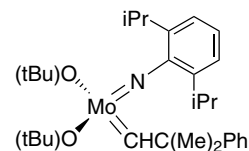


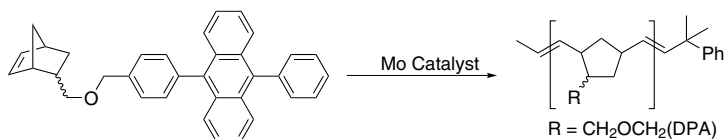
**42-1200**  
amp  
**2,6-Diisopropylphenylimidoneophylidene molybdenum(VI) bis(t-butoxide)** (126949-65-3)  
Mo(C<sub>10</sub>H<sub>12</sub>)(C<sub>12</sub>H<sub>17</sub>N)(OC<sub>4</sub>H<sub>9</sub>)<sub>2</sub>; FW: 549.65; yellow to orange powdr.  
*air sensitive, moisture sensitive, (store cold)*



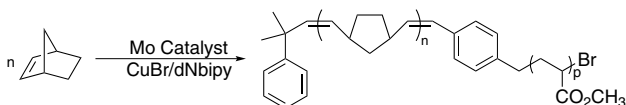
100mg  
500mg

Technical Notes:

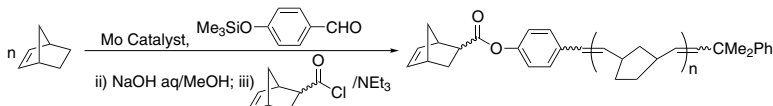
- Catalyst for synthesis of blue-light-emitting electroluminescent diphenylanthracene polymer from norbornene monomer by ROMP.
- Catalyst for transformation of ROMP into controlled atom transfer radical polymerization for the preparation of block copolymers.
- Catalyst for synthesis of various ring-opened poly(norbornene) derivatives by the ring-opening metathesis polymerizations.
- Catalysts for stereoselective cyclopolymerization of 1,6-heptadiynes.
- Catalyst for synthesis various (linear, triarms, ABA or ABCBA type) amphiphilic multiblock copolymers containing acetal-protected sugars by the coupling of an end-functionalized ROMP copolymer with poly(ethylene glycol).
- Catalyst for two-step method synthesis of ROMP/AP polycyclopentene/polystyrene and polynorbornene/polystyrene diblock copolymers.
- Catalyst for synthesis of poly(homoisobutylene) and poly(homo- $\alpha$ -methylstyrene) via ROMP.
- Catalyst for the Z-selective and syndioselective polymerization of NBDF6 and MPCP.
- Catalyst for regioselective cyclopolymerization of 1,7-octadiynes.
- Catalyst for stereospecific ring-opening metathesis polymerization of norbornene and tetracyclododecene.



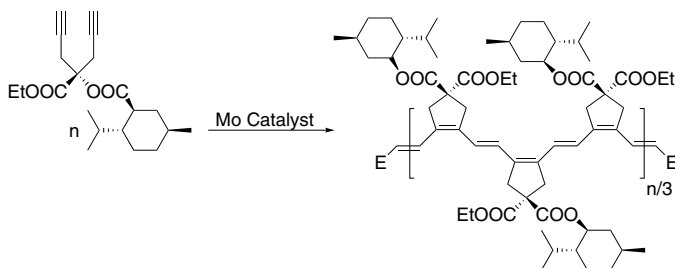
Tech. Note (1)  
Ref. (1)



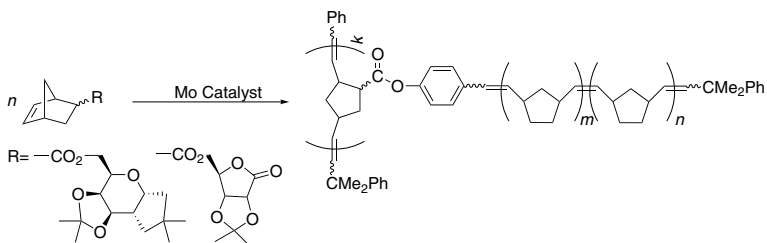
Tech. Note (2)  
Ref. (2)



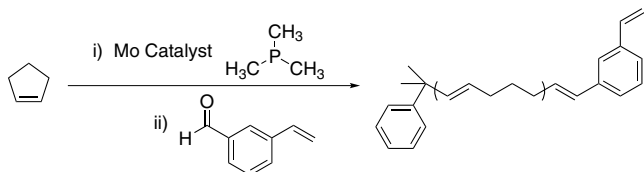
Tech. Note (3)  
Ref. (3)



Tech. Note (4)  
Ref. (4)



Tech. Note (5)  
Ref. (5)



Tech. Note (6)  
Ref. (6)

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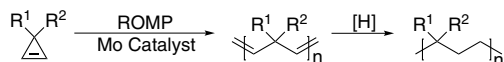
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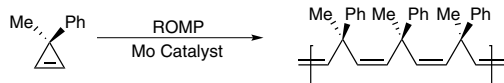
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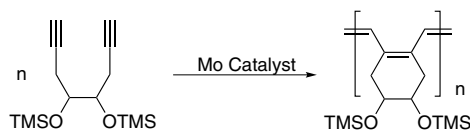
# Schrock Catalysts



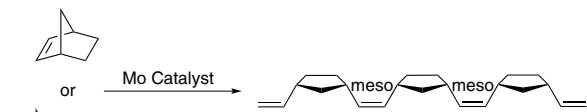
Tech. Note (7)  
Ref. (7)



Tech. Note (8)  
Ref. (8)



Tech. Note (9)  
Ref. (9)



Tech. Note (10)  
Ref. (10)

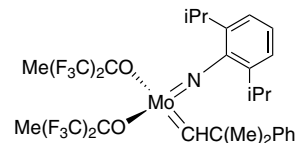
## References:

1. *Macromolecules* **1997**, *30*, 3553.
2. *Macromolecules* **1997**, *30*, 6513.
3. *Macromolecules* **2001**, *34*, 4712.
4. *Angew. Chem. Int. Ed.* **2002**, *41*, 4004.
5. *Chem. Eur. J.* **2007**, *13*, 8985.
6. *Macromolecules* **2008**, *41*, 5283.
7. *Macromolecules* **2008**, *41*, 8405.
8. *Macromolecules* **2010**, *43*, 7515.
9. *Macromolecules* **2011**, *44*, 8380.
10. *Macromolecules* **2015**, *48*, 2493.

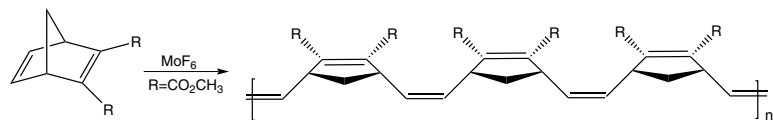
**42-1205** **2,6-Diisopropylphenylimidoneophylidene molybdenum(VI) bis(hexafluoro-t-butoxide) SCHROCK'S CATALYST** (139220-25-0)  
Mo(C<sub>10</sub>H<sub>12</sub>)(C<sub>12</sub>H<sub>17</sub>N)[OC(CH<sub>3</sub>)(CF<sub>3</sub>)<sub>2</sub>]<sub>2</sub>; FW: 765.53; yellow to orange pwdr.  
*air sensitive, moisture sensitive, (store cold)*

## Technical Notes:

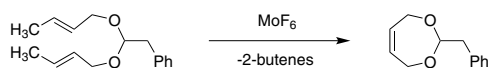
1. Unlike Mo(C<sub>10</sub>H<sub>12</sub>)(C<sub>12</sub>H<sub>17</sub>N)(OC<sub>4</sub>H<sub>9</sub>)<sub>2</sub>, the bis(hexafluoro-t-butoxide) (MoF<sub>6</sub>) derivative will metathesize many ordinary olefins, especially terminal olefins, and will ROMP many norbornene or substituted norbornadiene monomers to give all cis, and often isotactic, polymers.
2. Useful for the "ring-closing" of dienes or the coupling of terminal olefins.
3. Useful for cross-metathesis of aliphatic alkenes with 2-vinyl aromatics.



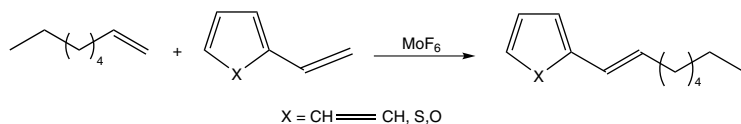
100mg  
500mg  
2g



Tech. Note (1)  
Ref. (1,2)



Tech. Note (2)  
Ref. (3,4)



Tech. Note (3)  
Ref. (6)

## References:

1. *J. Am. Chem. Soc.*, **1994**, *116*, 3414.
2. *J. Am. Chem. Soc.*, **1993**, *115*, 4413.
3. *J. Am. Chem. Soc.*, **1992**, *114*, 5426.
4. *J. Am. Chem. Soc.*, **1992**, *114*, 7324.
5. *Tetrahedron*, **1998**, *54*, 4413. (review article)
6. *J. Mol. Catal. Chem.*, **2002**, *190*, 45.

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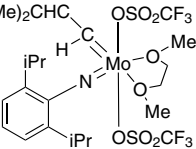
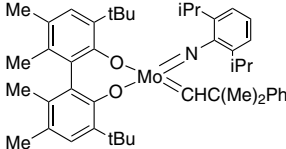
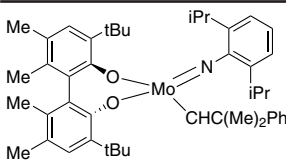
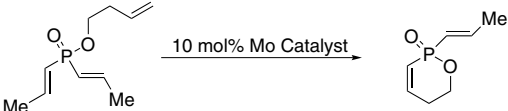
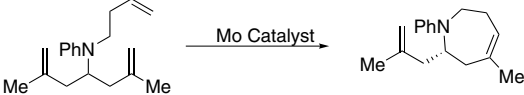
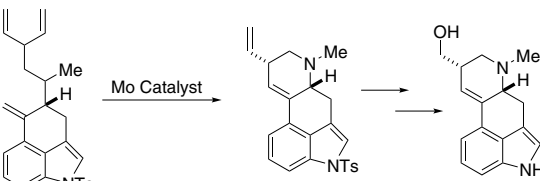
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# Schrock Catalysts

42-1210	<b>2,6-Diisopropylphenylimido neophylidenemolybdenum(VI) bis(trifluoromethanesulfonate) dimethoxyethane adduct (126949-63-1)</b> $\text{Mo}(\text{C}_{10}\text{H}_{12})(\text{C}_{12}\text{H}_{17}\text{N})(\text{OSO}_2\text{CF}_3)_2(\text{C}_4\text{H}_{10}\text{O}_2)$ ; FW: 791.68; yellow to orange powder. <i>air sensitive, moisture sensitive, (store cold)</i> Note: <b>**Limited quantities available**</b>		100mg
<b>Technical Note:</b> 1. Used as a starting material for preparations of various molybdenum metathesis catalysts.			
<b>References:</b>			
1. <i>J. Am. Chem. Soc.</i> , <b>2004</b> , 126, 10945. 2. <i>Organometallics</i> <b>2006</b> , 25, 1412. 3. <i>J. Am. Chem. Soc.</i> <b>2006</b> , 128 16373. 4. <i>Organometallics</i> <b>2008</b> , 27, 6570. 5. <i>Angew. Chem. Int. Ed.</i> , <b>2011</b> , 50, 7829. 6. <i>Organometallics</i> <b>2014</b> , 33, 5334.			
42-1212 amp	<b>2,6-Diisopropylphenylimidoneophylidene[racemic-BIPHEN]molybdenum(VI), min. 97% rac-SCHROCK-HOVEYDA CATALYST (300344-02-9)</b> $\text{Mo}(\text{C}_{10}\text{H}_{12})(\text{C}_{12}\text{H}_{17}\text{N})(\text{C}_{24}\text{H}_{32}\text{O}_2)$ ; FW: 755.93; red xtl. <i>air sensitive, moisture sensitive, (store cold)</i>		100mg 500mg
<b>Technical Note:</b> 1. A ring-closing metathesis catalyst.			
42-1213 amp	<b>2,6-Diisopropylphenylimidoneophylidene [(R)-(+)-BIPHEN]molybdenum(VI), min. 97% (R) SCHROCK-HOVEYDA CATALYST (329735-77-5)</b> $\text{Mo}(\text{C}_{10}\text{H}_{12})(\text{C}_{12}\text{H}_{17}\text{N})(\text{C}_{24}\text{H}_{32}\text{O}_2)$ ; FW: 755.93; red xtl. <i>air sensitive, moisture sensitive, (store cold)</i>		25mg 100mg
<b>Technical Note:</b> 1. Catalyst used for the asymmetric ring-closing metathesis of phosphine oxides.			
		<b>Tech. Note (1)</b> <b>Ref. (1)</b>	
<b>References:</b> 1. <i>Angew. Chem. Int. Ed.</i> <b>2009</b> , 48, 762.			
42-1214 amp	<b>2,6-Diisopropylphenylimidoneophylidene[(S)-(-)-BIPHEN]molybdenum(VI), min. 97% (S) SCHROCK-HOVEYDA CATALYST (205815-80-1)</b> $\text{Mo}(\text{C}_{10}\text{H}_{12})(\text{C}_{12}\text{H}_{17}\text{N})(\text{C}_{24}\text{H}_{32}\text{O}_2)$ ; FW: 755.93; red xtl. <i>air sensitive, moisture sensitive, (store cold)</i>		25mg 100mg
<b>Technical Notes:</b> 1. Catalyst used for the enantioselective ring-closing metathesis of aminobenzenes. 2. Catalyst used for the enantioselective synthesis of (+)-Isolysergol via ring-closing metathesis.			
		<b>Tech. Note (1)</b> <b>Ref. (1,2)</b>	
		<b>Tech. Note (2)</b> <b>Ref. (3)</b>	
<b>References:</b> 1. <i>J. Am. Chem. Soc.</i> , <b>2002</b> , 124, 6991. 2. <i>Nature</i> , <b>2008</b> , 456, 933. 3. <i>Org. Lett.</i> , <b>2010</b> , 12, 2610.			

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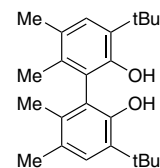
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# BIPHEN Ligands

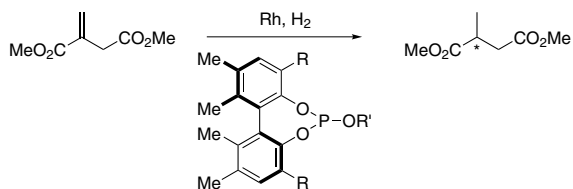
**08-2045** racemic-5,5',6,6'-Tetramethyl-3,3'-di- t-butyl-1,1'-biphenyl-2,2'-diol, 99% rac-BIPHEN H<sub>2</sub> (101203-31-0)  
C<sub>24</sub>H<sub>34</sub>O<sub>2</sub>; FW: 354.54; white to off-white xtl.; m.p. 163-165°



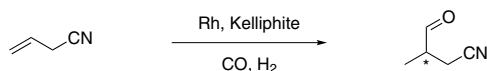
5g  
25g

**Technical Notes:**

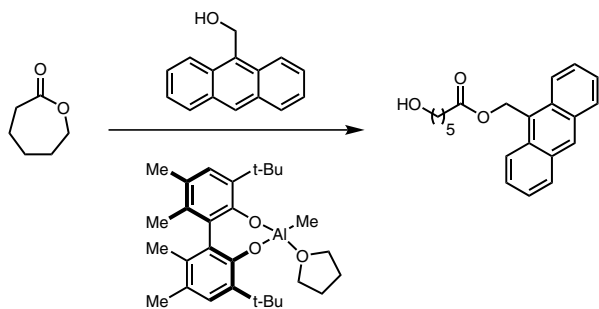
- Used as a ligand backbone for metathesis catalysts.
- Used as a ligand backbone in catalytic asymmetric hydrogenation.
- Used as a ligand backbone for asymmetric hydroformylation of allyl cyanide.
- Used as a ligand backbone for phosphoramidite ligands in the asymmetric Rh-catalyzed [2+2+2] cycloaddition.
- Used as a ligand backbone for the ring-opening polymerization of cyclic esters.



Tech. Note (2)  
Ref. (2)



Tech. Note (3)  
Ref. (3)



Tech. Note (5)  
Ref. (5,6)

**References:**

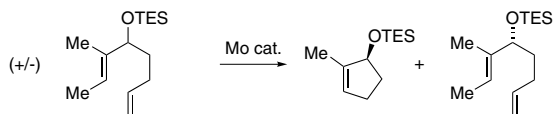
- See 42-1212.
- Org. Lett.*, **2003**, 5, 3831
- J. Org. Chem.*, **2004**, 69, 4031
- Angew. Chem. Int. Ed.*, **2009**, 48, 2379
- J. Polym. Sci. Pol. Chem.*, **2010**, 48, 3564
- J. Organomet. Chem.*, **2012**, 716, 175

**08-2046** (R)-(+)-5,5',6,6'-Tetramethyl-3,3'-di-t-butyl-1,1'- biphenyl-2,2'-diol, 99% (R)-BIPHEN H<sub>2</sub> (329735-68-4)  
C<sub>24</sub>H<sub>34</sub>O<sub>2</sub>; FW: 354.54; white powdr.

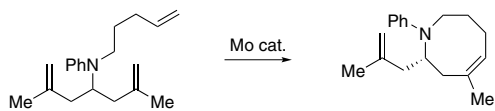
100mg  
500mg  
2g

**Technical Note:**

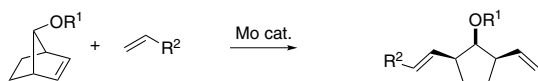
- The new Schrock-Hoveyda, chiral molybdenum catalyst can effect various modes of enantioselective olefin metathesis with excellent selectivity.
  - Kinetic resolution. Ref. (1)
  - Desymmetrization of tri- or tetraenes. Ref. (2)
  - Asymmetric Ring-Opening metathesis/Ring-Closing metathesis. Ref. (5)



Ref. (1)



Ref. (2)



Ref. (5)

**References:**

- J. Am. Chem. Soc.*, **1998**, 120, 4041
- J. Am. Chem. Soc.*, **2005**, 127, 8526
- Chem. Eur. J.*, **2001**, 7, 945, review
- Angew. Chem. Int. Ed.*, **2003**, 42, 4592, review
- J. Am. Chem. Soc.*, **1999**, 121, 11603
- J. Am. Chem. Soc.*, **2006**, 128, 5153
- Angew. Chem. Int. Ed.*, **2007**, 46, 4534

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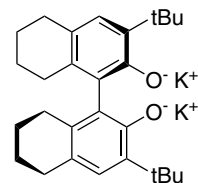
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## BIPHEN Ligands

**08-2047** (S)-(-)-5,5',6,6'-Tetramethyl-3,3'-di-t-butyl-1,1'-biphenyl-2,2'-diol, 99% (S)-BIPHEN H<sub>2</sub> (205927-03-3)  
C<sub>24</sub>H<sub>34</sub>O<sub>2</sub>; FW: 354.54; white powdr.



100mg  
500mg  
2g

Technical Note:

- See 08-2046.

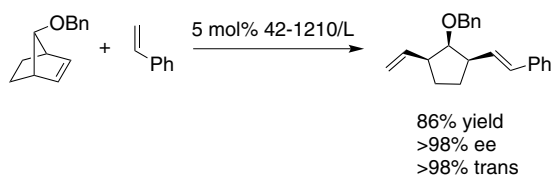
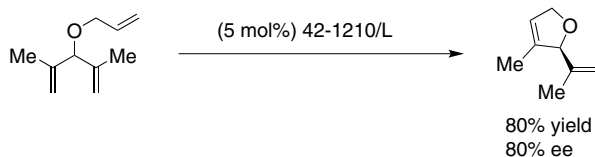
## Other Ligands Available: For Use with 42-1210 Catalyst

**19-1600** (R)-(-)-5,5',6,6',7,7',8,8'-Octahydro-3,3'-di-t-butyl-1,1'-bi-2-naphthol, dipotassium salt (350683-75-9)  
C<sub>28</sub>H<sub>36</sub>K<sub>2</sub>O<sub>2</sub>; FW: 482.80; cream-colored powdr.  
*moisture sensitive*

100mg  
500mg

Technical Note:

- Ligand used in combination with 42-1210 for asymmetric ring closing and ring opening metathesis.



References:

- Angew. Chem. Int. Ed.*, **2001**, *40*, 8, 1452

**19-1601** (S)-(+)-5,5',6,6',7,7',8,8'-Octahydro-3,3'-di-t-butyl-1,1'-bi-2-naphthol, dipotassium salt  
C<sub>28</sub>H<sub>36</sub>K<sub>2</sub>O<sub>2</sub>; FW: 482.80; cream-colored powdr.  
*moisture sensitive*

100mg  
500mg

Technical Note:

- See 19-1600.

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Germany  
Tel: 0 78 51/ 7 58 79  
Email: [info.europe@strem.com](mailto:info.europe@strem.com)

**Strem Chemicals UK Ltd.**  
An Independent Distributor of Strem Chemicals Products  
Newton Hall, Town Street  
Newton, Cambridge  
England CB22 7ZE  
Tel: 0845 643 7263  
Fax: 0845 643 7362  
Email: [enquiries@strem.co.uk](mailto:enquiries@strem.co.uk)