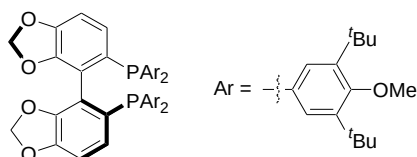
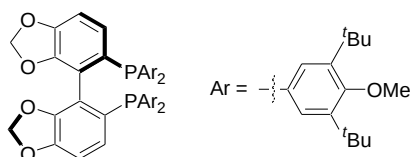


DTBM-SEGPPOS®

DTBM-SEGPPOS provides extreme sterically demanding environment around the metal center. One of the most remarkable results is asymmetric hydrogenation of 2-substituted 3-oxocarboxylates, accompanied by dynamic kinetic resolution. Due to its unique structural and electronic features, many complexes of DTBM-SEGPPOS such as gold, palladium, and especially copper complexes show excellent activities and enantioselectivities in a variety of asymmetric reactions.

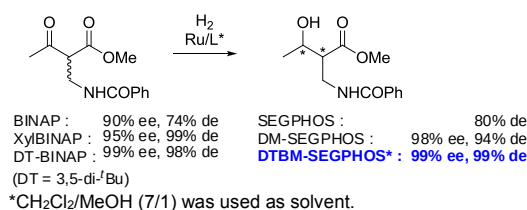
"SEGPPOS" is a registered trademark of Takasago International Corporation in Japan and other countries.

(R)-(-)-DTBM-SEGPPOS		(S)-(+)-DTBM-SEGPPOS	
CAS No.	566940-03-2	CAS No.	210169-40-7
Formula	C ₇₄ H ₁₀₀ O ₈ P ₂	Formula	C ₇₄ H ₁₀₀ O ₈ P ₂
M.W.	1179.53	M.W.	1179.53



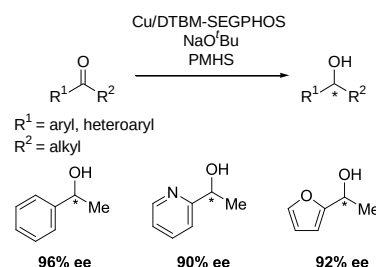
Tech Note

1 Ru Catalyzed Asymmetric Hydrogenation of α -Substituted β -Keto Esters Accompanied with Dynamic Kinetic Resolution



Saito, T.; Yokozawa, T.; Ishizaki, T.; Moroi, T.; Sayo, N.; Miura, T.; Kumobayashi, H. *Adv. Synth. Catal.* **2001**, 343, 264.
 doi: [10.1002/1615-4169\(20010330\)343:3<264::AID-ADSC264>3.0.CO;2-T](https://doi.org/10.1002/1615-4169(20010330)343:3<264::AID-ADSC264>3.0.CO;2-T)

2 Cu Catalyzed Asymmetric Reaction: 2.1 Hydrosilylation of Aryl Alkyl Ketones & Heteroaryl Alkyl Ketones

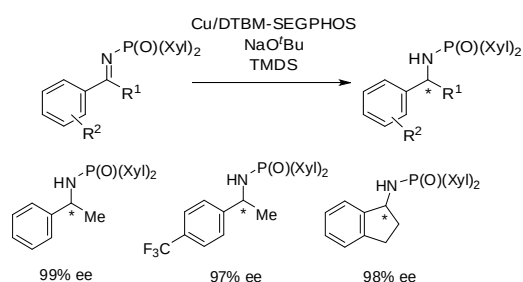


Lipshutz, B. H. *Org. Lett.* **2002**, 4, 4045.
 doi: [10.1021/ol026755n](https://doi.org/10.1021/ol026755n)
 Lipshutz, B. H. *J. Am. Chem. Soc.* **2003**, 125, 8779.
 doi: [10.1021/ja021391f](https://doi.org/10.1021/ja021391f)
 Lipshutz, B. H. *Org. Lett.* **2006**, 8, 2969.
 doi: [10.1021/ol060854+](https://doi.org/10.1021/ol060854+)



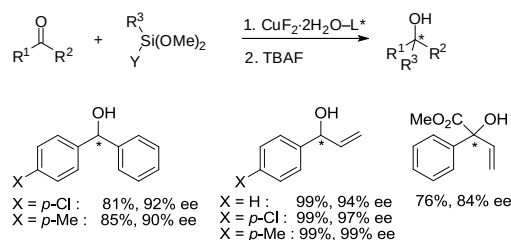
finechemicals@takasago.com

2.2 Hydrosilylation of Activated Imines



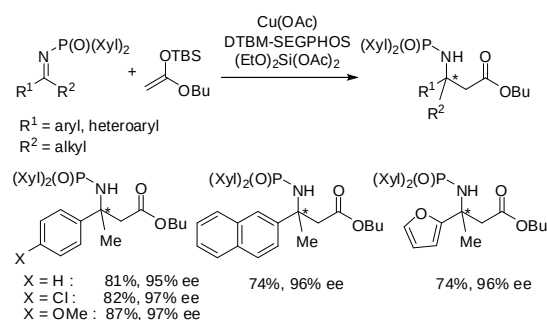
Lipshutz, B. H.; Shimizu, H. *Angew. Chem. Int. Ed.* **2004**, *43*, 2228.
doi: [10.1002/anie.200353294](https://doi.org/10.1002/anie.200353294)

2.3 1,2-Addition of Vinyl Silane and Phenyl Silanes to Aldehydes and Activated Ketones



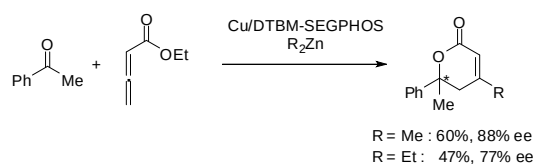
Kanai, M.; Shibasaki, M. *J. Am. Chem. Soc.* **2005**, *127*, 4138.
doi: [10.1021/ja0507362](https://doi.org/10.1021/ja0507362)

2.4 1,2-Addition of Silyl Enolates to Ketimines



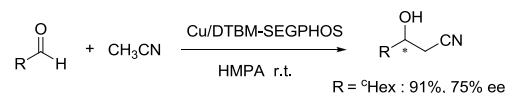
Kanai, M.; Shibasaki, M. *J. Am. Chem. Soc.* **2007**, *129*, 500.
doi: [10.1021/ja068226a](https://doi.org/10.1021/ja068226a)

2.5 Reductive Aldol Reaction



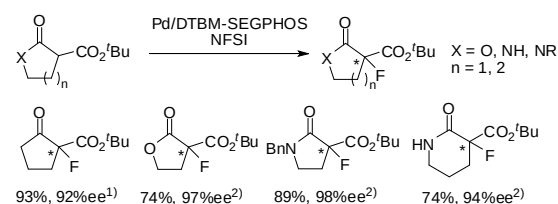
Kanai, M.; Shibasaki, M. *J. Am. Chem. Soc.* **2006**, *128*, 14440. doi: [10.1021/ja0652565](https://doi.org/10.1021/ja0652565)

2.6 Direct Catalytic Enantioselective Nitrile Aldol Reaction



Kanai, M.; Shibasaki, M. *Org. Lett.* **2005**, *7*, 3757.
doi: [10.1021/ol051423e](https://doi.org/10.1021/ol051423e)
US7355061B (Takasago)

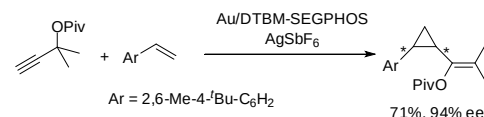
3 Pd Catalyzed Asymmetric Reaction: 3.1 Fluorination



Sodeoka, M. *J. Am. Chem. Soc.* **2002**, *124*, 14530.
doi: [10.1021/ja028464f](https://doi.org/10.1021/ja028464f)
Sodeoka, M. *J. Org. Chem.* **2007**, *72*, 246.
doi: [10.1021/jo062048m](https://doi.org/10.1021/jo062048m)

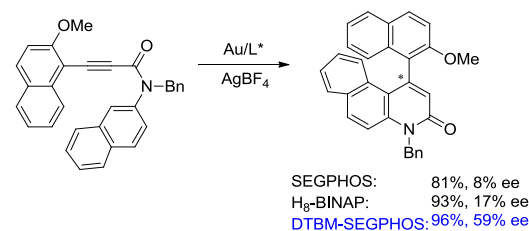
4 Au Catalyzed Asymmetric Reaction:

4.1 Cyclopropanation



Toste, F. D. *J. Am. Chem. Soc.* **2005**, *127*, 18002.
doi: [10.1021/ja0552500](https://doi.org/10.1021/ja0552500)

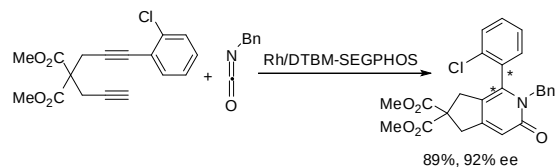
4.2 Cycloisomerization



Tanaka, K. *J. Org. Chem.* **2011**, *7*, 944.
doi: [10.3762/bjoc.7.105](https://doi.org/10.3762/bjoc.7.105)

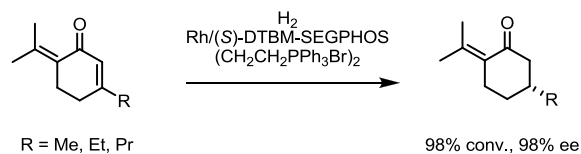
5 Rh Catalyzed Asymmetric Reactions:

5.1 Cyclization of Alkyne with Isocyanate



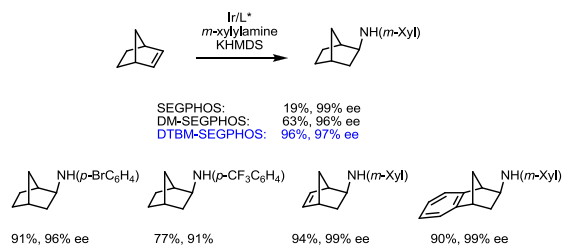
Tanaka, K. *Org. Lett.* **2005**, 7, 4737
doi: [10.1021/ol052041b](https://doi.org/10.1021/ol052041b)

5.2 Hydrogenation of Cyclic Enones



Ohshima, T.; Tadaoka, H.; Hori, K.; Sayo, N.; Mashima, K. *Chem. Eur. J.* **2008**, 14, 2060.
doi: [10.1002/chem.200701505](https://doi.org/10.1002/chem.200701505)

6 Ir Catalyzed Asymmetric Hydroamination



Hartwig, J. F. *J. Am. Chem. Soc.* **2008**, 130, 12220.
doi: [10.1021/ja803523z](https://doi.org/10.1021/ja803523z)