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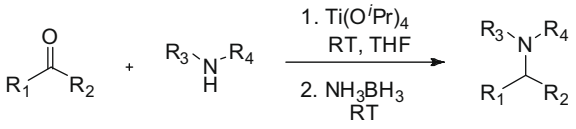
# Tetrahedron Letters Vol. 51, No. 24, 2010

# Contents

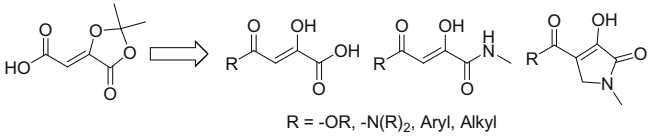
## COMMUNICATIONS



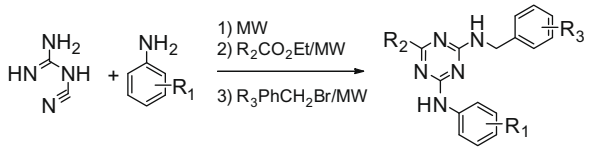


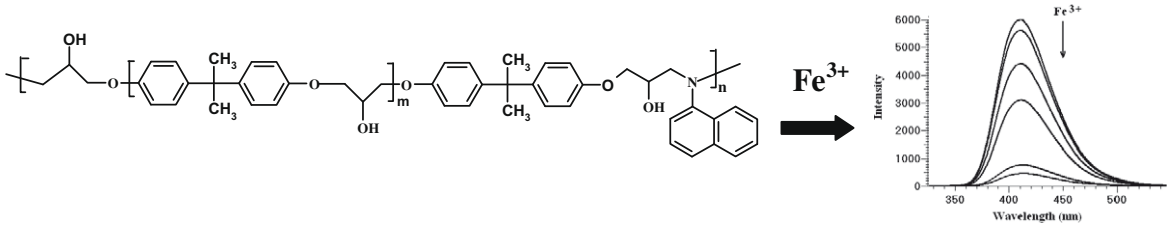

A variety of primary, secondary, and tertiary amines were prepared in 84–95% yields using ammonia borane for the reductive amination of aldehydes and ketones in the presence of titanium isopropoxide.





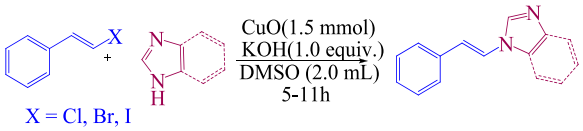


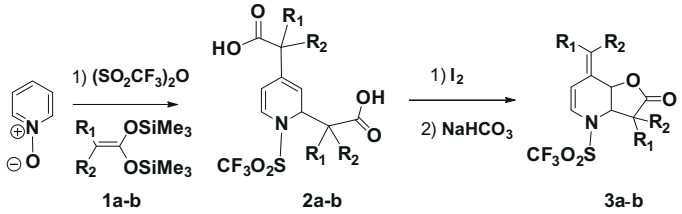



A simple epoxy-based polymer **1** bearing 1-naphthylamine units has been synthesized and its recognition behaviors toward various metal ions have been investigated in THF–water (8:2, v/v) solution. The designed polymer **1** was found to exhibit selective ON–OFF-type fluorosensing behavior toward $Fe^{3+}$ ions over other representative metal ions such as $Cu^{2+}$, $Zn^{2+}$, $Co^{2+}$, $Ni^{2+}$, and $Hg^{2+}$ ions.



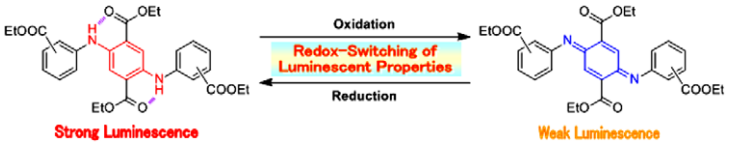




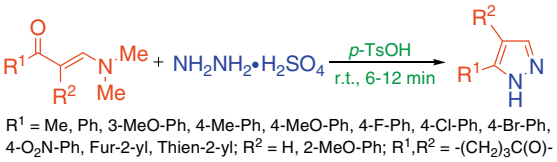




**a**:$R_1$ and $R_2$= -$CH_3$
**b**:$R_1$ and $R_2$= -$CH_2(CH_2)_3CH_2$-



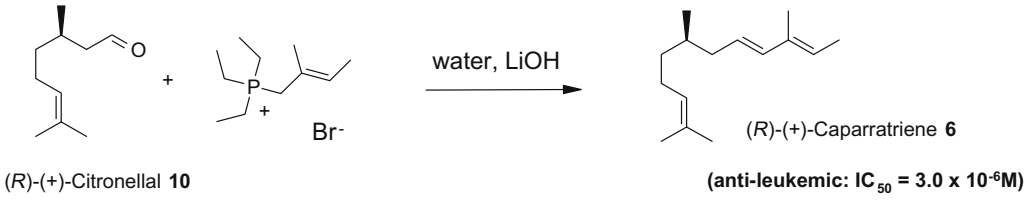



Phenylenediamines bearing the ethoxycarbonyl groups were synthesized to modulate luminescent properties. Switching of the luminescent properties was achieved by redox change between the phenylenediamine and quinonediimine derivatives.

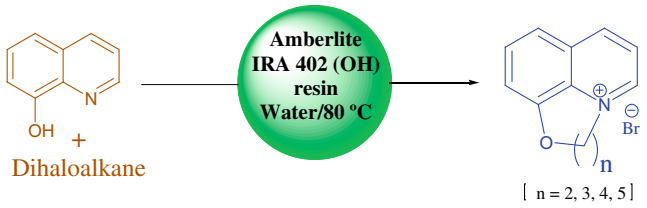



A series of NH-pyrazoles was efficiently synthesized from the reaction of β-enaminones and hydrazine sulfate in solid-state on grinding in the presence of *p*-toluenesulfonic acid.

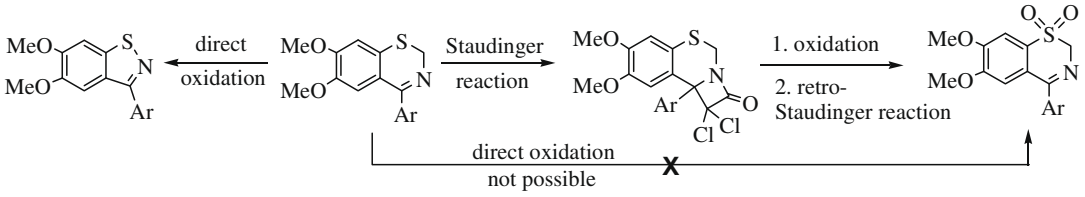


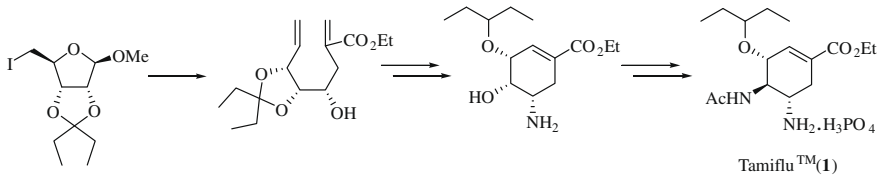




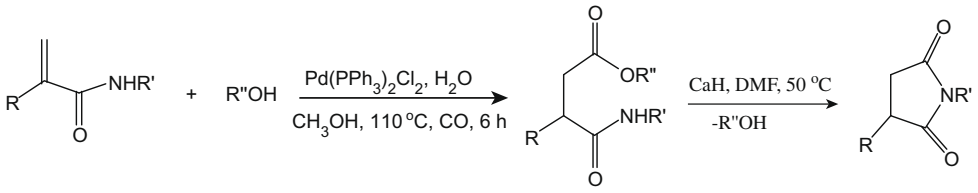





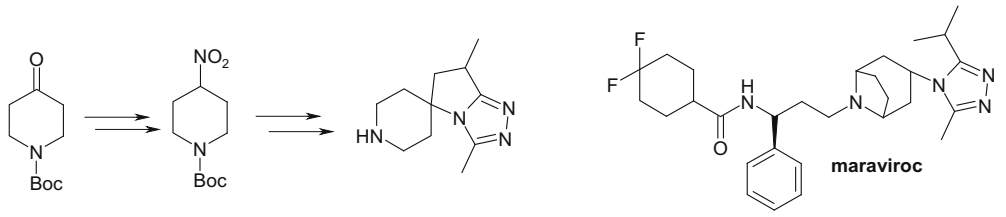







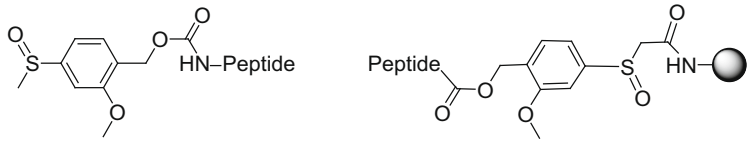



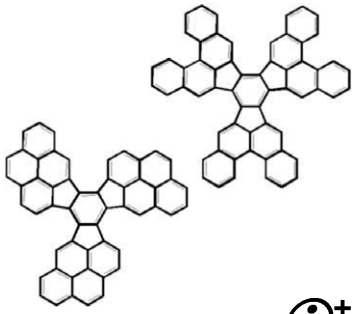



A simple preparation of previously unreported *N*-Boc 4-nitropiperidine is described. The synthetic utility of this new intermediate is illustrated by the synthesis of a spiropiperidine analogue of the eastern part of maraviroc.

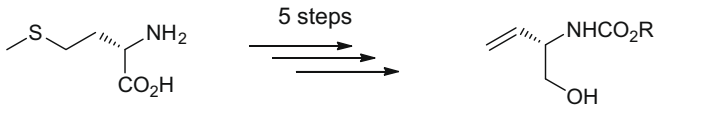




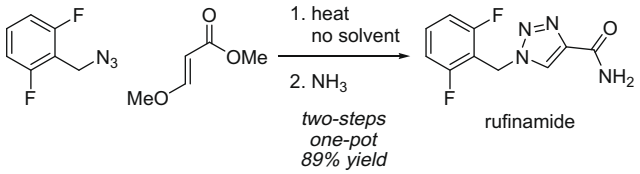


The synthesis of two precursor molecules for end-caps of single-walled carbon nanotubes, namely $C_{60}H_{30}$ for a (6, 6) nanotube and $C_{54}H_{24}$ for a (9, 0) nanotube, is presented. Further an attractive approach for the subsequent growth of the corresponding SWCNTs is discussed.

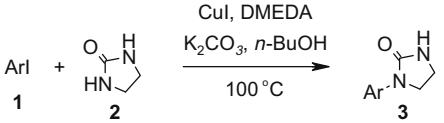




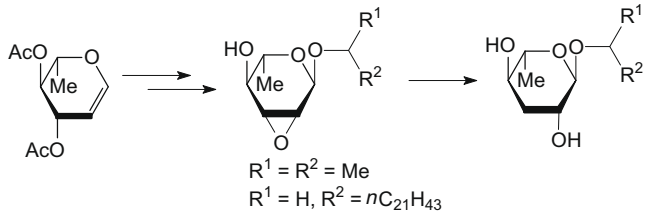




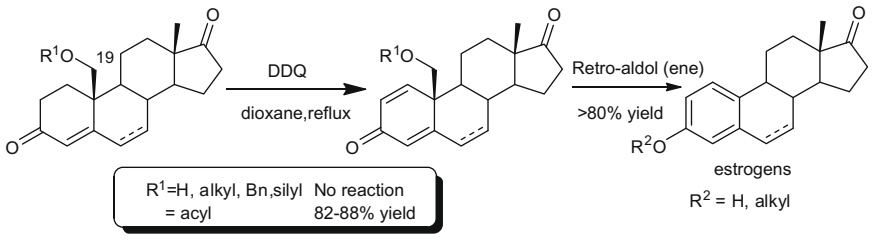




A mild, general, convenient and practical methodology for the selective copper-mediated mono N-arylation of unprotected 2-imidazolidinone was developed. Strong electron-donating groups and free hydroxy and amino groups on the aryl iodide substrates were well tolerated. The use of *n*-butanol as the solvent for the copper-catalysed mono-arylation of 2-imidazolidinone is unprecedented.

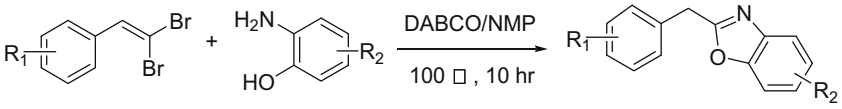



The synthesis of two 3-deoxy-α-L-rhamnosides (i.e., 3,6-dideoxy-L-*arabino*-hexopyranosides) as models of ascaroside natural products is reported.








Direct coupling of 1,1-dibromoethenes with 2-aminophenols had been achieved to form corresponding benzoxazoles under mildly basic reaction conditions.

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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