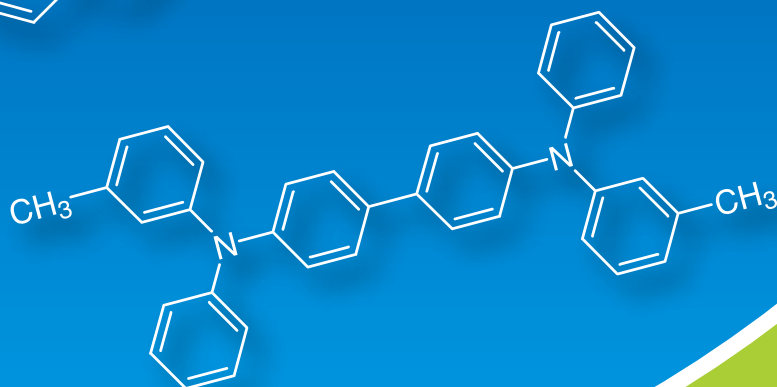
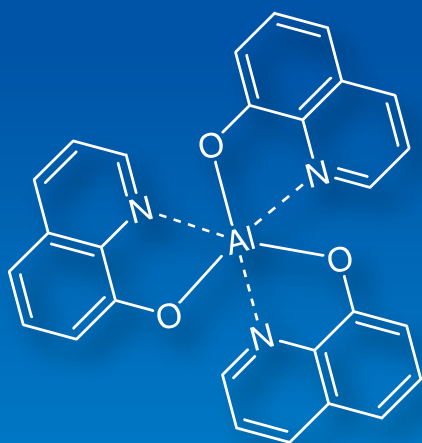


有機エレクトロルミネッセンス材料

Organic Light-Emitting Diode (OLED) Materials



ホスト材料

ホール輸送材料(HTM)

電子輸送材料(ETM)

青色ドーパント

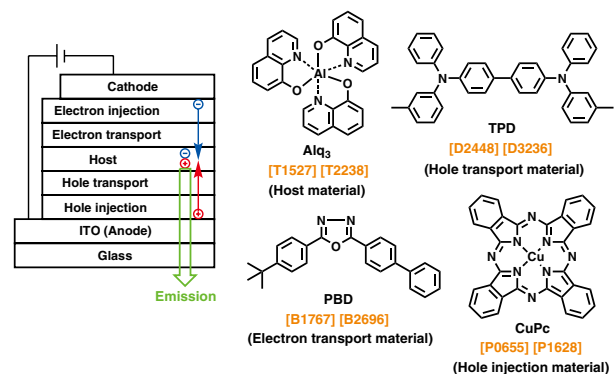
緑色ドーパント

赤色ドーパント

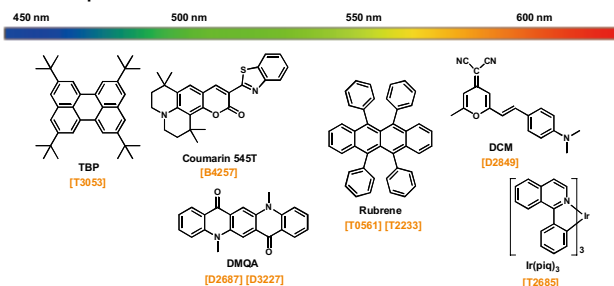
有機エレクトロルミネッセンス材料

有機EL素子は環境負荷が小さく、軽量かつフレキシブルな有機材料を用いているため、次世代のディスプレイや照明用光源として注目されています。1987年にTangらは、有機超薄膜の2層構造を採用した有機EL素子を報告し¹⁾、応用可能な素子として注目されるようになりました。その後、安達らにより、発光層を電子輸送層とホール輸送層で挟んだ3層構造の素子や発光層とホール輸送層を兼ねた2層構造の素子が報告されました^{2,3)}。さらに、キャリア注入特性を改善するために、電子注入層やホール注入層を加えた5層構造以上の有機EL素子も開発されてきています。発光層にドーパントを加えることで、RGBの発光色を制御可能で、これらのドーパントを組合せることで、白色の素子を作成することができます^{4,5)}。白色の有機EL素子(WOLED)の応用例として、有機EL照明パネルがあります⁶⁾。

透明性、均質性、等方的性質、優れた成形加工性などの特徴を有するアモルファス物質は、有機EL素子向けの材料の有力な候補となります。また、有機EL素子の実用化の観点からは、耐熱性・耐久性に優れる素子の開発が求められます。トリフェニルアミン系(TPD)のホール輸送材料は、耐熱性の高いアモルファス物質が多く知られており^{7,8)}、有機EL素子には最も汎用的に用いられています。その他、電子輸送材料であるオキサジアゾール誘導体(PBD)⁹⁾、発光材料(ホスト材料)であるAlq₃¹⁾、青色発光材料であるジスチリル誘導体¹⁰⁾がアモルファス有機EL材料の基本骨格となっています。



OLED Dopants



従来から良く知られている蛍光材料は、優れた高電流密度特性などいくつかの利点を有するものの、75%の三重項励起子は熱失活してしまい、25%の一重項励起子しかEL発光には利用できません。一方、三重項励起状態から発光するりん光材料を用いることで、一重項から三重項への項間交差により、100%のEL量子効率を得ることは可能です。これまでにIr(ppy)₃を基本構造

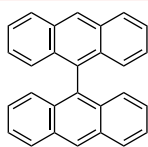
とする様々なりん光材料が報告されています¹¹⁾。貴金属などの重原子を用いない、熱活性型遅延蛍光(TADF)を示す発光材料が近年注目されています。安達らによると、一重項励起状態と三重項励起状態のエネルギー差が小さい材料を用いることで、三重項から一重項励起状態への逆エネルギー移動を高効率で可能にし、原理的には蛍光過程であっても25%以上の励起子生成効率を実現することができます^{12,13)}。

文 献

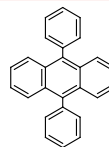
- 1) C. W. Tang, S. A. VanSlyke, *Appl. Phys. Lett.* **1987**, 51, 913.
- 2) C. Adachi, S. Tokito, T. Tsutsui, S. Saito, *Jpn. J. Appl. Phys.* **1988**, 27, L269.
- 3) C. Adachi, S. Tokito, T. Tsutsui, S. Saito, *Jpn. J. Appl. Phys.* **1988**, 27, L713.
- 4) Review: B. Luessem, M. Riede, K. Leo, *Phys. Org. Semicon. (2nd Edition)* **2012**, 427.
- 5) Review: C. Adachi, T. Oyamada, T. Matsushima, *Mol. Electron. Bioelectron.* **2007**, 18, 25.
- 6) Review: H. Sasabe, J. Kido, *J. Mater. Chem. C* **2013**, 1, 1699.
- 7) Y. Shirota, K. Okumoto, H. Inada, *Synth. Met.* **2000**, 111-112, 387.
- 8) X. Zhou, J. Blochwitz, M. Pfeiffer, A. Nollau, T. Fritz, K. Leo, *Adv. Funct. Mater.* **2001**, 11, 310.
- 9) M. Era, C. Adachi, T. Tsutsui, S. Saito, *Chem. Phys. Lett.* **1991**, 178, 488.
- 10) C. Hosokawa, H. Higashi, H. Nakamura, T. Kusumoto, *Appl. Phys. Lett.* **1995**, 67, 3853.
- 11) C. Adachi, M. A. Baldo, S. R. Forrest, M. E. Thompson, *Appl. Phys. Lett.* **2000**, 77, 904.
- 12) H. Uoyama, K. Goushi, K. Shizu, H. Nomura, C. Adachi, *Nature* **2012**, 492, 234.
- 13) Q. Zhang, B. Li, S. Huang, H. Nomura, H. Tanaka, C. Adachi, *Nat. Photonics* **2014**, 8, 326.

ホスト材料

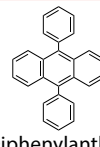
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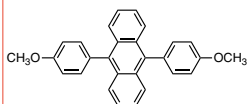
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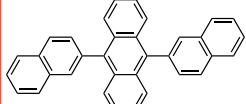
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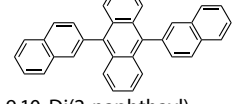
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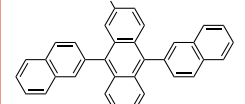
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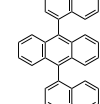
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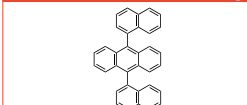
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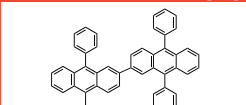
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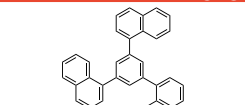
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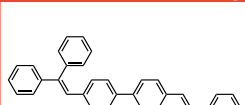
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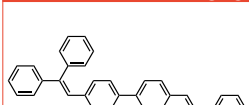
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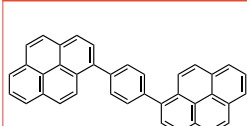
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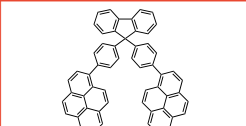
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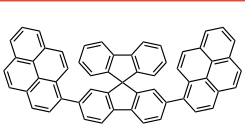
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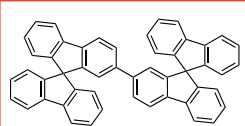
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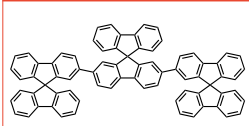
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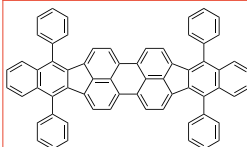
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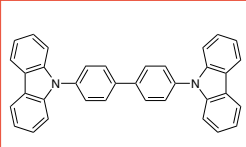
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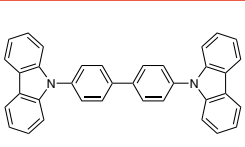
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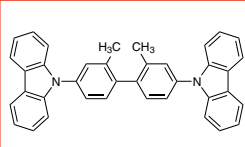
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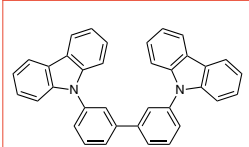
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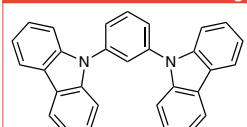
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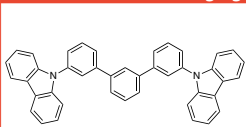
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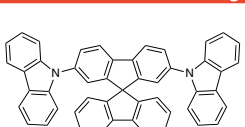
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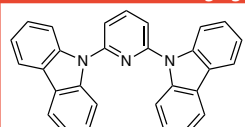
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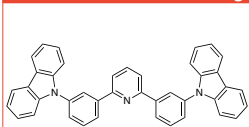
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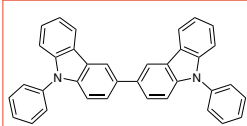
B4961 200mg 1g

2,6-Bis(9H-carbazol-9-yl)-
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CAS RN: 168127-49-9

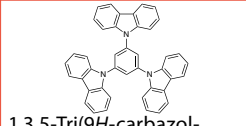
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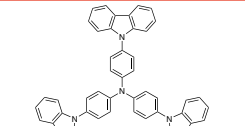
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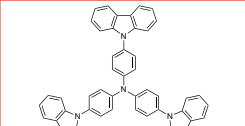
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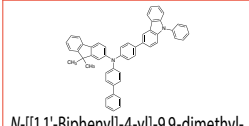
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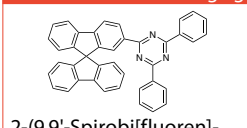
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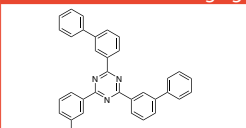
B5435 1g 5g

N-[[1,1'-Biphenyl]-4-yl]-9,9-dimethyl-
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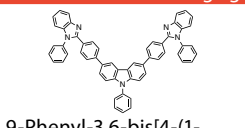
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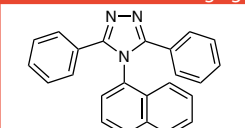
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T2T
CAS RN: 1201800-83-0

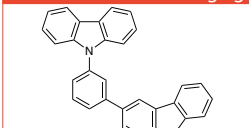
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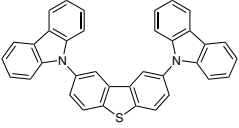
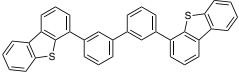
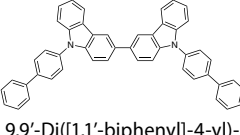
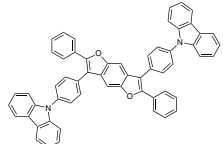
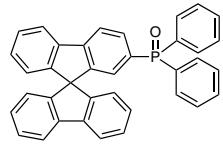
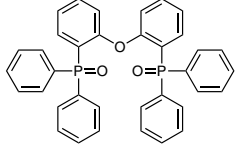
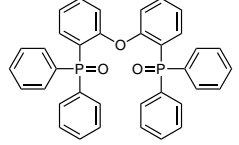
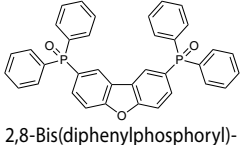
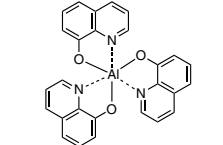
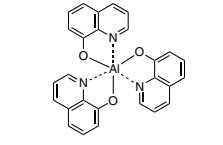
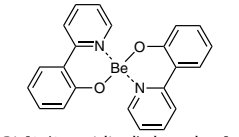
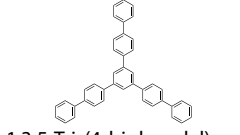
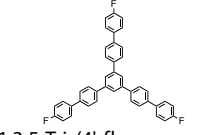
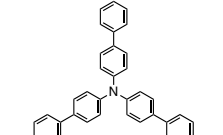
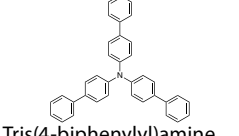
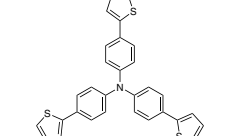
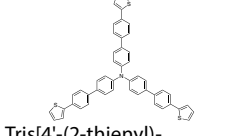
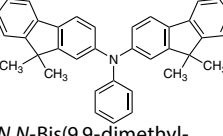
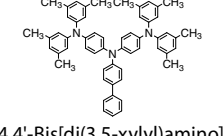
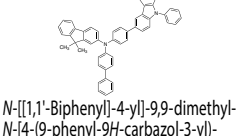
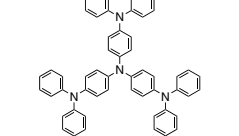
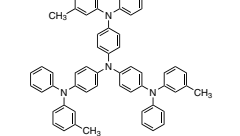
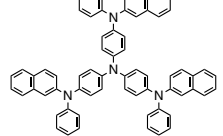
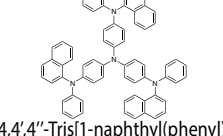
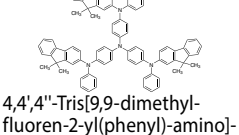
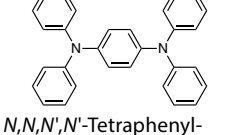
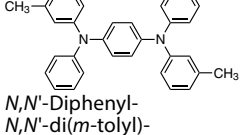
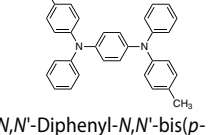
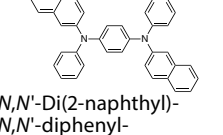
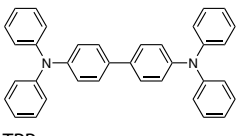
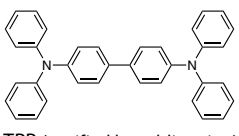
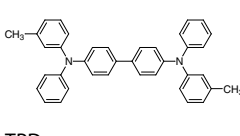
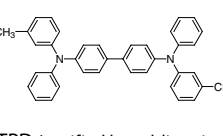
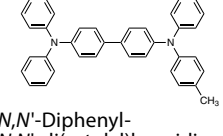
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CAS RN: 1258780-50-5

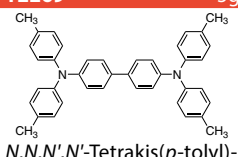
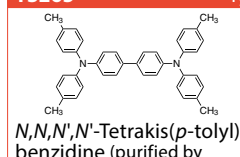
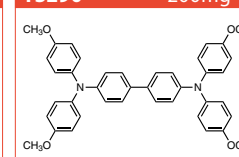
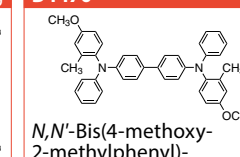
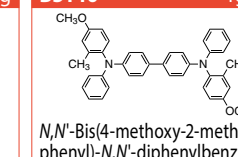
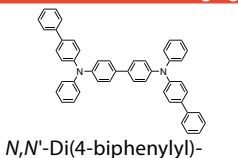
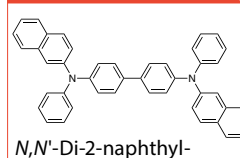
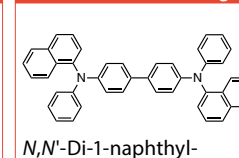
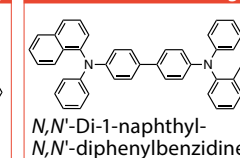
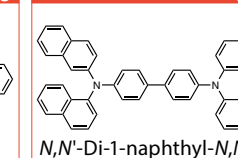
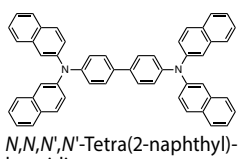
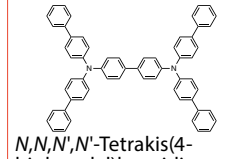
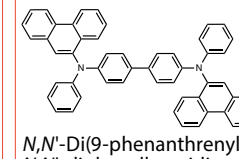
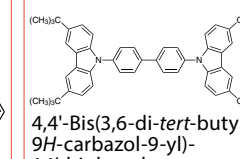
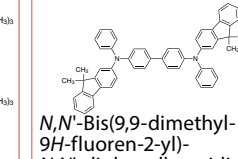
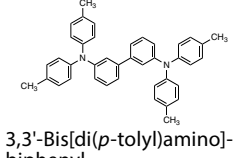
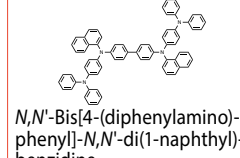
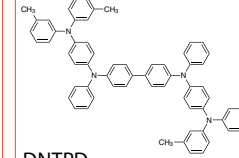
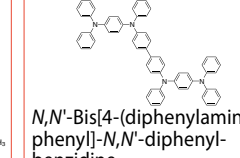
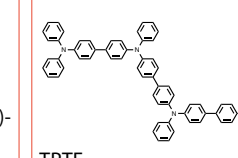
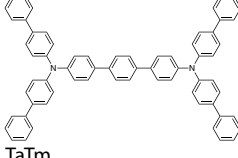
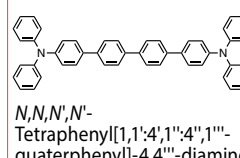
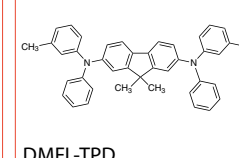
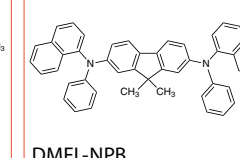
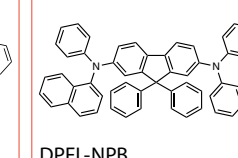
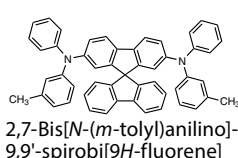
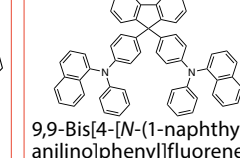
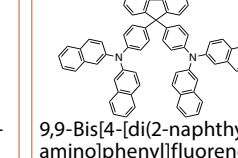
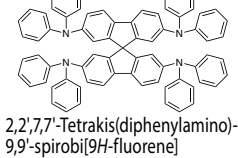
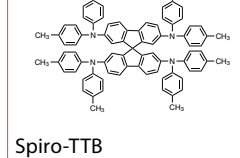
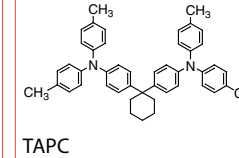
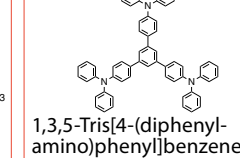
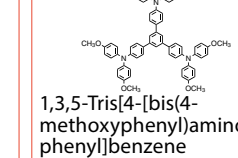
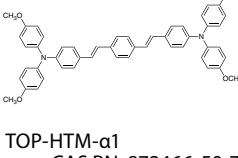
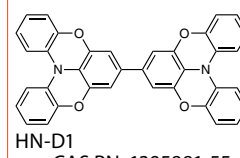
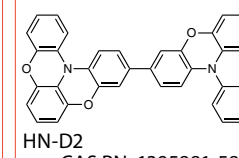
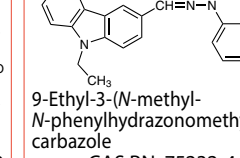
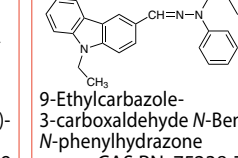
N1139 200mg 1g

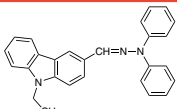
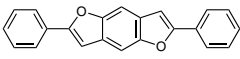
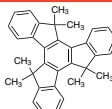
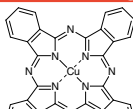
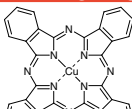
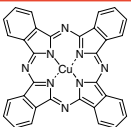
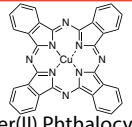
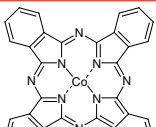
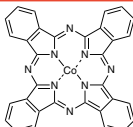
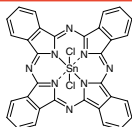
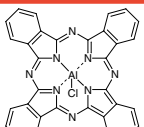
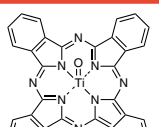
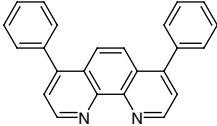
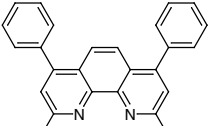
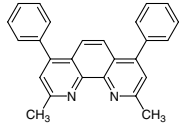
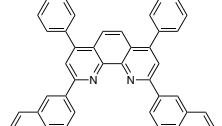
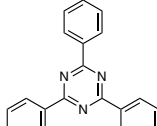
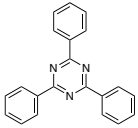
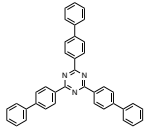
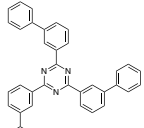
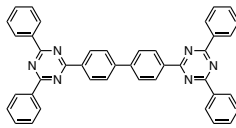
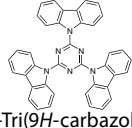
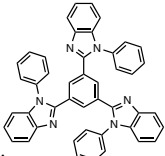
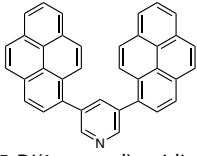
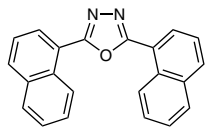
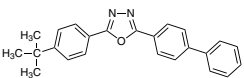
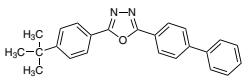
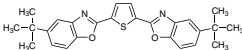
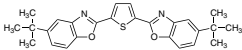
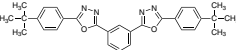
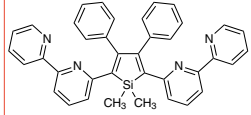
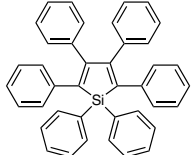
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CAS RN: 16152-10-6

D4919 200mg 1g

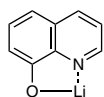
9-[3-(Dibenzofuran-2-yl)-
phenyl]-9H-carbazole
CAS RN: 1338446-77-7

B4942 200mg 1g  DCzDBT CAS RN: 913738-04-2	D5473 1g  3,3'-Di(dibenzothiophen-4-yl)-1,1'-biphenyl CAS RN: 1128045-14-6	D5303 200mg 1g  9,9'-Di([1,1'-biphenyl]-4-yl)-9H,9'H-3,3'-bicarbazole CAS RN: 57102-51-9	C2780 200mg 1g  CZBDF CAS RN: 1092578-51-2	D4921 200mg  SPP01 CAS RN: 1125547-88-7
B5240 1g  DPEPO CAS RN: 808142-23-6	B5448 200mg 1g  DPEPO (purified by sublimation) CAS RN: 808142-23-6	B5822 200mg 1g  2,8-Bis(diphenylphosphoryl)-dibenzo[b,d]furan CAS RN: 911397-27-8	T1527 5g 25g 250g  Alq3 CAS RN: 2085-33-8	T2238 5g  Alq3 (purified by sublimation) CAS RN: 2085-33-8
B4720 200mg  Bis[2-(2-pyridinyl)phenolato]-beryllium(II) CAS RN: 220694-90-6	ホール輸送材料(HTM)			
T3461 1g  1,3,5-Tris(4-biphenyl)-benzene CAS RN: 6326-64-3				
T3462 200mg  1,3,5-Tris(4'-fluoro-biphenyl-4-yl)benzene CAS RN: 372956-40-6				
T3327 1g 5g  Tris(4-biphenyl)amine CAS RN: 6543-20-0				
T3778 200mg 1g  Tris(4-biphenyl)amine (purified by sublimation) CAS RN: 6543-20-0	T3050 1g 5g  Tris[4-(2-thienyl)phenyl]amine CAS RN: 142807-63-4	T3337 200mg  Tris[4'-(2-thienyl)-4-biphenyl]amine CAS RN: 1092356-36-9	B5045 200mg 1g  N,N-Bis(9,9-dimethyl-9H-fluoren-2-yl)aniline CAS RN: 165320-27-4	B2269 100mg 1g  4,4'-Bis[di(3,5-xylyl)amino]-4''-phenyltriphenylamine CAS RN: 249609-49-2
B5435 1g 5g  N-[1,1'-Biphenyl]-4-yl]-9,9-dimethyl-N-[4-(9-phenyl-9H-carbazol-3-yl)-phenyl]-9H-fluoren-2-amine CAS RN: 1242056-42-3	T3062 200mg 1g  TDATA CAS RN: 105389-36-4	T2251 100mg  m-MTDATA CAS RN: 124729-98-2	T3233 1g  2-TNATA CAS RN: 185690-41-9	T3689 250mg  4,4',4''-Tris[1-naphthyl(phenyl)-amino]triphenylamine CAS RN: 185690-39-5
T3438 200mg 1g  4,4',4''-Tris[9,9-dimethyl-fluoren-2-yl(phenyl)-amino]-triphenylamine CAS RN: 303111-06-0	T3309 1g 5g  N,N,N',N'-Tetraphenyl-1,4-phenylenediamine CAS RN: 14118-16-2	D4930 1g 5g  N,N'-Diphenyl-N,N'-di(m-tolyl)-1,4-phenylenediamine CAS RN: 80223-29-6	D4905 1g 5g  N,N'-Diphenyl-N,N'-bis(p-tolyl)-1,4-phenylenediamine CAS RN: 138171-14-9	D4929 1g 5g  N,N'-Di(2-naphthyl)-N,N'-diphenyl-1,4-phenylenediamine CAS RN: 139994-47-1
T1812 5g 25g  TPB CAS RN: 15546-43-7	T3266 1g 5g  TPB (purified by sublimation) CAS RN: 15546-43-7	D2448 1g 5g  TPD CAS RN: 65181-78-4	D3236 1g 5g  TPD (purified by sublimation) CAS RN: 65181-78-4	D4834 200mg 1g  N,N'-Diphenyl-N,N'-di(p-tolyl)benzidine CAS RN: 20441-06-9

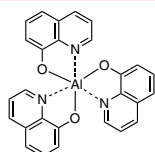
T2269 5g  N,N,N',N'-Tetrakis(p-tolyl)-benzidine CAS RN: 76185-65-4	T3265 1g  N,N,N',N'-Tetrakis(p-tolyl)-benzidine (purified by sublimation) CAS RN: 76185-65-4	T3290 200mg 1g  MeO-TPD CAS RN: 122738-21-0	B4470 5g  N,N'-Bis(4-methoxy-2-methylphenyl)-N,N'-diphenylbenzidine CAS RN: 169685-34-1	B5140 1g 5g  N,N'-Bis(4-methoxy-2-methylphenyl)-N,N'-diphenylbenzidine (purified by sublimation) CAS RN: 169685-34-1
D4928 1g 5g  N,N'-Di(4-biphenyl)-N,N'-diphenylbenzidine CAS RN: 134008-76-7	D4253 1g  N,N'-Di-2-naphthyl-N,N'-diphenylbenzidine CAS RN: 139255-17-7	D5126 1g 5g  N,N'-Di-1-naphthyl-N,N'-diphenylbenzidine CAS RN: 123847-85-8	D3970 1g 5g  N,N'-Di-1-naphthyl-N,N'-diphenylbenzidine (purified by sublimation) CAS RN: 123847-85-8	D4855 200mg 1g  N,N'-Di-1-naphthyl-N,N'-di-2-naphthylbenzidine CAS RN: 374592-88-8
T3288 1g  N,N,N',N'-Tetra(2-naphthyl)-benzidine CAS RN: 141752-82-1	T3054 1g  N,N,N',N'-Tetrakis(4-biphenyl)-benzidine CAS RN: 164724-35-0	D5177 200mg 1g  N,N'-Di(9-phenanthrenyl)-N,N'-diphenylbenzidine CAS RN: 182507-83-1	B5675 1g  4,4'-Bis(3,6-di-tert-butyl-9H-carbazol-9-yl)-1,1'-biphenyl CAS RN: 838862-47-8	B4962 1g  N,N'-Bis(9,9-dimethyl-9H-fluoren-2-yl)-N,N'-diphenylbenzidine CAS RN: 361486-60-4
B4874 1g 5g  3,3'-Bis[di(p-tolyl)amino]-biphenyl CAS RN: 161485-60-5	B5093 1g 5g  N,N'-Bis[4-(diphenylamino)-phenyl]-N,N'-di(1-naphthyl)-benzidine CAS RN: 910058-11-6	B5634 1g 5g  DNTPD CAS RN: 199121-98-7	B5117 200mg 1g  N,N'-Bis[4-(diphenylamino)-phenyl]-N,N'-diphenylbenzidine CAS RN: 209980-53-0	D4863 1g  TPTE CAS RN: 167218-46-4
T3656 1g  TaTm CAS RN: 952431-34-4	T3657 200mg 1g  N,N,N',N'-Tetraphenyl[1,1':4,1'':4'',1'''-quaterphenyl]-4,4'''-diamine CAS RN: 145898-89-1	D4920 200mg 1g  DMFL-TPD CAS RN: 143886-11-7	B4926 200mg 1g  DMFL-NPB CAS RN: 222319-05-3	D5443 200mg 1g  DPFL-NPB CAS RN: 357645-40-0
B4882 200mg 1g  2,7-Bis[N-(m-tolyl)anilino]-9,9'-spirobi[9H-fluorene] CAS RN: 1033035-83-4	B4959 200mg 1g  2,7-Bis[N,N-bis(4-methoxyphenyl)amino]-9,9'-spirobi[9H-fluorene] CAS RN: 1138220-69-5	B4875 200mg 1g  2,7-Bis[N-(1-naphthyl)anilino]-9,9'-spirobi[9H-fluorene] CAS RN: 932739-76-9	B4979 200mg 1g  9,9-Bis[4-[N-(1-naphthyl)anilino]phenyl]fluorene CAS RN: 510775-24-3	B4978 200mg 1g  9,9-Bis[4-[di(2-naphthyl)amino]phenyl]fluorene CAS RN: 916061-87-5
T3634 1g  2,2',7,7'-Tetrakis(diphenylamino)-9,9'-spirobi[9H-fluorene] CAS RN: 189363-47-1	T3704 200mg  Spiro-TTB CAS RN: 515834-67-0	B2079 1g 5g  TAPC CAS RN: 58473-78-2	T3436 200mg 1g  1,3,5-Tris[4-(diphenylamino)phenyl]benzene CAS RN: 147951-36-8	T3437 200mg  1,3,5-Tris[4-bis(4-methoxyphenyl)amino]phenyl]benzene CAS RN: 142894-38-0
B5672 1g 5g 25g  TOP-HTM-α1 CAS RN: 872466-50-7	B4908 200mg 1g  HN-D1 CAS RN: 1395881-55-6	B4907 200mg 1g  HN-D2 CAS RN: 1395881-58-9	E0570 1g  9-Ethyl-3-(N-methyl-N-phenylhydrazonomethyl)-carbazole CAS RN: 75232-44-9	E0574 1g  9-Ethylcarbazole-3-carboxaldehyde N-Benzyl-N-phenylhydrazone CAS RN: 75238-79-8

E05711g  9-Ethylcarbazole-3-carboxaldehyde Diphenylhydrazone CAS RN: 73276-70-7	D4633200mg 1g  2,6-Diphenylbenzo[1,2-b:4,5-b']difuran CAS RN: 5379-77-1	D4753200mg  10,15-Dihydro-5,5,10,10,15,15-hexamethyl-5H-tribenzo[a,f,k]-trindene CAS RN: 597554-76-2	P100525g 250g  Copper(II) Phthalocyanine (α-form) CAS RN: 147-14-8	P100625g 100g 500g  Copper(II) Phthalocyanine (β-form) CAS RN: 147-14-8
P16281g  Copper Phthalocyanine (purified by sublimation) CAS RN: 147-14-8	C3645100mg 500mg  Copper(II) Phthalocyanine (purified by sublimation) [for organic electronics] CAS RN: 147-14-8	P08875g 25g  Cobalt(II) Phthalocyanine CAS RN: 3317-67-7	C3252200mg  Cobalt(II) Phthalocyanine (purified by sublimation) CAS RN: 3317-67-7	P09971g  Tin(IV) Phthalocyanine Dichloride CAS RN: 18253-54-8
C11671g  Phthalocyanine Chloroaluminum CAS RN: 14154-42-8	T2272200mg 1g  TiOPc (purified by sublimation) CAS RN: 26201-32-1	電子輸送材料(ETM)		
B26951g  Bathophenanthroline (purified by sublimation) CAS RN: 1662-01-7	D07111g 5g  Bathocuproine CAS RN: 4733-39-5	B26941g 5g  Bathocuproine (purified by sublimation) CAS RN: 4733-39-5	D5581200mg 1g  NBPhen CAS RN: 1174006-43-9	T27851g 5g  2,4,6-Triphenyl-1,3,5-triazine CAS RN: 493-77-6
T32681g  2,4,6-Triphenyl-1,3,5-triazine (purified by sublimation) CAS RN: 493-77-6	T3539200mg 1g  2,4,6-Tri([1,1'-biphenyl]-4-yl)-1,3,5-triazine CAS RN: 31274-51-8	T3997200mg 1g  T2T CAS RN: 1201800-83-0	B4977200mg 1g  4,4'-Bis(4,6-diphenyl-1,3,5-triazin-2-yl)biphenyl CAS RN: 266349-83-1	T27001g 5g  2,4,6-Tri(9H-carbazol-9-yl)-1,3,5-triazine (purified by sublimation) CAS RN: 134984-37-5
T3537200mg 1g  TPBi CAS RN: 192198-85-9	D4931200mg 1g  3,5-Di(1-pyrenyl)pyridine CAS RN: 1246467-58-2	D27575g  2,5-Di(1-naphthyl)-1,3,4-oxadiazole CAS RN: 905-62-4	B17675g  PBD CAS RN: 15082-28-7	B26961g 5g  PBD (purified by sublimation) CAS RN: 15082-28-7
B15545g 25g  BBOT CAS RN: 7128-64-5	B42211g 5g  BBOT (purified by sublimation) CAS RN: 7128-64-5	B4252200mg 1g  OXD-7 CAS RN: 138372-67-5	B4233200mg  2,5-Bis(2,2'-bipyridin-6-yl)-1,1-dimethyl-3,4-diphenylsilole CAS RN: 350042-00-1	H14131g  HPS CAS RN: 752-28-3

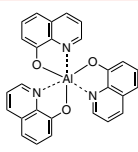
Q0100 1g 5g

(8-Quinololinolato)lithium
CAS RN: 25387-93-3

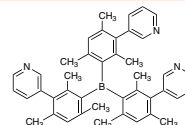
T1527 5g 25g 250g

Alq₃
CAS RN: 2085-33-8

T2238 5g

Alq₃ (purified by sublimation)
CAS RN: 2085-33-8

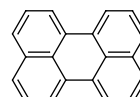
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3TPYMB
(purified by sublimation)
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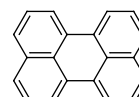
発光体およびドーパント

青色
ドーパント

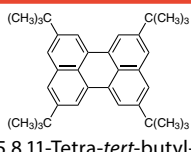
P0078 1g 5g 25g

Perylene
CAS RN: 198-55-0

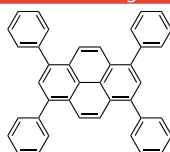
P1629 1g

Perylene
(purified by sublimation)
CAS RN: 198-55-0

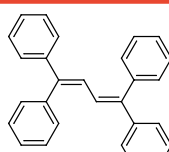
T3053 100mg

2,5,8,11-Tetra-*tert*-butylperylene
CAS RN: 80663-92-9

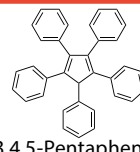
T3042 50mg 200mg

1,3,6,8-Tetraphenylpyrene
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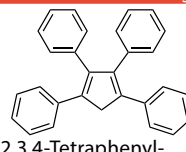
T0168 1g 5g

TPB
CAS RN: 1450-63-1

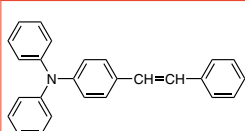
P1633 100mg

1,2,3,4,5-Pentaphenyl-1,3-cyclopentadiene
CAS RN: 2519-10-0

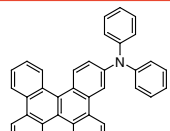
T1333 1g 5g

1,2,3,4-Tetraphenyl-1,3-cyclopentadiene
CAS RN: 15570-45-3

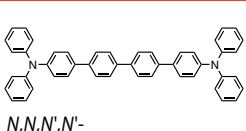
S0924 1g 5g

4-Styryltriphenylamine
CAS RN: 89114-74-9

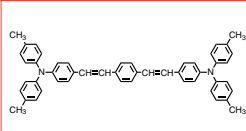
D3739 200mg

3-DPADBC
CAS RN: 1397202-77-5

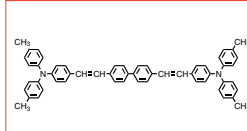
T3657 200mg 1g

*N,N,N',N'*-Tetraphenyl[1,1':4,1'':4'',1''':4'''':4''''-quaterphenyl]-4,4'''-diamine
CAS RN: 145898-89-1

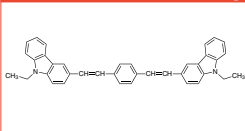
B2080 1g

1,4-Bis[4-(di-*p*-tolylamino)styryl]benzene
CAS RN: 55035-43-3

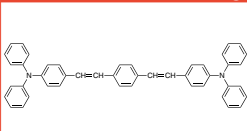
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4,4'-Bis[4-(di-*p*-tolylamino)styryl]biphenyl
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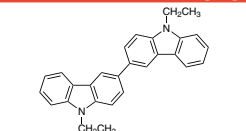
B4792 200mg

1,4-Bis[2-(9-ethylcarbazol-3-yl)vinyl]benzene
CAS RN: 62608-15-5

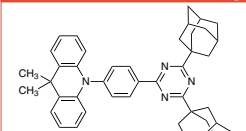
B5820 200mg

DSA-Ph
CAS RN: 55035-42-2

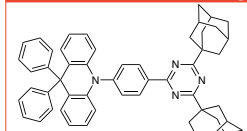
D5387 1g 5g

9,9'-Diethyl-9*H*,9'*H'*-3,3'-bicarbazole
CAS RN: 20466-00-6

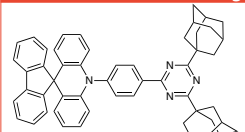
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MA-TA
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CAS RN: 2250187-15-4

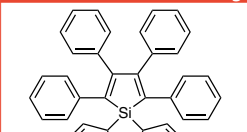
D5746 200mg

PA-TA
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CAS RN: 2250187-17-6

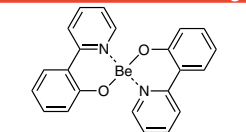
D5747 200mg

FA-TA
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CAS RN: 2250187-16-5

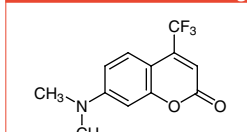
H1413 1g

HPS
CAS RN: 752-28-3

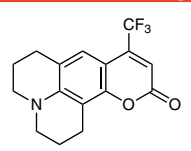
B4720 200mg

Bis[2-(2-pyridinyl)phenolato]beryllium(II)
CAS RN: 220694-90-6緑色
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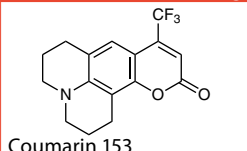
D3356 5g

Coumarin 152
CAS RN: 53518-14-2

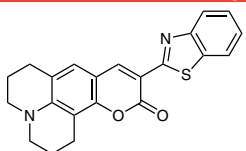
C2858 200mg 1g

Coumarin 153
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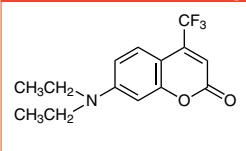
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Coumarin 153
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CAS RN: 53518-18-6

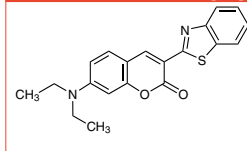
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CAS RN: 85642-11-1

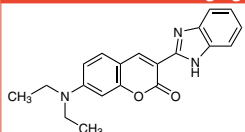
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Coumarin 481
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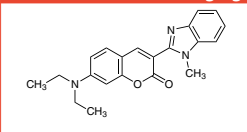
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Coumarin 6
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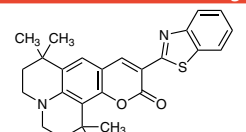
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Coumarin 7
CAS RN: 27425-55-4

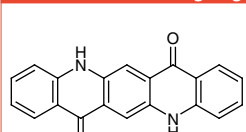
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Coumarin 30
CAS RN: 41044-12-6

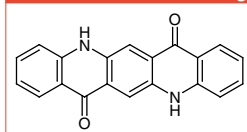
B4257 200mg

Coumarin 545T
CAS RN: 155306-71-1

Q0057 5g 25g

Quinacridone
CAS RN: 1047-16-1

Q0083 1g

Quinacridone
(purified by sublimation)
CAS RN: 1047-16-1

D2687 1g 5g DMQA CAS RN: 19205-19-7	D3227 1g DMQA (purified by sublimation) CAS RN: 19205-19-7	D4780 200mg 1g N,N'-Dibutylquinacridone CAS RN: 99762-80-8	D4697 200mg 1g 5,12-Dibutyl-1,3,8,10-tetramethylquinacridone CAS RN: 850815-10-0	B5149 200mg 1g 9,10-Bis[N-(p-tolyl)anilino]anthracene CAS RN: 190974-21-1
B4965 200mg 1g 9,10-Bis[N-(m-tolyl)anilino]anthracene CAS RN: 189263-81-8	B4966 200mg 1g 9,10-Bis[N,N-di(p-tolyl)amino]anthracene CAS RN: 177799-16-5	B5023 200mg 1g 9,10-Bis[N-(2-naphthyl)anilino]anthracene CAS RN: 473717-08-7	B5092 200mg 2,6-Bis(diphenylamino)anthraquinone CAS RN: 868850-50-4	B1678 5g 25g Bis(8-quinolinolato)zinc(II) Hydrate CAS RN: 13978-85-3
B2078 5g Bis[2-(2-benzoxazolyl)phenolato]zinc(II) CAS RN: 23467-27-8	B2077 1g 5g Bis[2-(2-benzothiazolyl)phenolato]zinc(II) CAS RN: 58280-31-2	T3716 200mg 1g Ir(ppy) ₃ CAS RN: 94928-86-6	T1946 200mg Ir(ppy) ₃ (purified by sublimation) CAS RN: 94928-86-6	P2637 200mg Ir(ppy) ₂ (acac) CAS RN: 337526-85-9
D4887 200mg Ir[(ppy) ₂ (dtbbpy)]PF ₆ CAS RN: 676525-77-2	B4944 200mg Ir[(dFppy) ₂ (bpy)]PF ₆ CAS RN: 864163-80-4	B4893 200mg [Ir(ppy) ₂ (bpy)]PF ₆ CAS RN: 106294-60-4	T1527 5g 25g 250g Alq ₃ CAS RN: 2085-33-8	T2238 5g Alq ₃ (purified by sublimation) CAS RN: 2085-33-8
赤色 ドーパント	T0561 100mg 1g Rubrene CAS RN: 517-51-1	T2233 250mg 1g Rubrene (purified by sublimation) CAS RN: 517-51-1	D6033 250mg DBP CAS RN: 175606-05-0	D2849 500mg DCM CAS RN: 51325-91-8
D4700 200mg DCJT CAS RN: 200052-70-6	T2685 100mg Ir(piq) ₃ (purified by sublimation) CAS RN: 435293-93-9	A3149 200mg PQIr CAS RN: 1173886-71-9	T3206 200mg Tris(acetylacetonato)-(1,10-phenanthroline)-europium(III) CAS RN: 17568-09-1	T1735 1g 5g Tris(1,3-diphenyl-1,3-propanedionato)(1,10-phenanthroline)-europium(III) CAS RN: 17904-83-5
P1766 1g Eu(TTA) ₃ phen CAS RN: 17904-86-8	T3208 200mg 1g Tris(1,10-phenanthroline)-ruthenium(II) Bis(hexafluorophosphate) CAS RN: 60804-75-3			

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