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Tetrahedron Letters

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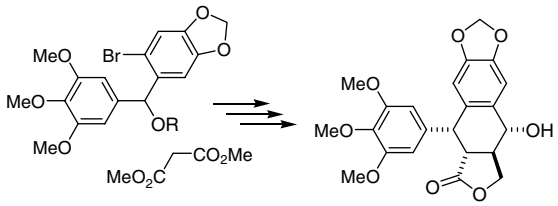
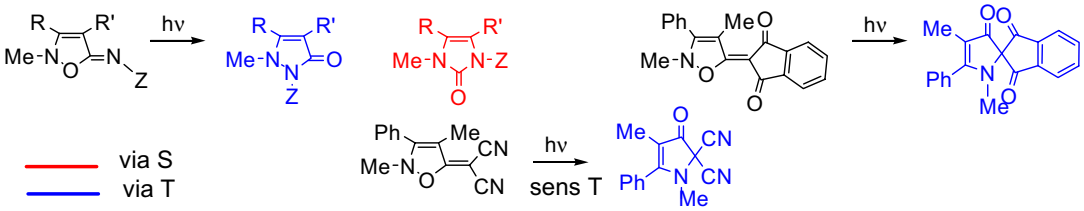
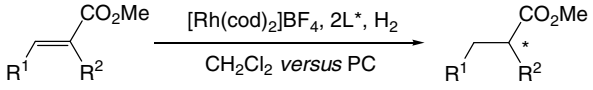
Contents

COMMUNICATIONS

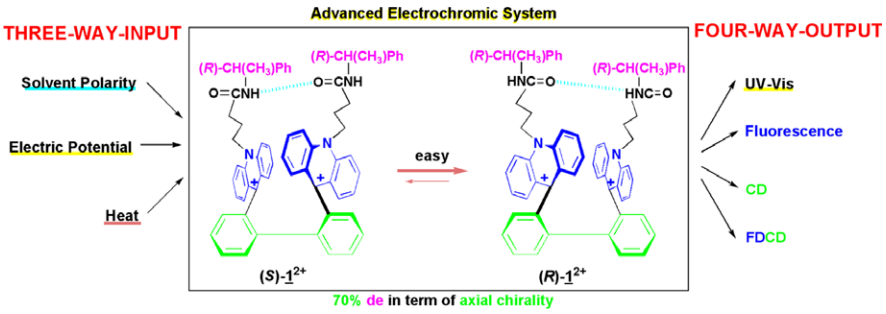


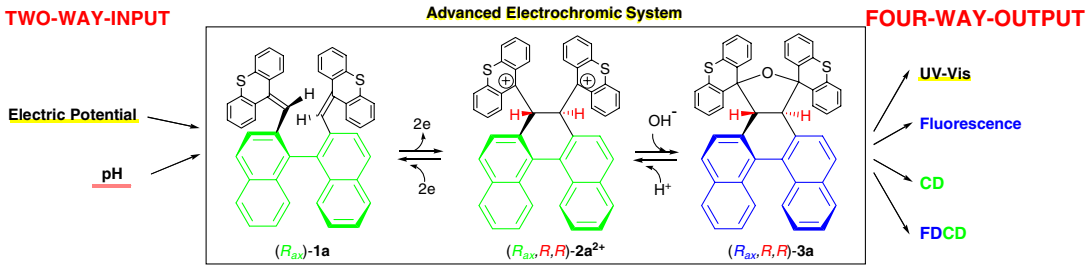
A formal synthesis of podophyllotoxin was carried out in nine steps. The key pseudo-domino step was accomplished through the succession of an intermolecular palladium-catalyzed allylic alkylation and an intramolecular Mizoroki–Heck coupling reaction.

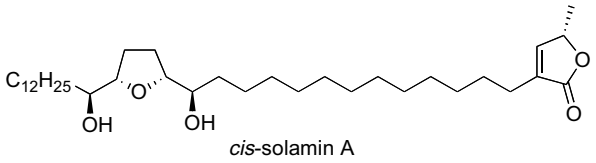


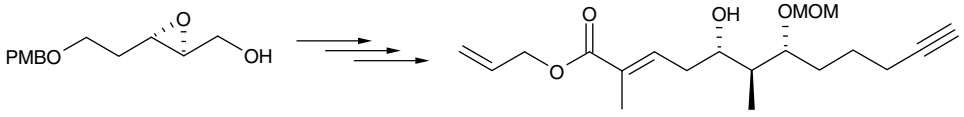


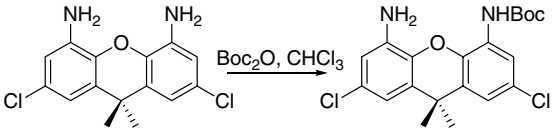
Propylene carbonate (PC) can be used as alternative solvent in the Rh-catalyzed hydrogenation of functionalized olefins with self-assembling catalysts to increase reaction rate and enantioselectivity.



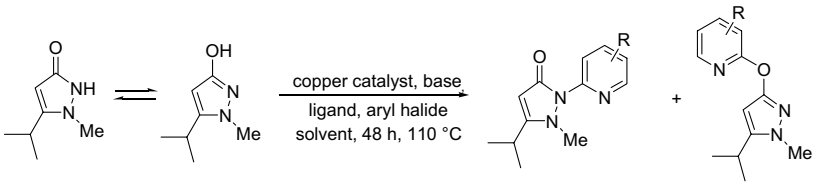


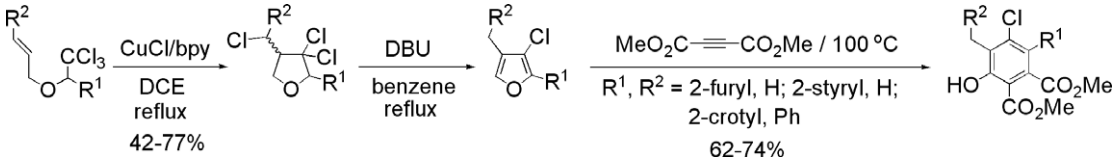


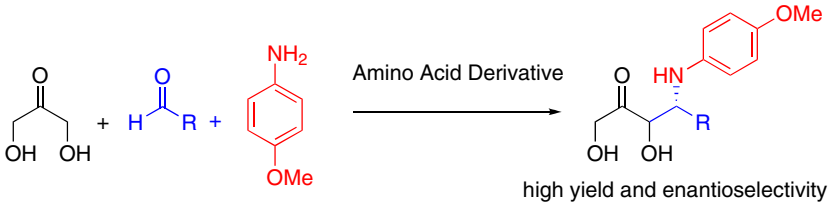


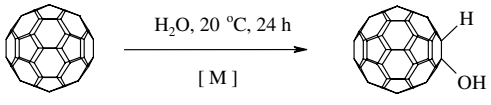


The proximity of the 4,5-diamino groups in a 9,9′-dimethylxanthene skeleton provides unique reactivity due to aggregation effects. While treatment with 1 equiv of an isocyanate yields the diurea and starting material, under similar conditions, Boc_2O essentially provides the monocarbamoyl derivative.



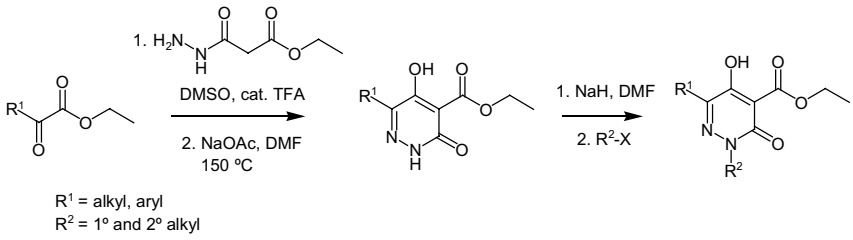


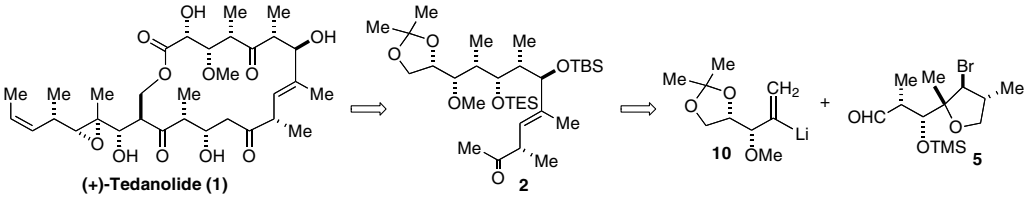




[M] = Cp_2ZrCl_2, Cp_2TiCl_2, Cp_2HfCl_2.

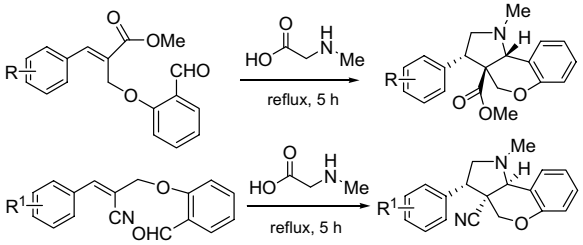
Selective addition of H_2O to fullerene C_{60} catalyzed by Cp_2MCl_2 (M = Ti, Zr, Hf) catalysts to yield 1-hydroxy-1,2-dihydrofullerene has been realized for the first time.

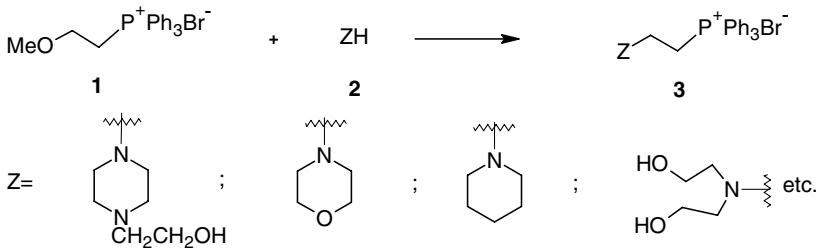


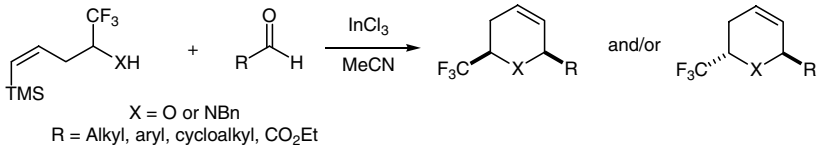


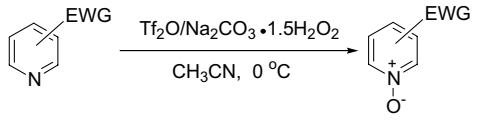
A highly stereoselective vinyllithium addition and hydroboration–protonation of the resulting allylic alcohol permits the preparation of the completely protected C_1–C_{12} fragment **2** of the novel macrocyclic cytotoxic agent tedanolide **1**.

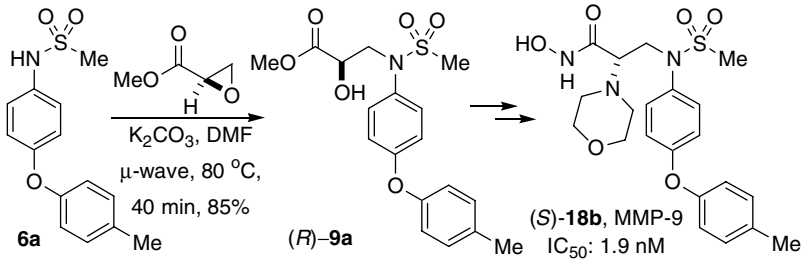
A simple and convenient route for the synthesis of tricyclic chromeno[4,3-*b*]pyrrolidine frameworks using Baylis–Hillman bromides involving a substitution followed by in situ formation of an imine, decarboxylation and a [3+2] cycloaddition sequence is reported.

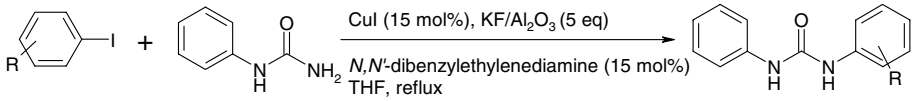




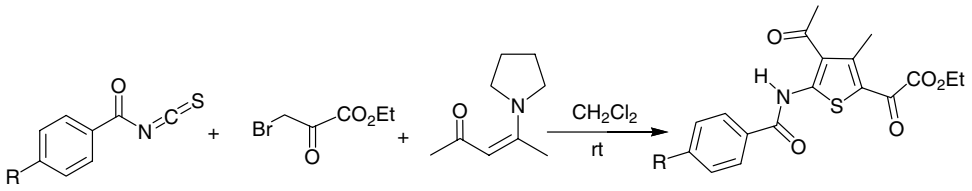




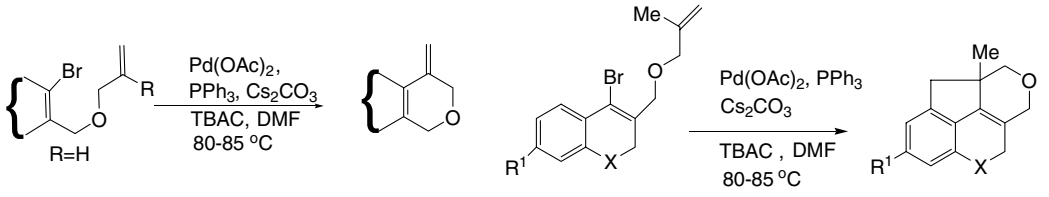


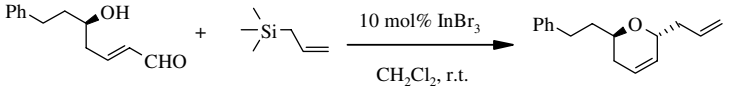


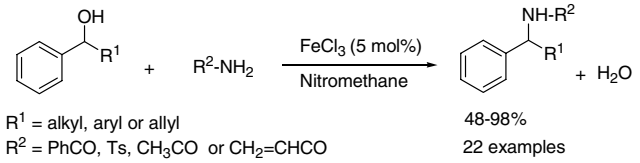
An efficient and mild method for the coupling of aryl iodides with phenylurea using air-stable CuI as a copper source and *N*,*N*′-dibenzylethylenediamine as an effective ligand in the presence of KF/Al_2O_3 as a base is described.

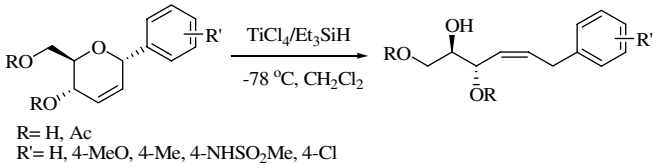


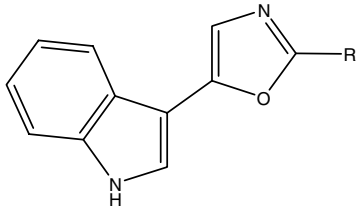
An Ag(I)-catalyzed intramolecular cyclization of ethyl *o*-hydroxyphenylethynylpho-sphinate to phosphachromones has been developed with high regioselectivity and good yields. The present reaction represents the first example of intramolecular addition of phenol to 1-alkynylphosphonates, which provides an approach to synthesize new phosphorus heterocycles. The resulting phosphachromones could have potential bioactivities.

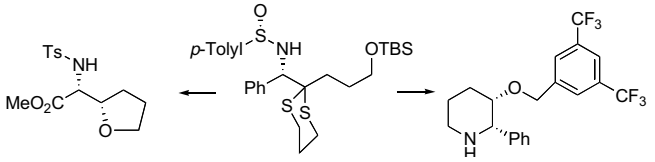


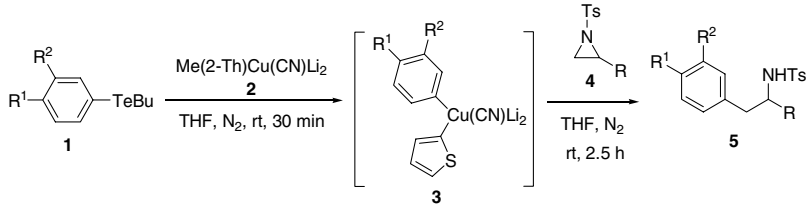




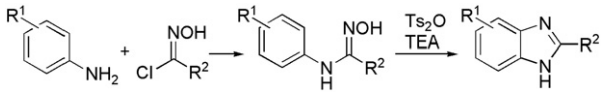




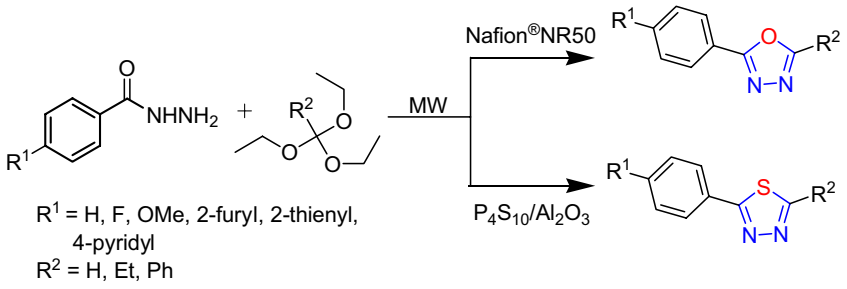


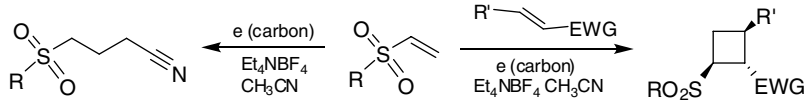


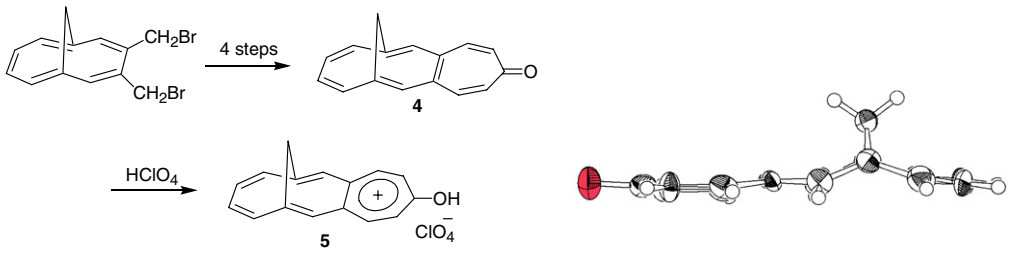
The ring opening reaction of *N*-tosyl aziridines with dilithium arylthienylcyanocuprates generated from arylbutyltellurides produced phenethylamine derivatives in good to excellent yields.

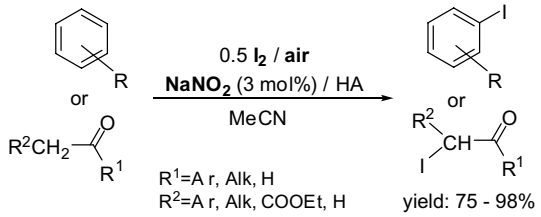


Tosylation of *N*-aryl amidoxime in the presence of TEA produces the corresponding benzimidazoles in high yields.

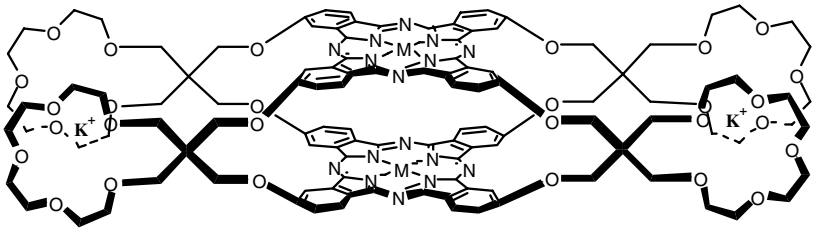






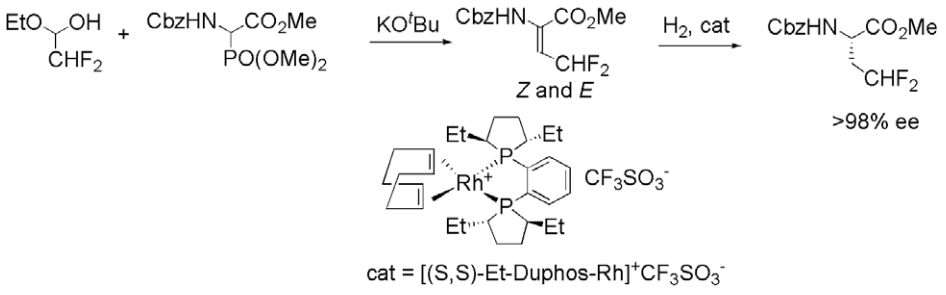


Aerobic oxidative iodination activated by sodium nitrite occurs effectively and selectively with 100% iodine atom economy, with air as the oxidant.

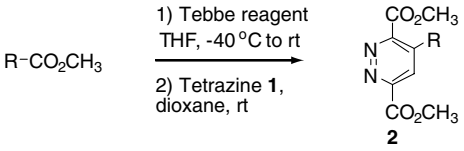


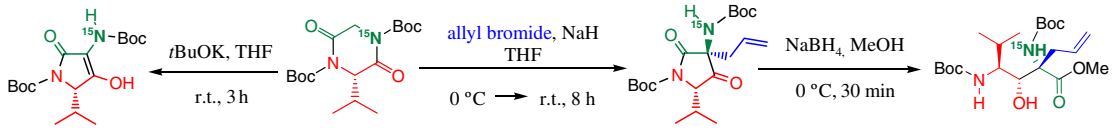
M : Zn Co 2SCN-

Novel cofacial bis-phthalocyanines containing crown ethers were synthesized by the cyclic condensation of dihydroxy groups at the periphery of the bisphthalocyanine complexes with tetraethyleneglycol ditosylate in the presence of NaH as base in refluxing THF.

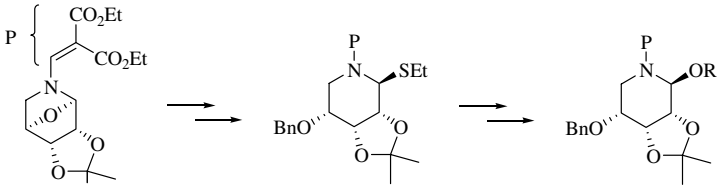


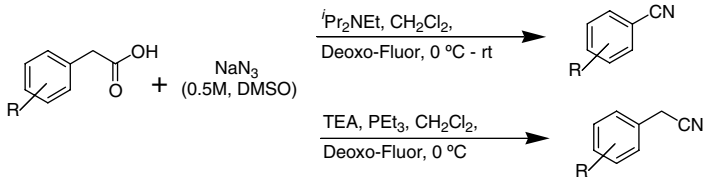
cat = [(S,S)-Et-Duphos-Rh]+CF3SO3-



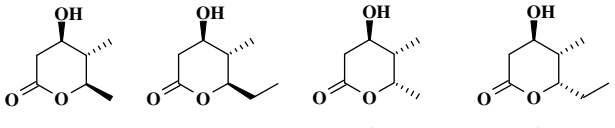


The reactivity of bis lactams is studied by [15N]-isotopic labeling, toward the transannular rearrangement of activated lactams (TRAL), a new reaction allowing access to valuable pharmacological scaffolds.

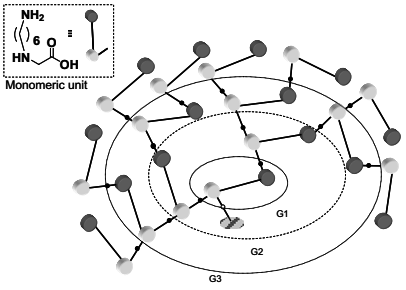




A mild, efficient, and practical method for the one-step synthesis of benzonitriles from phenylacetic acids using bis(2-methoxyethyl)aminosulfur trifluoride is described. The reaction was easily extended to the synthesis of the corresponding phenylacetonitriles by inclusion of triethylphosphine.



Prelactone V Prelactone E *epi*-Prelactone V *epi*-Prelactone E



*Corresponding author
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