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Tetrahedron Letters

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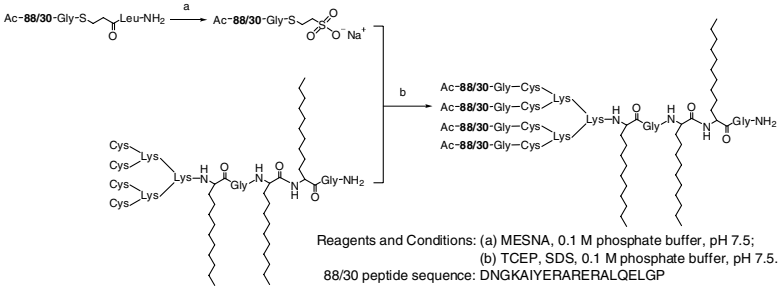
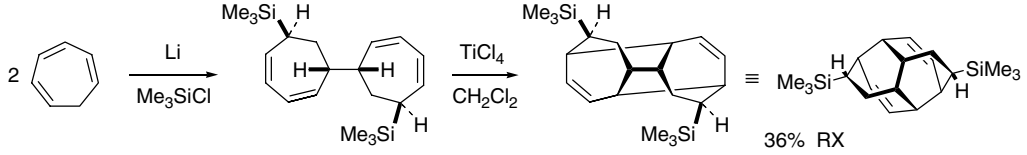
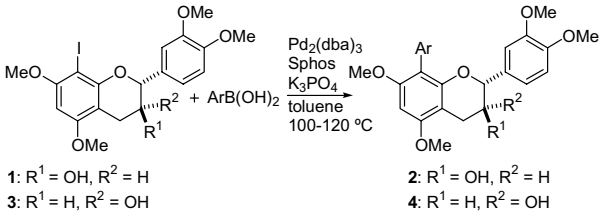
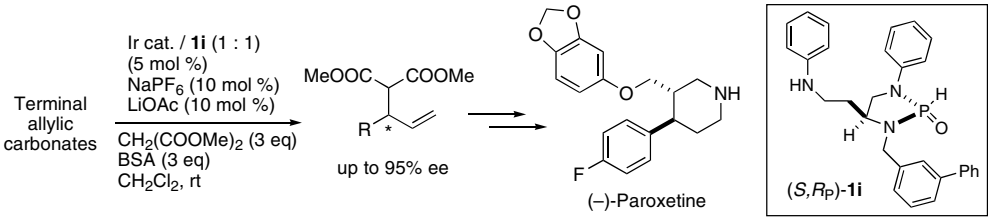
Contents

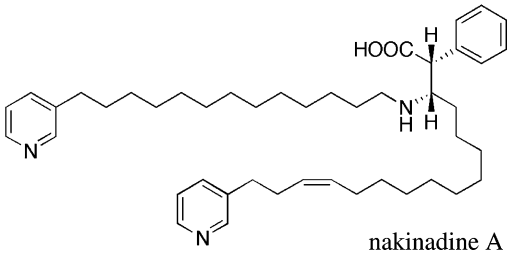
COMMUNICATIONS

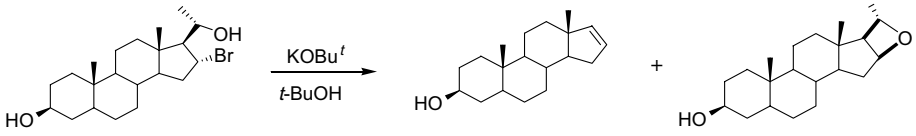


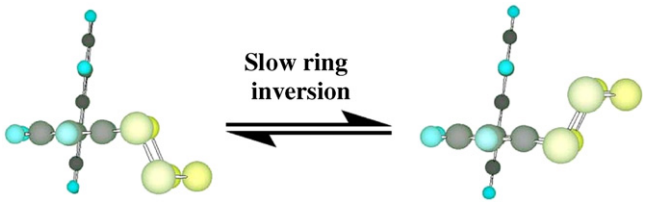




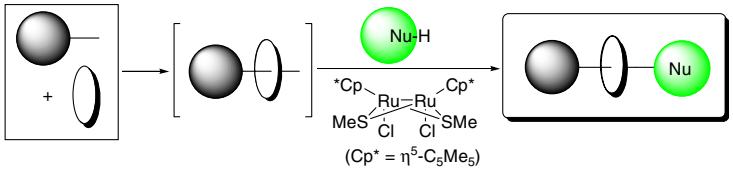


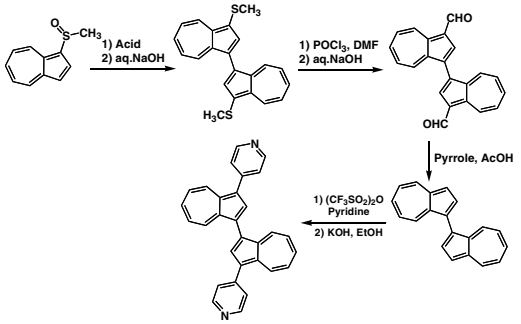


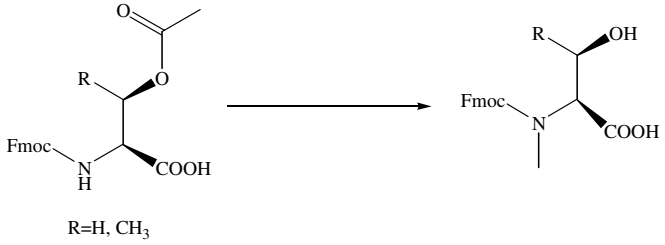




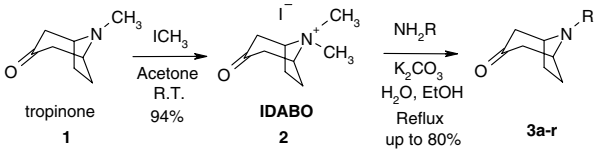
Rotational energy barrier = 25.49 kcal/mol. $^{298}\Delta G$ (Pentathiepin ring inversion energy barrier) = 24.28 kcal/mol.



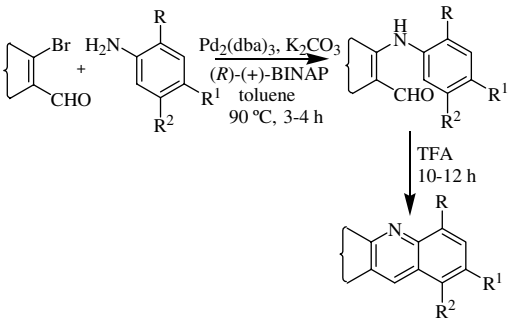


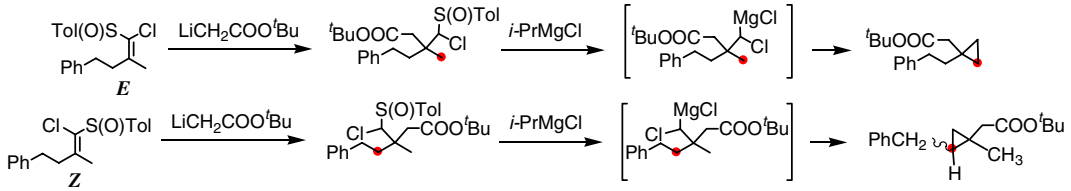


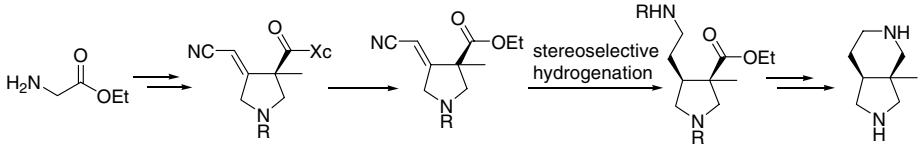
An improved method for the synthesis of Fmoc-*N*-methyl serine and threonine has been developed.

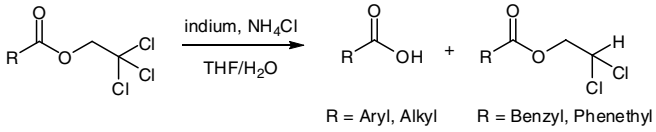


We describe a new one-pot synthesis of functionalized nortropinone starting from 8,8-dimethyl-3-oxo-8-azonia-bicyclo[3.2.1]octane iodide (IDABO).

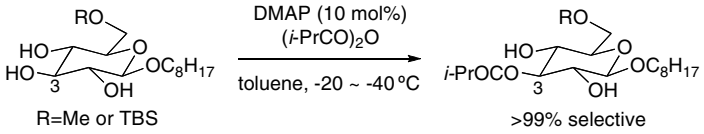


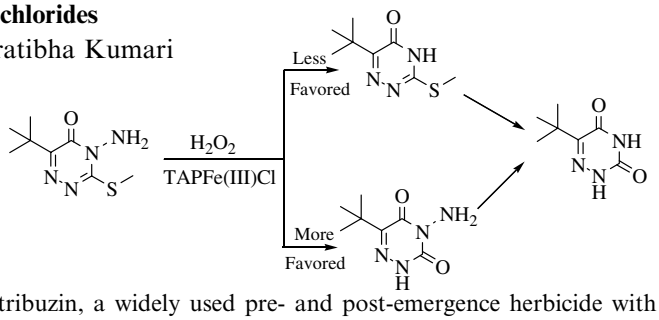




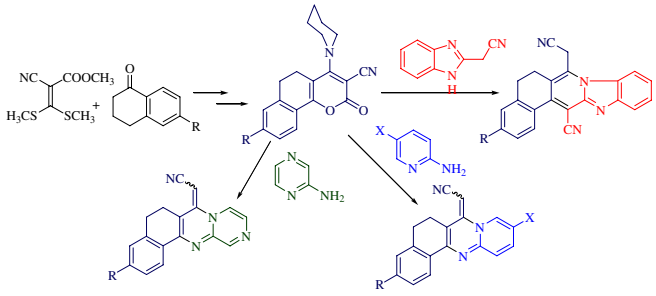


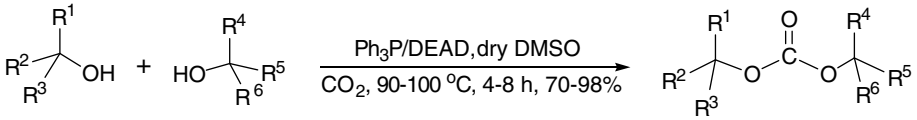
On treatment with indium metal, 2,2,2-trichloroethyl carboxylates smoothly undergo deprotection to carboxylic acids and reductive demonochlorination to 2,2-dichloroethyl esters, sharply depending on their structures.

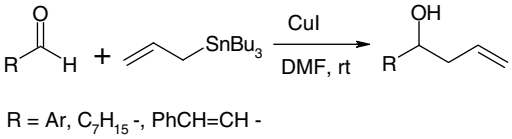


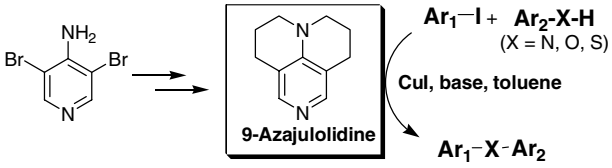


The biomimetic oxidation of metribuzin, a widely used pre- and post-emergence herbicide with hydrogen peroxide catalyzed by 5,10,15,20-tetraarylporphyrinatoiron(III) chlorides in dichloromethane, is reported to mimic the reactions of natural cytochrome P450 enzymes under mild conditions.

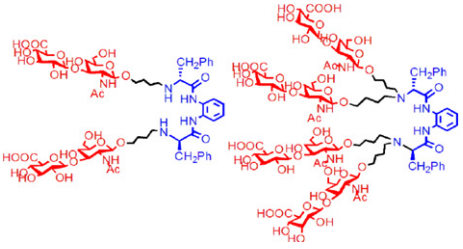


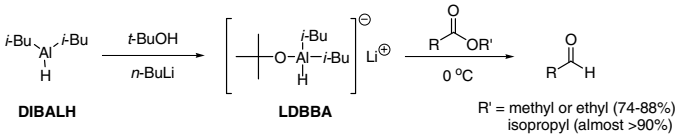


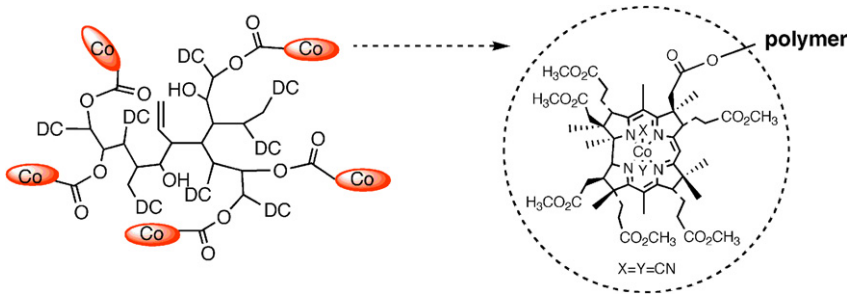


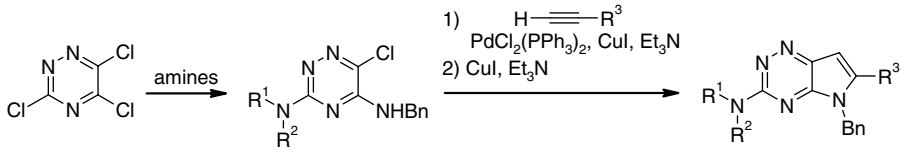


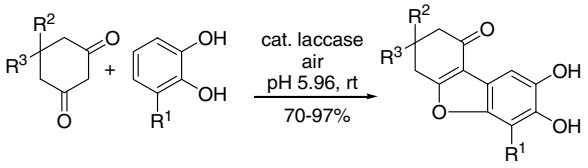
The efficient synthesis of 9-azajulolidine from readily available reagents and its utilization as an effective electron-rich ligand for post-Ullmann-type reactions are reported.



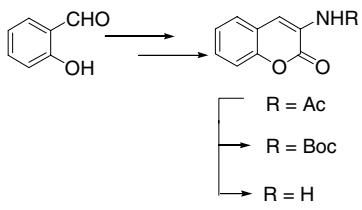




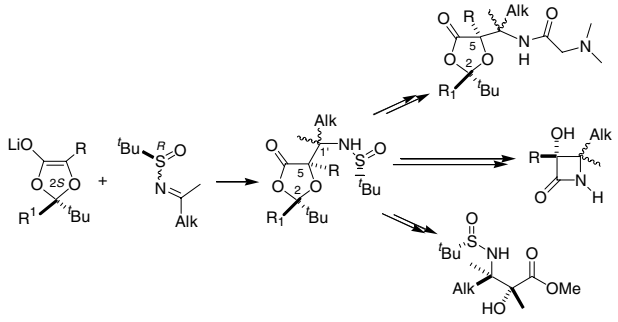


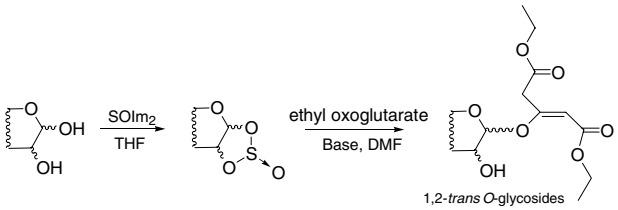


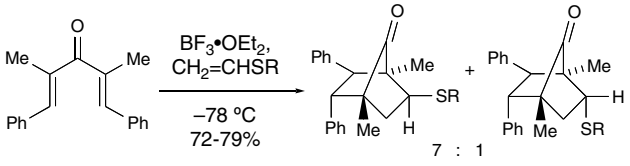
Laccase initiated domino reactions of cyclohexane-1,3-diones with catechols using air as an oxidant afford 3,4-dihydro-7,8-dihydroxy-2*H*-dibenzofuran-1-ones with yields ranging from 70% to 97%.



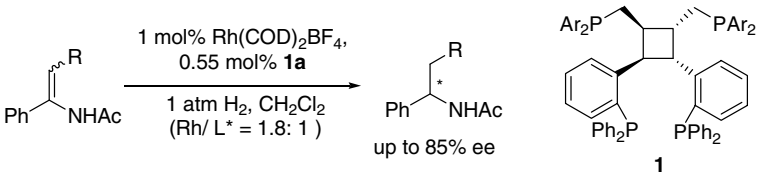
A commonly encountered problem in the synthesis of 3-aminocoumarins is the formation of 3-hydroxycoumarins. A solution to this problem, which involves non-aqueous formation of the 3-aminocoumarin system, is described.

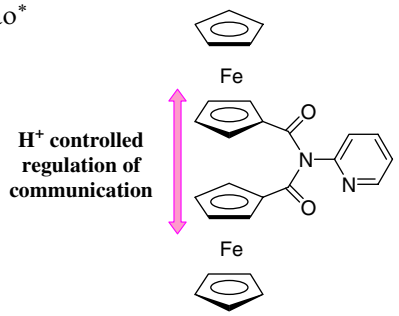




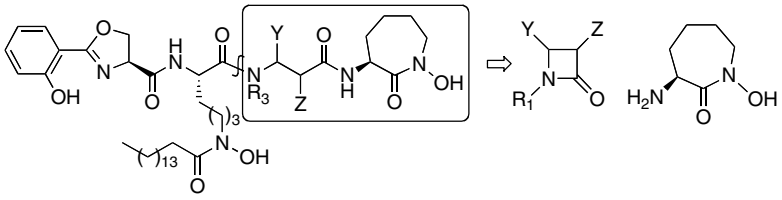


Simple cross-conjugated dienones undergo Nazarov cyclization and in situ trapping in the presence of vinyl sulfides, yielding functionalized bicyclo[2.2.1]heptanone products. The formal 3+2 cycloaddition is presumed to be a stepwise process, but furnishes the adducts with good diastereoselectivity.

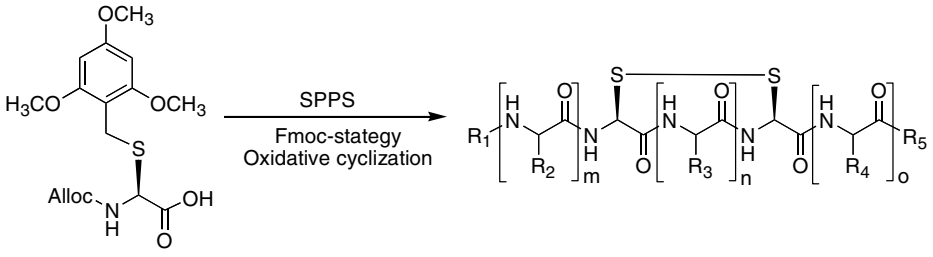


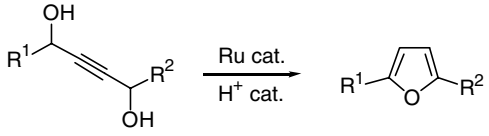


The imide-bridged diferrocene was synthesized and characterized, permitting the protonation-controlled regulation for the electronic communication between the two ferrocenyl moieties.

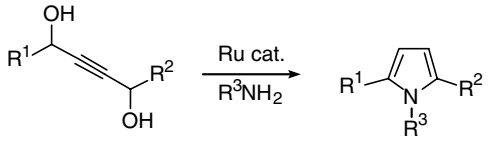


Mycobactins facilitate assimilation of iron by mycobacteria. Synthetic analogs with structural variation of the cobactin components have potent anti-TB activity. A new method for the synthesis of cobactin analogs is presented. The key process involves single-step coupling reactions between an amine of a cyclic (L)-lysine-derived hydroxamic acid with cyanide-activated β-lactams.

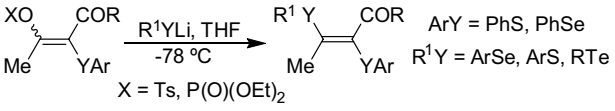


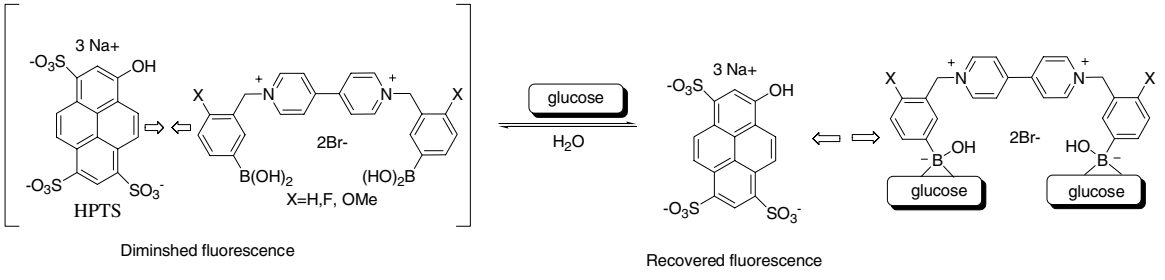


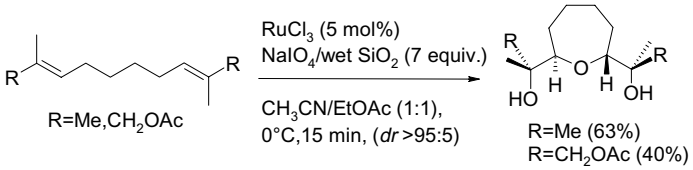
A ruthenium-catalysed isomerisation of 1,4-alkynediols to 1,4-diketones leads to in situ acid-catalysed dehydration to furans.

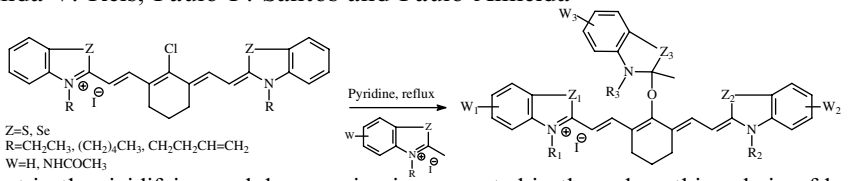


Ruthenium-catalysed isomerisation of 1,4-alkynediols in the presence of amines leads to the synthesis of pyrroles.

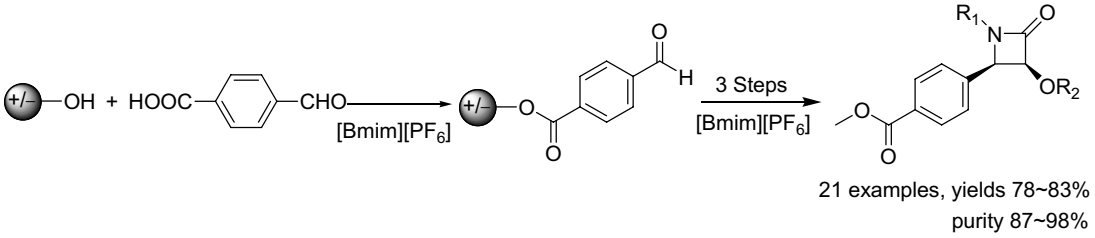




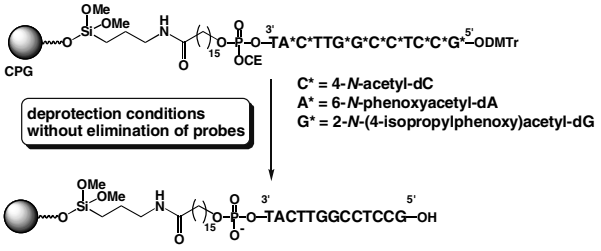


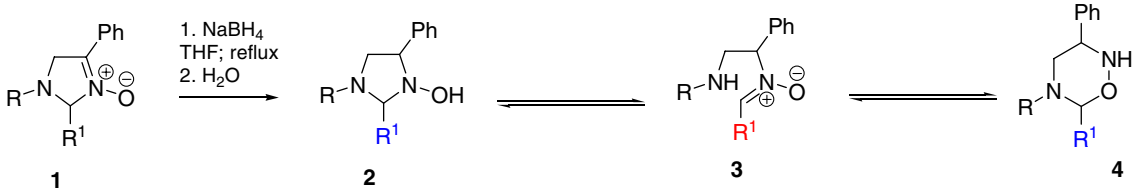


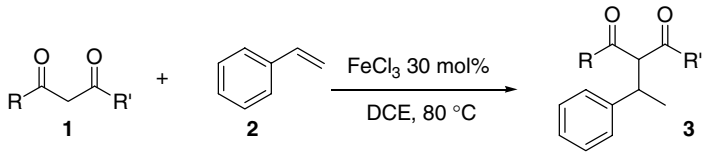
The chlorine atom present in the rigidifying cyclohexane ring incorporated in the polymethine chain of heptamethinecyanine dyes was replaced by a 2-methylbenzoazolium salt conveniently substituted through an ether linkage furnished by residual water present in the reactional mixture. The expected substituted cyanines were obtained along with other related triheterocyclic cyanine dyes, resulting from the replacement of the terminal heterocyclic moieties of the starting chloro dye or of an already substituted dye, by an exogenous benzoazolium residue.

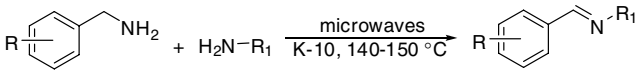


An efficient and general ionic liquid supported synthesis of β-lactam library via multistep reactions have been successfully carried out in a single ionic liquid batch.









R = H, CH_3, Cl, F, CF_3, OCH_3, etc.
R_1= Ph, substituted Ph, -CH_2Ph, substituted -CH_2Ph, alkyl

A K-10 montmorillonite catalyzed microwave-assisted oxidative coupling of amines is described. Substituted benzylamines readily undergo self-coupling reactions, while aliphatic amines and anilines cannot form self-coupled products. A mixture of a benzylamine and an aniline or aliphatic amine, respectively, however, effectively and selectively produces mixed imines.

OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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