

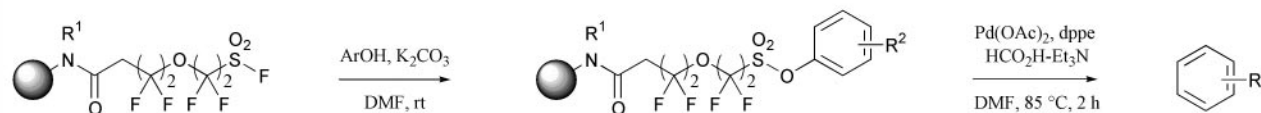
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Perkin 1 Abstracts: Solid Phase Organic Synthesis are a selection of significant papers published in the recent literature covering the broad area of Solid Phase Organic Synthesis (SPOS). The abstracts cover preparation of single compounds on solid support as well as combinatorial libraries. Advances in new linker design are also covered.

**A traceless perfluoroalkylsulfonyl linker for the deoxygenation of phenols.**

Linker



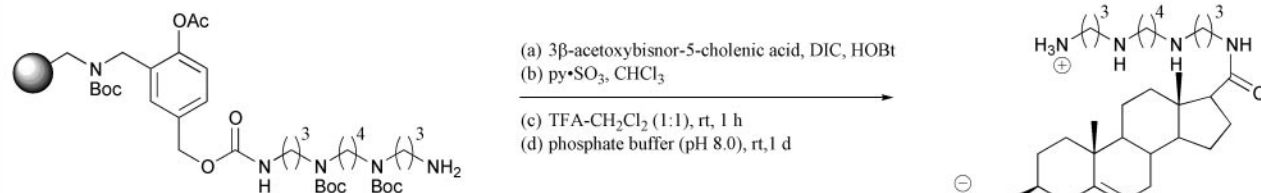
3 steps from TentaGel-NH<sub>2</sub> resin

Y. Pan and C. P. Holmes, *Org. Lett.*, 2001, **3**, 2769.

12 examples (yield 63-90%). Preparation of a commercial drug, meclizine (yield 80%), via a similar route is also reported.

**pH Cleavable linker.**

Linker



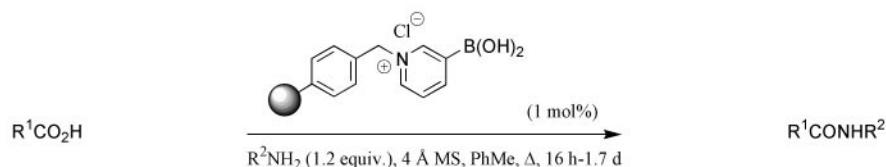
from PS resin

B. Chitkul, B. Atrash and M. Bradley, *Tetrahedron Lett.*, 2001, **42**, 6211.

Preparation (yield 60%) of an analogue of squalamine, an antibacterial agent is described. Preparation of the linker in solution-phase is also reported.

**Arylboronic acid-based amidation catalyst.**

Catalyst

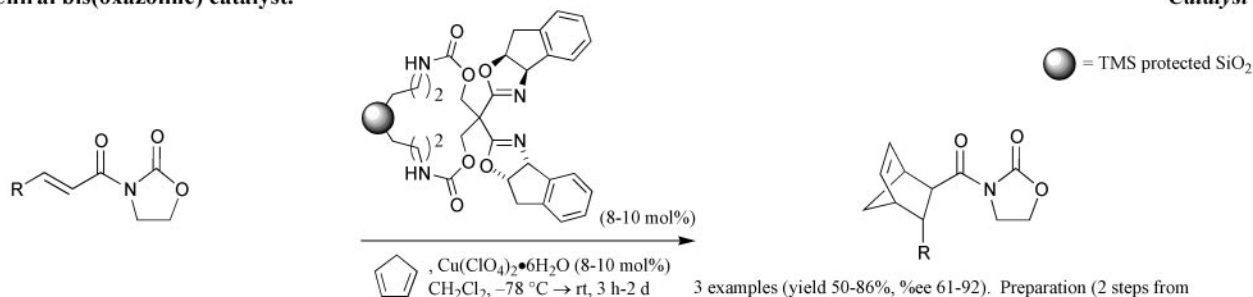


R. Latta, G. Springsteen and B. Wang, *Synthesis*, 2001, **11**, 1611.

8 examples (yield 50-98%). Preparation (2 steps from Merrifield resin) of the illustrated catalyst and recycling experiments (3 cycles, yield 95-97%) are also reported.

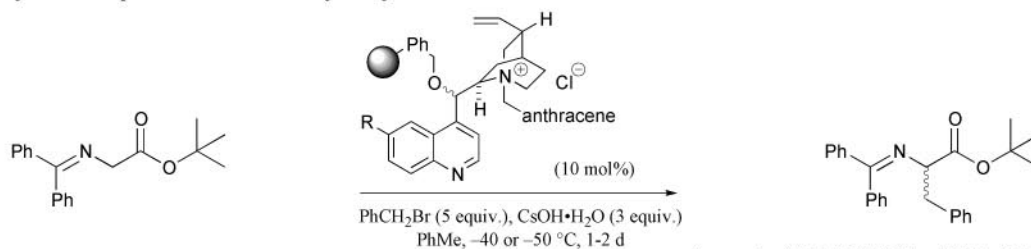
**Chiral bis(oxazoline) catalyst.**

Catalyst

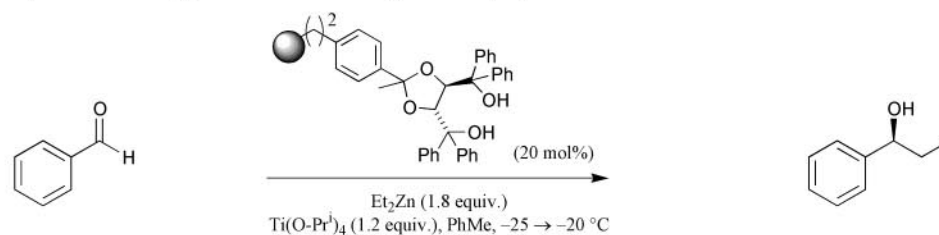


D. Rechavi and M. Lemaire, *Org. Lett.*, 2001, **3**, 2493.

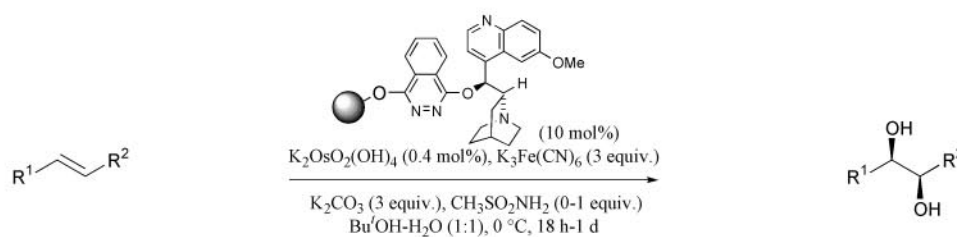
3 examples (yield 50-86%, %ee 61-92). Preparation (2 steps from activated silica) of the illustrated catalyst and recycling of a similar catalyst are also reported.

**Asymmetric phase-transfer catalysis by cinchona alkaloid derivatives.**
**Catalyst**

 B. Thierry, T. Perrard, C. Audouard, J.-C. Plaquevent and D. Cahard, *Synthesis*, 2001, 11, 1742.

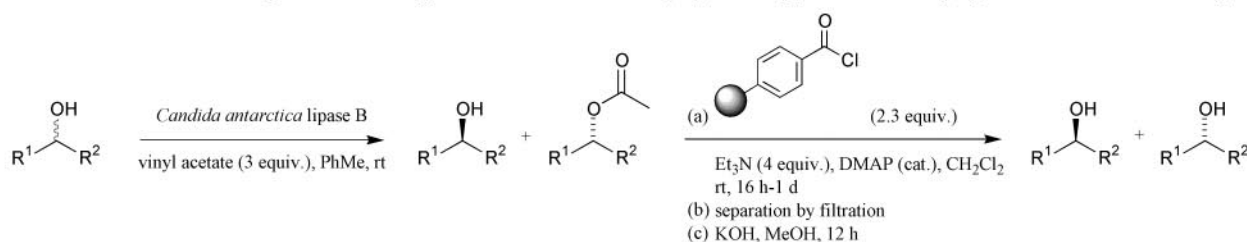
4 examples (yield 46-67%, %ee 26-94). Catalysts derived from pseudoenantiomers give opposite enantioselectivity. Preparation of the catalysts (1 step from Merrifield resin) and preparation and application of similar catalysts, tethered by the quaternary nitrogen are also reported.

**Preparation and application of chiral ligands on polymer fibres.**
**Ligand**

 S. Degni, C.-E. Wilén and R. Leino, *Org. Lett.*, 2001, 3, 2551.

1 example (yield 100%, %ee 94). Preparation of the illustrated ligand (using electron-beam induced pre-irradiation grafting) and 8 similar TADDOL and proline derived ligands and their applications are also reported.

**Asymmetric dihydroxylation of olefins.**
**Ligand**

 Y.-Q. Kuang, S.-Y. Zhang and L.-L. Wei, *Tetrahedron Lett.*, 2001, 42, 5925.

6 examples (yield 81-93%, %ee 79-98). Preparation (2 steps from PEG monomethyl ether) and recycling (5 cycles, yield 92-94%, %ee 97-99) of the illustrated ligand are also reported.

**Isolation of chiral secondary alcohols using kinetic resolution and polymer-supported scavenging.**
**Scavenger**

 A. Córdova, M. R. Tremblay, B. Clapham and K. D. Janda, *J. Org. Chem.*, 2001, 66, 5645.

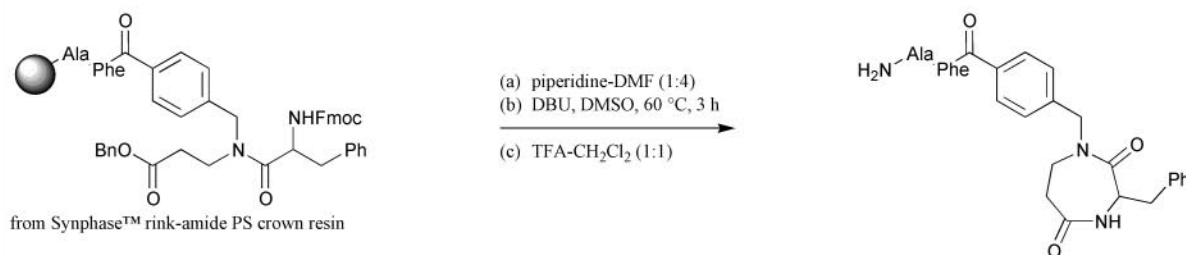
9 examples (%ee from resin 78-99, %ee from acetates 88-99). Use of a polymer-supported proline-based catalyst (1 example, %ee from resin 43, %ee from acetate 34) is also reported.

**Hydrogenation of electron-deficient alkenes.**
**Reagent**

 B. Desai and T. N. Danks, *Tetrahedron Lett.*, 2001, 42, 5963.

8 examples (yield 80-95%). Thermal activation of the illustrated reaction (8 examples, yield 50-95%) is also reported.

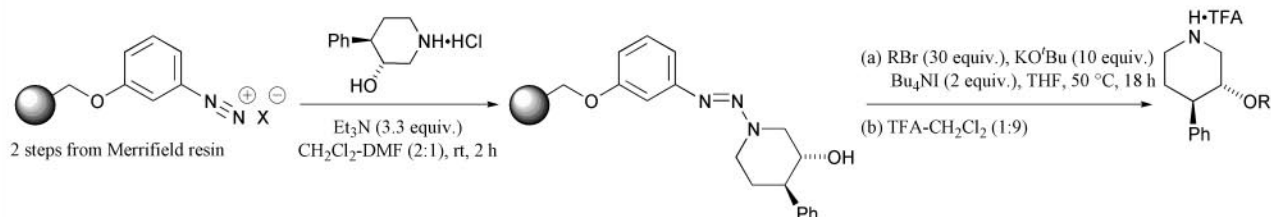
### 3,7-Disubstituted perhydro-1,4-diazepine-2,5-diones



J. Giovannoni, G. Subra, M. Amblard and J. Martinez, *Tetrahedron Lett.*, 2001, **42**, 5389.

1 example (LCMS purity 94%). Preparation of a second diazepinone (LCMS purity 97%) via a similar route is also reported.

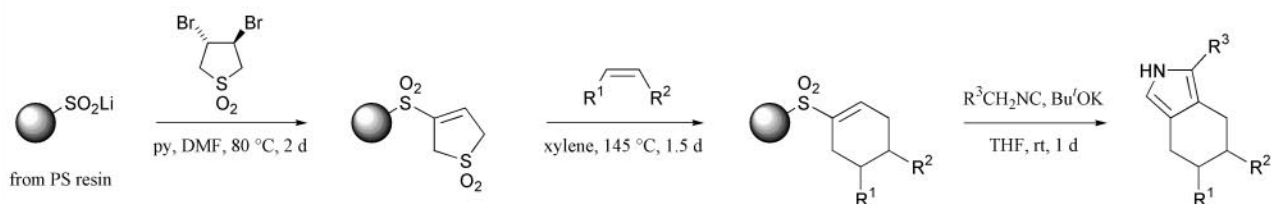
### 3-Alkoxy-4-arylpiperidines: potential aspartic peptidase inhibitors.



M. G. Bursavich and D. H. Rich, *Org. Lett.*, 2001, **3**, 2625.

5 examples (yield 77-98%, purity 98%). Preparation of 2 libraries of 3-alkoxy-4-arylpiperidines bearing further substitution on the aromatic ring is also reported.

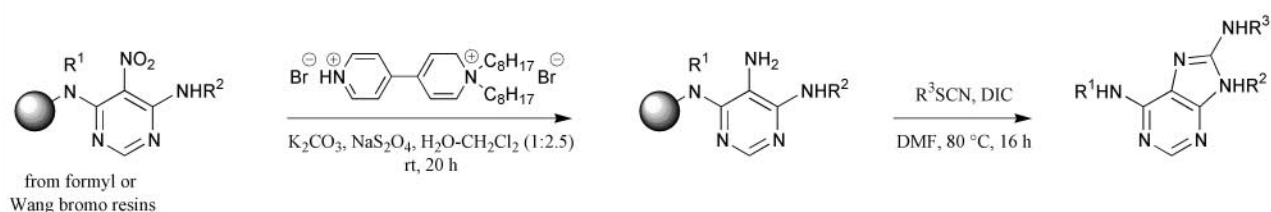
### 4,5,6,7-Tetrahydroisoindole derivatives.



W.-C. Cheng, M. M. Olmstead and M. J. Kurth, *J. Org. Chem.*, 2001, **66**, 5528.

9 examples (yield 32-40%).

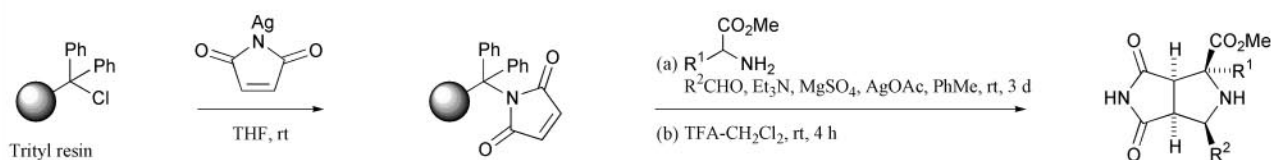
### Bicyclic pyrimidine derivatives.



G. M. Makara, W. Ewing, Y. Ma and E. Wintner, *J. Org. Chem.*, 2001, **66**, 5783.

18 examples (yield 0, 45-85%, HPLC purity 40-95%).

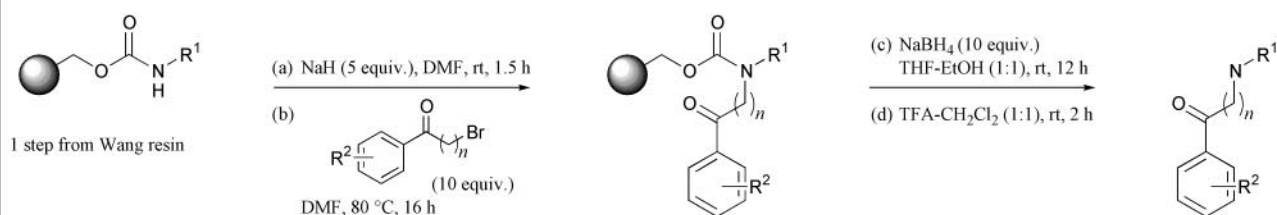
### Pyrrolidines via a dipolar cycloaddition.



A. G. M. Barrett, R. J. Boffey, M. U. Frederiksen, C. G. Newton and R. S. Roberts, *Tetrahedron Lett.*, 2001, **42**, 5579.

Preparation of a 120-member library (sample HPLC purity >70%) is reported.

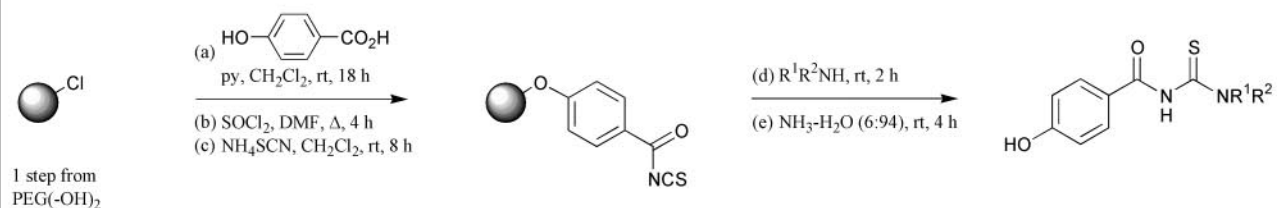
### Arylkanolamines



T. Srinivasan, P. Gupta and B. Kundu, *Tetrahedron Lett.*, 2001, **42**, 5993.

11 examples (yield 75-92%, HPLC purity 85-93%).

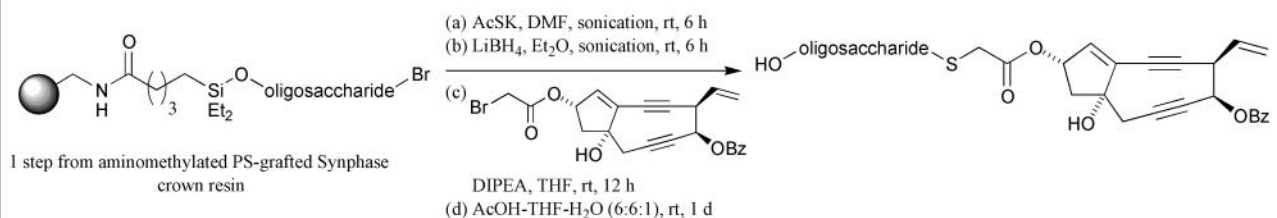
### N-p-Hydroxybenzoyl thiureas



Z. Chen, G. Yang, Z. Zhang and D. Wang, *Synthesis*, 2001, **10**, 1483.

19 examples (yield 71-84%).

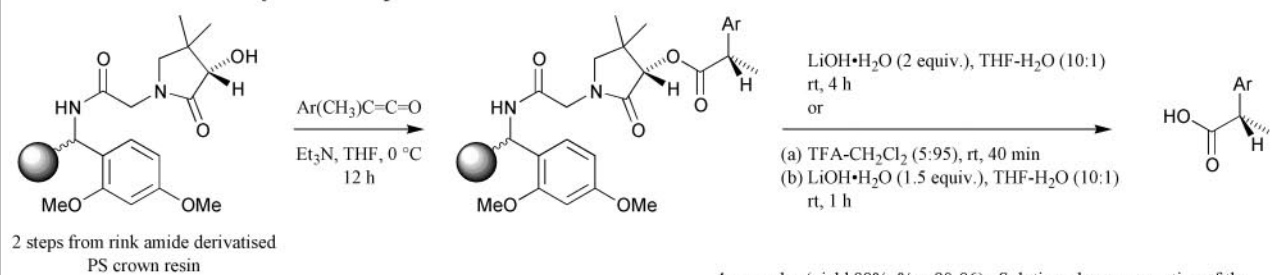
### Oligosaccharide conjugated enediynes.



A. Matsuda, T. Doi, H. Tanashi and T. Takahashi, *Synlett*, 2001, **7**, 1101.

14 examples (yield 50-80%).

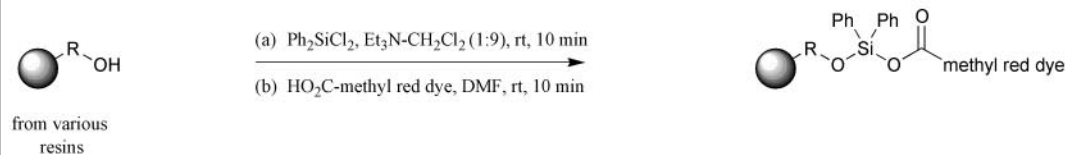
### A chiral alcohol auxiliary for nucleophilic addition to ketenes.



R. Akkari, M. Calmes, N. Mai, M. Rolland and J. Martinez, *J. Org. Chem.*, 2001, **66**, 5859.

4 examples (yield 99%, %ee 90-96). Solution-phase preparation of the optically active alcohol and its attachment to the polymer support is also reported.

### Colorimetric test for the detection of tertiary alcohols.



B. A. Burkett, R. C. D. Brown and M. M. Meloni, *Tetrahedron Lett.*, 2001, **42**, 5773.

5 examples. The illustrated test results in an orange/red colouration of the beads. Application of the colour test to aminomethyl PS resin, with positive results, is also reported.