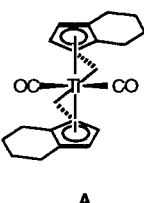
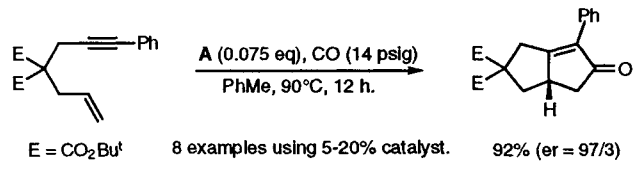
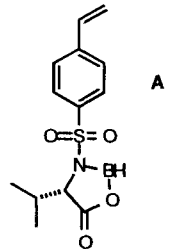
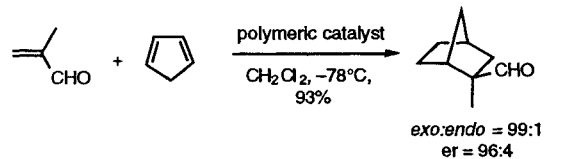
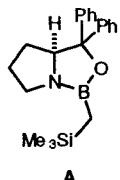
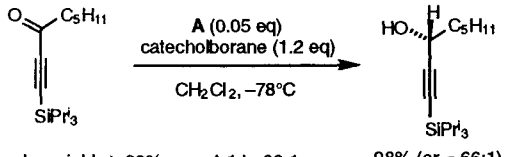


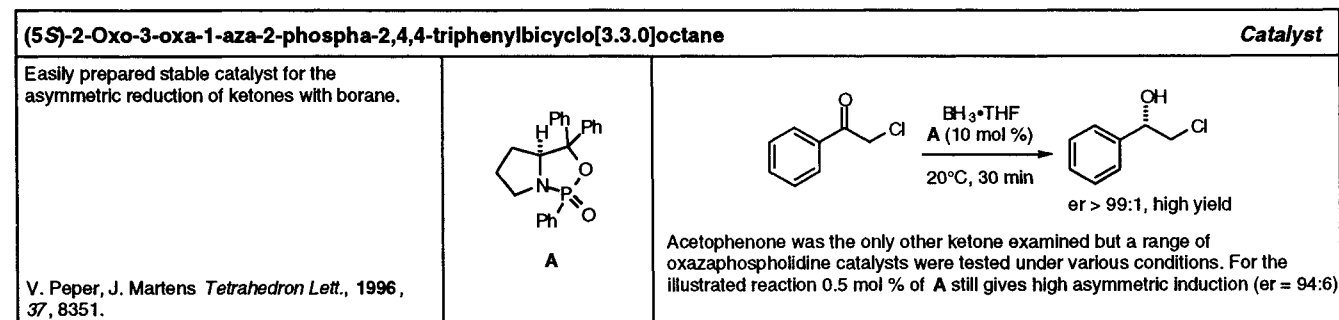
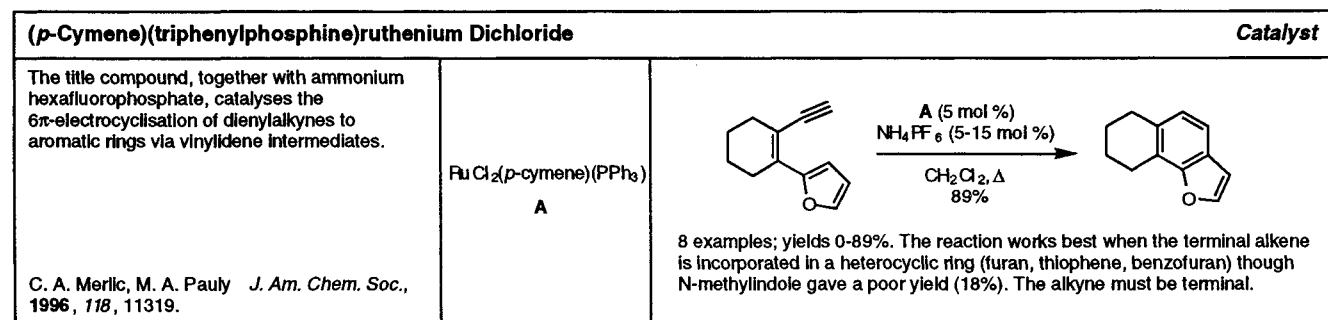
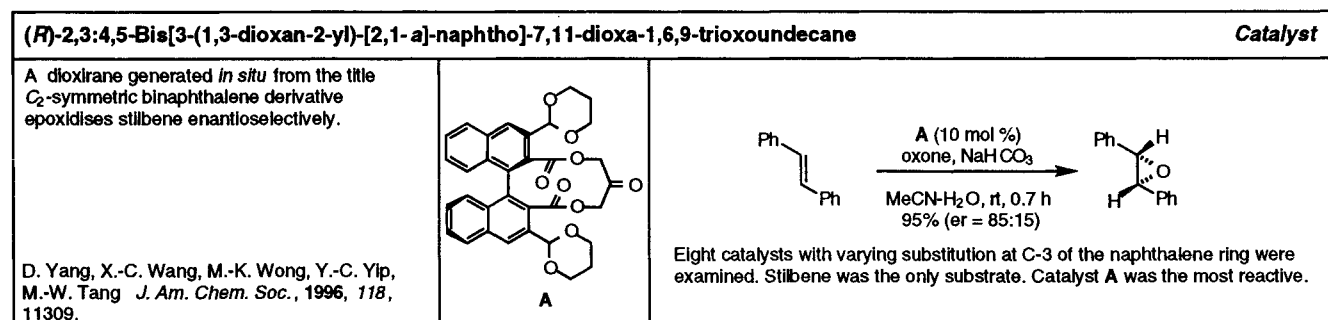
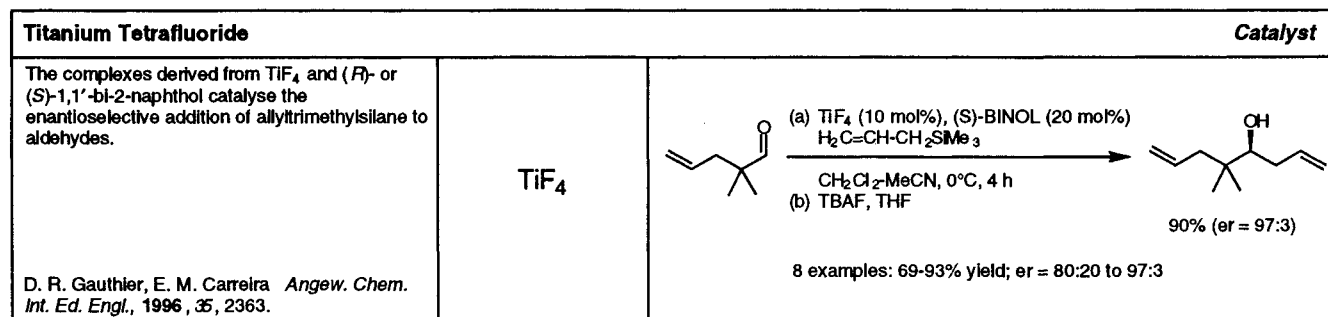
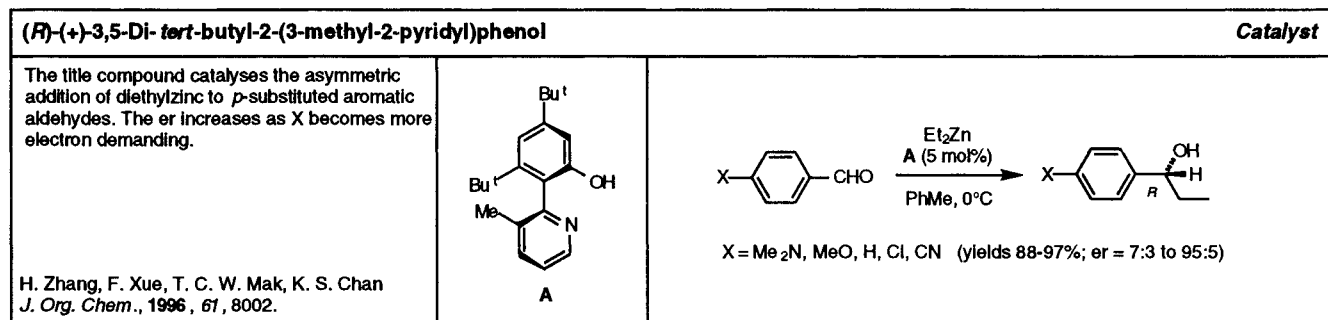
SYNTHESIS ALERTS

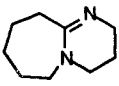
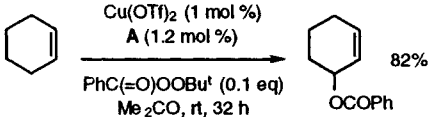
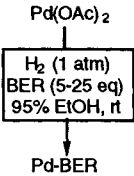
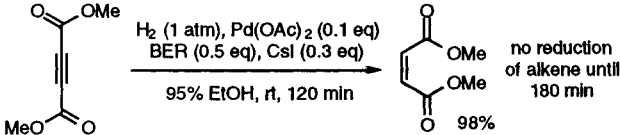
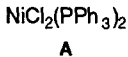
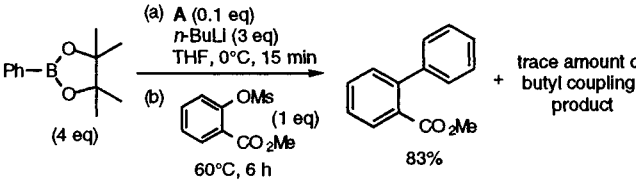
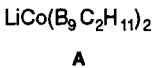
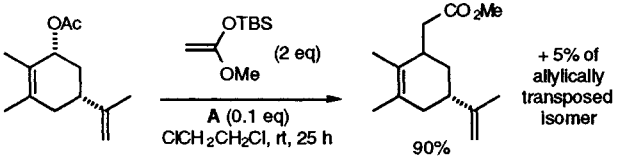
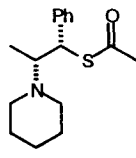
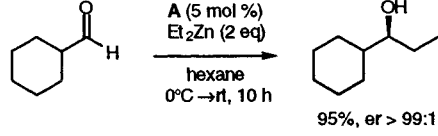
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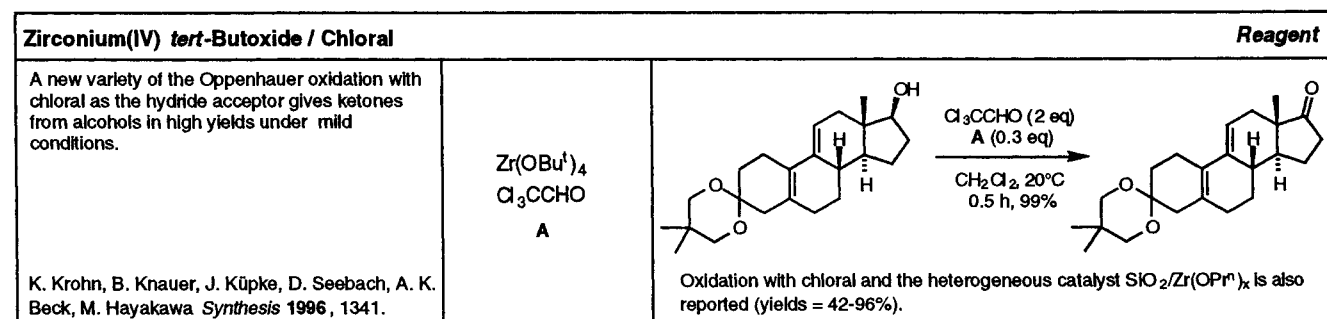
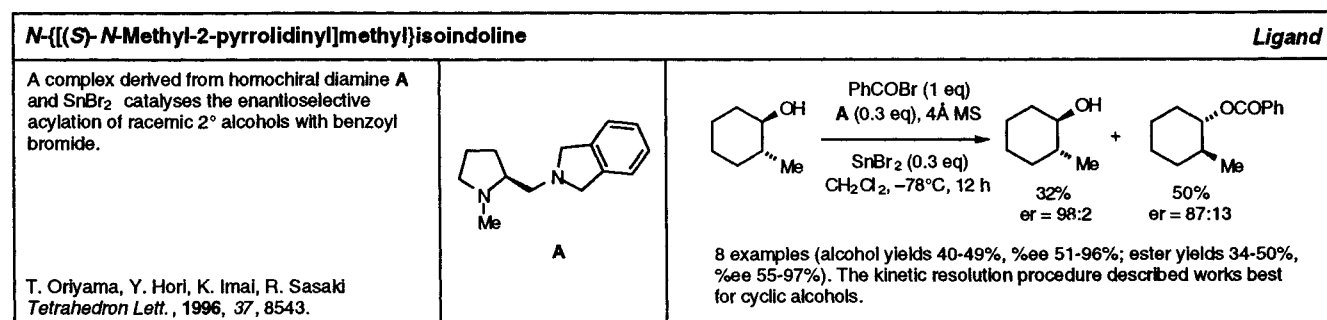
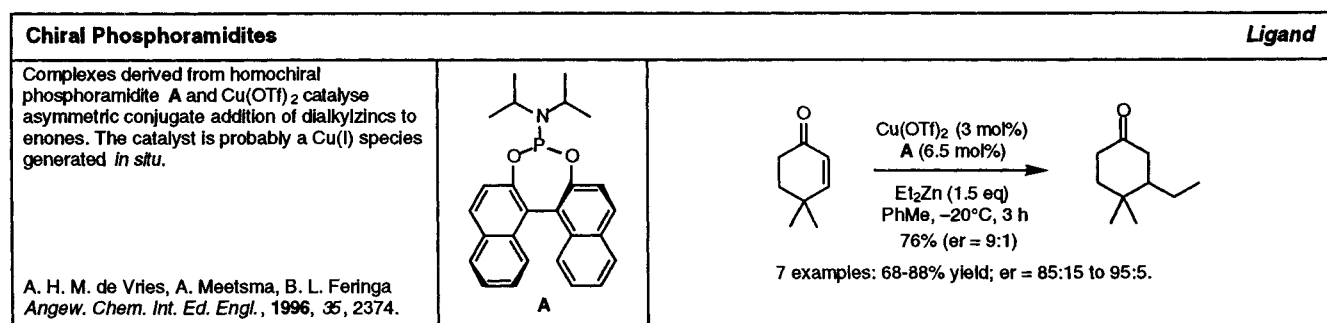
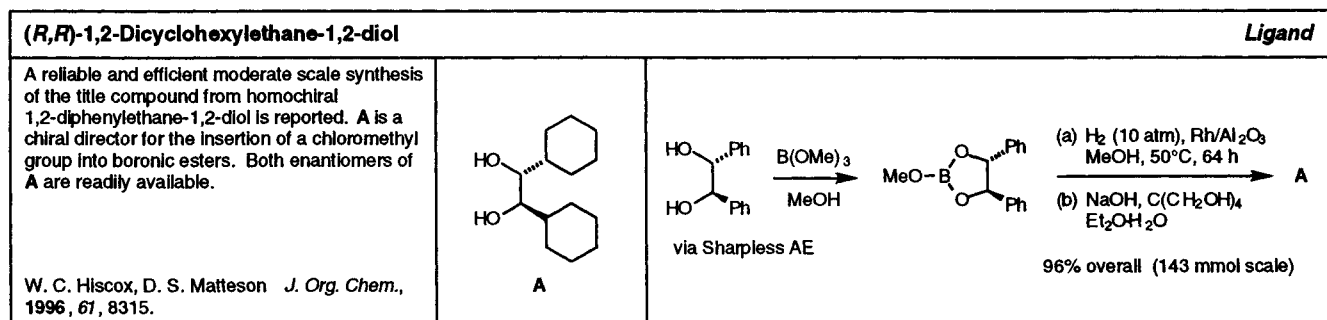
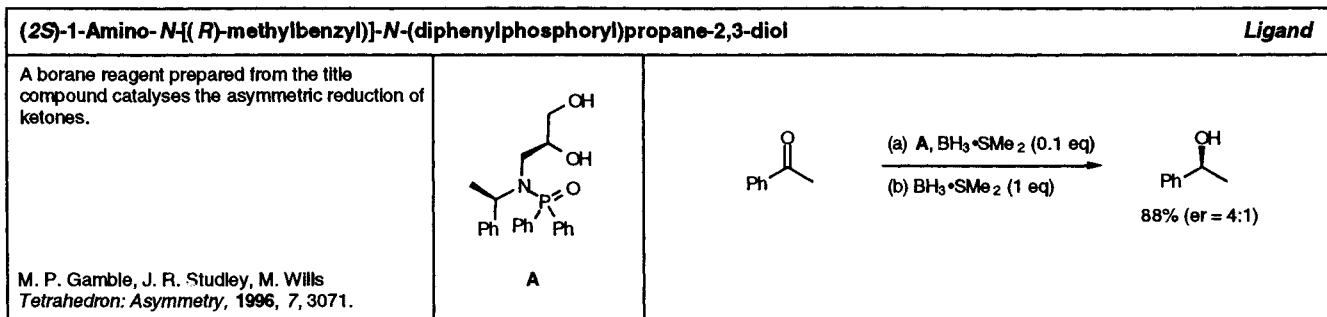
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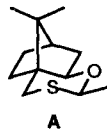
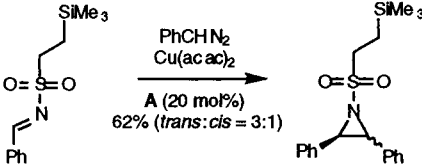
(<i>S,S</i>)-Ethanobis(tetrahydroindene)dicarbonyl Titanium(II)		Catalyst
First catalytic asymmetric Pauson-Khand type cyclization. F. A. Hicks, S. L. Buchwald <i>J. Am. Chem. Soc.</i> , 1996 , <i>118</i> , 11688.	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">E = CO₂But 8 examples using 5-20% catalyst. 92% (er = 97/3)</p>
Polymeric Oxazaborolidinone Catalyst		Catalyst
Crosslinked polymers prepared from the monomer A catalyze the asymmetric Diels-Alder reaction between methacrolein and cyclopentadiene. K. Kamahori, S. Itsuno <i>J. Org. Chem.</i> , 1996 , <i>61</i> , 8321.	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">The nature of the other monomers that make up the cross-linked polymer have a significant effect on the outcome of the reaction. Five catalyst systems examined.</p>
(<i>S</i>)-3,3-Diphenyl-1-[(trimethylsilyl)methyl]tetrahydro-1<i>H</i>,3<i>H</i>-pyrrolo[1,2-<i>c</i>][1,3,2]oxazaborole		Catalyst
The title compound catalyses the enantioselective reduction of α,β -ynones using catecholborane as the stoichiometric reductant. Enantioselectivity is dependent on the size of the boron substituent. C. J. Helal, P. A. Magriotis, E. J. Corey <i>J. Am. Chem. Soc.</i> , 1996 , <i>118</i> , 10938.	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">12 examples; yields \geq 90%; er = 4:1 to 66:1 98% (er = 66:1)</p>

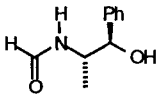
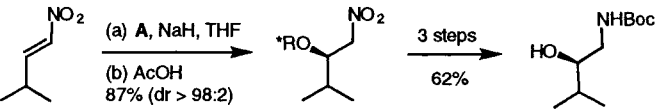


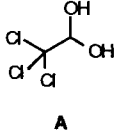
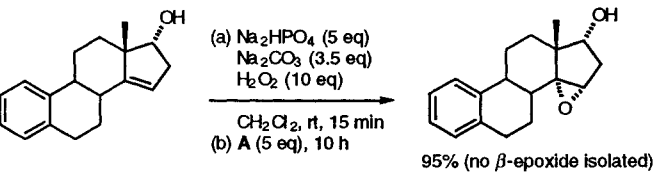
1,8-Diazabicyclo[5.4.0]undec-7-ene / Copper (II) Triflate		Catalyst
<p>A complex derived from $\text{Cu}(\text{OTf})_2$ and DBU (or DBN) catalyses the allylic oxidation of alkenes by <i>tert</i>-butyl perbenzoate.</p> <p>G. Sekar, A. DattaGupta, V. K. Singh <i>Tetrahedron Lett.</i>, 1996, 37, 8435.</p>	 <p style="text-align: center;">A</p>	 <p>82%</p> <p>18 examples of the oxidation of a variety of simple alkenic hydrocarbons (yields 26-80%). In the absence of DBU or DBN very little if any reaction occurs.</p>
Palladium on Borohydride Exchange Resin (BER)		Catalyst
<p>Pd-BER (A) in the presence of CsI acts as a semihydrogenation catalyst for acetylenes.</p> <p>N. M. Yoon, K. B. Park, H. J. Lee, J. Choi <i>Tetrahedron Lett.</i>, 1996, 37, 8527.</p>	 <p style="text-align: center;">A</p>	 <p>98%</p> <p>9 well chosen varied examples (yields 97-100%). Terminal acetylenes can be semihydrogenated with only 1 mol % $\text{Pd}(\text{OAc})_2$ / 0.25 eq BER. In each case any reduction of the product alkene commences well after the completion of acetylene semihydrogenation.</p>
Bis(triphenylphosphine)nickel(II) Chloride		Catalyst
<p>The title compound catalyses coupling of aryl mesylates with lithium arylborates.</p> <p>Y. Kobayashi, R. Mizojiri <i>Tetrahedron Lett.</i>, 1996, 37, 8531.</p>	 <p style="text-align: center;">A</p>	 <p>83%</p> <p>8 examples (yields 80-95%). In each case the aryl mesylate has an electron withdrawing substituent.</p>
Lithium Cobalt-Bisdicarbollide		Catalyst
<p>Superior catalyst for the nucleophilic substitution of allylic acetates.</p> <p>P. A. Grieco, W. J. DuBay, L. J. Todd <i>Tetrahedron Lett.</i>, 1996, 37, 8707.</p>	 <p style="text-align: center;">A</p>	 <p>90%</p> <p>12 examples (yields 71-99%).</p>
(1S,2R)-2-(N-Piperidinyl)-1-phenylpropane-1-thiol Acetate		Catalyst
<p>The title compound [prepared from (+)-norephedrine] catalyses the asymmetric addition of diethylzinc to aldehydes.</p> <p>M.-J. Jin, S.-J. Ahn, K.-S. Lee <i>Tetrahedron Lett.</i>, 1996, 37, 8767.</p>	 <p style="text-align: center;">A</p>	 <p>95%, er > 99:1</p> <p>5 examples (yields 95-100%, er > 99:1).</p>

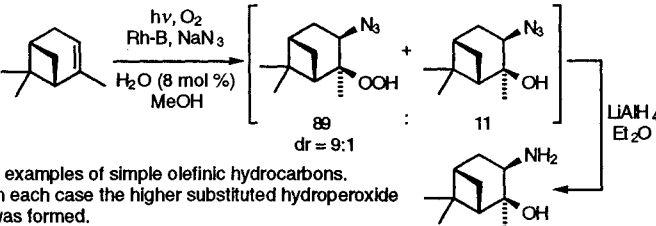


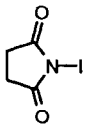
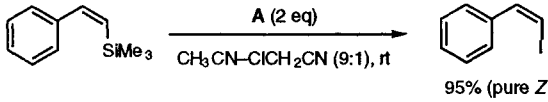
(2,7-Dimethyl-1,8-biphenylenedioxy)bis(dimethylaluminum)		Reagent
Directed aldol reactions of enol silanes, conjugate addition reactions of silyl ketene acetals, reduction reactions using Bu_3SnH , and Claisen rearrangements of allyl vinyl ethers are induced using the title bidentate Lewis acid.		
T. Ooi, M. Takahashi, K. Maruoka <i>J. Am. Chem. Soc.</i> , 1996 , <i>118</i> , 11307.	A	87%
[(Trimethylsilyl)methyl]copper(I)		Reagent
Reaction of organolithium reagents with the title compound gives mixed organocuprates which are highly reactive, thermally stable, and efficient in the transfer of the alkyl group. The byproduct on workup is tetramethylsilane.	$\text{Me}_3\text{SiCH}_2\text{Cu}$	
Preparation: J. A. J. Jarvis, R. Pearce, M. F. Lappert <i>J. Chem. Soc., Dalton Trans.</i> , 1977 , 999.	A	98%
S. H. Bertz, M. Ericksson, G. Miao, J. P. Snyder <i>J. Am. Chem. Soc.</i> , 1996 , <i>118</i> , 10906.		Good rate and stability also observed for the β -silyl organocuprates of the type $\text{RCu}[\text{N}(\text{SiMe}_3)_2]\text{Li}$ and $\text{RCu}(\text{SiMe}_3)\text{Li}$.
Diisopropoxy(η^2-propene)titanium		Reagent
The title compound, prepared by reaction of $\text{Ti}(\text{OPr})_4$ with 2 PrMgCl , reacts with alka-3,4-dienyl carbonates via an intramolecular nucleophilic acyl substitution reaction to afford alkenyltitanium compounds.		
Y. Yoshida, S. Okamoto, F. Sato <i>J. Org. Chem.</i> , 1996 , <i>61</i> , 7826.	A	55%
		9 examples; yields 49-88%. 3 examples failed.
6-(Methylsulfinyl)hexanoic Acid		Reagent
The title compound serves as a substitute for DMSO in Swern oxidations. The resultant thioether is odourless and can be recovered. The carboxyl group can be used to tether the reagent to a solid support.		
Y. Liu, J. C. Vederas <i>J. Org. Chem.</i> , 1996 , <i>61</i> , 7856.	A	96%
		6 examples; yields 31-94%.
(R)-4,9-Dimethyl-4,5,9,10-tetrahydro-3H,8H-naphtho[2.1-f:1'2'-h]-1,2,4,11-tetraazacyclododecine-5,8-dione		Reagent
The homochiral azodicarboxamide A reacts with achiral oxazolidinone enolates to give α -hydrazino acid derivatives with high stereoselectivity.		
J. M. Harris, R. McDonald, J. C. Vederas <i>J. Chem. Soc., Perkin Trans.1</i> , 1996 , 2669.	A	Two examples
		R = Me (85%; dr>95:5) R = CH_2Ph (92%; dr>95:5)

4,11,11-Trimethyl-5-oxa-3-thiatricyclo[6.2.1.0 ^{1,6}]undecane		Reagent
<p>The sulfur ylide generated from the title compound, together with Cu(acac)₂ and phenyldiazomethane, accomplishes an asymmetric aziridination of N-SES aldimines. The source and purity of the Cu(acac)₂ is important.</p>	 <p>A</p>	<p>3 examples</p>  <p>er = 95:5 62% (trans:cis = 3:1)</p> <p>For a related asymmetric epoxidation of aldehydes see: V. K. Aggarwal, J. G. Ford, A. Thompson, R. V. H. Jones, M. C. H. Syanden <i>J. Am. Chem. Soc.</i>, 1996, 118, 7004.</p>
<p>V. K. Aggarwal, A. Thompson, R. V. H. Jones, M. C. H. Standen <i>J. Org. Chem.</i>, 1996, 61, 8368.</p>		

(-)-(1R,2S)-N-Formylnorephedrine		Reagent
<p>The title compound undergoes enantioselective addition to nitroalkenes. The adducts can be converted to vicinal amino alcohols.</p>	 <p>A</p>	 <p>(a) A, NaH, THF (b) AcOH 87% (dr > 98:2)</p> <p>3 steps 62%</p> <p>5 examples: 34-53% yield overall (4 steps)</p>
<p>D. Enders, A. Hartwig, G. Raaba, and J. Runsink <i>Angew. Chem. Int. Ed. Engl.</i>, 1996, 35, 2388.</p>		

Chloral Hydrate / Hydrogen Peroxide		Reagent
<p>The combination of the two title reagents effects a highly regio- and stereoselective epoxidation of alkenes.</p>	 <p>A</p>	 <p>(a) Na₂HPO₄ (5 eq) Na₂CO₃ (3.5 eq) H₂O₂ (10 eq) CH₂Cl₂, rt, 15 min (b) A (5 eq), 10 h</p> <p>95% (no β-epoxide isolated)</p> <p>3 other steroidal substrates were epoxidised in near quantitative yield. The presence of a proximate free hydroxyl is essential for good facial control (e.g., the α-acetate gives 1:1 α:β epoxides).</p>
<p>H. Kasch <i>Tetrahedron Lett.</i>, 1996, 37, 8349.</p>		

Sodium Azide		Reagent
<p>1,2-Azido hydroperoxides are accessible from alkenes when irradiated in the presence of A, oxygen and an appropriate sensitizer.</p>	<p>NaN₃</p> <p>A</p>	 <p>hv, O₂ Rh-B, NaN₃ H₂O (8 mol %) MeOH</p> <p>89 : 11 dr = 9:1</p> <p>6 examples of simple olefinic hydrocarbons. In each case the higher substituted hydroperoxide was formed.</p> <p>Rh-B = Rhodamine B</p>
<p>A. G. Griesbeck, T. Hundertmark, J. Steinwascher <i>Tetrahedron Lett.</i>, 1996, 37, 8367.</p>		

N-Iodosuccinimide		Reagent
<p>Iodoalkenes can be procured under mild conditions from alkenylsilanes by the action of A in CH₃CN / ClCH₂CN.</p>	 <p>A</p>	 <p>A (2 eq) CH₃CN-ClCH₂CN (9:1), rt</p> <p>95% (pure Z)</p> <p>22 well chosen varied examples (yields typically 60-95%). Retention of olefin geometry is diminished for substrates with less bulky allylic substituents. The presence of allylic oxygen functionality favours the E-olefin regardless of the alkenylsilane geometry.</p>
<p>D. P. Stamos, A. G. Taylor, Y. Kishi <i>Tetrahedron Lett.</i>, 1996, 37, 8647.</p>		