C<sub>9</sub>H<sub>13</sub>NO<sub>2</sub>  
FW 167.21

### 4-Bromo-3,3,4,4-tetrafluorobutan-1-ol

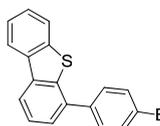
CAT# OC1019



CAS# [234443-21-1]  
Formula C<sub>4</sub>H<sub>5</sub>BrF<sub>4</sub>O  
FW 224.98

### 4-(4-Bromophenyl)dibenzo[b,d]thiophene

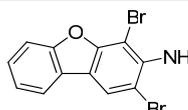
CAT# OC1025



CAS# [530402-77-8]  
Formula C<sub>18</sub>H<sub>11</sub>BrS  
FW 339.25

### 2,4-Dibromodibenzo[b,d]furan-3-amine

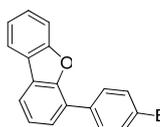
CAT# OC1028



CAS# [133953-35-2]  
Formula C<sub>12</sub>H<sub>7</sub>Br<sub>2</sub>NO  
FW 341.00

### 4-(4-Bromophenyl)dibenzo[b,d]furan

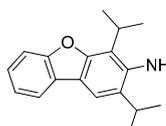
CAT# OC1030



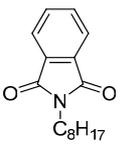
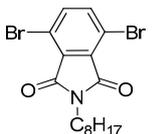
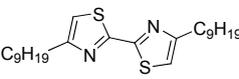
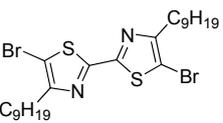
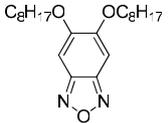
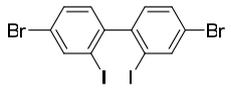
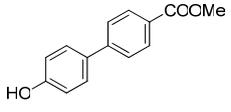
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Formula C<sub>18</sub>H<sub>11</sub>BrO  
FW 323.18

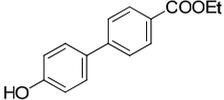
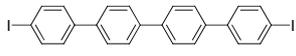
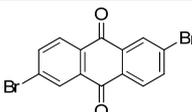
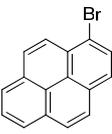
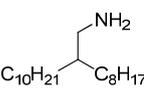
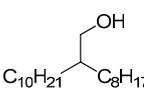
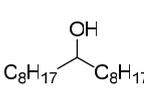
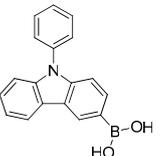
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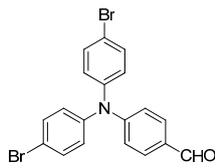
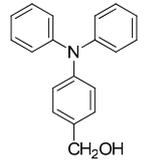
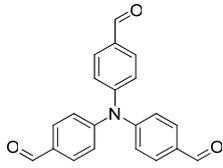
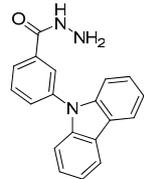
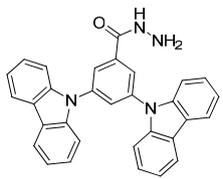
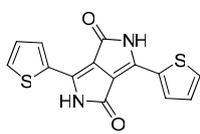
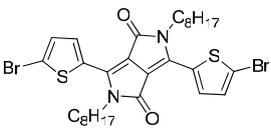
CAT# OC1035

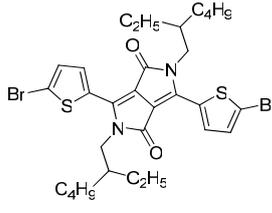
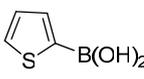
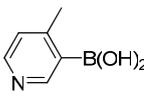
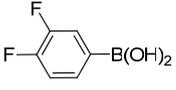
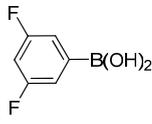
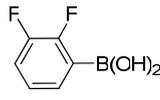
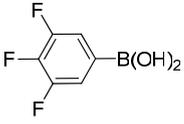
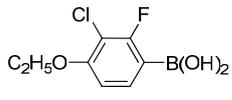


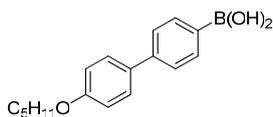
CAS# [1332881-95-4]  
Formula C<sub>18</sub>H<sub>21</sub>NO  
FW 267.37

<b>N-Octyl-phthalimide</b>		<b>CAT# IN1028</b>
	CAS# [59333-62-9] Formula C <sub>16</sub> H <sub>21</sub> NO <sub>2</sub> FW 259.34	
<b>N-Octyl-3,6-dibromophthalimide</b>		<b>CAT# IN1036</b>
	CAS# [59333-62-9] Formula C <sub>16</sub> H <sub>19</sub> Br <sub>2</sub> NO <sub>2</sub> FW 417.14	
<b>4,4'-Dinonyl-2,2'-bithiazole</b>		<b>CAT# IN1034</b>
	CAS# [180729-91-3] Formula C <sub>24</sub> H <sub>40</sub> N <sub>2</sub> S <sub>2</sub> FW 420.72	
<b>5,5'-Dibromo-4,4'-dinonyl-2,2'-bithiazole</b>		<b>CAT# IN1035</b>
	CAS# [172100-44-6] Formula C <sub>24</sub> H <sub>38</sub> Br <sub>2</sub> N <sub>2</sub> S <sub>2</sub> FW 578.51	
<b>5,6-Bis(octyloxy)benzo-2,1,3-oxadiazole</b>		<b>CAT# IN1042</b>
	CAS# [1314801-34-7] Formula C <sub>22</sub> H <sub>38</sub> N <sub>2</sub> O <sub>3</sub> FW 376.53	
<b>4,7-Dibromo-5,6-bis(octyloxy)benzo-2,1,3-oxadiazole</b>		<b>CAT# IN1043</b>
	CAS# [1314801-35-8] Formula C <sub>22</sub> H <sub>34</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>3</sub> FW 534.32	
<b>4,4'-Dibromo-2,2'-diiodobiphenyl</b>		<b>CAT# IN1083</b>
	CAS# [852138-89-7] Formula C <sub>12</sub> H <sub>6</sub> Br <sub>2</sub> I <sub>2</sub> FW 563.79	
<b>Methyl 4'-hydroxybiphenyl-4-carboxylate</b>		<b>CAT# IN1084</b>
	CAS# [40501-41-5] Formula C <sub>14</sub> H <sub>12</sub> O <sub>3</sub> FW 228.24	
<b>Ethyl 4'-hydroxybiphenyl-4-carboxylate</b>		<b>CAT# IN1086</b>

	CAS# [50670-76-3] Formula C <sub>15</sub> H <sub>14</sub> O <sub>3</sub> FW 242.27	
<b>4,4''-Diiodo-[1,1';4',1'';4'',1''']quaterphenyl</b>		<b>CAT# IN1088</b>
	CAS# [1770-82-7] Formula C <sub>24</sub> H <sub>16</sub> I <sub>2</sub> FW 558.19	
<b>2,6-Dibromoanthracene-9,10-dione</b>		<b>CAT# IN1085</b>
	CAS# [633-70-5] Formula C <sub>14</sub> H <sub>6</sub> Br <sub>2</sub> O <sub>2</sub> FW 366.00	
<b>1-Bromopyrene</b>		<b>CAT# IN1080</b>
	CAS# [1714-29-0] Formula C <sub>16</sub> H <sub>8</sub> Br FW 281.15	
<b>10,10'-Dibromo-9,9'-bianthryl</b>		<b>CAT# IN1082</b>
	CAS# [121848-75-7] Formula C <sub>28</sub> H <sub>16</sub> Br <sub>2</sub> FW 512.23	
<b>2-Octyldodecan-1-amine</b>		<b>CAT# IN1049</b>
	CAS# [62281-06-5] Formula C <sub>20</sub> H <sub>43</sub> N FW 297.56	
<b>2-Octyldodecan-1-ol</b>		<b>CAT# IN1050</b>
	CAS# [5333-42-6] Formula C <sub>20</sub> H <sub>42</sub> O FW 298.55	
<b>Heptadecan-9-ol</b>		<b>CAT# IN1051</b>
	CAS# [624-08-8] Formula C <sub>17</sub> H <sub>36</sub> O FW 256.47	
<b>9-Phenyl-9H-carbazol-3-ylboronic acid</b>		<b>CAT# IN1065</b>
	CAS# [854952-58-2] Formula C <sub>18</sub> H <sub>14</sub> BNO <sub>2</sub> FW 287.12	
<b>4-[Bis-(4-bromophenyl)amino]benzaldehyde</b>		

<b>CAT# IN1044</b>	
	CAS# [25069-38-9] Formula C <sub>19</sub> H <sub>13</sub> Br <sub>2</sub> NO FW 431.12
<b>(4-(Diphenylamino)phenyl)methanol</b>	
<b>CAT# OC1005</b>	
	CAS# [25069-40-3] Formula C <sub>19</sub> H <sub>17</sub> NO FW 275.35
<b>4,4',4''-Nitrilotribenzaldehyde</b>	
<b>CAT# OC1040</b>	
	CAS# [119001-43-3] Formula C <sub>21</sub> H <sub>15</sub> NO <sub>3</sub> FW 329.35
<b>3-Carbazol-9-ylbenzhydrazide</b>	
<b>CAT# OC1056</b>	
	CAS# [119001-43-3] Formula C <sub>19</sub> H <sub>15</sub> N <sub>3</sub> O FW 301.34
<b>3,5-Dicarbazol-9-ylbenzhydrazide</b>	
<b>CAT# OC1060</b>	
	CAS# [1057401-13-4] Formula C <sub>30</sub> H <sub>18</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 682.57
<b>3,6-Di(thiophen-2-yl)pyrrolo[3,4-c]pyrrole-1,4-dione</b>	
<b>CAT# IN1323</b>	
	CAS# [850583-75-4] Formula C <sub>14</sub> H <sub>8</sub> N <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 300.36
<b>3,6-Bis(5-bromothiophen-2-yl)-2,5-dioctylpyrrolo[3,4-c]pyrrole-1,4-dione</b>	
<b>CAT# IN1326</b>	
	CAS# [1057401-13-4] Formula C <sub>30</sub> H <sub>38</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 682.57
<b>3,6-Bis(5-bromothiophen-2-yl)-2,5-bis(2-ethylhexyl)pyrrolo[3,4-c]pyrrole-1,4-dione</b>	
<b>CAT# IN1327</b>	

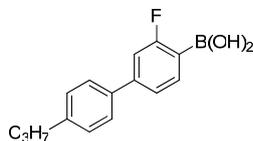
	CAS# [1000623-95-9] Formula C <sub>30</sub> H <sub>38</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>2</sub> S <sub>2</sub> FW 682.57
<b>Thiophen-2-ylboronic acid</b>	
<b>CAT# BA025</b>	
	CAS# [6165-68-0] Formula C <sub>4</sub> H <sub>5</sub> BO <sub>2</sub> S FW 127.96
<b>4-Methylpyridine-3-boronic acid</b>	
<b>CAT# BA030</b>	
	CAS# [148546-82-1] Formula C <sub>6</sub> H <sub>6</sub> BF <sub>2</sub> O <sub>2</sub> FW 136.94
<b>3,4-Difluorophenylboronic acid</b>	
<b>CAT# BA105</b>	
	CAS# [168267-41-2] Formula C <sub>6</sub> H <sub>5</sub> BF <sub>2</sub> O <sub>2</sub> FW 157.91
<b>3,5-Difluorophenylboronic acid</b>	
<b>CAT# BA106</b>	
	CAS# [156545-07-2] Formula C <sub>6</sub> H <sub>5</sub> BF <sub>2</sub> O <sub>2</sub> FW 157.91
<b>2,3-Difluorophenylboronic acid</b>	
<b>CAT# BA107</b>	
	CAS# [121219-16-7] Formula C <sub>6</sub> H <sub>3</sub> BF <sub>3</sub> O <sub>2</sub> FW 157.91
<b>3,4,5-Trifluorophenylboronic acid</b>	
<b>CAT# BA108</b>	
	CAS# [143418-49-9] Formula C <sub>6</sub> H <sub>4</sub> BF <sub>3</sub> O <sub>2</sub> FW 175.90
<b>3-Chloro-4-ethoxy-2-fluorophenylboronic acid</b>	
<b>CAT# BA111</b>	
	CAS# [909122-50-5] Formula C <sub>8</sub> H <sub>6</sub> BClFO <sub>3</sub> FW 218.42
<b>4'-(Pentyloxy)biphenyl-4-ylboronic acid</b>	
<b>CAT# BA115</b>	



CAS# [158937-25-8]  
 Formula C<sub>17</sub>H<sub>21</sub>BO<sub>3</sub>  
 FW 284.16

**3-Fluoro-4'-propylbiphenyl-4-ylboronic acid**

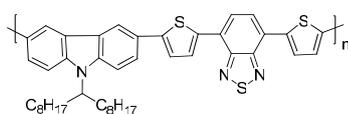
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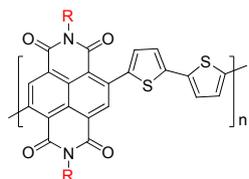
**Examples of Customized Polymers**

CAT# SunamerXXX



CAS# [958261-50-2]

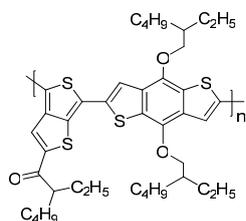
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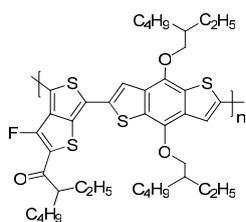
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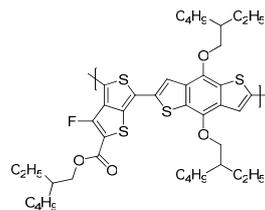
CAT# Sunamer101



CAT# Sunamer102



CAT# Sunamer103



# Chemical Indices

## CAS Number Index

CAS# or CAS RN represents Chemical Abstracts Service Registry Number, which is uniquely assigned to a specific chemical by the American Chemical Society and indexed in Chemical Abstracts published by Chemical Abstracts Service in the US. CAS numbers are used worldwide for accurate identification and quick search of chemicals/materials.

## Catalog Number Index

The format of our catalog number of a chemical does not follow a general rule. However, the alphanumeric codes start always with at least two letters.

Both indices are in ascending order.

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You may complete the form manually (please print or type), and fax it back to us at +86-512-62872181

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**Fax to:**

**Sales Department  
SunaTech Inc.**

**398 Ruoshui Road  
Suzhou Industrial Park  
Suzhou, Jiangsu, 215125  
P. R. China  
Tel.: + 86-512-6287 2180  
Fax: + 86-512-6287 2181  
Email: sales@sunatech.com**

**Date:**

**Purchase Order Number:**

**Our Quotation Number:**

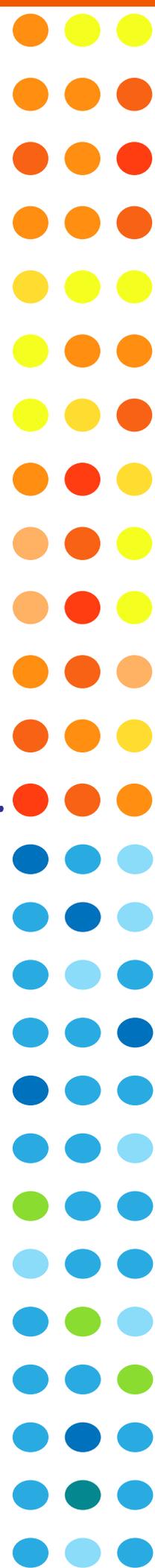
**Shipping / Billing Address:**

Item	Cat. No.	Product	Unit Price (\$ US)	Quantity	Goods Value (\$ US)
1					
2					
3					
4					
5					
<b>Subtotal</b>					
<b>Shipping &amp; Handling</b>					
<b>Total</b>					
<b>Pre-payment</b>					
<b>Balance Due</b>					
<b>Required Delivery Time:</b>					
<p>SunaTech General Terms and Conditions: (1) All product prices are F.O.B. Suzhou, P. R. China. Buyers are solely responsible for paying any applicable taxes and customs duties. (2) Payment is due within thirty (30) days of the invoice date unless otherwise stated. (3) We accept cheque or bank wire transfer. (4) For first-time international buyers, we may request a negotiable (full or partial) prepayment through wire transfer. (5) A minimum order of \$ 200.00 US is required. (6) For the items that are not in stock, the estimated lead time is dependent upon the stock availability and the delivery time of our supplier(s) at the time of your inquiry. In most cases, the lead time remains unchanged at the time when you actually place an order. We'll notify the customers of any delay.</p>					
<b>Signature</b>			<b>Date</b>		

# Periodic Table of the Elements

		1										18						
		IA										VIIIA						
1	1 <b>H</b> 1.008											13 <b>B</b> 10.81	14 <b>C</b> 12.01	15 <b>N</b> 14.01	16 <b>O</b> 16.00	17 <b>F</b> 19.00	2 <b>He</b> 4.003	
2	3 <b>Li</b> 6.941	4 <b>Be</b> 9.012											5 <b>B</b> 10.81	6 <b>C</b> 12.01	7 <b>N</b> 14.01	8 <b>O</b> 16.00	9 <b>F</b> 19.00	10 <b>Ne</b> 20.18
3	11 <b>Na</b> 22.99	12 <b>Mg</b> 24.31	3 <b>III</b>	4 <b>IV</b>	5 <b>V</b>	6 <b>VI</b>	7 <b>VII</b>	8 <b>VIII</b>	9 <b>VIII</b>	10 <b>VIII</b>	11 <b>IB</b>	12 <b>IIB</b>	13 <b>Al</b> 26.98	14 <b>Si</b> 28.09	15 <b>P</b> 30.97	16 <b>S</b> 32.07	17 <b>Cl</b> 35.45	18 <b>Ar</b> 39.95
4	19 <b>K</b> 39.10	20 <b>Ca</b> 40.08	21 <b>Sc</b> 44.96	22 <b>Ti</b> 47.87	23 <b>V</b> 50.94	24 <b>Cr</b> 52.00	25 <b>Mn</b> 54.94	26 <b>Fe</b> 55.85	27 <b>Co</b> 58.93	28 <b>Ni</b> 58.69	29 <b>Cu</b> 63.55	30 <b>Zn</b> 65.38	31 <b>Ga</b> 69.72	32 <b>Ge</b> 72.64	33 <b>As</b> 74.92	34 <b>Se</b> 78.96	35 <b>Br</b> 79.90	36 <b>Kr</b> 83.80
5	37 <b>Rb</b> 85.47	38 <b>Sr</b> 87.62	39 <b>Y</b> 88.91	40 <b>Zr</b> 91.22	41 <b>Nb</b> 92.91	42 <b>Mo</b> 95.96	43 <b>Tc</b> (99)	44 <b>Ru</b> 101.1	45 <b>Rh</b> 102.9	46 <b>Pd</b> 106.4	47 <b>Ag</b> 107.9	48 <b>Cd</b> 112.4	49 <b>In</b> 114.8	50 <b>Sn</b> 118.7	51 <b>Sb</b> 121.8	52 <b>Te</b> 127.6	53 <b>I</b> 126.9	54 <b>Xe</b> 131.3
6	55 <b>Cs</b> 132.9	56 <b>Ba</b> 137.3	57~71 <b>La~Lu</b>	72 <b>Hf</b> 178.5	73 <b>Ta</b> 180.9	74 <b>W</b> 183.84	75 <b>Re</b> 186.2	76 <b>Os</b> 190.2	77 <b>Ir</b> 192.2	78 <b>Pt</b> 195.1	79 <b>Au</b> 197.0	80 <b>Hg</b> 200.6	81 <b>Tl</b> 204.4	82 <b>Pb</b> 207.2	83 <b>Bi</b> 209.0	84 <b>Po</b> (210)	85 <b>At</b> (210)	86 <b>Rn</b> (222)
7	87 <b>Fr</b> (223)	88 <b>Ra</b> (226)	89~103 <b>Ac~Lr</b>	104 <b>Rf</b> (267)	105 <b>Db</b> (268)	106 <b>Sg</b> (271)	107 <b>Bh</b> (272)	108 <b>Hs</b> (277)	109 <b>Mt</b> (276)	110 <b>Ds</b> (281)	111 <b>Rg</b> (280)	112 <b>Uub</b> (285)	113 <b>Uut</b> (284)	114 <b>Uuq</b> (289)	115 <b>Uup</b> (288)	116 <b>Uuh</b> (293)		118 <b>Uuo</b> (294)
<b>Lanthanide</b>			57 <b>La</b> 138.9	58 <b>Ce</b> 140.1	59 <b>Pr</b> 140.9	60 <b>Nd</b> 144.2	61 <b>Pm</b> (145)	62 <b>Sm</b> 150.4	63 <b>Eu</b> 152.0	64 <b>Gd</b> 157.3	65 <b>Tb</b> 158.9	66 <b>Dy</b> 162.5	67 <b>Ho</b> 164.9	68 <b>Er</b> 167.3	69 <b>Tm</b> 168.9	70 <b>Yb</b> 173.0	71 <b>Lu</b> 175.0	
<b>Actinide</b>			89 <b>Ac</b> (227)	90 <b>Th</b> 232.0	91 <b>Pa</b> (231)	92 <b>U</b> (238)	93 <b>Np</b> (237)	94 <b>Pu</b> (239)	95 <b>Am</b> (243)	96 <b>Cm</b> (247)	97 <b>Bk</b> (247)	98 <b>Cf</b> (252)	99 <b>Es</b> (252)	100 <b>Fm</b> (257)	101 <b>Md</b> (258)	102 <b>No</b> (259)	103 <b>Lr</b> (262)	

Symbol -- 77  
**Ir**  
192.2 --Atomic number  
--Atomic weight



*Innovation doesn't have to start from scratch  
- try to start from SunaTech Inc.*

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