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Tetrahedron Letters

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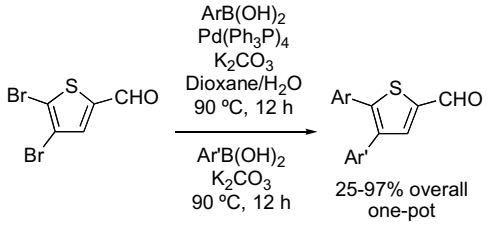
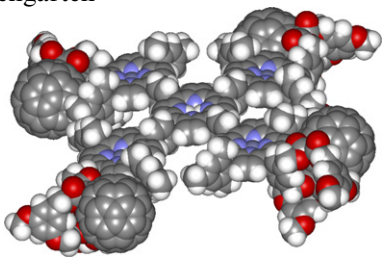
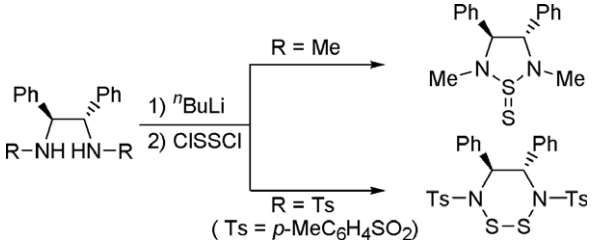
Contents

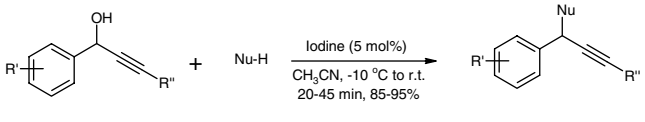
COMMUNICATIONS



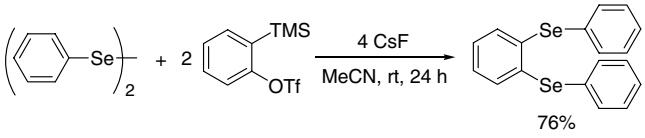


A porphyrin substituted with four porphyrin–fullerene moieties has been prepared and variable-temperature NMR studies revealed a high barrier to free rotation about the four *para*-substituted phenyl groups of the central porphyrin core.

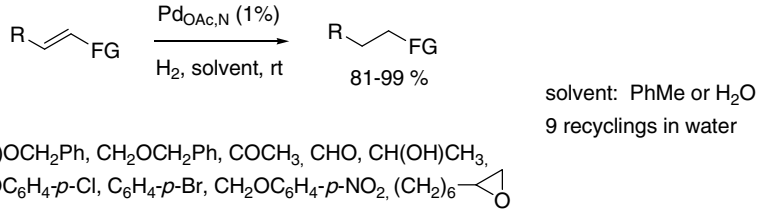


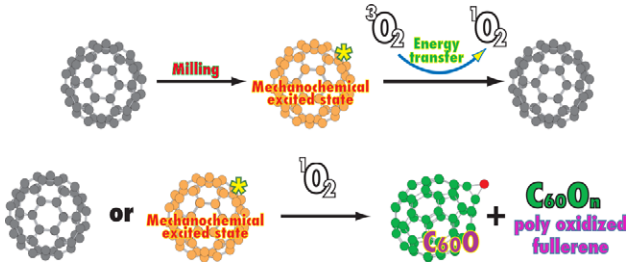


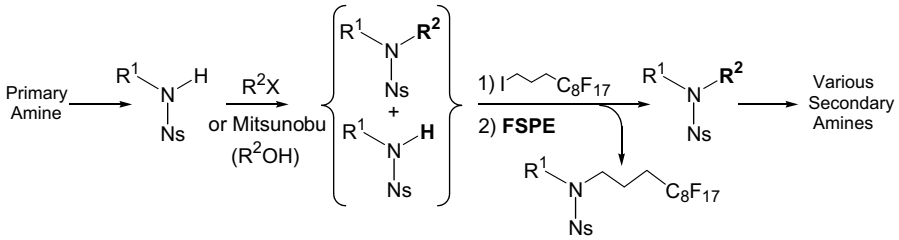
R' = H, OMe, F
R'' = TMS, Ph, *n*-pentyl
Nu-H = alkyl alcohol, phenol, anisole, 2-naphthol, indole



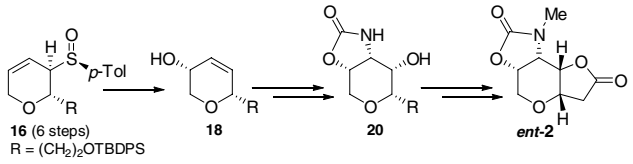
The reaction between diorgano dichalcogenides and *o*-(trimethylsilyl)phenyl triflate in the presence of CsF at room temperature produced *o*-bis(organochalcogenide)benzenes in moderate to good yields.

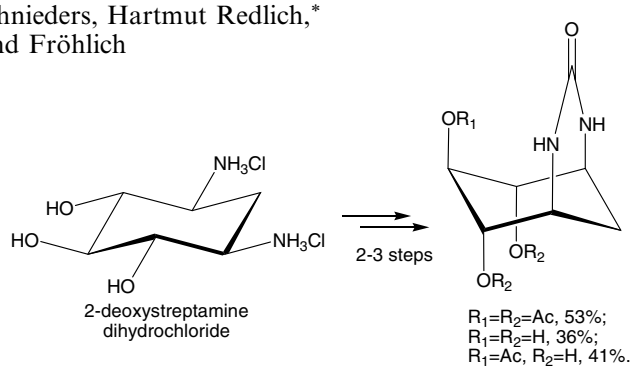


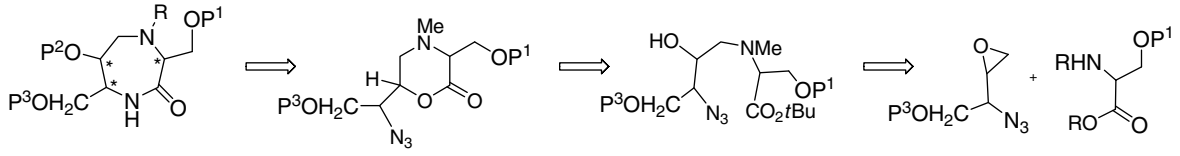


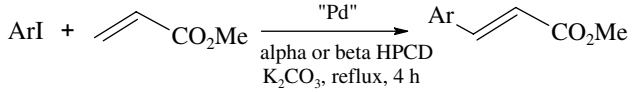


A rapid purification of tertiary sulfonamides was facilitated by FSPE and allowed for parallel secondary amines preparation.

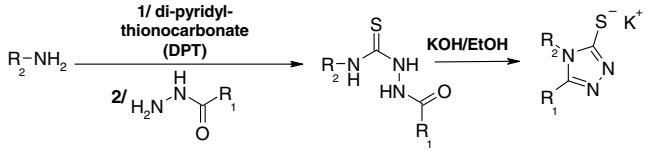


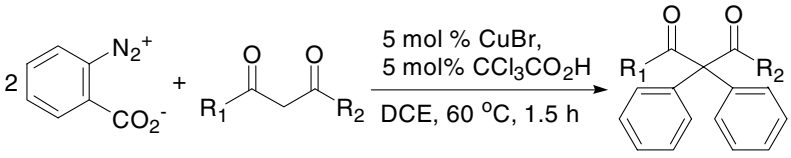


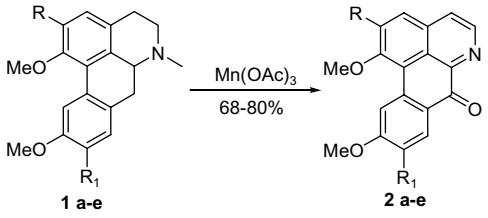


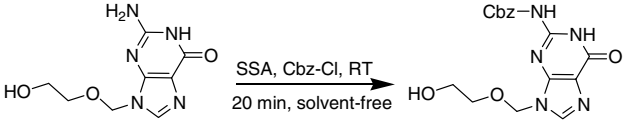


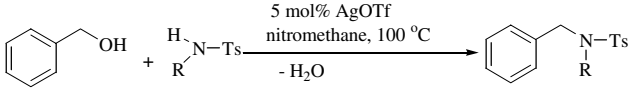
It was made possible to carry out Heck reactions in aqueous media using hydroxypropylated CDs. Best yields were obtained with $Pd/CaCO_3$ as catalyst reservoir. Recycle of the whole system has been made possible up to three times.

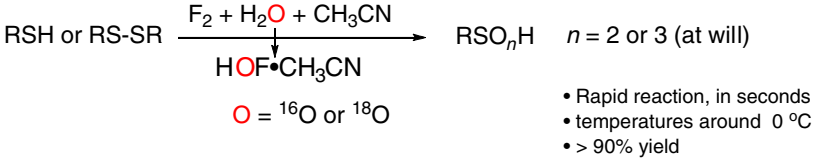


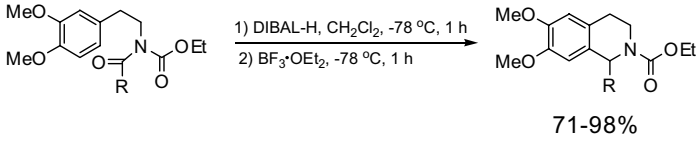


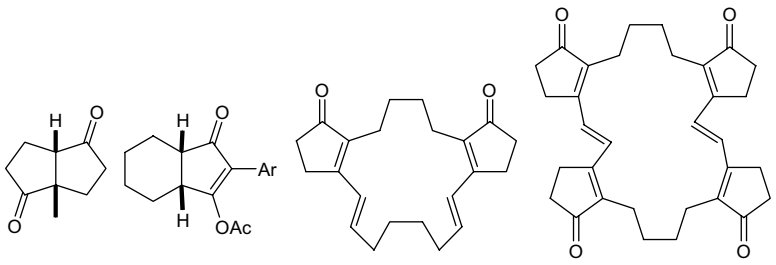


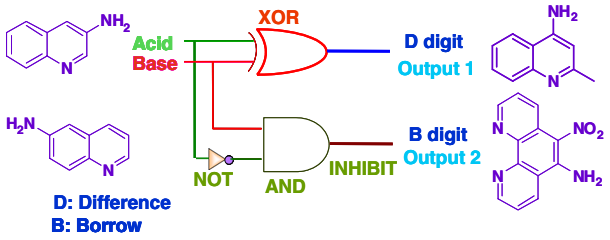




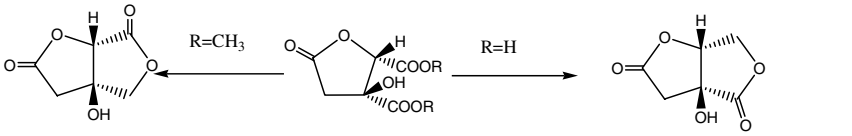








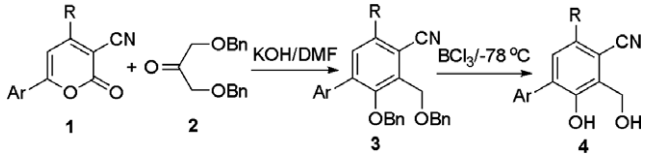
Examples are given of a simple unimolecular system functioning as a combinational logic circuit for a half-subtractor. Intramolecular charge transfer processes in simple molecules can be exploited to implement combinational digital operation.

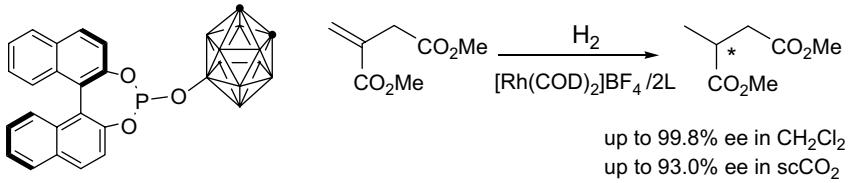


(+)-avenaciolide skeleton
$[\alpha]_D^{20}$ = +20.64, (c = 0.28%,H_2O)
mp,136-138 °C

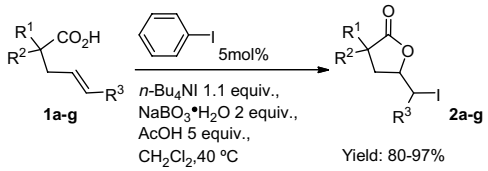
R=H=garcinia acid
$[\alpha]_D^{20}$ = +102.15, (c = 1%,H_2O)
mp,178 °C

(-)-canadensolide skeleton
$[\alpha]_D^{20}$ = -89.067,(c = 0.1%,H_2O)
mp,143-145 °C

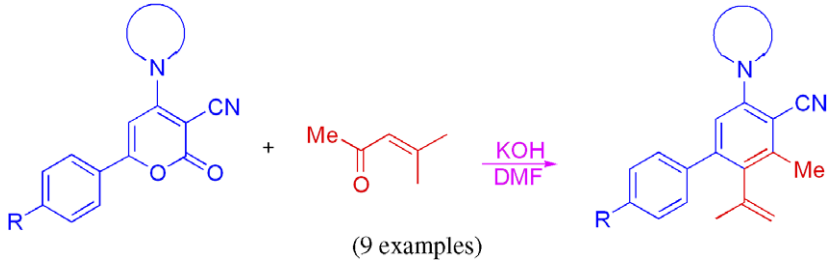


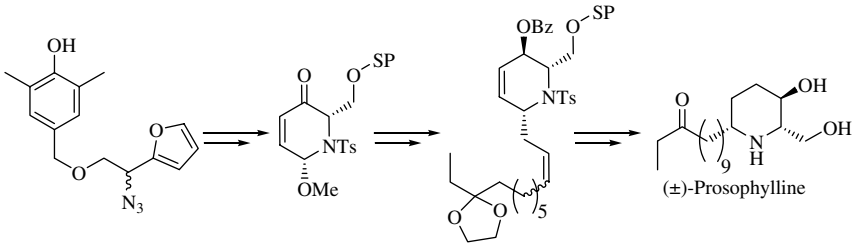


up to 99.8% ee in CH_2Cl_2
up to 93.0% ee in $scCO_2$

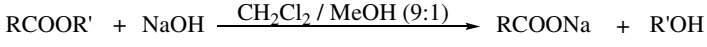


A convenient approach has been developed for iodolactonisation using iodobenzene as catalyst. The active reagent was generated in situ with tetra-*n*-butylammonium iodide (TBAI) and diacetoxyiodobenzene (PIDA). PIDA, in turn, was generated in situ using a catalytic amount of iodobenzene with sodium perborate monohydrate as the stoichiometric oxidant. A variety of olefinic acids including δ-pentenoic acids, δ-pentynoic acids and δ-hexynoic acid gave high yields of lactones using this methodology.

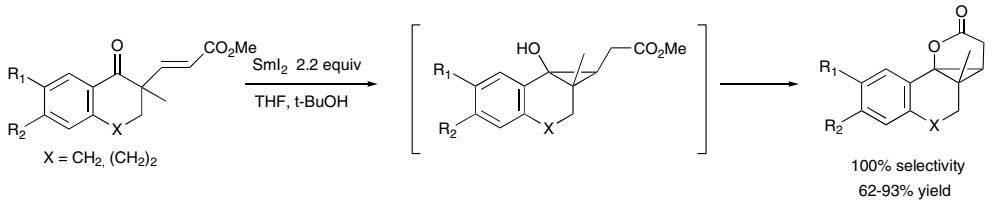


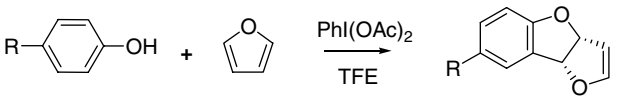


The synthesis of (±)-prosophylline via a polymer-supported piperidine intermediate is reported.

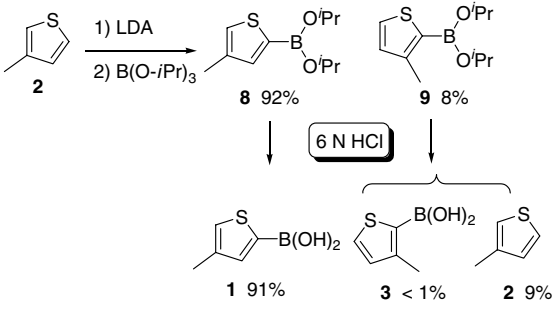


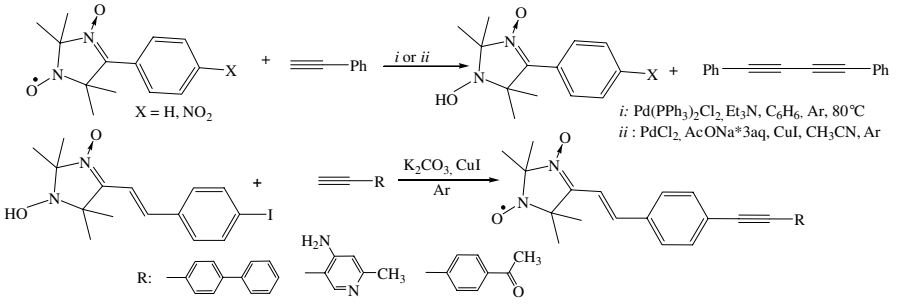
A very mild and rapid procedure for the efficient alkaline hydrolysis of esters in non-aqueous conditions has been developed, by the use of dichloromethane/methanol (9:1) as solvent. A plausible reaction mechanism is also proposed.

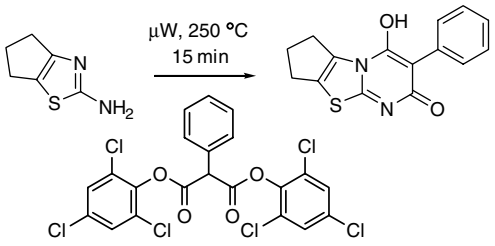




Treatment of various substituted phenols in the presence of furan, iodobenzene diacetate, and trifluoroethanol promotes oxidative formal [2+3] cycloaddition in moderate to useful yields.







*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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