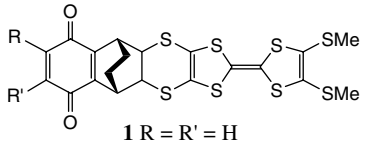
ELSEVIER

Tetrahedron Letters

Tetrahedron Letters Vol. 48, No. 24, 2007

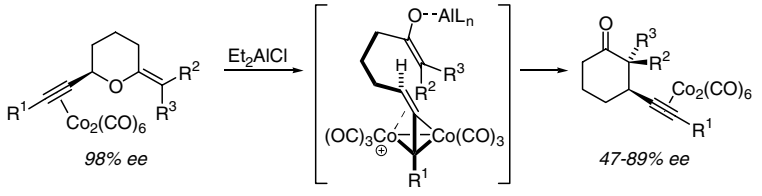
Contents

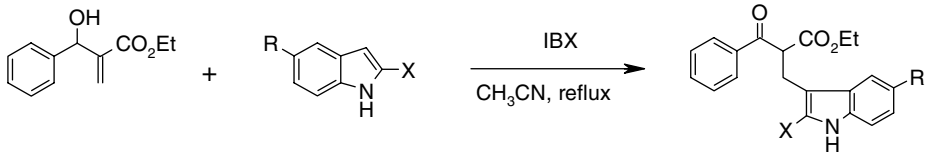
COMMUNICATIONS

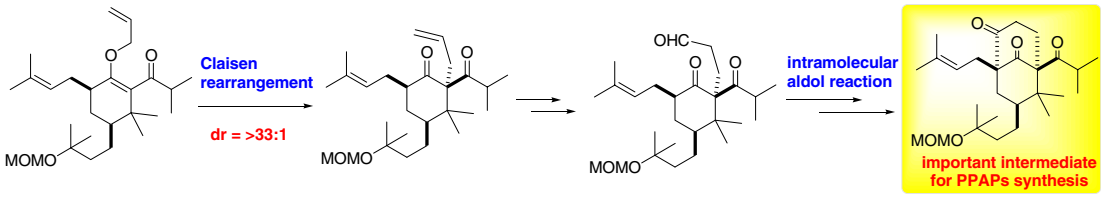


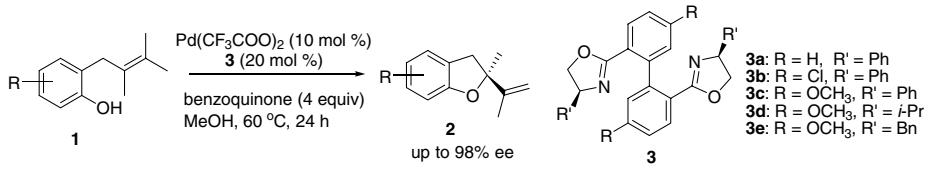
1 R = R' = H
2 R = H, R' = Cl
3 R = R' = Cl

The synthesis, spectral and electrochemical properties of a series of TTF–σ–PBQ derivatives, along with a demonstration of the fine-tuning of the degree of charge transfer in these systems, are reported.

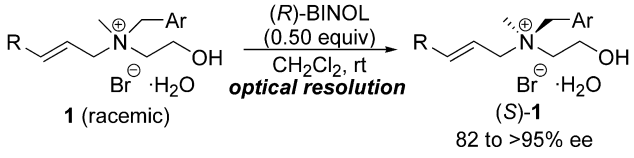


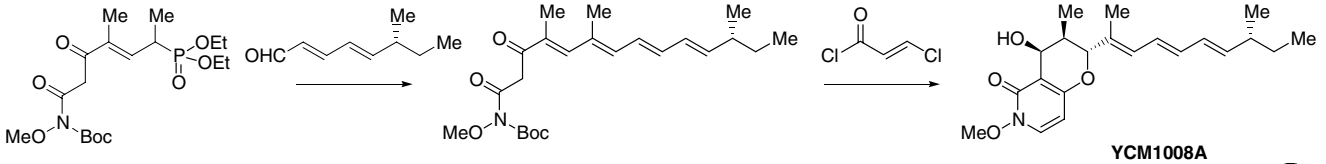


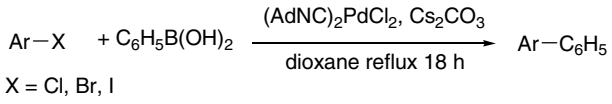




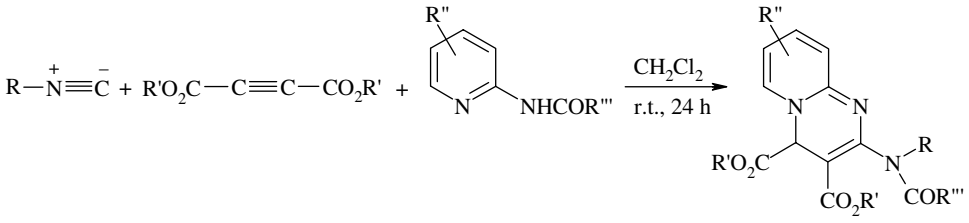
A series of axis-unfixed bisoxazoline ligands with different steric and electronic properties was synthesized and applied in Pd(II)-catalyzed intramolecular Wacker-type cyclization of allylphenols with high catalytic activity and excellent enantioselectivity (up to 98% ee).

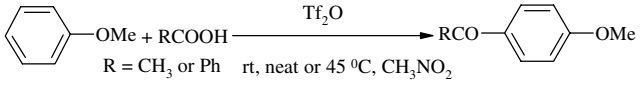


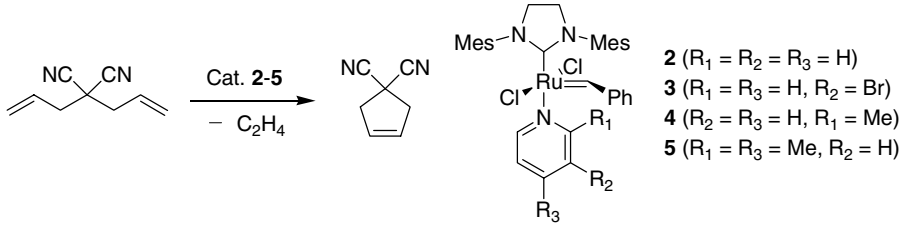




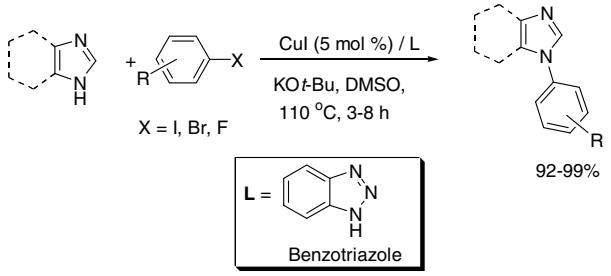
Isonitrile palladium complexes [$(RNC)_2PdCl_2$] were prepared and tested in Suzuki reaction of 4-chloroanisol. $(AdNC)_2PdCl_2$ was found the most efficient and was used in phenylation of chloro and bromo aromatic substrates.

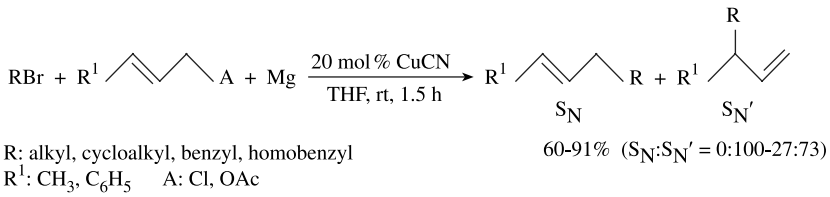




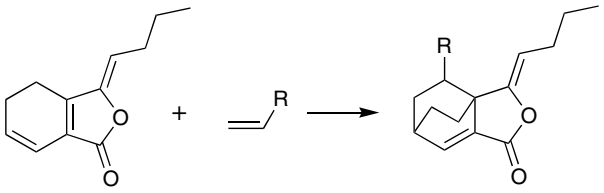


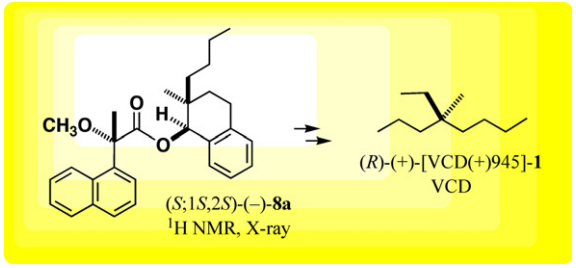
Benzotriazole is an efficient and inexpensive ligand for the N-arylation of imidazoles with aryl and heteroaryl halides using mild reaction conditions.

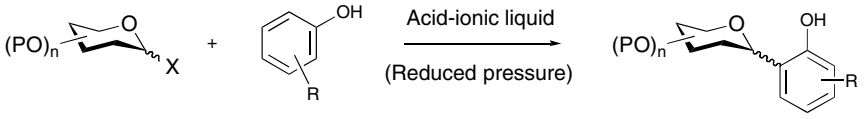


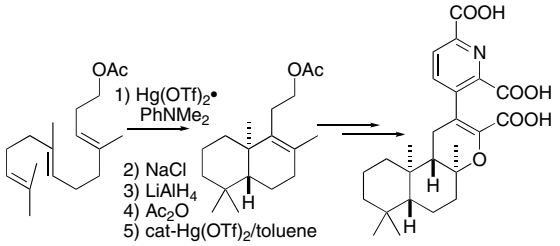


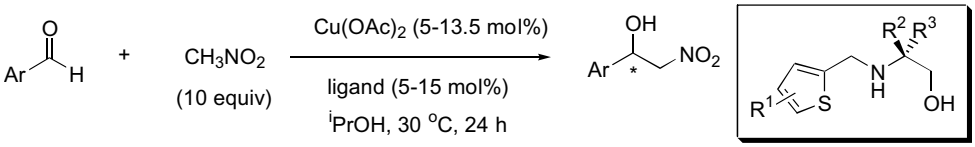
CuCN catalyzed alkyl–allyl coupling under magnesium-Barbier conditions occurs regioselectively and affords predominantly, or exclusively, γ-products in good to high yields.



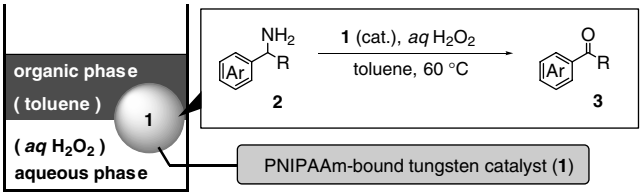


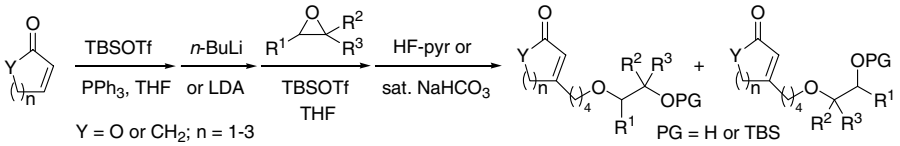


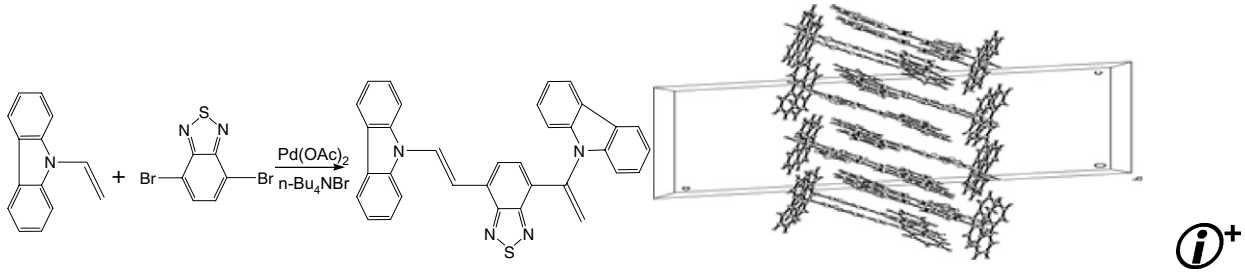


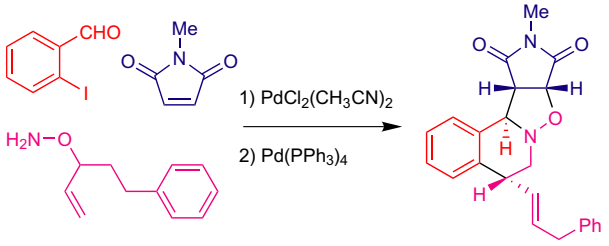


Thiolated amino-alcohols have been synthesized and evaluated as a potential new class of chiral ligands for copper-catalyzed nitro-aldol reactions. A range of aromatic aldehydes was acceptable for the nitro-aldol reaction with nitromethane, giving moderate to good enantioselectivities (69–88% ee).

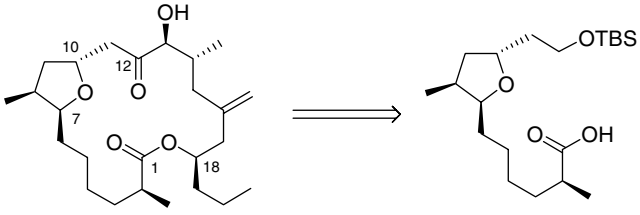


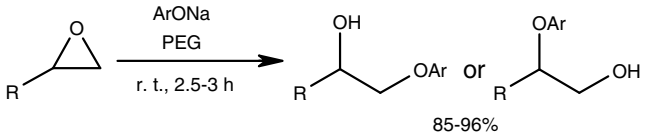


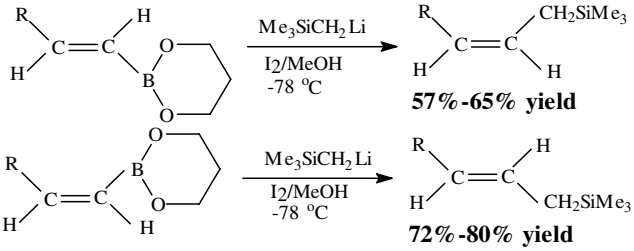




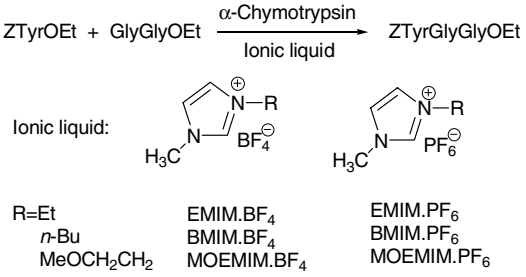
A three-component coupling reaction approach toward isoquinoline derivatives is reported.

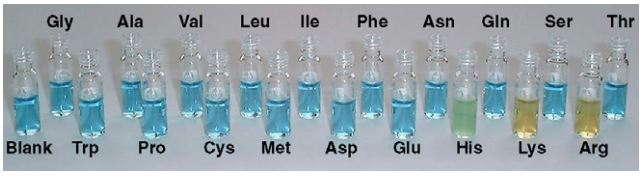




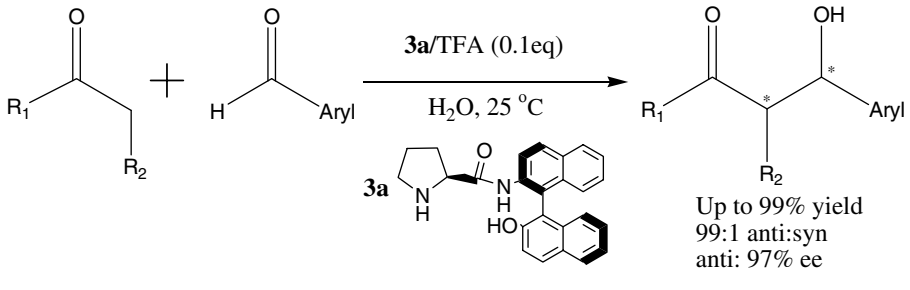


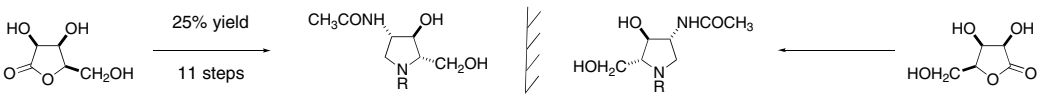
α-Chymotrypsin catalyzed peptide bond formation was studied in ionic liquids using the synthesis of a protected fragment of Leu-enkephalin, ZTyrGlyGlyOEt, as model reaction. MOEMIM·PF_6 was found to be the most favorable solvent among the six different 1-alkyl-3-methylimidazolium hexafluorophosphates and tetrafluoroborates ionic liquids screened. With MOEMIM·PF_6 as reaction media, several di- or tripeptide derivatives were successfully prepared in 68–75% isolated yields.

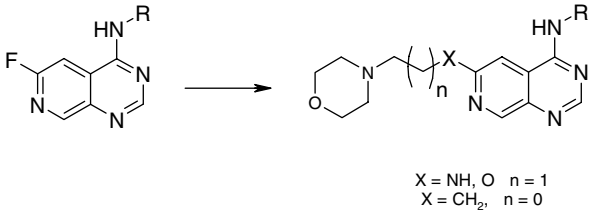


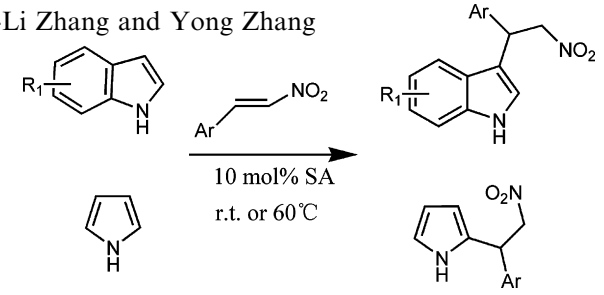


Calix[4]pyrrole-based supramolecular assemblies, formed by the π–π CT interaction between calix[4]pyrroles and TCBQ, can be used for selective sensing of amino acids and amines by visual color changes in an unbuffered water-containing media at room temperature.

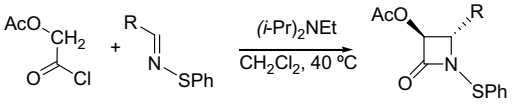




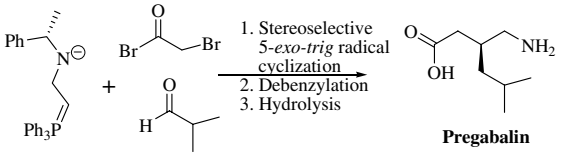




Sulfamic acid (SA) effectively catalyze the Michael addition of indoles and pyrrole to nitroolefins under solvent-free condition to afford the corresponding Michael adducts in good to excellent yields.



R = *i*-Pr, *t*-Bu, Ph, *p*-CN-Ph, *p*-NO_2-Ph, *p*-Me-CO_2Ph, *p*-MeO-Ph, *p*-MeS-Ph, *p*-F-Ph, *m*-F-Ph, *o*-CF_3-Ph, 2-furfuryl, 2-thiophenyl, 2-pyrrolyl



A practical stereoselective 5-*exo-trig* radical cyclization procedure was developed in order to prepare enantiomerically pure GABA derivative precursors (4-alkyl-pyrrolidin-2-ones). This procedure allows much more rapid access to optically pure GABA derivatives, such as the powerful antiepileptic agent (*S*)-(+)-3-aminomethyl-5-methylhexanoic acid (Pregabaline).

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

The first total synthesis of YCM1008A, a new Ca^{2+}-signaling inhibitor, has been achieved. The *N*-methoxy pyrano-pyridone moiety was synthesized by successive O- and N-conjugate additions with diketoamide. The absolute configuration of YCM1008A was disclosed by the total synthesis.
Tetrahedron Letters **2007**, *48*, 4187–4190.

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Chemical Engineering and Biotechnology Abstracts, Current Biotechnology Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®

ELSEVIER
ISSN 0040-4039