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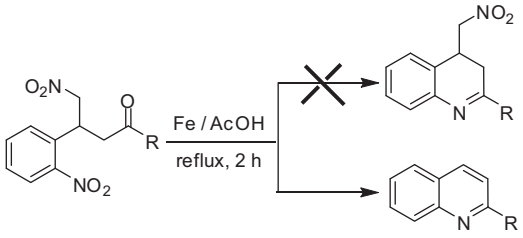
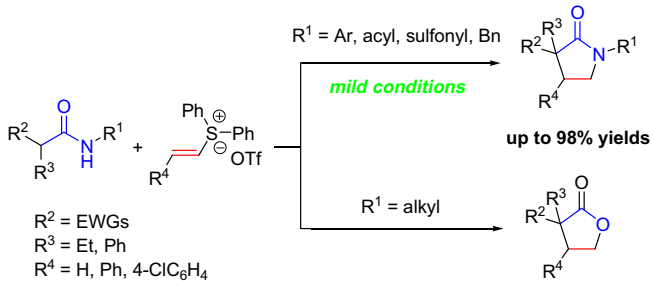
# Tetrahedron Letters Vol. 51, No. 40, 2010

## Contents

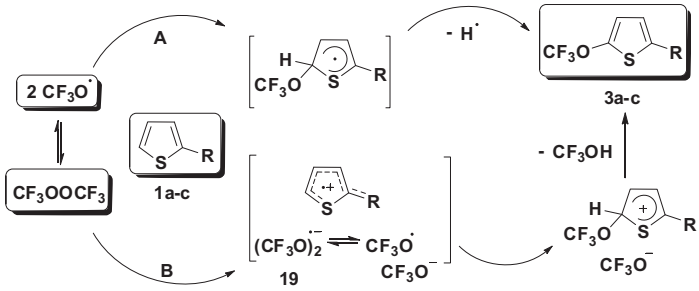



A new carbon degradation protocol which results in the formation of quinoline derivatives is described. The reactions involved the use of mild reaction conditions and an inexpensive reducing reagent (Fe/AcOH).





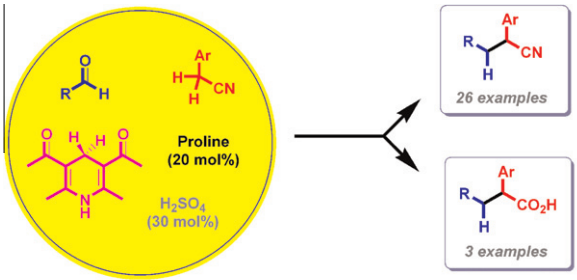


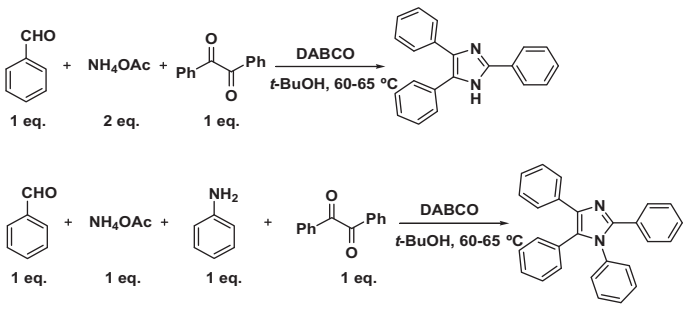




A new 'green' process to obtain trifluoromethoxylated compounds by a gas-phase method has been accomplished. Though the reaction occurs in the gas-phase and radicals are involved, an electron transfer mechanism is also postulated.

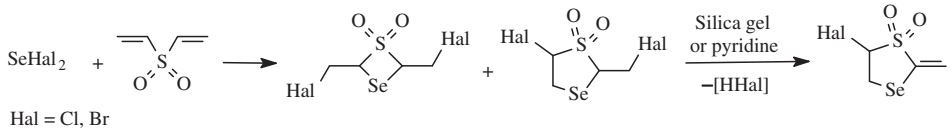


A novel approach for a one-pot, three-component reductive alkylation (TCRA) reaction of arylacetonitriles-containing electron-withdrawing groups with aldehydes/ketones and 1,4-dihydropyridine via iminium-catalysis has been developed. Many TCRA reaction products have direct applications in agricultural and pharmaceutical chemistry.

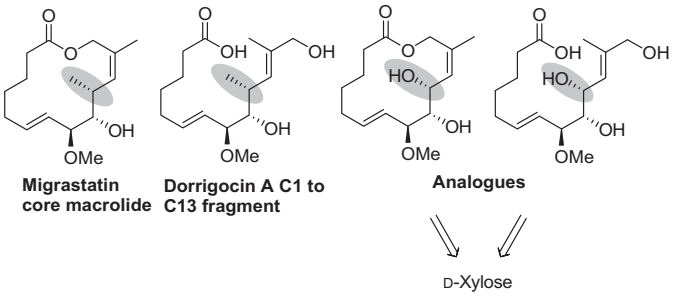




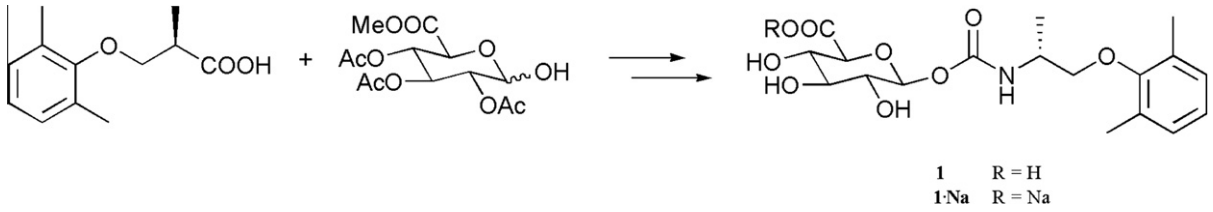


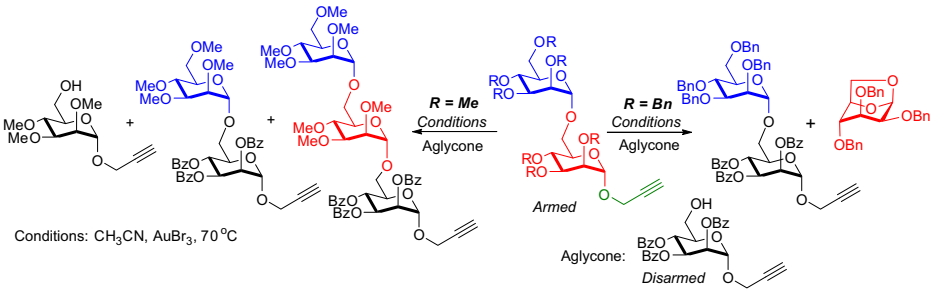


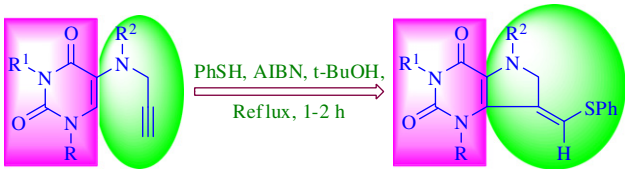


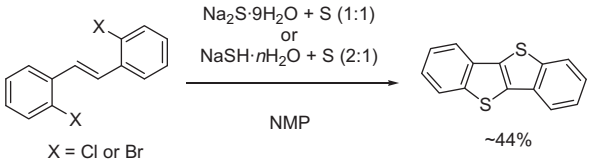

A facile convergent synthesis of (*R*)-mexiletine *N*-carbonyloxy β-D-glucuronide (**1**) as its sodium salt (**1·Na**) has been developed. The compound is now available as an authentic reference standard for analytical studies, enabling more detailed investigation on the metabolism of mexiletine.



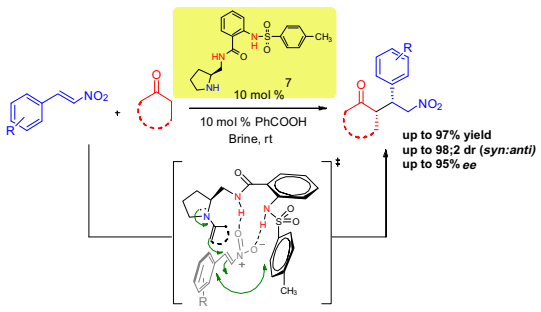


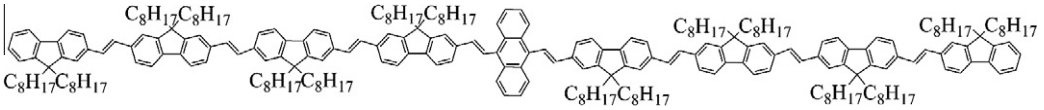





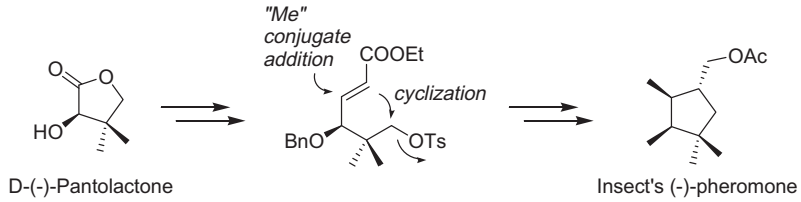





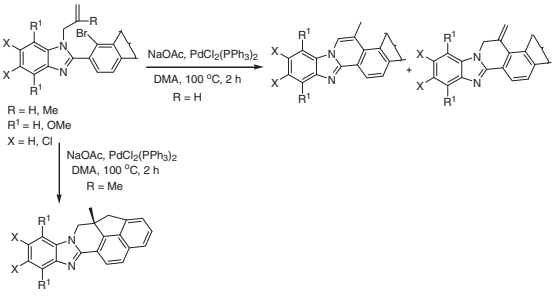





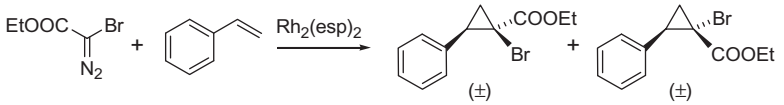


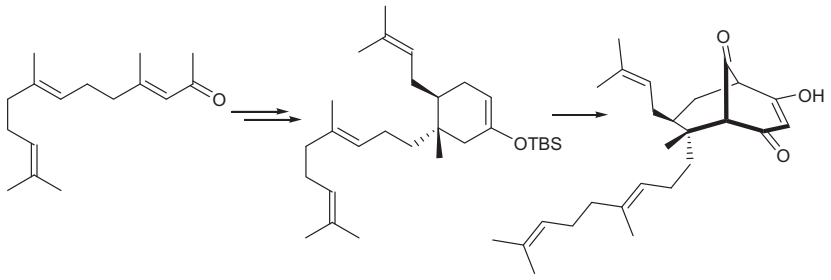





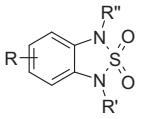





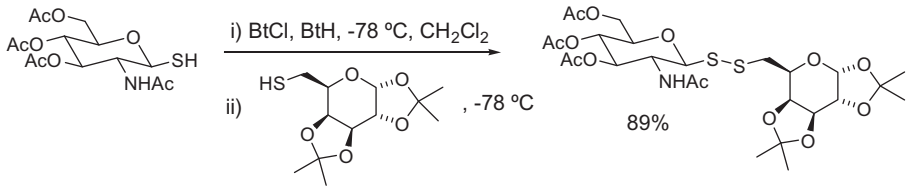




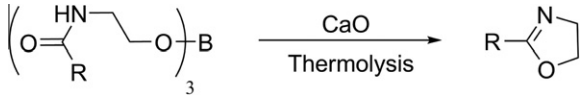

A general route to benzosulfamides is presented allowing for flexible installation of substituents.



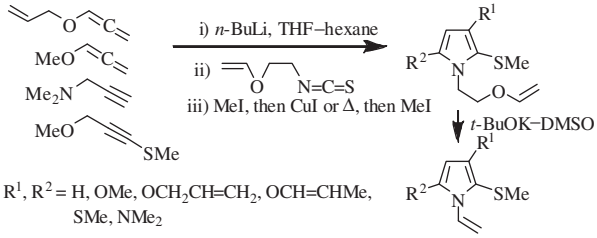



A series of glycosyl disulfides have been efficiently prepared in a one-pot reaction using 1-chlorobenzotriazole (BtCl) as the oxidant.

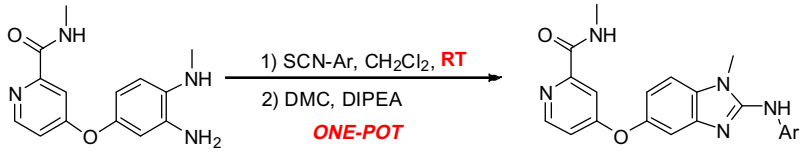




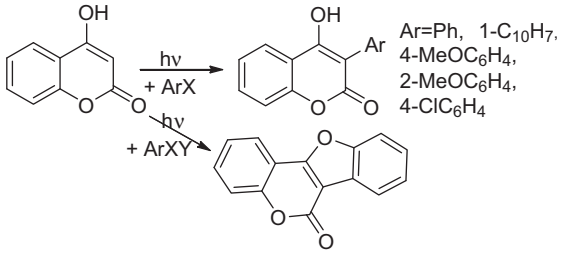

A new, convenient, one-pot process is presented for the synthesis of 2-oxazolines in high yields (78–92%) via boron esters of *N*-(2-hydroxyethyl) amides.



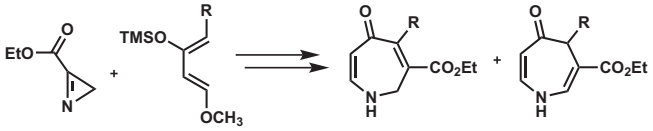


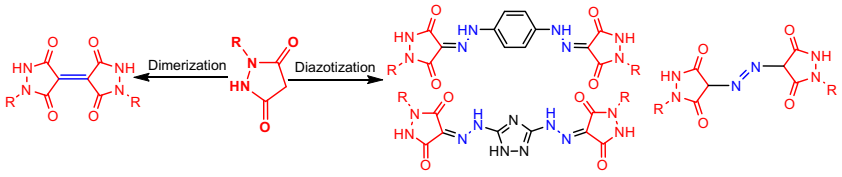


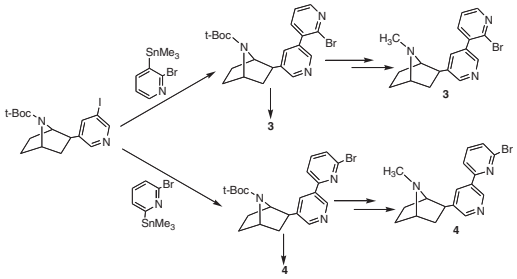



We report here a simple and efficient preparation of 1*H*-azepin-5(2*H*)-ones and their unexpectedly facile isomerization to 1*H*-azepin-5(4*H*)-ones under mildly basic reaction conditions.

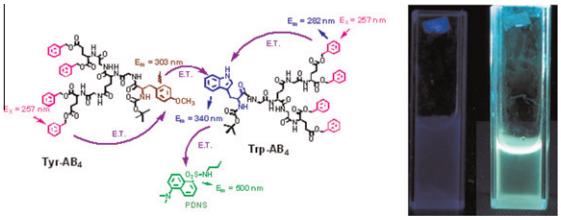




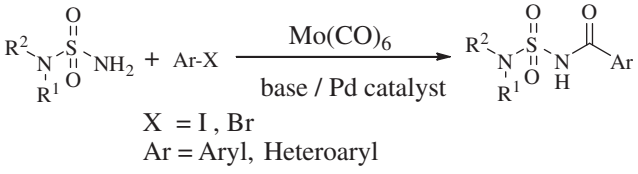



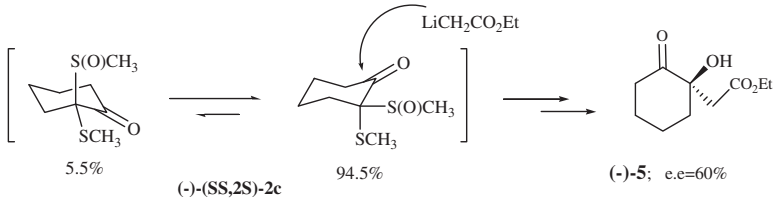


The gels and co-gels from glycine (**Gly**) and glutamic acid (**Glu**)-based dendrons with either tyrosine (**Tyr**) or tryptophan (**Trp**), two of the luminescent amino acid residues in natural proteins, at the focal point were reported. Such gels showed efficient light-harvesting and energy transfer properties. Specially, a high efficient energy transfer (ET) process and a light-harvesting in the co-gel system were achieved. Moreover, luminescent gels with tunable emission ranging from blue to green were also observed owing to the cascade intra- and intermolecular ET from dendritic gelators to the guest molecules (PDNS) in the host–guest gel system (co-gel with PDNS as the guest molecule), which mimicked the natural light-harvesting systems.








Based on IR data and DFT calculations, (−)-(*SS*,2*S*)-**2c** showed to be a mixture of two main conformers and that the axial $SCH_3$ group hinders the attack of $LiCH_2CO_2Et$ to the *si* face of the carbonyl group, affording, after hydrolysis, enantiomerically enriched (−)-**5**.

*Corresponding author
Supplementary data available via ScienceDirect

## COVER

*N*-*p*-Nosyl 3-phenyloxaziridine is an air-stable, crystalline solid that can be synthesized on multi-gram scale. It can be used as the terminal oxidant in the copper(II) catalyzed oxyamination of styrenes, and the resulting 1,3-oxazolidines bear protecting groups that can be easily removed under mild conditions and in high yields.
*Tetrahedron Letters* **2010**, 51, 5223–5225.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