Perkin 1 Abstracts: Solid Phase Organic Synthesis

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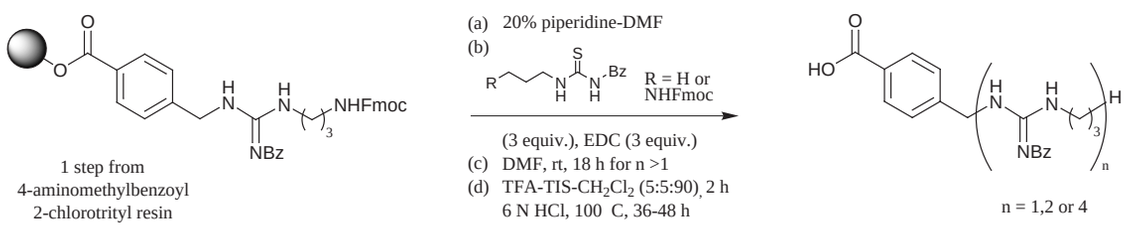
Perkin 1 Abstracts: Solid Phase Organic Synthesis are a selection of significant papers published in the recent literature covering the broad area of Solid Phase Organic Synthesis (SPOS). The abstracts cover preparation of single compounds on solid support as well as combinatorial libraries. Advances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

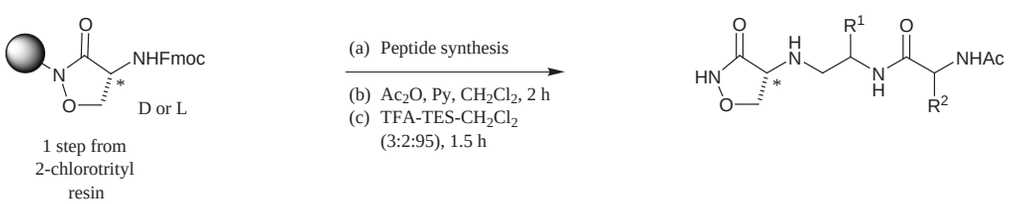
Oligomeric guanidiniums



S. E. Schneider, P. A. Bishop, M. A. Salazar, O. A. Bishop and E. V. Anslyn, *Tetrahedron*, 1998, **54**, 15063.

3 examples (yields 26-84%). Also 6 examples of oligomeric guanidiniums prepared by 3 other methods (yields <5-84%).

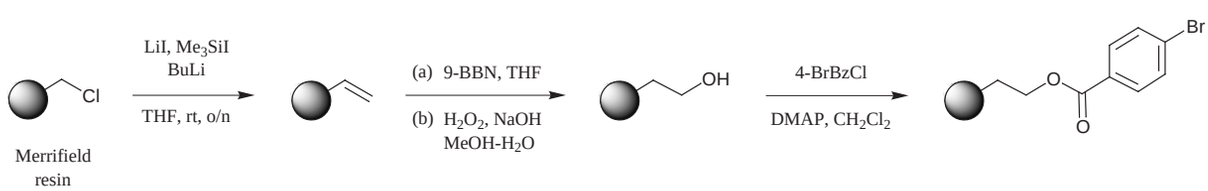
D- and L-Cycloserine derivatives



M. F. Gordeev, G. W. Luehr, H. C. Hui, E. M. Gordon and D. V. Patel, *Tetrahedron*, 1998, **54**, 15879.

An 80 member library is prepared (average purity 75%). Various other synthetic transformations are also described, 6 examples (yields 35-90%).

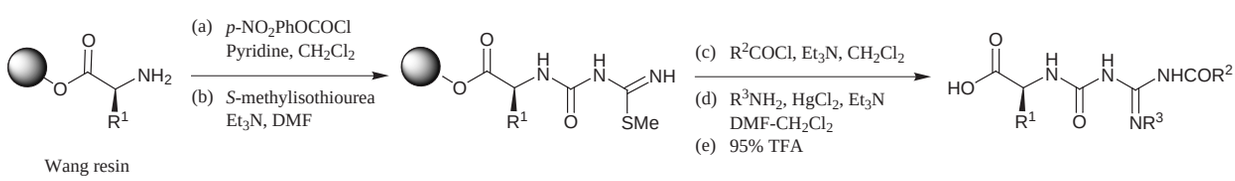
Preparation of (vinyl)polystyrene resin.



C. Sylvain, A. Wagner and C. Mioskowski, *Tetrahedron Lett*., 1998, **39**, 9679.

A simple and efficient one-pot preparation of the title resin and its use for the above esterification is described.

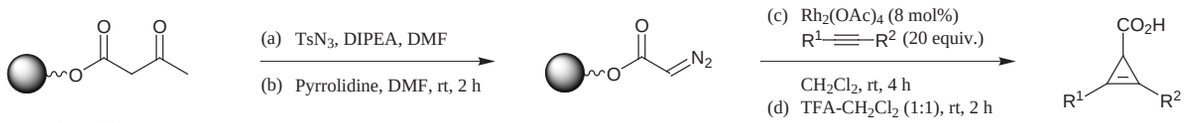
N-Acyl-*N*′-carbamoylguanidines



P. Lin and A. Ganesan, *Tetrahedron Lett*., 1998, **39**, 9789.

3 examples (yields 49-83%). In addition, using α-amino acids loaded on PS-Rink amide resin, 12 examples of products with a carboxamide terminus (yields 47-93%, HPLC purity 57-99%) are reported.

Cyclopropenes

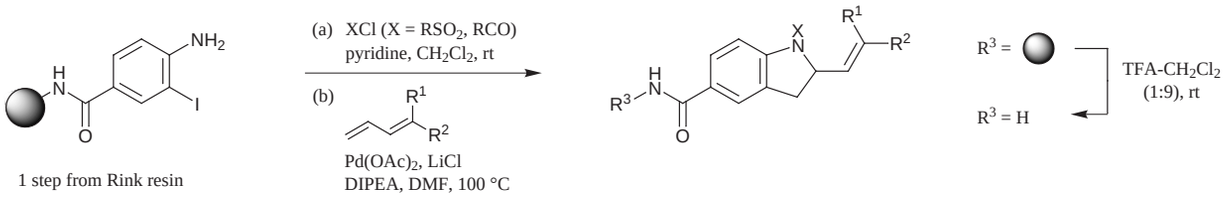


1 step from Wang resin

M. Cano, F. Camps and J. Joglar, *Tetrahedron Lett*., 1998, **39**, 9819.

4 examples (yields >30%).

Indolines

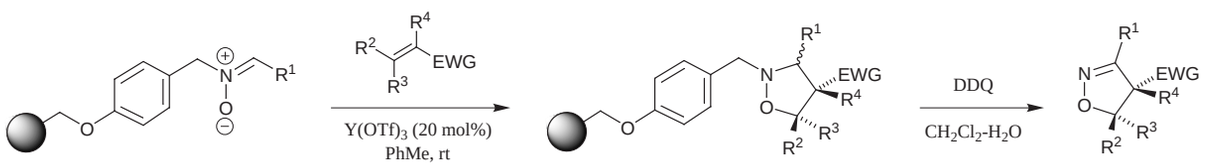


1 step from Rink resin

Y. Wang and T.-N. Huang, *Tetrahedron Lett*., 1998, **39**, 9605.

12 examples (yields 76-91%, HPLC purity 49-90%).

2-Isoxazolines

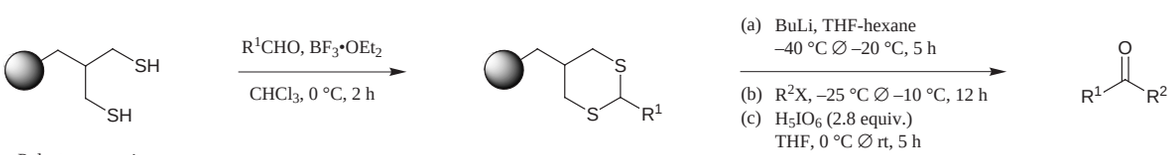


4 steps from chloromethyl polystyrene resin

S. Kobayashi and R. Akiyama, *Tetrahedron Lett*., 1998, **39**, 9211.

13 examples (yields 47-89%).

Synthesis of ketones using a supported 1,3-dithiane.

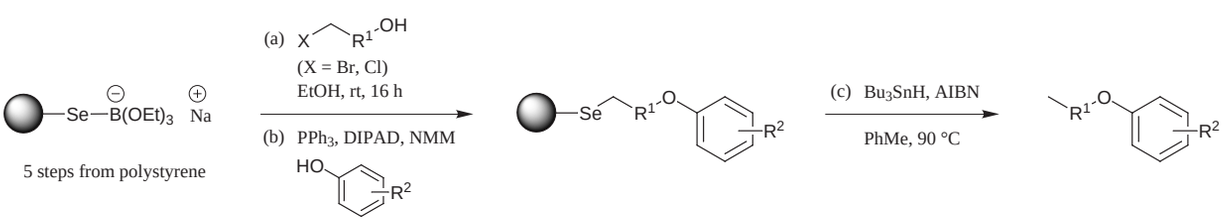


Polystyrene resin

V. Bertini, F. Lucchesini, M. Pocci and A. De Munno, *Tetrahedron Lett.*, 1998, **39**, 9263.

5 examples (yields 58-97%).

Selenium based traceless linker. *Linker*

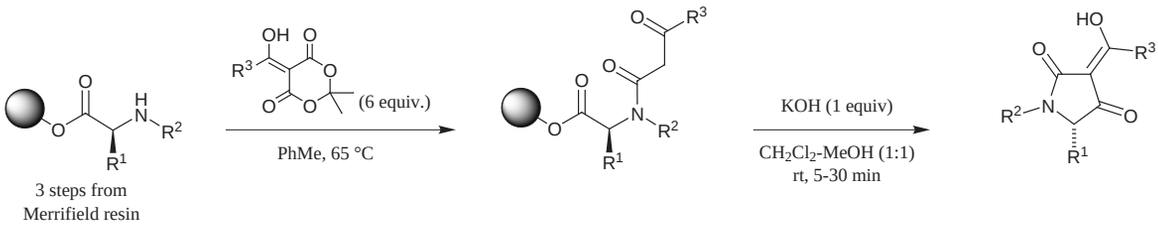


5 steps from polystyrene

Preparation of the above selenium based resin, and its use in the synthesis of 6 aryl alkyl ethers (yields 57-83%, GC purity 78-88%) is reported.

T. Ruhland, K. Andersen and H. Pederson, *J. Org. Chem*., 1998, **63**, 9204.

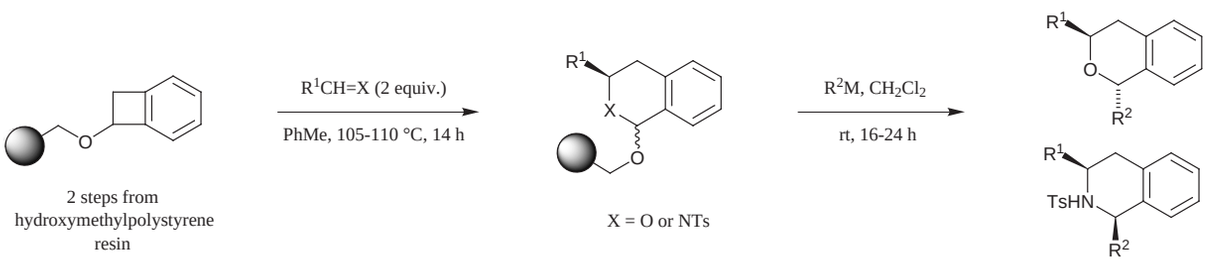
3-Acyltetramic acids



T. T. Romoff, L. Ma, Y. Wang and D. A. Campbell, *Synlett*, 1998, 1341.

21 examples (yields 43-92%).

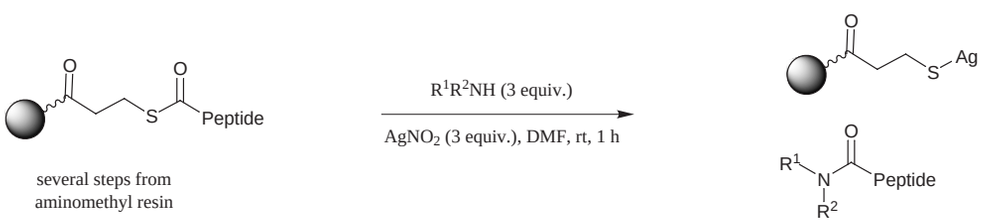
Benzodihydropyrans and tetrahydroisoquinolines



D. Craig, M. J. Robson and S. J. Shaw, *Synlett*, 1998, 1381.

10 examples (yields 10-47% over 3 steps).

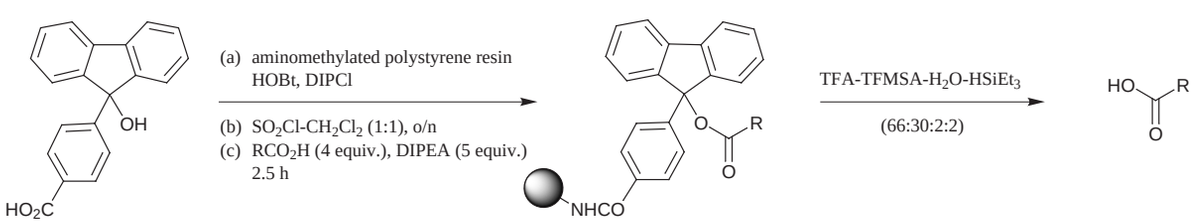
C-Terminally amidated peptides.



K. Kaljuste and J. P. Tam, *Tetrahedron Lett.*, 1998, **39**, 9327.

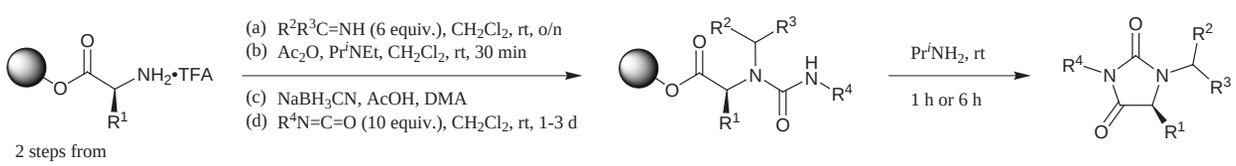
9 examples (yield 50-97%).

9-Hydroxy-9-(4-carboxyphenyl)fluorene *Linker*



B. Henkel and E. Bayer, *Tetrahedron Lett.*, 1998, **39**, 9401.

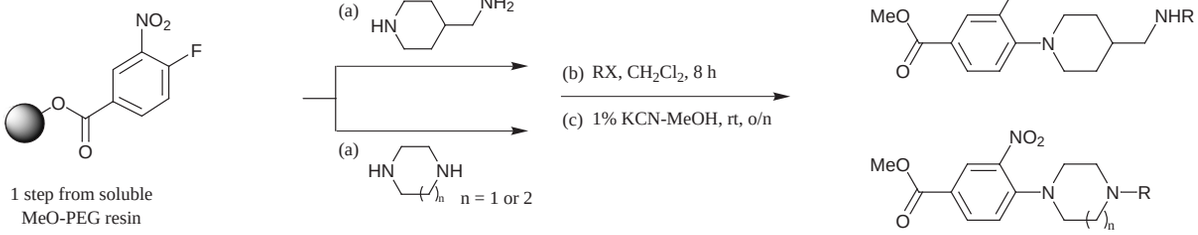
Hydantoins



S.-H. Lee, S.-H. Chung and Y.-S. Lee, *Tetrahedron Lett.*, 1998, **39**, 9469.

19 examples (yields 12-98%).

Arylpiperazines

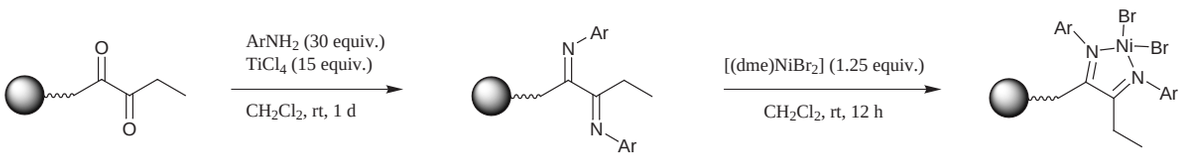


1 step from soluble MeO-PEG resin

P.-C. Pan and C.-M. Sun, *Tetrahedron Lett.*, 1998, **39**, 9505.

12 examples (yields 99%, HPLC purity 83-97%).

Olefin polymerisation catalyst libraries.

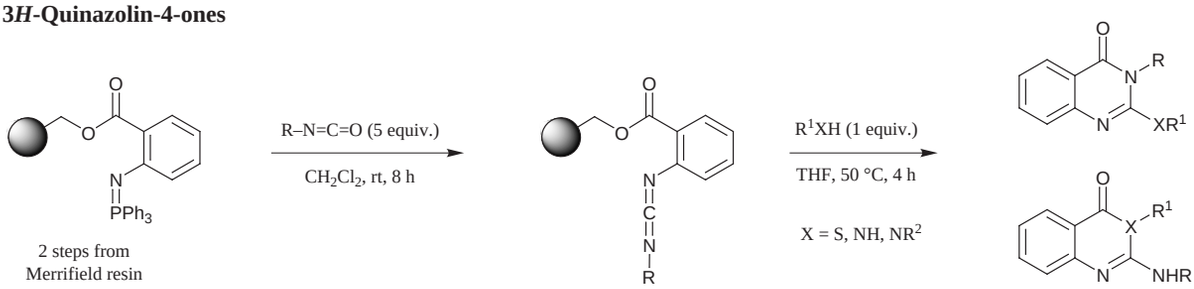


1% cross-linked polystyrene resin

T. R. Boussie, C. Coutard, H. Turner, V. Murphy and T. S. Powers, *Angew. Chem. Int. Ed.*, 1998, **37**, 3272.

A 96-membered library of Ni(II) and Pd(II) resin bound complexes are prepared.

3*H*-Quinazolin-4-ones

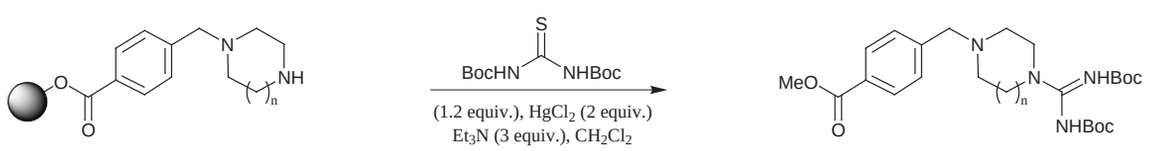


2 steps from Merrifield resin

J. M. Villalgordo, D. Orbrecht and A. Chucholowsky, *Synlett*, 1998, 1405.

12 examples (yields 42-85%, HPLC purity 90-100%).

N,*N*-Di(Boc)-protected guanidines

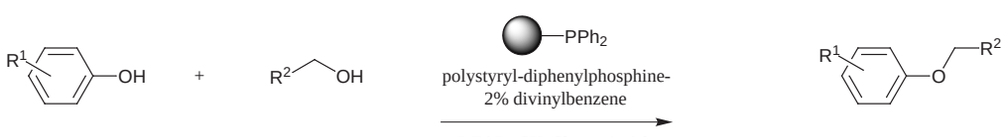


2 steps from MeO-PEG resin

J.-Y. Shey and C.-M. Sun, *Synlett*, 1998, 1423.

2 examples (yields 90-98%, HPLC purity 97-98%).

Polymer-bound triphenylphosphine as traceless reagent for Mitsunobu reactions.



A. R. Tunoori, D. Dutta and G. I. Georg, *Tetrahedron Lett.*, 1998, **39**, 8751.

15 examples (yields 59-94%). The polymer-bound phosphines are easily removed by filtration.