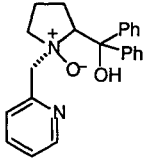
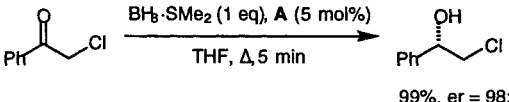
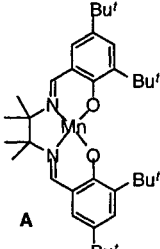
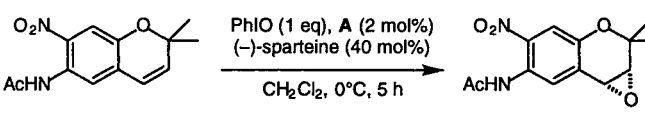
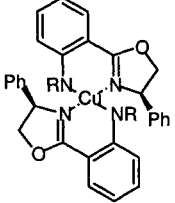
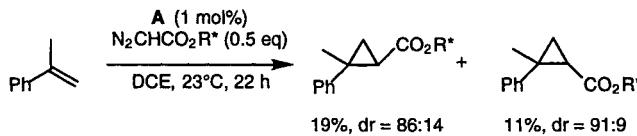


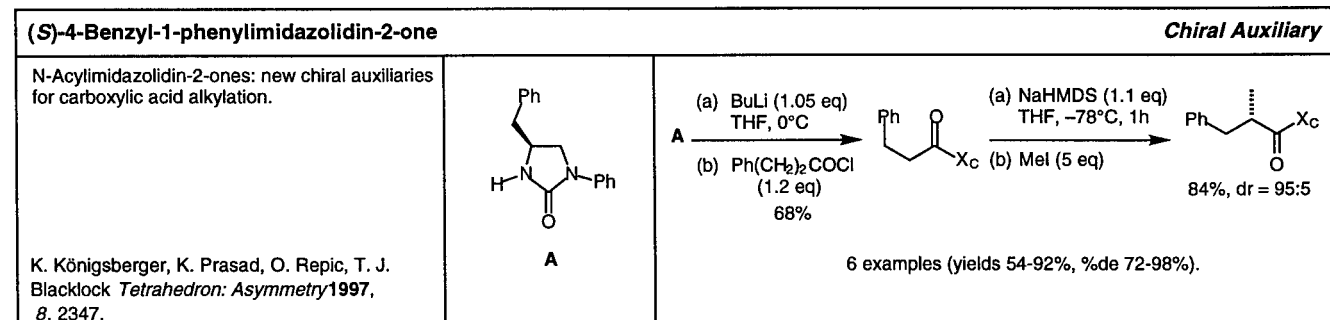
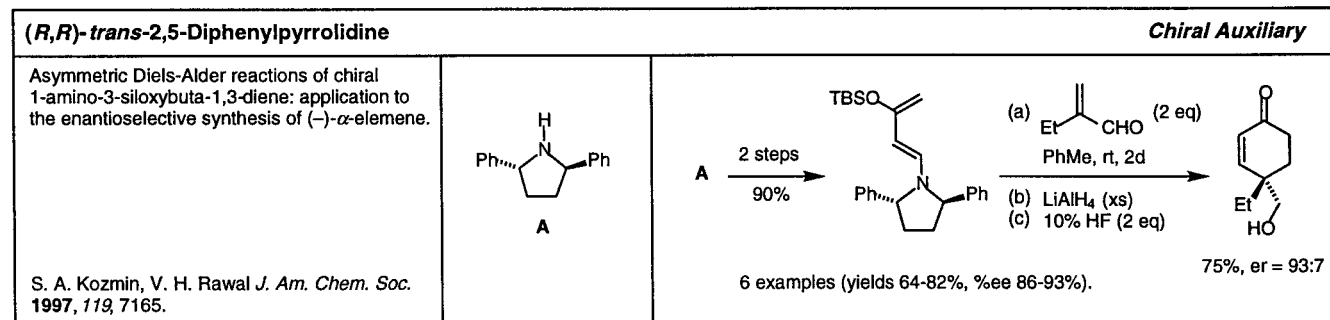
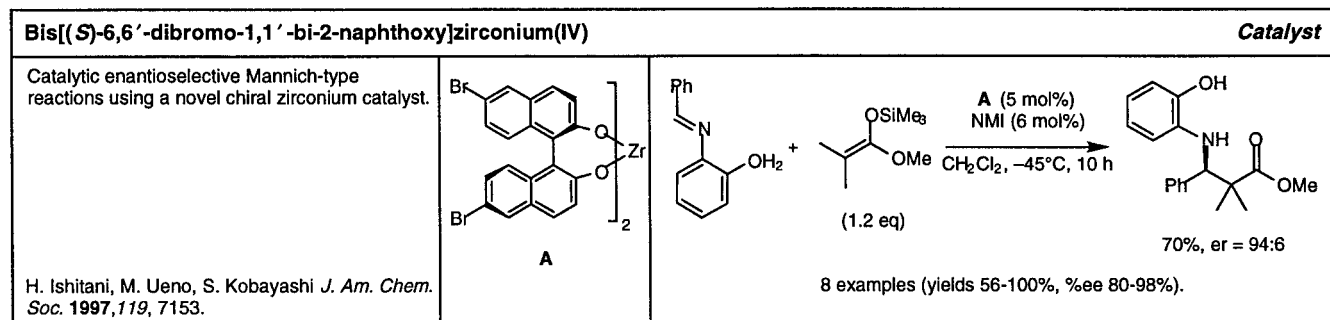
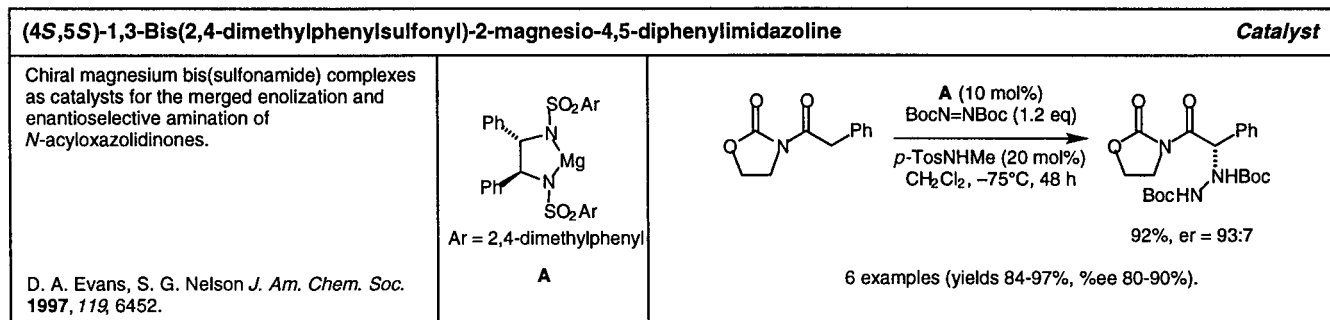
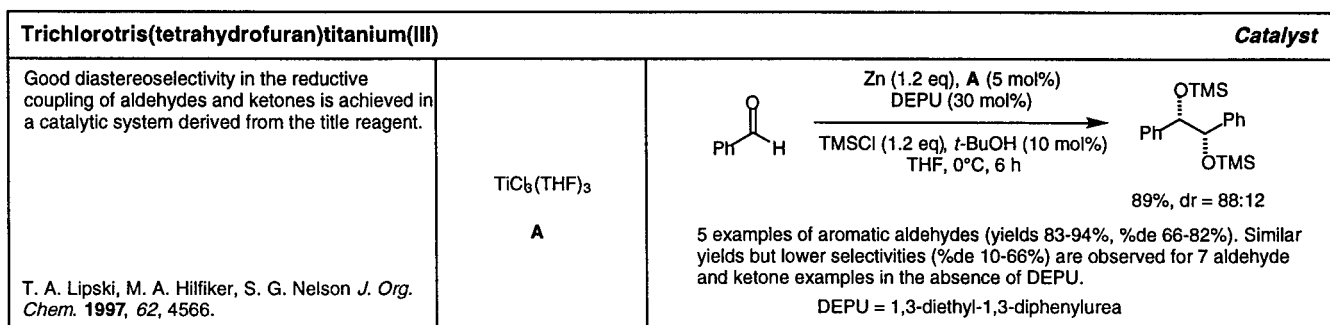
SYNTHESIS ALERTS

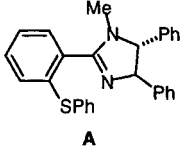
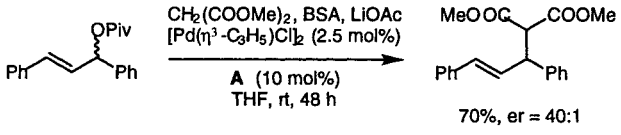
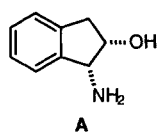
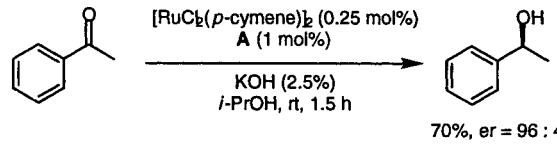
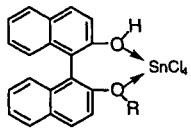
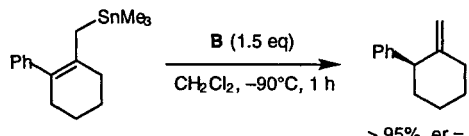
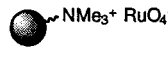
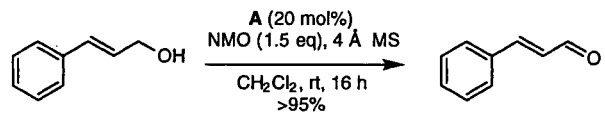
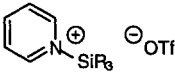
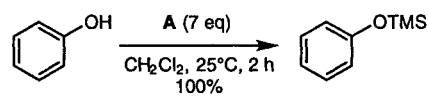
Synthesis Alerts is a monthly feature to help readers of Synthesis keep abreast of new reagents, catalysts, ligands, chiral auxiliaries, and protecting groups which have appeared in the recent literature. Emphasis is placed on new developments but established reagents, catalysts etc are also covered 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.

Synthesis Alerts is a personal selection by Paul Blakemore, John Christopher, Louise Lea, Philip Kocienski, J.-Y. Le Brazidec, Robert Narquizian and Christopher Smith of the University of Glasgow. The journals regularly covered by the abstractors are: *Angewandte Chemie International Edition*, *Bulletin de la Societe Chimie de France*, *Bulletin of the Chemical Society of Japan*, *Chemische Berichte*, *Chemistry Letters*, *Helvetica Chimica Acta*, *Journal of Organic Chemistry*, *Journal of Organometallic Chemistry*, *Journal of the American Chemical Society*, *Liebigs Annalen*, *Tetrahedron Letters*.

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	(S)-N-(2-Pyridylmethyl)-2-(diphenylhydroxymethyl)pyrrolidine N-Oxide	Catalyst
<p>The homochiral <i>N</i>-oxide A catalyses the enantioselective borane reduction of simple phenyl ketones.</p> <p>I. A. O'Neil, C. D. Turner, S. B. Kalindjian <i>Synlett</i> 1997, 777.</p>	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">99%, er = 98:2</p> <p>The reduction of ethyl phenyl ketone and α-methoxyacetophenone is also examined (yields 99%, %ee 68% (<i>R</i>) and 48% (<i>R</i>) respectively).</p>
<p>Achiral Manganese Salen Complex</p> <p>Asymmetric epoxidation has been achieved using the achiral Mn-salen complex A with homochiral (-)-sparteine ligand.</p> <p>T. Hashikayata, Y. Ito, T. Katsuki <i>Tetrahedron</i>, 1997, 9541.</p>	 <p style="text-align: center;">A</p>	 <p style="text-align: center;">11%, er = 80:20</p> <p>13 examples (yields 3-19%, %ee 7-73%).</p> <p style="text-align: center;">(-)-sparteine</p>
<p>Bis[(4<i>R</i>)-2-(2-toluenesulfonylamino)phenyl-4-phenyl-1,3-oxazolinat]copper(II)</p> <p>The title reagent A was found to be an effective catalyst for the enantioselective cyclopropanation of olefins.</p> <p>T. Ichiyonagi, M. Shimizu, T. Fujisawa <i>Tetrahedron</i>, 1997, 9599.</p>	 <p style="text-align: center;">A, R = SO₂Tol</p>	 <p style="text-align: center;">19%, dr = 86:14 11%, dr = 91:9</p> <p>4 examples (yields 27-51%, <i>trans:cis</i> > 63:37, %ee 52-82%).</p> <p style="text-align: center;">R* = <i>d</i>-menthyl, DCE = 1,2-dichloroethane</p>



(4<i>S</i>,5<i>S</i>)-1-Methyl-2-(2-phenylthiophenyl)- <i>trans</i>-4,5-diphenyl-4,5-dihydroimidazole Ligand		
<p>The palladium complex of the title compound has been used for the asymmetric allylic substitution of 1,3-diphenylprop-2-enyl pivalate.</p>	 <p style="text-align:center">A</p>	 <p style="text-align:center">70%, er = 40:1</p> <p style="text-align:center">7 examples (yields 19-91%, %ee 48-96%).</p> <p style="text-align:center">BSA = <i>N,O</i>-bis(trimethylsilyl)acetimide.</p>
T. Morimoto, K. Tachibana, K. Achiwa <i>Synlett</i> 1997 , 783.		
(1<i>R</i>,2<i>S</i>)-(+)- <i>cis</i>-1-Aminoindan-2-ol Ligand		
<p>Stereochemically rigid amino alcohol A is an effective ligand for the control of asymmetric ruthenium-catalyzed transfer hydrogenation of ketones.</p>	 <p style="text-align:center">A</p>	 <p style="text-align:center">70%, er = 96:4</p> <p style="text-align:center">9 examples (yields 40-94%, %ee 7-98%). The requirement of an aromatic system in the substrate is demonstrated by the low enantioselectivity for the reduction of a nonaromatic ketone example.</p>
M. Palmer, T. Walsgrove, M. Wills <i>J. Org. Chem.</i> 1997 , 62, 5226.		
Homochiral Bronsted Acid Reagent		
<p>The title reagent B effects the enantioselective protonation of prochiral allyltrimethylitins.</p>	 <p style="text-align:center">A R = H B R = Me</p>	 <p style="text-align:center">> 95%, er = 84:16</p> <p style="text-align:center">Experimental conditions optimised on a simple system utilising A. 4 useful examples employing B (yields >95%, %ee 31-89%). Use of safer tributyl- and triphenyltin derivatives results in reduced enantioselectivity.</p>
K. Ishihara, Y. Ishida, S. Nakamura, H. Yamamoto <i>Synlett</i> 1997 , 758.		
Polymer-Supported Perruthenate Reagent		
<p>A polymer supported perruthenate reagent has been developed for the oxidation of primary and secondary alcohols, affording pure products without the need for a conventional workup procedure.</p>	 <p style="text-align:center">A</p>	 <p style="text-align:center">>95%</p> <p style="text-align:center">10 examples (yields 54-95%). Reagent A has been effectively used stoichiometrically as well as catalytically by the addition of co-oxidants, trimethylamine <i>N</i>-oxide (TMAO) or <i>N</i>-methylmorpholine <i>N</i>-oxide (NMO).</p>
B. Hinzen, S. V. Ley <i>J. Chem. Soc., Perkin Trans. 1</i> 1997 , 13, 1909.		
<i>N</i>-Trimethylsilylpyridinium Triflate Reagent		
<p>Effects the trimethylsilylation of alcohols in high yield without the need for an aqueous workup.</p>	 <p style="text-align:center">A R = Me B R = Pr C R = Ph</p>	 <p style="text-align:center">100%</p> <p style="text-align:center">5 examples (yields 80-93%). Reaction of B and C with 1-octanol is also reported (yields 78% and 84% respectively).</p>
G. A. Olah, D. A. Klumpp <i>Synthesis</i> 1997 , 774.		

