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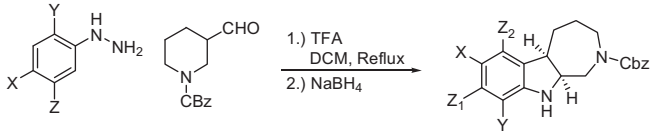
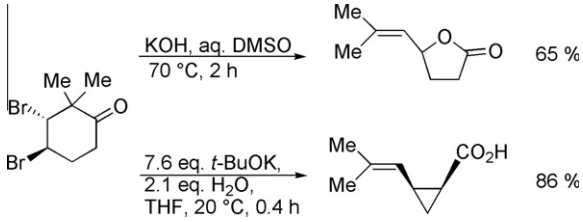
Contents

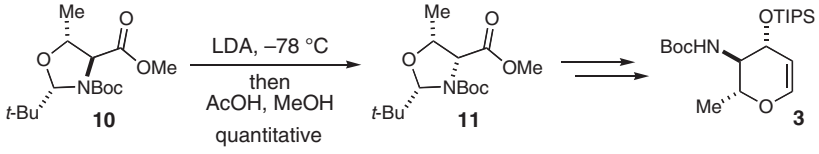
COMMUNICATIONS

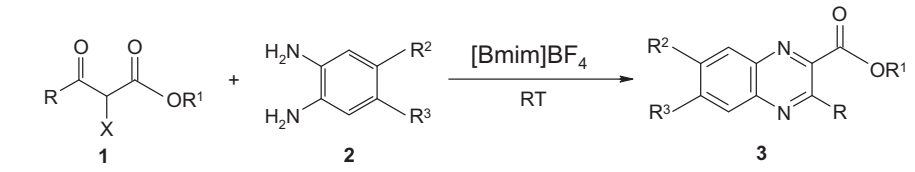


The reaction of benzyl 3-formylpiperidine-1-carboxylate and aryl hydrazines under standard Fisher indole conditions followed by reductive work-up affords azepino[3,4*b*]indoles in moderate to good yields. The products are proposed to be derived via a Plancher rearrangement [(a) Plancher, G. *Gazzetta* **1898**, *28*, 374; (b) Plancher, G. *Atti. R. Accad. Lincei* **1900**, *9*, 115; (c) Boyd-Barrett, H. S. *J. Chem. Soc.* **1932**, 321].

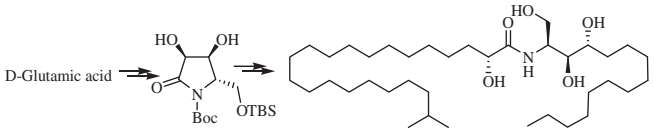


Whereas potassium hydroxide reacts with a large variety of 2,2-dimethyl-substituted cyclohexanones bearing two leaving groups at 3,4-positions to produce vinyl lactones or/and their vinyl cyclopropane carboxylic acid isomers, 'anhydrous potassium hydroxide' (from 3/1 *t*-BuOK/H_2O) exclusively produces the latter in very high yield under very mild conditions.

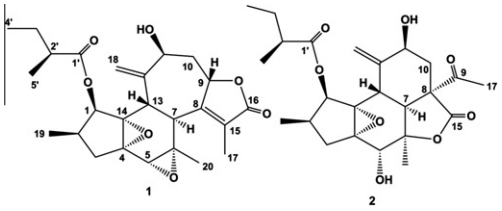


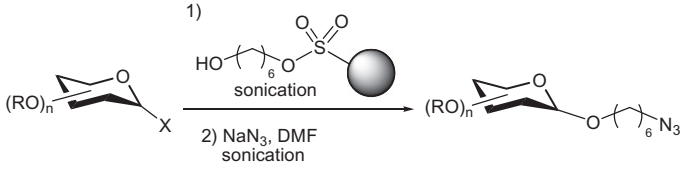


R = CH_3, Ph, CF_3, Isopropyle R^2 = H, CH_3, COOMe, NO_2
R^1 = Et, Me, Bn R^3 = H, CH_3
X = Cl, Br

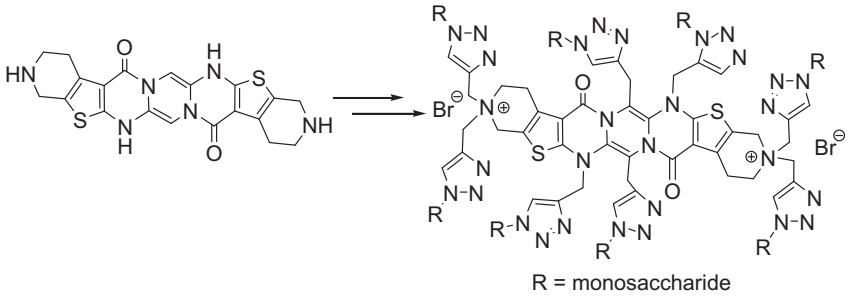


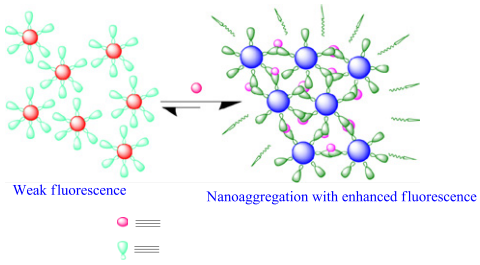
A convenient method for the preparation of multifunctional chiral building block **2** from D-glutamic acid was described. Cerebroside sphingolipid **1**, a sex pheromone of hair crab, was successfully synthesized based on such a readily available building block.



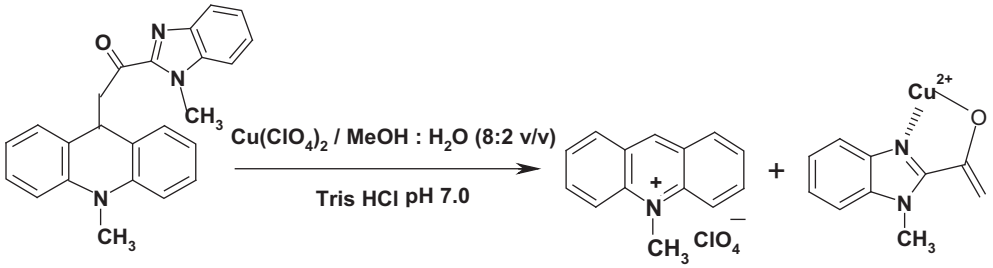


An approach that combines solid phase and solution phase synthesis of oligosaccharides via the assistance of sonication has been developed. By employing the traceless linker, the designed oligosaccharides can be obtained in pure form and, more importantly, ready for incorporation to aglycons of interest via 'Click' chemistry or amide linkage. The overall strategy will facilitate the studies of roles of carbohydrates in bioactive compounds.

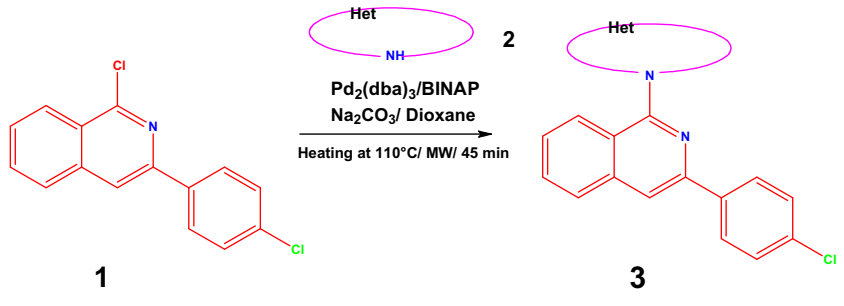


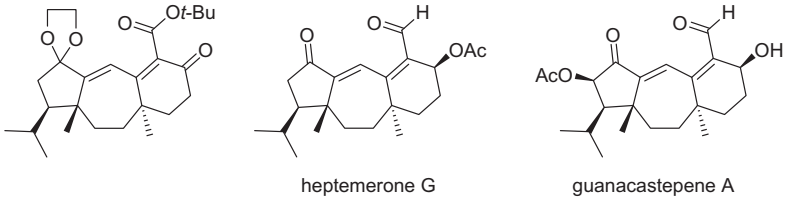


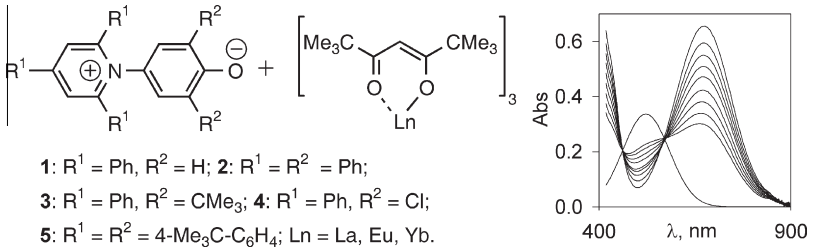
ACEADD-GNPs exhibit sandwich formation in the presence of metal ions resulting in nanoaggregation and fluorescence enhancement.



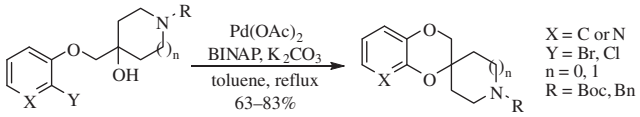
A novel retro-reaction strategy has been used to design a highly selective Cu^{2+} fluorescent chemodosimeter in the form of a C9 acridane-chelate. The fluorescence amplification is the result of the release of a strongly fluorescent acridinium ion at the expense of the weakly emitting probe.



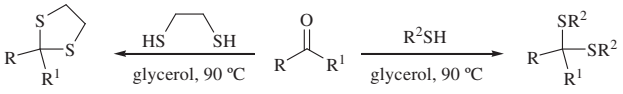


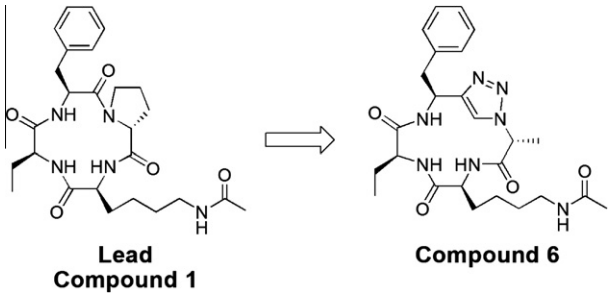


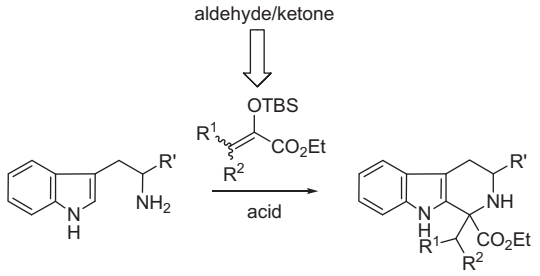
1: R^1 = Ph, R^2 = H; **2**: R^1 = R^2 = Ph;
3: R^1 = Ph, R^2 = CMe_3; **4**: R^1 = Ph, R^2 = Cl;
5: R^1 = R^2 = 4-Me_3C-C_6H_4; Ln = La, Eu, Yb.



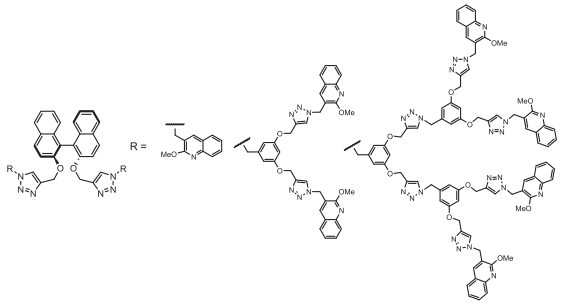
Intramolecular palladium-catalyzed C–O bond forming reactions of 2-chloropyridines or an aromatic bromide provided spirocyclic pyridinedioxins or benzodioxins.

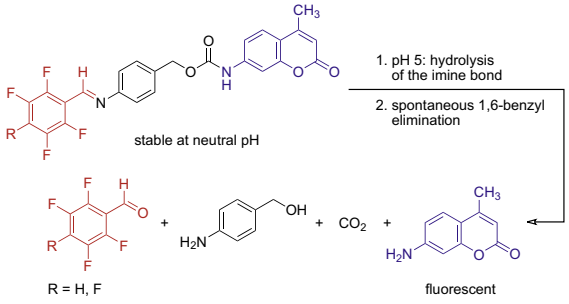


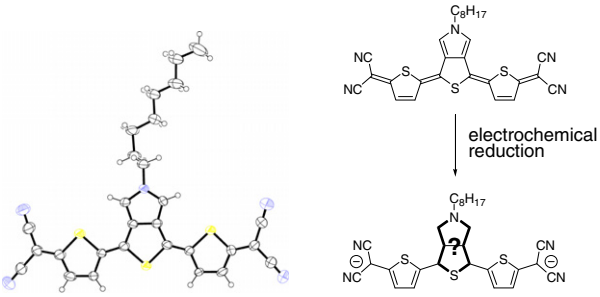


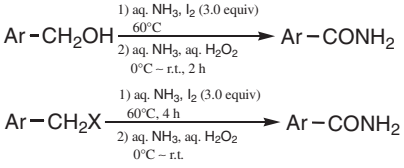


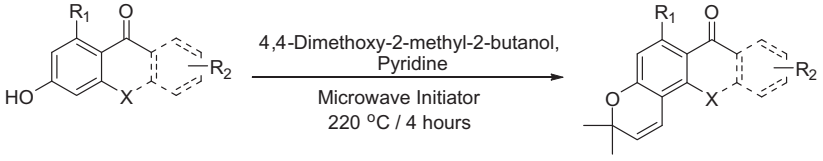
We report an efficient method for the synthesis of β-carbolines from α-siloxy α,β-unsaturated esters, which are accessible from a variety of aldehydes and ketones.



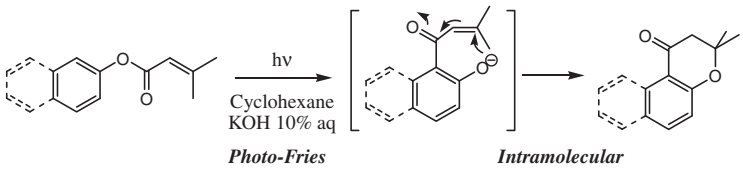


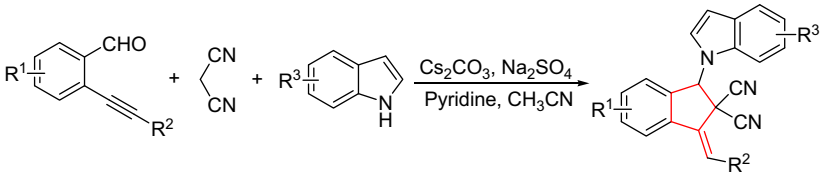


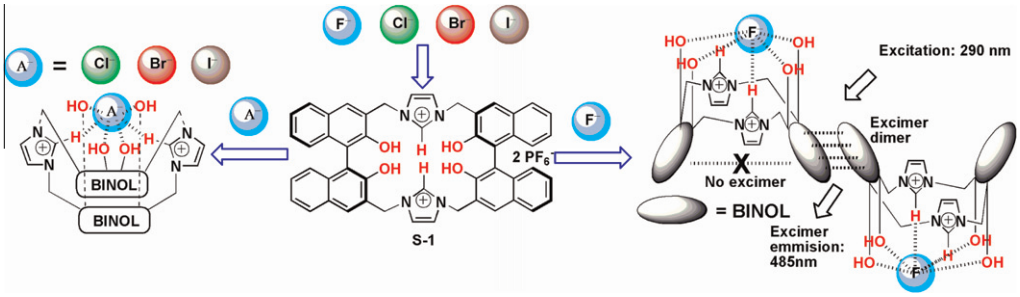


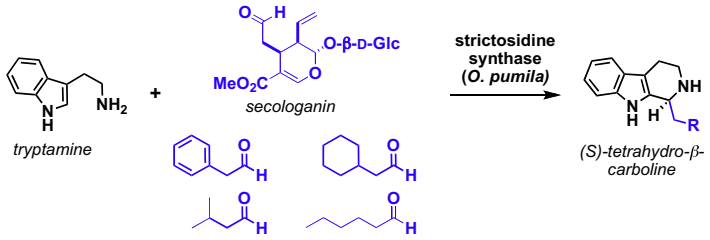


A novel and efficient one-pot microwave-assisted synthesis of angular 2,2-dimethyl-2*H*-chromone-containing compounds is reported.

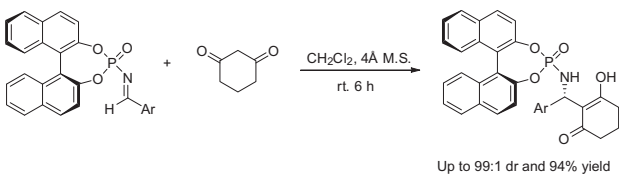




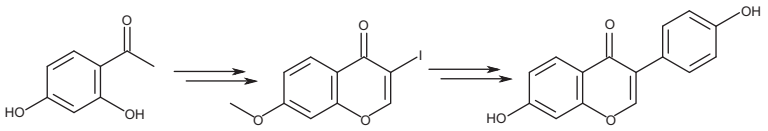


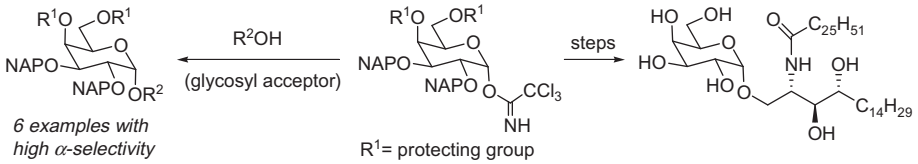


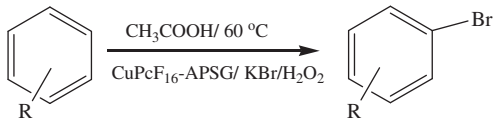
Strictosidine synthase from *Ophiorrhiza pumila* turns over a variety of aldehydes to yield a range of tetrahydro-β-carboline products with high stereoselectivity.



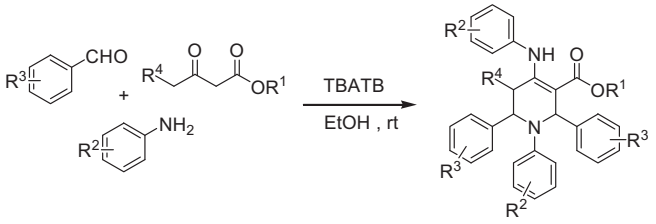
(*S*)-BINOL-based chiral *N*-phosphoryl imines have been designed and synthesized. These *N*-phosphoryl imines have been proven to be efficient for direct 1,2-addition reaction with both cyclic and linear diketones without the use of any bases. They can also serve as electrophiles for the reaction with diethyl malonate in the presence of potassium carbonate. The absolute configuration has been unambiguously determined by converting a product into an authentic sample.

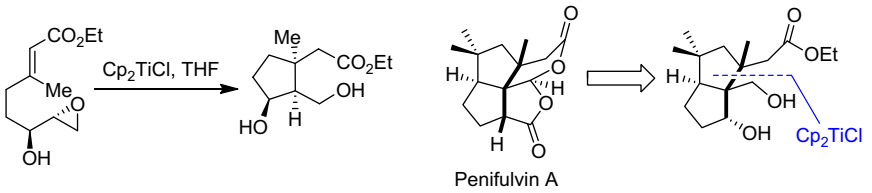


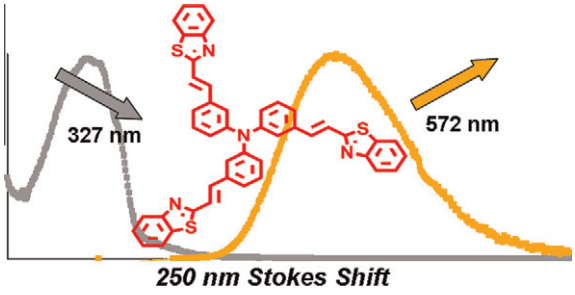


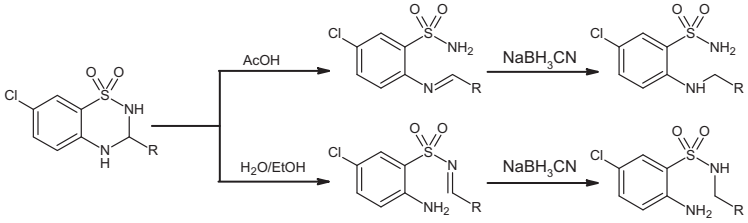


A silica gel-supported copper(II) perfluorophthalocyanine complex has been found to be an efficient and recyclable catalyst in the regioselective oxidative bromination of various aromatic substrates.

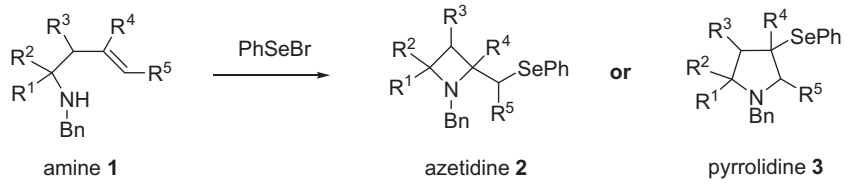




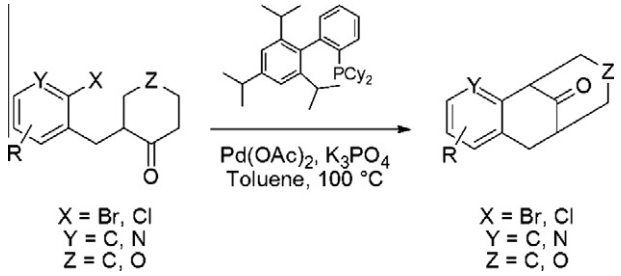


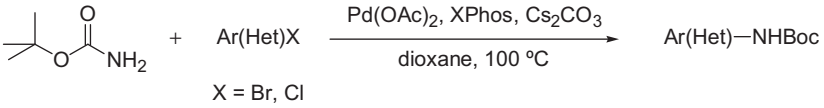


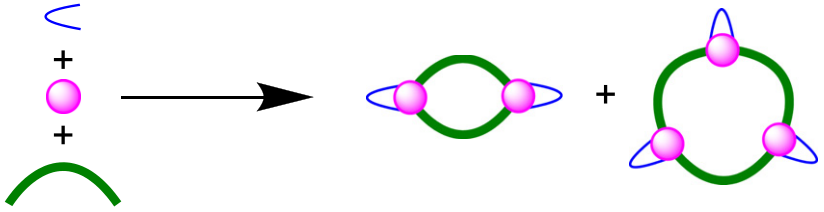
A simple and efficient synthetic path for N-1 or N-2 alkyl-substituted 2-aminobenzensulfonamides was developed based on regioselective reduction with $NaBH_3CN$ in different solvents. This simple method could be adapted for the synthesis of more advanced intermediates.



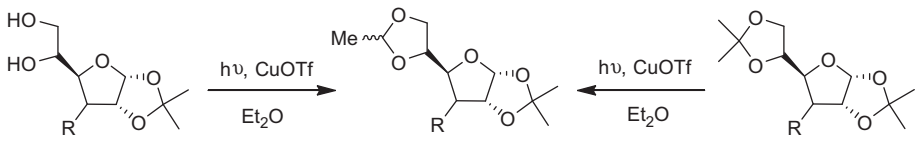
Azetidines or pyrrolidines can be regioselectively obtained by selenocyclization of homoallylic amines, according to the double bond substitution.

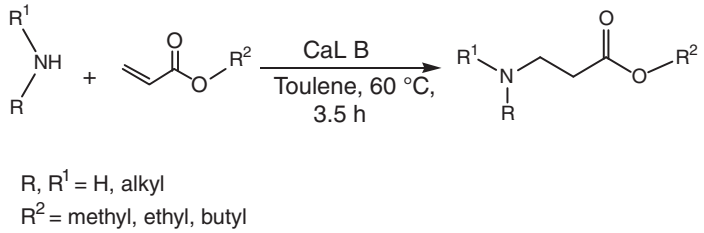




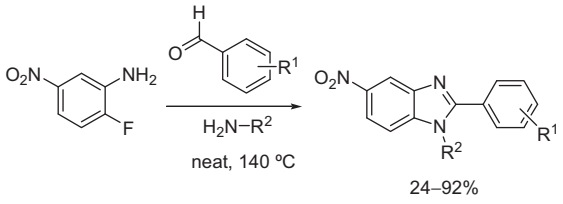


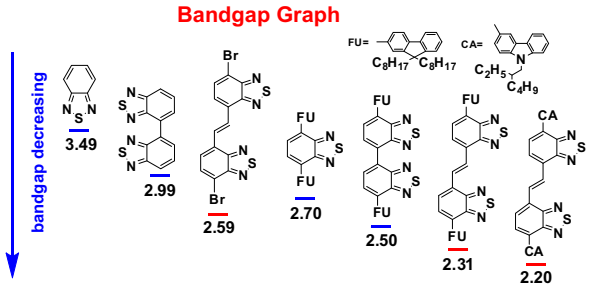
Multinuclear discrete heteroleptic complexes have been synthesized by mixing Pd(II), 2,2′-bipyridine and *N*,*N*′-(1,2-phenylene)diisonicotinamide in a single pot as a new approach. A dimeric molecular rhombus and a trimer in equilibrium are obtained as new complexes.

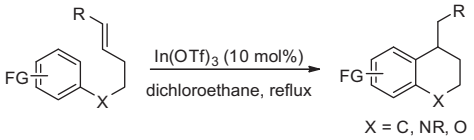




An efficient protocol has been developed to catalyze the regioselective aza-Michael addition of amines with acrylates using CaL B as a biocatalyst at 60 °C.







We report herein that $In(OTf)_3$ is an effective catalyst for the intramolecular hydroarylation of ω-aryl-1-alkenes to form tetralin and chromane derivatives. Though narrower in substrate scope when compared to the Ru-catalyzed version, the reaction catalyzed by $In(OTf)_3$ gave better and cleaner reactions in selected cases.

*Corresponding author
Supplementary data available via ScienceDirect

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