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Tetrahedron Letters

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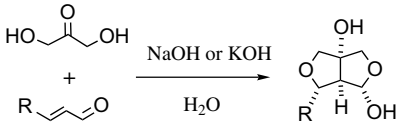
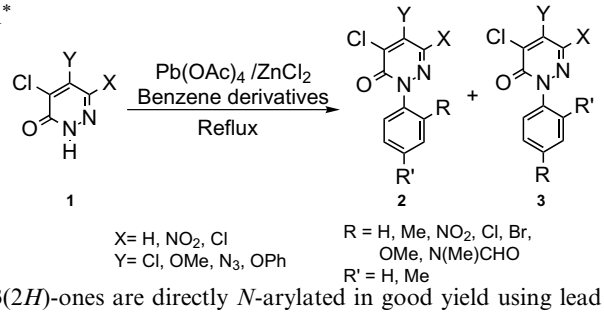
Contents

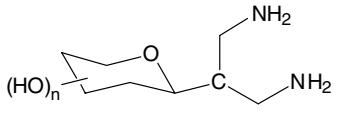
COMMUNICATIONS

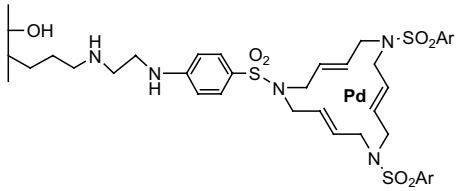


Tetrahydrofuran derivatives were synthesized by the one-pot reaction of 1,3-dihydroxyacetone with α,β-unsaturated aldehydes and ketones in aqueous NaOH or KOH. This sequence is successfully applied to the reaction of L-(*S*)-erythrulose with 2-cyclopentenone to give tricyclic tetrahydrofuran derivatives in the absence of any protecting groups.

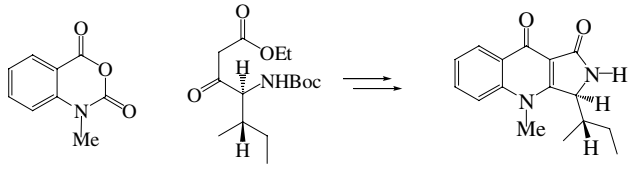


A variety of substituted pyridazin-3(2*H*)-ones are directly *N*-arylated in good yield using lead tetraacetate/zinc chloride in benzene or in substituted benzenes including chloro- and bromobenzene.

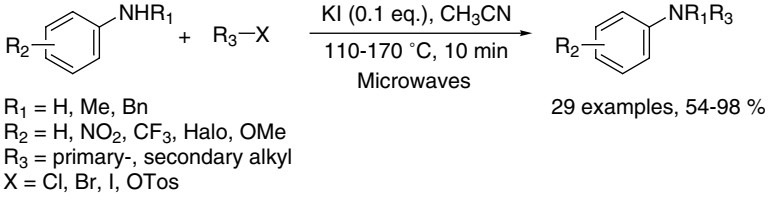


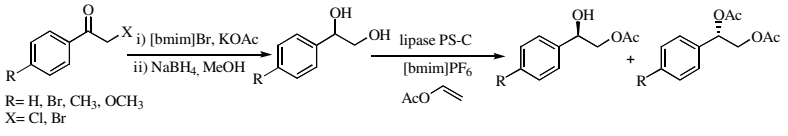


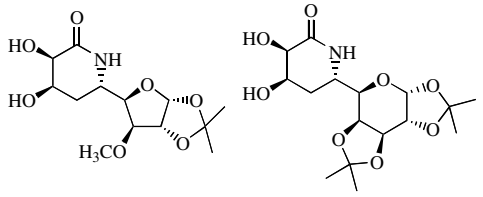
A mesostructured hybrid material containing a 15-membered triazamacrocyclic triolefinic palladium(0) complex was prepared and tested as a reusable heterogeneous catalyst for Suzuki cross-couplings in organic solvents.



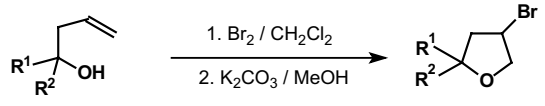
(+)-Quinolactacin A2

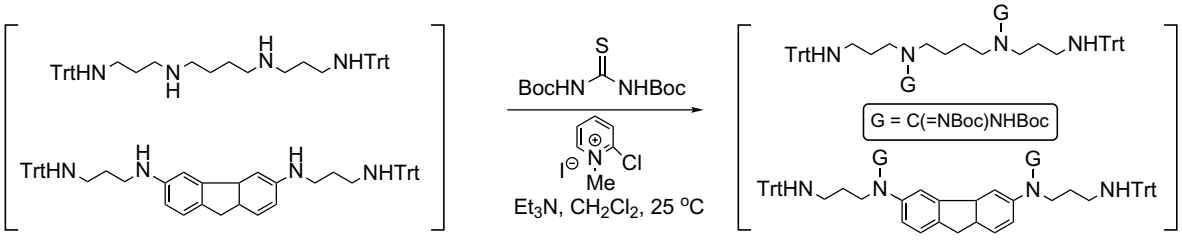


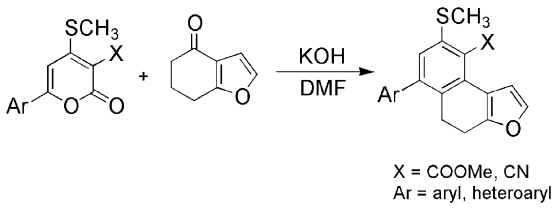


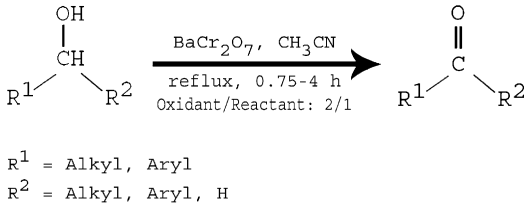


The stereoselective synthesis of *C*-linked 4′-deoxy aza-disaccharides **1** and **2** from the corresponding carbo-β-amino acids is described. The synthesis depends on intramolecular amide bond formation in the corresponding amino esters.

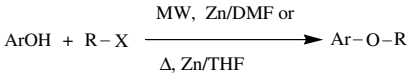




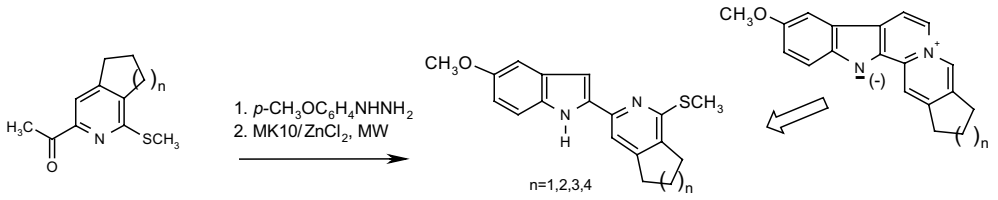




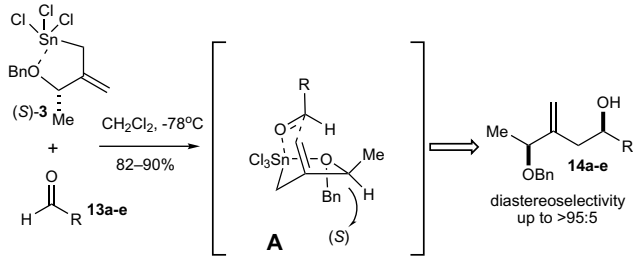
Barium dichromate is used as a mild oxidizing agent for the selective conversion of primary and secondary alcohols to their corresponding aldehydes and ketones, respectively. Over-oxidation does not occur and primary alcohols undergo oxidation to the aldehyde. Primary and secondary benzylic alcohols are oxidized faster and more efficiently.



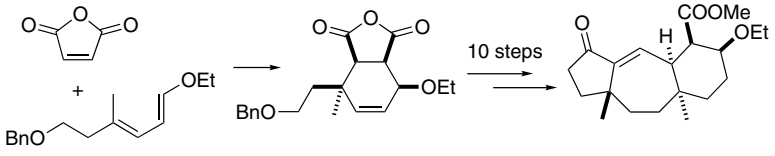
A zinc-catalyzed Williamson ether synthesis is described with microwave heating in the presence of DMF or stirring in an oil-bath using THF as solvent and in the absence of base.

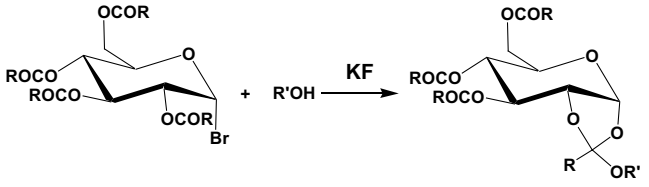


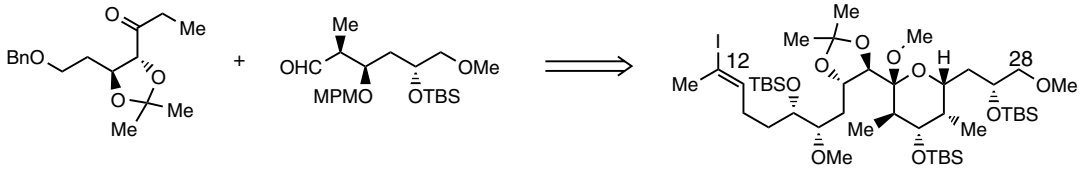
Fischer indole synthesis on solid-support under microwave irradiation towards 5-methoxy-2-(2-pyridyl)indoles has been developed, as the key step in the total synthesis of new 9-methoxyindolo[2,3-*a*]quinolizine alkaloids.

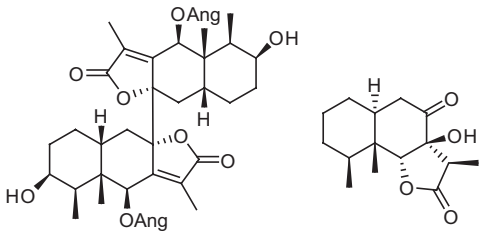


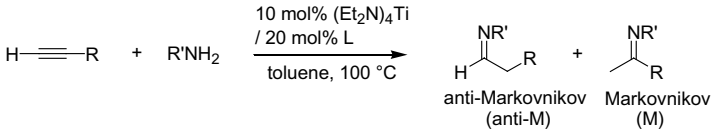
Chiral lactate-derived allyltrichlorostannanes reacted with chiral α-methyl, β-alkoxy and *syn* and *anti* α-methyl-β-alkoxy aldehydes to give the corresponding homoallylic alcohols with moderate to high 1,4-*syn*-diastereoselectivities.



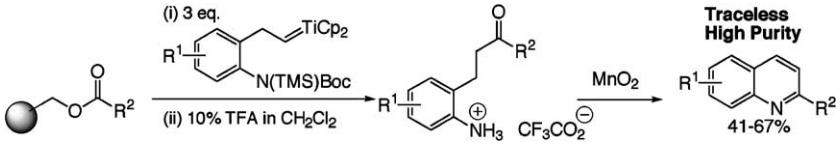


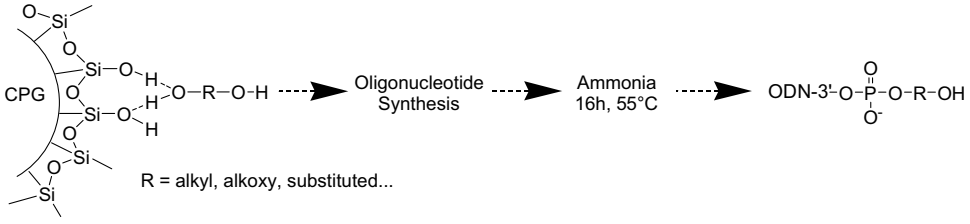


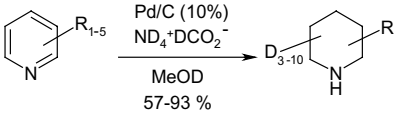


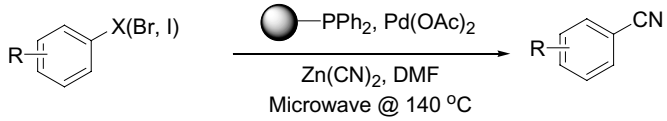


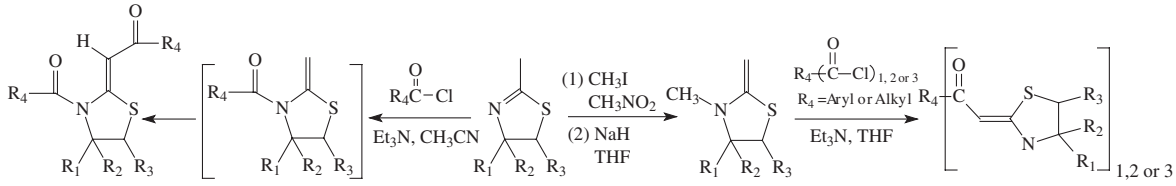
A remarkable control of regioselectivity is achieved for the titanium-catalyzed intermolecular hydroamination of various alkynes. Proper choice of the ligand enables a selectivity switch from the Markovnikov to the anti-Markovnikov products from M:anti-M = >90:10 to >10:90.

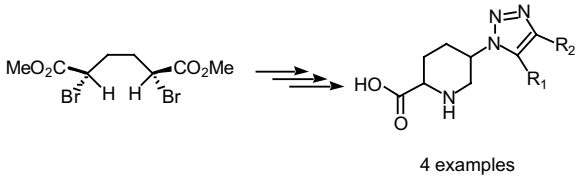


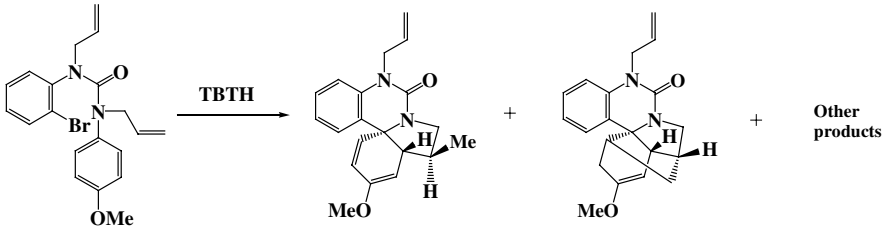


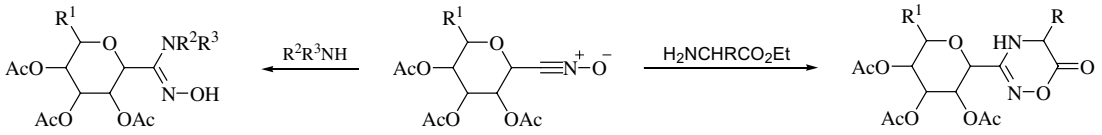


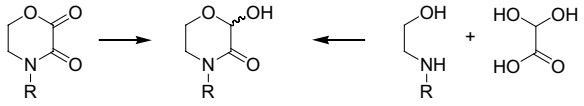


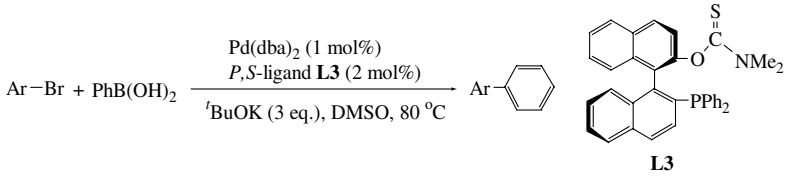




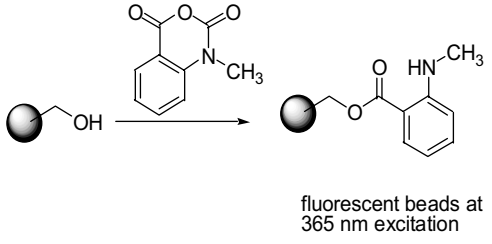




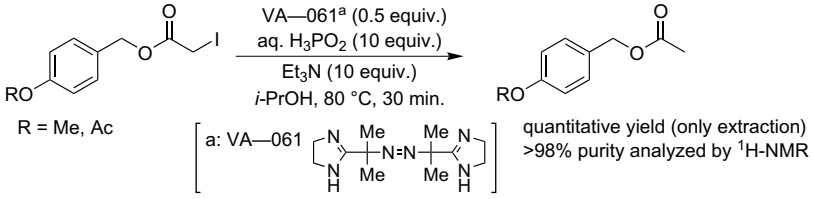




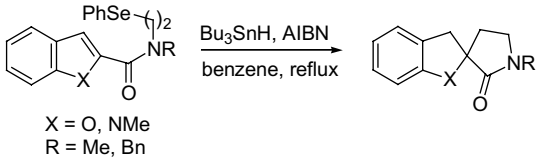
In the presence of a novel *P,S*-heterodonor ligand, palladium(0)-catalyzed Suzuki cross-coupling reaction proceeded smoothly at 80 °C in DMSO.



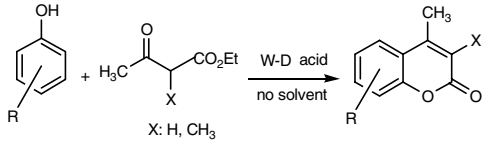
A method for the rapid qualitative detection of hydroxyl functionality has been developed for application in solid-phase organic synthesis.



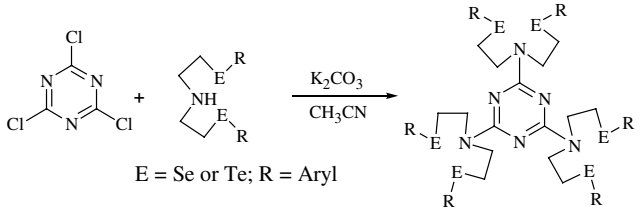
A simple, mild and high-yielding procedure for the reduction of various halogenated compounds using a combination of the water-soluble radical initiater (VA-061), hypophosphorous acid and triethylamine in aqueous alcohol is reported.

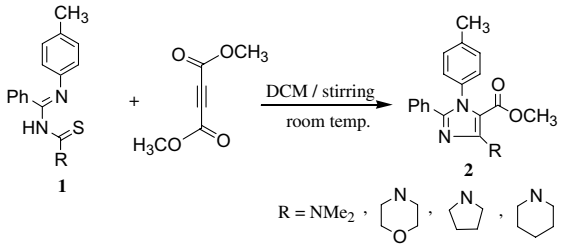


New spirolactams were obtained in radical dearomatising spirocyclisations of alkyl, vinyl and aryl radicals tethered at the C-2 positions of benzofuran and indole.

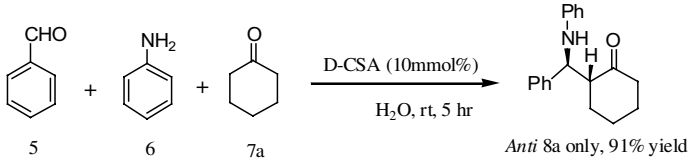


Seventeen examples are resolved, most of them in good to excellent yields, using the cheap WD catalyst.

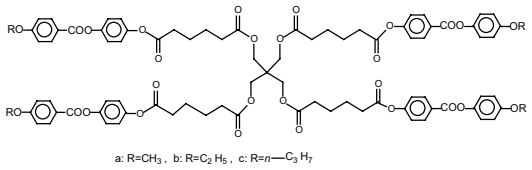




Novel, unprecedented and single-pot synthesis of functionalized imidazoles possessing secondary amine and carbomethoxy moieties, by the reaction of secondary amino-*N*-carbothioic acid (phenyl-*p*-tolylimino-methyl)amides with dimethyl acetylenedicarboxylate under mild conditions is described.



Camphor sulfonic acid and three sulfonated amino acids shows to efficiently catalyze direct Mannich reactions of benzaldehyde, aniline and various ketones in aqueous media, with high diastereo- or regioselectivities.



A new class of star-shaped glassy nematic liquid crystals based on pentaerythritol as a flexible core and ω-[4-(*p*-alkoxybenzoloxy)phenoxycarbonyl]valeric acid as side-chain mesogenic arms has been prepared. This is a new kind of glassy nematic liquid crystals.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

The cover shows an asymmetric total synthesis of (+)-bongkrekic acid, an important apoptosis inhibitor, which has not been synthesized since the first synthesis by optical resolution was reported twenty years ago. *Tetrahedron Letters* **2004**, *45*, 8863–8866.

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