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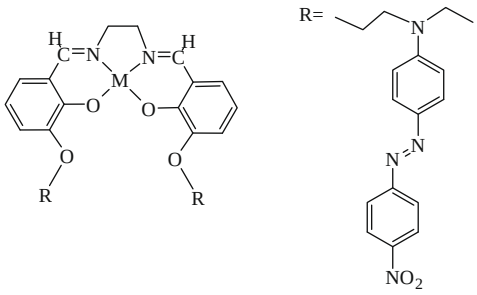
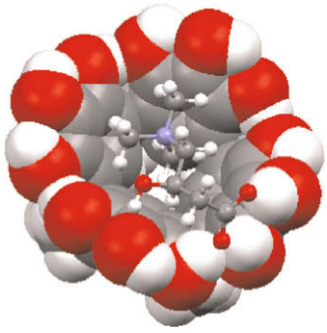
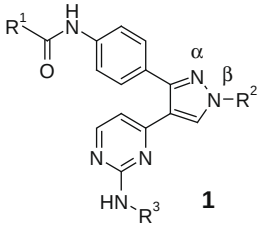
Contents

Communications



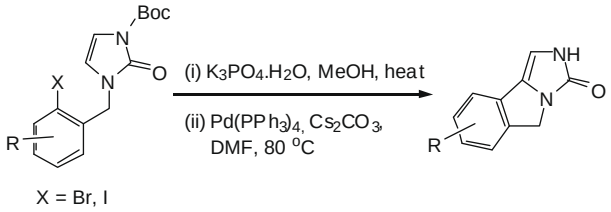
New salen compounds tethered with azo dyes have been developed and two-photon absorption properties are found to result from azo-dye components.



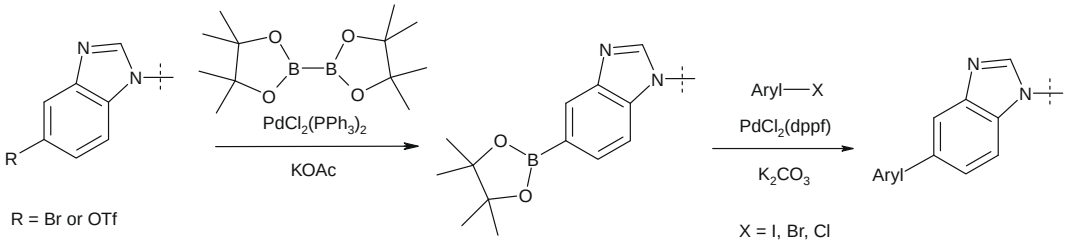


1

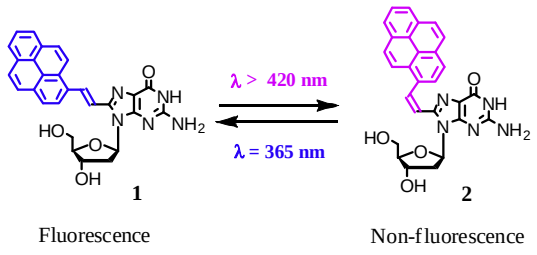
Two regioselective synthetic routes for 1-*N*-alkyl-3-aryl-4-[pyrimidin-4-yl]-pyrazoles of generic formula **1** were developed. These highly efficient and scalable routes circumvent the generally observed poor regioselectivity for the pyrazole alkylation.

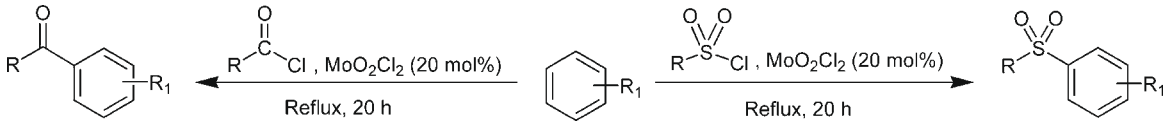


A simple protocol for the synthesis of various imidazoisoindol-3-ones is described by employing palladium-catalyzed intramolecular C–H insertion reaction of substituted 2-haloaryl imidazolin-2-ones.

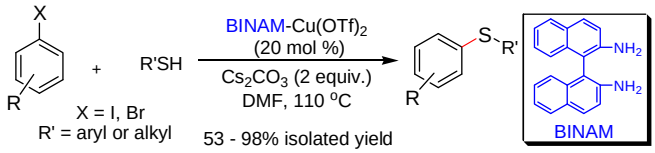


N-Substituted 5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1*H*-benzimidazoles were conveniently accessed via microwave-assisted synthesis. Subsequent Suzuki–Miyaura reaction with heteroaryl halides proceeded to give a wide variety of 5-heteroaryl-substituted benzimidazoles.

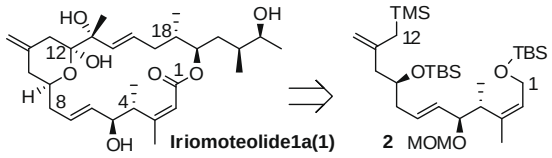


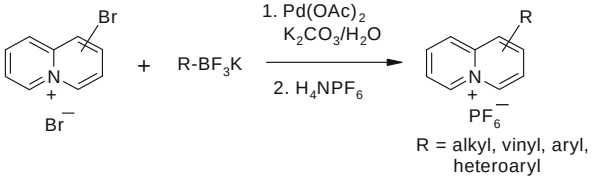


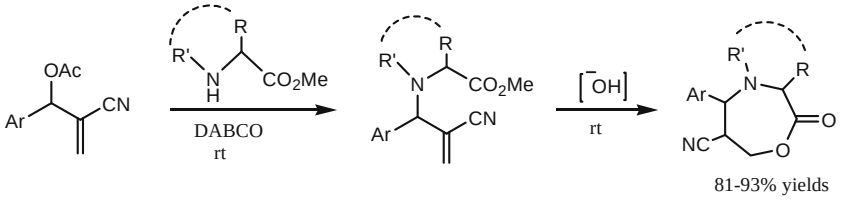
MoO_2Cl_2 catalyzes the synthesis of aromatic ketones and sulfones in moderate to good yields.

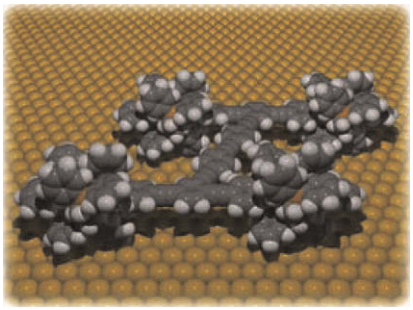


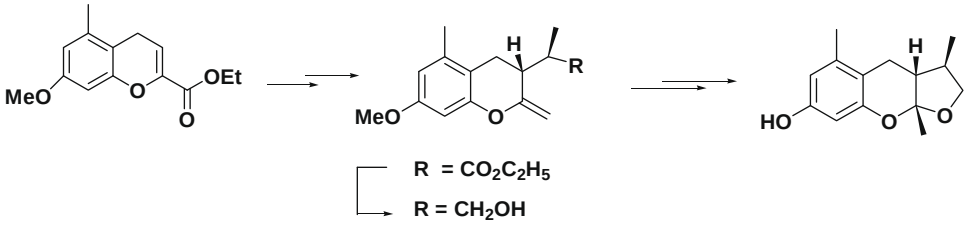
A wide range of diaryl thioethers and aryl alkyl thioethers are synthesized from the corresponding aryl iodides and aromatic/aliphatic thiols through Ullmann type intermolecular coupling reactions in the presence of a catalytic amount of easily available BINAM–Cu(OTf)$_2$ complex. Less reactive aryl bromides have also been shown to react with thiols under identical reaction conditions to give good yields of the thioethers without increasing the reaction temperature and time.

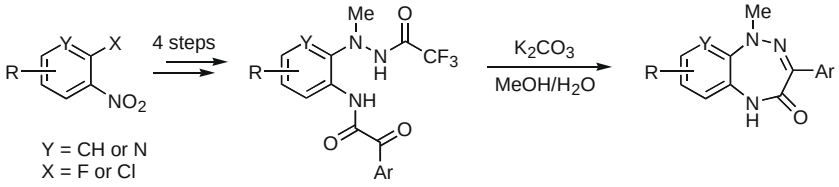


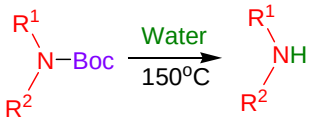




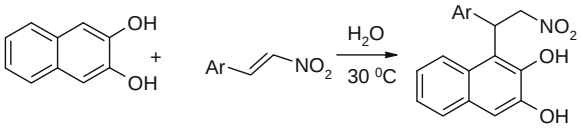




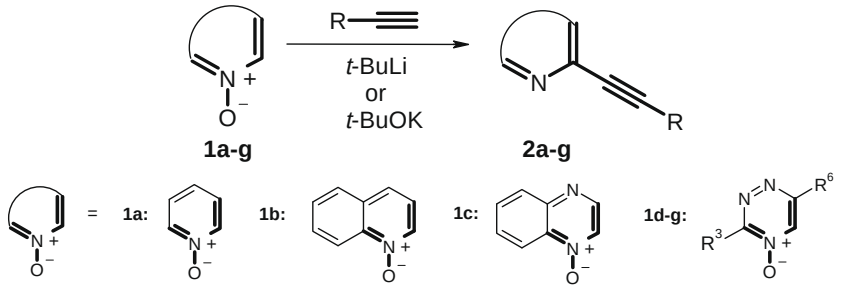


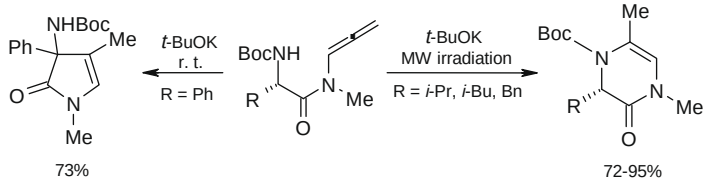


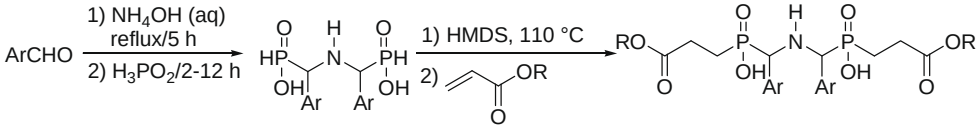
A catalyst-free water-mediated *N*-Boc deprotection of *N*-Boc-amines is reported. In the absence of any additional reagents, the free amines were formed from a variety of aromatic and aliphatic *N*-Boc-amines as well as from some *N*-Boc-amino acid derivatives.

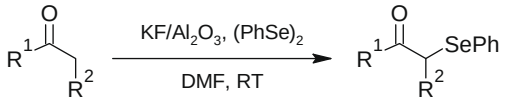


The accelerated Michael-type Friedel–Crafts alkylation of naphthols with nitrostyrenes in the presence of water is reported.

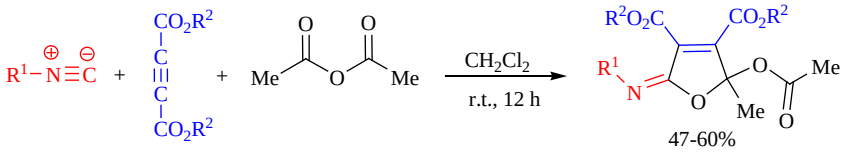


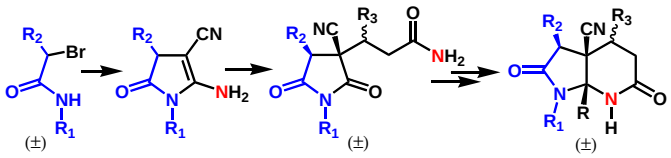




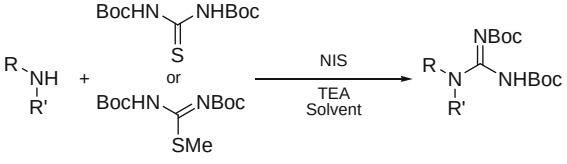


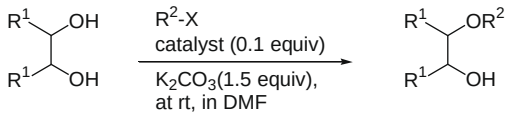
R^1 = H, alkyl, aryl
R^2 = H, alkyl



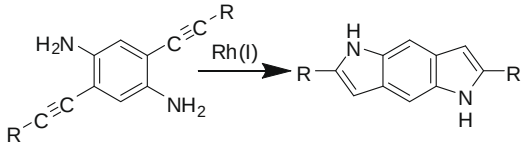


The scope of reactions of enaminonitrile γ-lactams, obtained easily from N-alkylated α-bromoacetamides and malononitrile, with acryloyl chloride derivatives has been extended successfully in forming novel polysubstituted imides. From these results, the tandem ring closure/ring opening seems to be effective and general. The latter systems obtained were then used to provide substituted 7-hexahydro-aza-indoles by using a regioselective reduction process followed ultimately by aza-cationic cyclization in acidic medium.

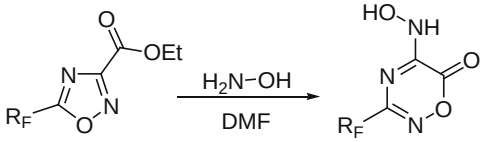


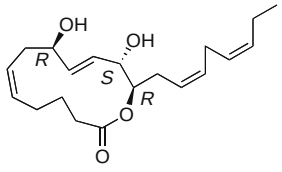


R^2X= allylBr, BnBr, MeI, EtI;
catalyst= $CuCl_2$, *p*-MeOPhB$(OH)_2$$R^2X$, *p*-FPhB$(OH)_2$

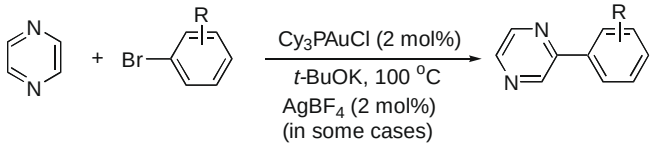


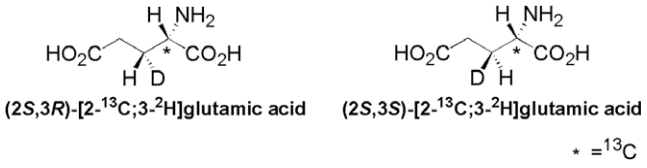
[Rh(bim)$(CO)_2$+BPh_4^-] (bim = bis(*N*-methylimidazol-2-yl)methane) is an efficient precatalyst for hydroamination of selected alkynylanilines to give benzo(dipyrroles) by means of hydroamination.

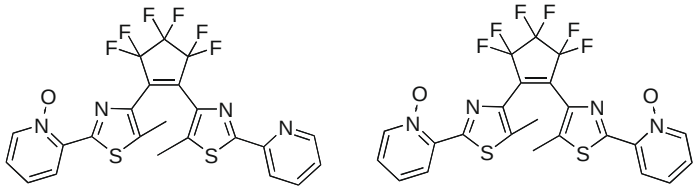




amphidinolactone A

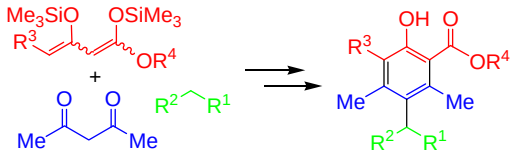


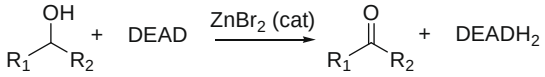




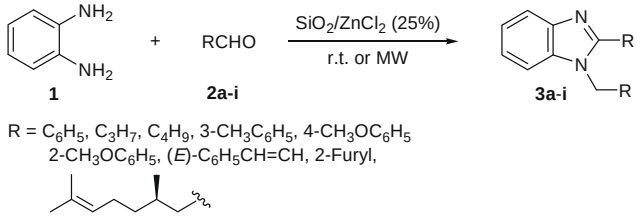
2a **3a**

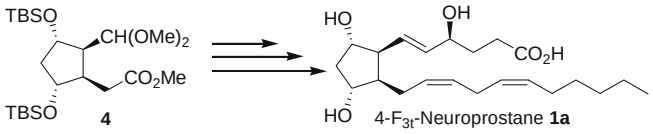
Simple oxidation of the pyridyl moieties has great impacts on the main photochromic features of 1,2-bis[5′-methyl-2′-(2″-pyridyl)thiazolyl]perfluorocyclopentene.



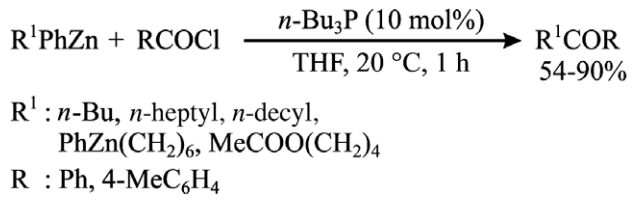


Diethyl azodicarboxylate (DEAD) in presence of catalytic amounts of $ZnBr_2$ is an efficient reagent for the oxidation of alcohols to carbonyl derivatives via dehydrogenation.

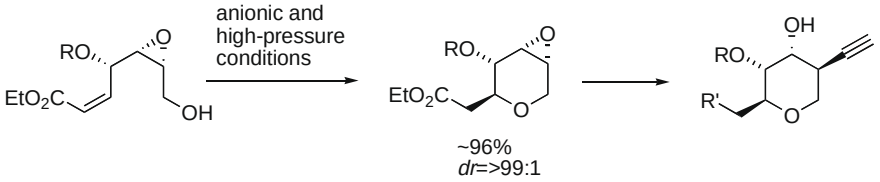


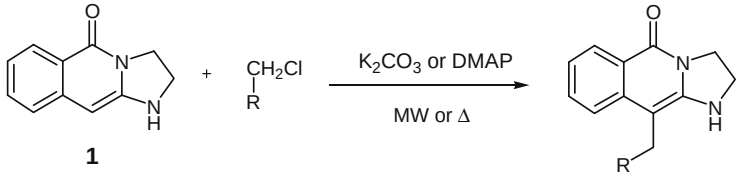


The synthesis of the 4-F_{3t}-Neuroprostane **1a** derived from peroxidation of docosapentaenoic acid (DPA; C22:5ω6) is described starting from chiral polyfunctional cyclopentane **4**.



n-Bu_3P-catalyzed acylation of mixed *n*-alkyl phenylzincs with aromatic acyl halides in THF is efficient for selective transfer of *n*-alkyl groups to produce *n*-alkyl aryl ketones in good yields.





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