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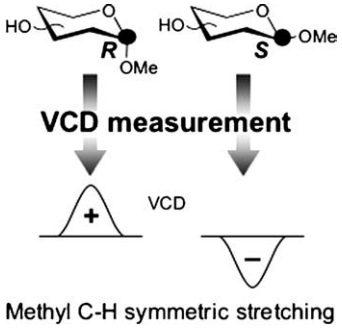
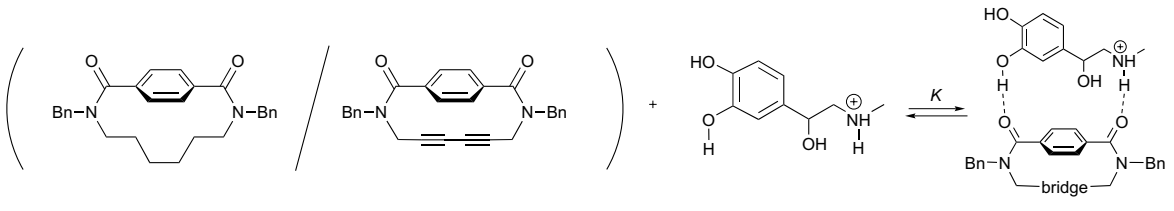
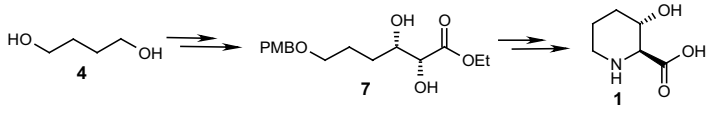
Contents

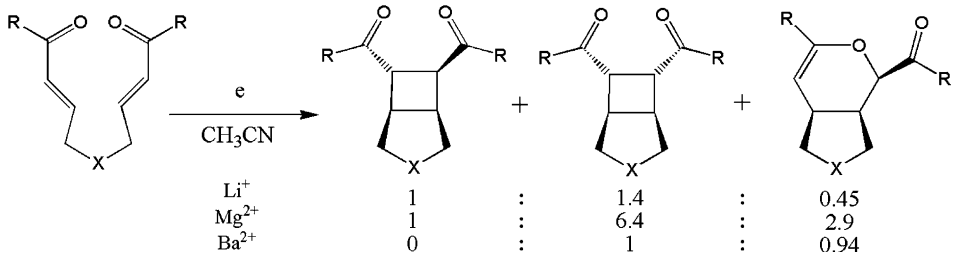
COMMUNICATIONS

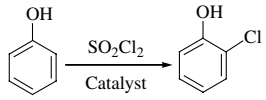




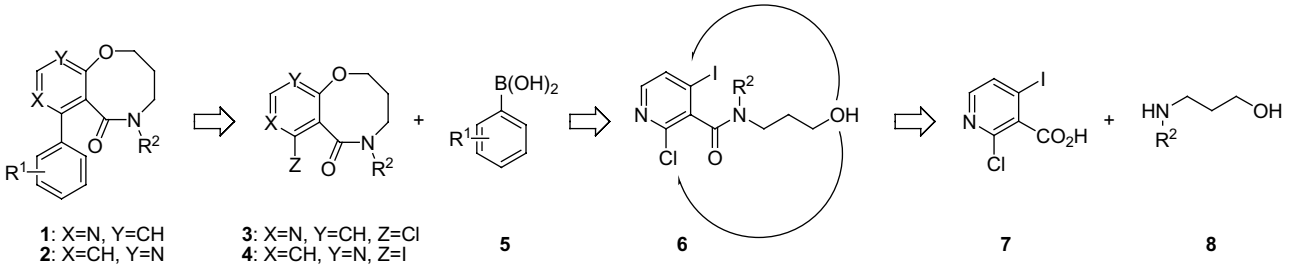


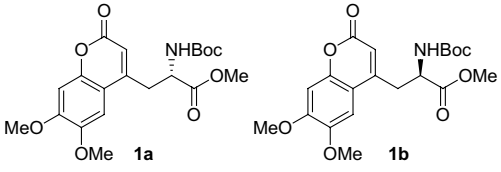
A concise enantioselective synthesis of (2*S*,3*S*)-3-hydroxypipecolic acid **1** starting from 1,4-butanediol using Sharpless asymmetric dihydroxylation and the regioselective nucleophilic opening of a cyclic sulfate as the key steps is described.

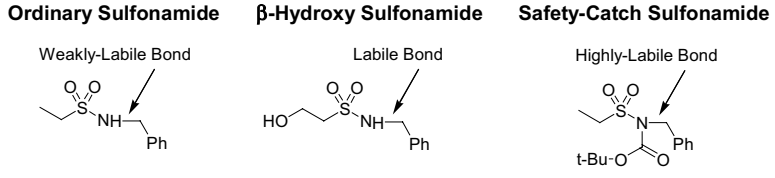


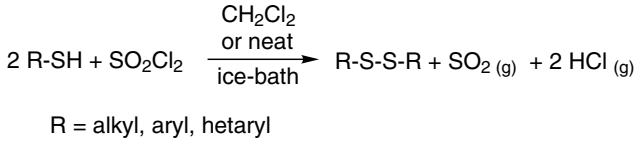


ortho-Chlorination of phenol with sulfuryl chloride in the presence of a *t*-butylaminomethyl polystyrene catalyst, proceeds in high conversion (~98%) and with high selectivity (~89%).

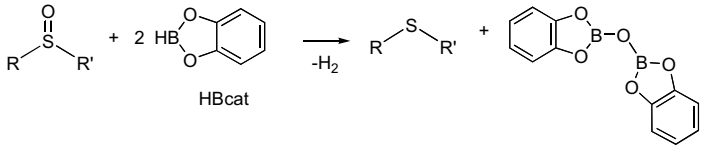




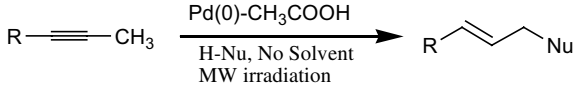


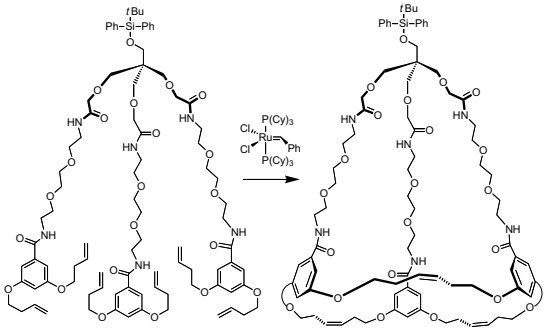


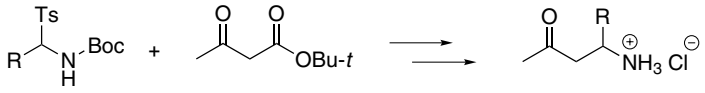
Addition of sulfuryl chloride to an alkyl- or arylthiol in a 1:2 ratio under solvent free conditions or in CH_2Cl_2 solution produces the corresponding disulfides in nearly quantitative yields.

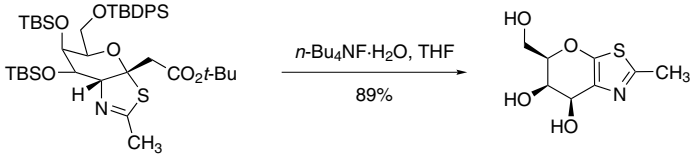


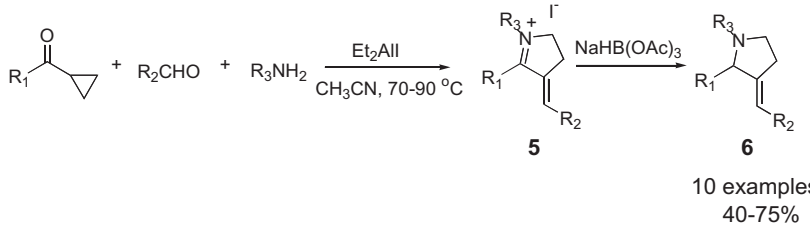
The addition of catecholborane (HBcat; cat = 1,2-$O_2C_6H_4$) to a wide range of sulfoxides affords the corresponding sulfides, dihydrogen, and catBOBcat.

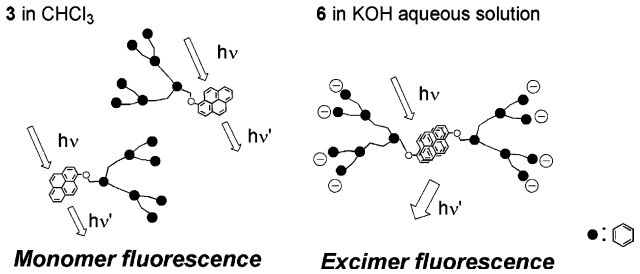


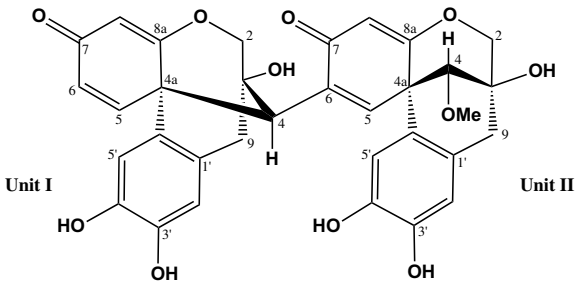


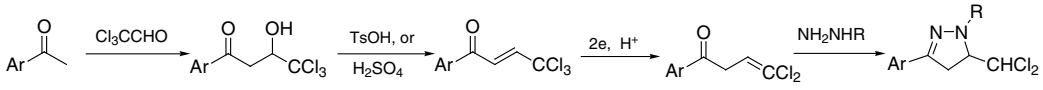


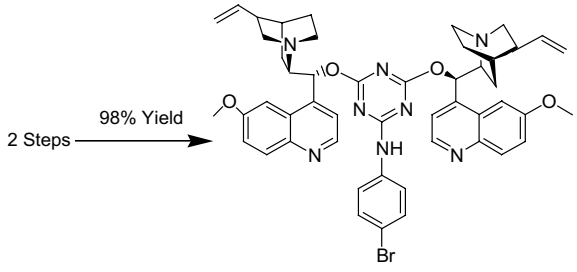




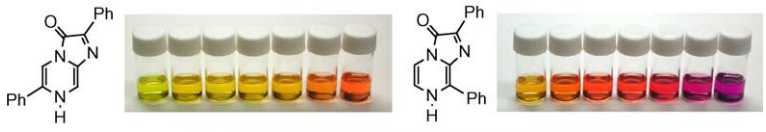


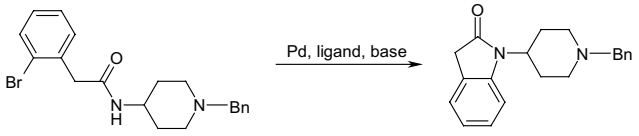


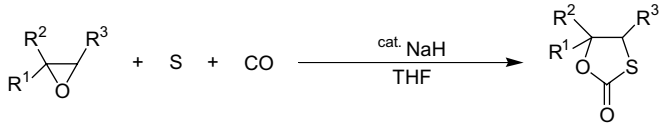


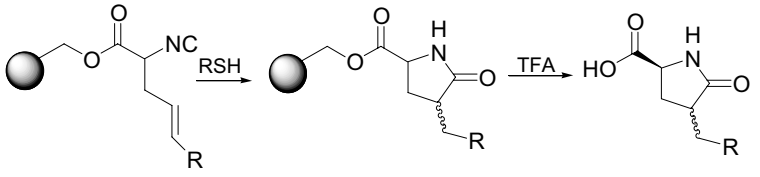


Sharpless asymmetric dihydroxylation ligands were synthesized using a triazine spacer group in two, high yielding steps and gave good enantioselectivities in the asymmetric dihydroxylation of alkenes.

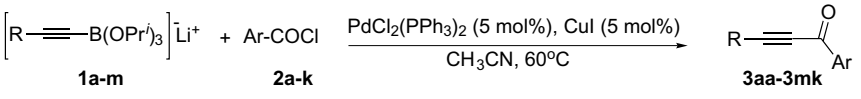


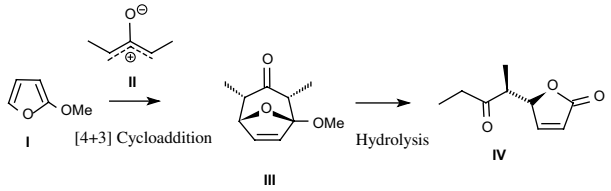




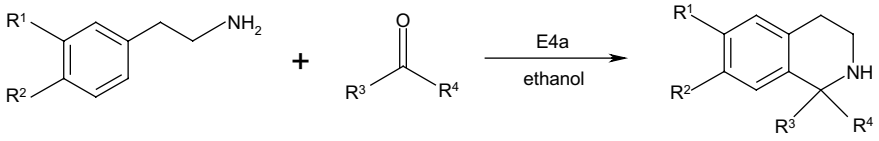


Polymer-supported isocyanides have been synthesised, from commercial Wang and HMBA-AM resins, and reacted under radical conditions with 2-mercaptoethanol and ethanethiol to give the corresponding pyrrolidine or pyroglutamic acid derivatives in good yields.

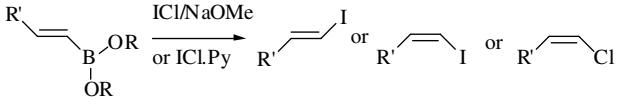


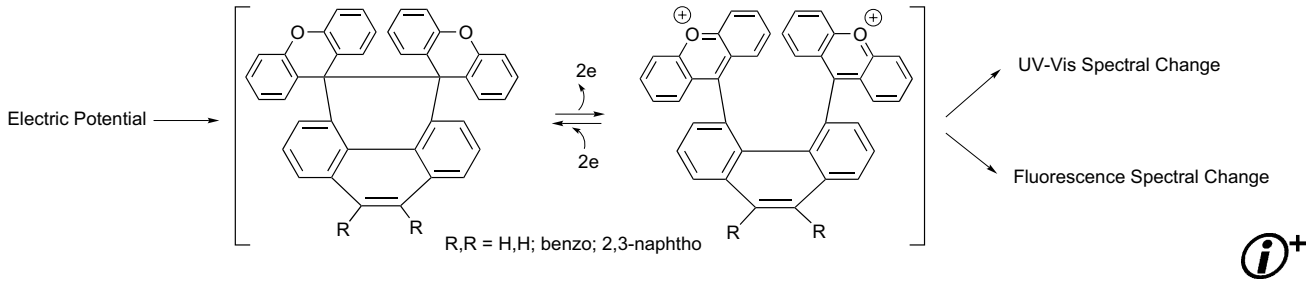


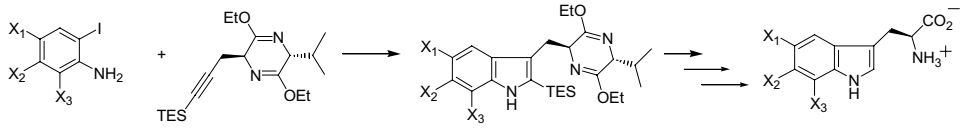
4-(1-Methyl-2-oxo-butyl)-2-butenolide **IV** and the corresponding saturated γ-lactones are interesting synthetic building blocks of biologically active natural products and were synthesized by acidic hydrolysis of 1-methoxy-8-oxabicyclo[3.2.1]oct-6-en-3-one **III**, via a cleavage at the C1–C2 bond by an intramolecular reverse Dieckmann process.

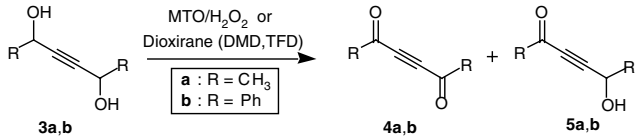


A new, one-step variation of the Pictet–Spengler reaction has been elaborated using a small pore size zeolite as the catalyst.

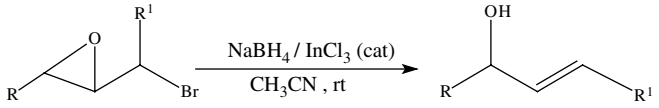


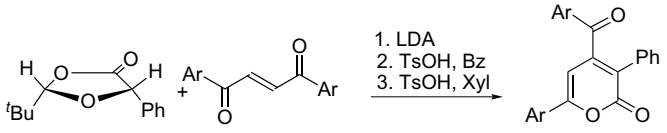




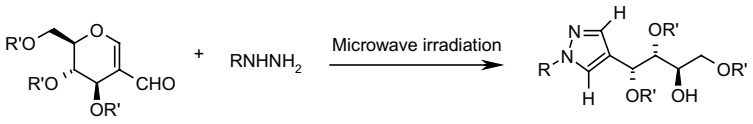


Dimethyldioxirane (DMD) and its trifluoro analog (TFD) were employed to achieve selectively the direct transformation of diol **3a** and of diol **3b** into the corresponding carbonyls. The results are compared with oxidations using methyltrioxorhenium (MTO)/85% H_2O_2.





4-Aroyl-6-aryl-3-phenyl-2-pyrones are synthesized from a mandelic acid dioxolanone.



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*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

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