

Synthesis Alerts is a monthly feature to help readers of *Synthesis* keep abreast of new reagents, catalysts, ligands, chiral auxiliaries, and protecting groups which have appeared in the recent literature. Emphasis is placed on new developments but established reagents, catalysts etc are also covered if they are used in novel and useful reactions. In each abstract, a specific example of a transformation is given in a concise format designed to aid visual retrieval of information.

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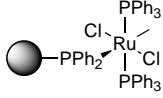
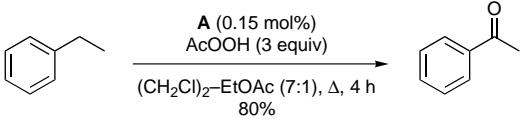
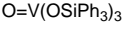
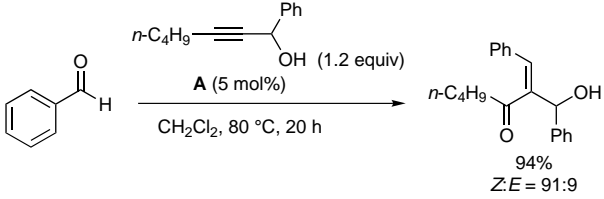
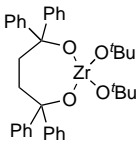
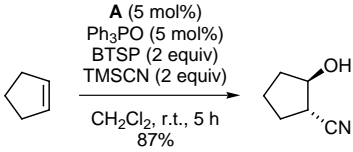
Fabrize Anizon, Robert Chow, Jennifer Delaney, Hassan Mamdani, Marcel de Puit and Sukhjinder Uppal, Department of Chemistry, Leeds University, Leeds, LS2 9JT, UK.

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Synthesis 2001, No. 9, 29 06 2001. Article Identifier: 1437-210X,E;2001,0,09,1427,1430,ftx,en;X00901SS.pdf.
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ISSN 0039-7881

The journals regularly covered by the abstractors are:

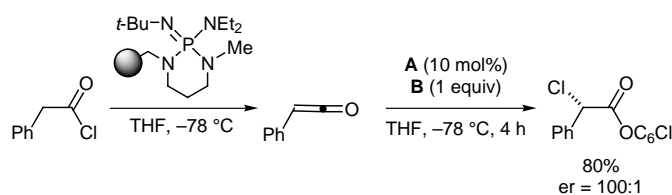
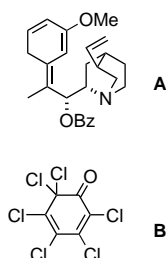
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Synlett
Synthesis
Tetrahedron
Tetrahedron Asymmetry and Tetrahedron Letters

Resin-bound Ruthenium Phosphine Complex		Catalyst
<p>The title reagent catalyses transfer hydrogenation and hydrocarbon oxidation reactions.</p>	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">10 examples (yields 40–89%).</p>
<p>Leadbeater, N. E. <i>J. Org. Chem.</i> 2001, 66, 2168.</p>		
Tris(triphenylsilyl)vanadate		Catalyst
<p>The title reagent catalyses the aldol-type addition of propargyl alcohols to aldehydes.</p>	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">10 examples (yields 42–95%).</p>
<p>Trost, B. M.; Oi, S. <i>J. Am. Chem. Soc.</i> 2001, 123, 1230.</p>		
Zirconium Catalyst		Catalyst
<p>Reagent A catalyses the one-pot synthesis of β-cyanohydrins from olefins.</p>	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">15 examples (yields 53–96%).</p>
<p>Yamasaki, S.; Kanai, M.; Shibasaki, M. <i>J. Am. Chem. Soc.</i> 2001, 123, 1256.</p>		

Benzoylquinine (BQ)/Perhaloquinone Derived Reagent

Catalyst

Reagent A catalyses the reactions of acyl halides with halogenating agent B to form α -haloesters.

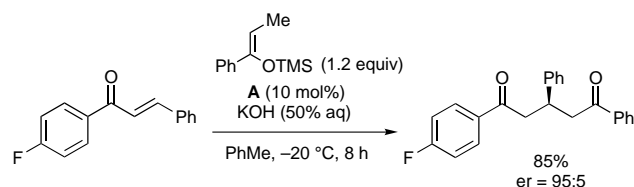
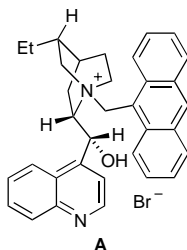


Wack, H.; Taggi, A. E.; Hafez, A. M.; Drury III, W. J.; Lectka, T. *J. Am. Chem. Soc.* **2001**, *123*, 1531.

N-(9-Anthracenylmethyl)dihydrocinchonidinium Bromide

Catalyst

The title reagent catalyses the enantio- and diastereoselective Michael reaction of silyl enol ethers and chalcones.



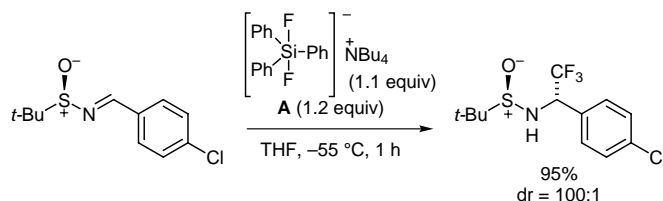
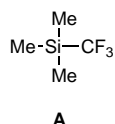
Zhang, F.-Y.; Corey, E. J. *Org. Lett.* **2001**, *3*, 639.

11 examples (yields 79–92%, %ee 91–95%).

Trimethyl(trifluoromethyl)silane

Catalyst

The title reagent is used for the stereoselective nucleophilic trifluoromethylation of *N*-(*tert*-butylsulfanyl)imines.



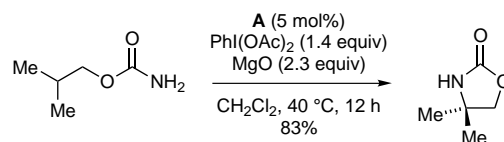
Prakash, G. K. S.; Mandal, M.; Olah, G. A. *Angew. Chem. Int. Ed.* **2001**, *40*, 589.

12 examples (yields 75–95%, %de 80–99%).

Rhodium(II) Acetate Dimer

Catalyst

The title reagent catalyses the C-H insertion reaction for the oxidative conversion of carbamates to oxazolidinones.



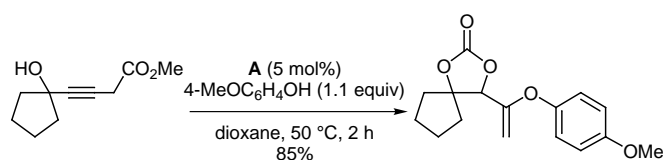
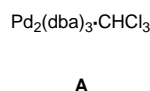
Espino, C. G.; Du Bois, J. *Angew. Chem. Int. Ed.* **2001**, *40*, 598.

5 examples (yields 77–83%).

Tris(dibenzylideneacetone)dipalladium(0) Chloroform Adduct

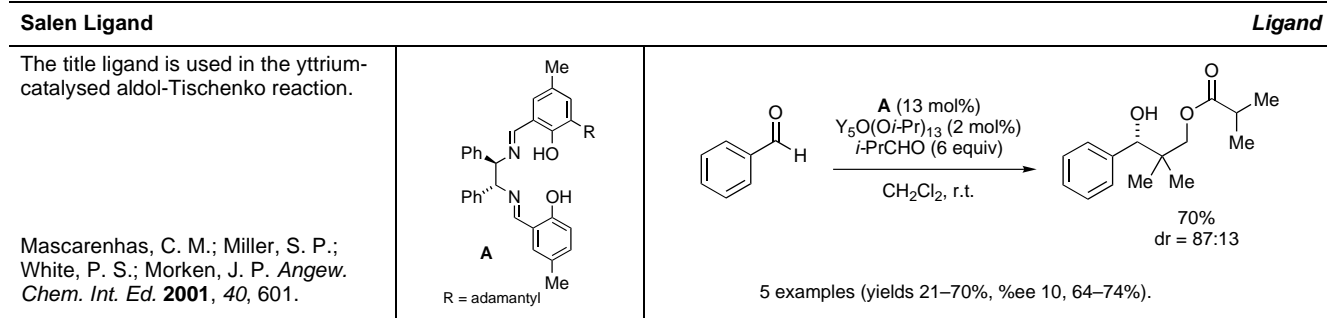
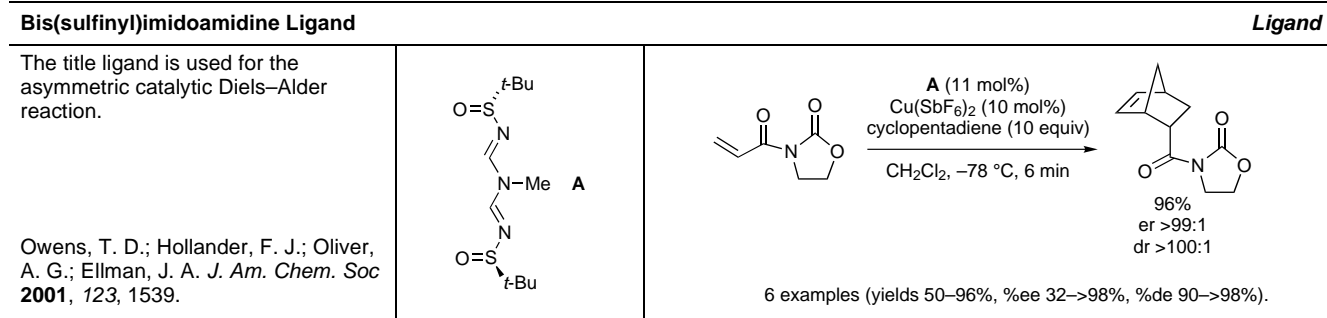
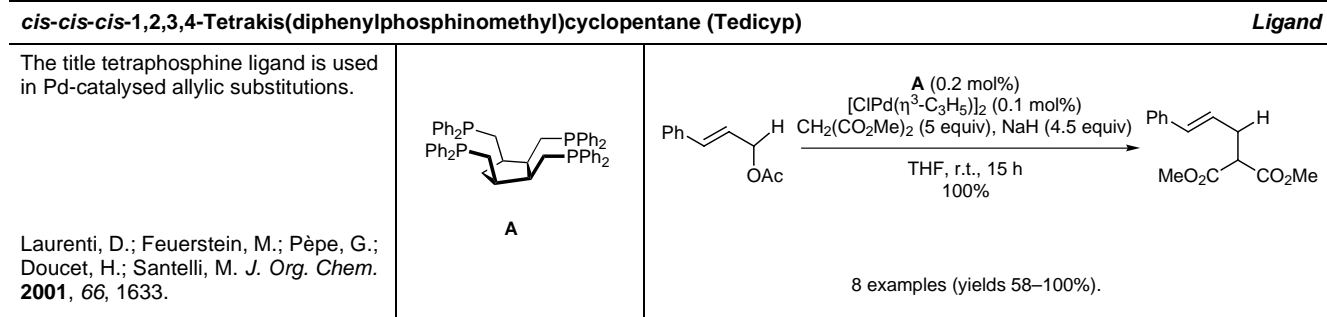
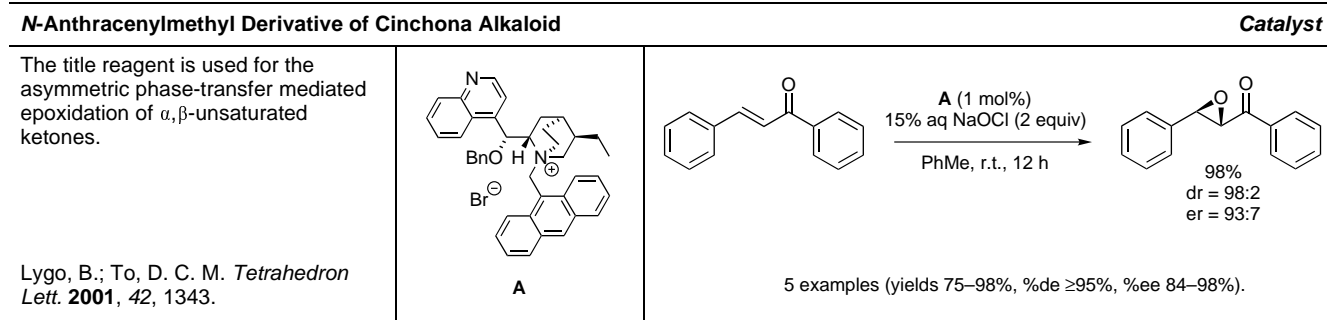
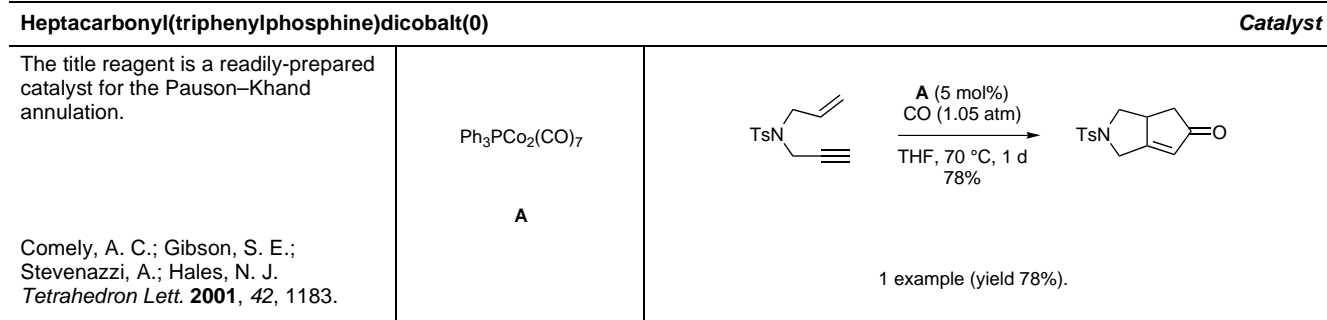
Catalyst

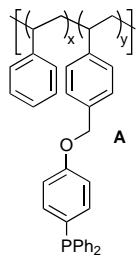
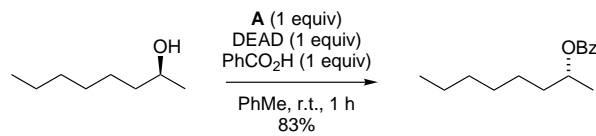
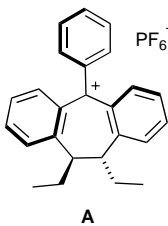
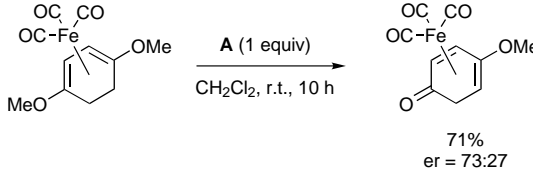
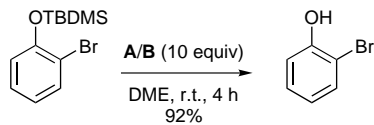
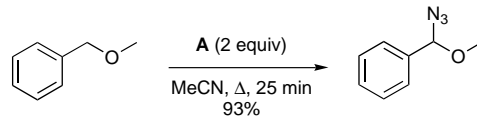
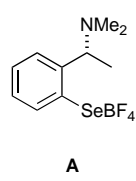
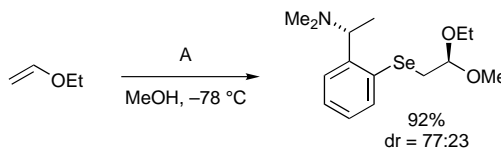
The title reagent catalyses the domino reaction of 4-methoxycarbonyloxy-2-butyn-1-ols with phenols to form cyclic carbonates, with the recycling of carbon dioxide.



Yoshida, M.; Ihara, M. *Angew. Chem. Int. Ed.* **2001**, *40*, 616.

14 examples (yields 36–91%).



Solid-Supported Triphenylphosphine		Reagent
The title reagent is used in the Mitsunobu reaction of alcohols.		 <p>5 examples (yields 71–88%).</p>
Charette, A. B.; Janes, M. K.; Boezio, A. A. <i>J. Org. Chem.</i> 2001 , 66, 2178.		
Chiral Carbenium Ion		Reagent
The title reagent is employed for enantioselective hydride abstraction.		 <p>2 examples (yields 65–71%, %ee 43–53%).</p>
Magdziak, D.; Pettus, L. H.; Pettus, T. R. <i>Org. Lett.</i> 2001 , 3, 557.		
Potassium Fluoride/Aluminium Oxide		Reagent
The title reagent pair mediates the deprotection of aryl silyl ethers and the preparation of SEM ethers.	<p>KF</p> <p>A</p> <p>Al₂O₃</p> <p>B</p>	 <p>6 examples of deprotection of silyl ethers (yields 87–95%) and 7 examples of SEM ether preparation (yields 0, 88–96%).</p>
Blass, B. E.; Harris, C. L.; Portlock, D. E. <i>Tetrahedron Lett.</i> 2001 , 42, 1611.		
Iodonium Azide		Reagent
The title reagent is used for the azidation of benzyl ethers.	<p>IN₃</p> <p>A</p>	 <p>5 examples (yields 74–98%).</p>
Viuf, C.; Bols, M. <i>Angew. Chem. Int. Ed.</i> 2001 , 40, 623.		
(R)-(+)-N,N-Dimethyl-1-phenethylamine Derived Diselenide		Reagent
The title reagent is used for the asymmetric methoxyselenenylation of alkyl vinyl ethers.		 <p>11 examples (yields 53–92%, %de 16–80%).</p>
Uchiyama, M.; Satoh, S.; Ohta, A. <i>Tetrahedron Lett.</i> 2001 , 42, 1559.		