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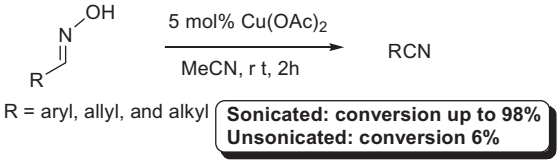
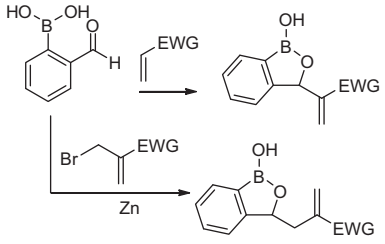
Contents

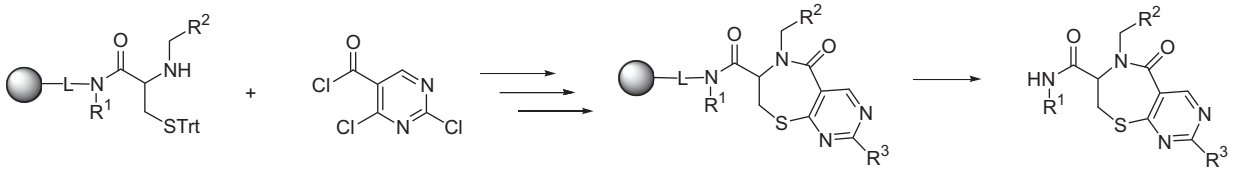
COMMUNICATIONS

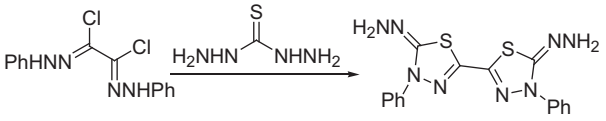


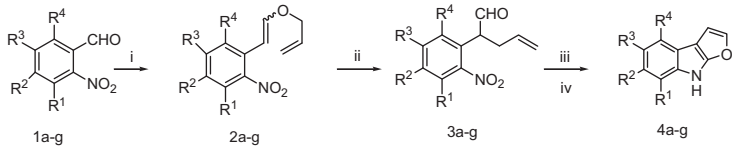
Ultrasound-promoted copper(II)-catalyzed dehydration of aldoximes in acetonitrile to give nitriles under ambient conditions.



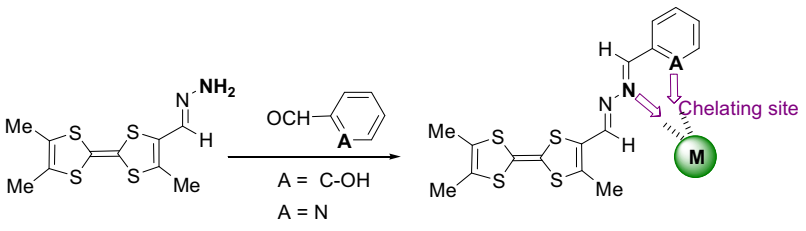
2-Formylphenylboronic acids upon reaction with activated olefins such as acrylates, methyl vinyl ketone, and acrylonitrile provide functionalized benzoboroxoles. The corresponding homologated benzoboroxoles were synthesized via the reaction of 2-formylphenylboronic acids with α-bromomethylacrylates.

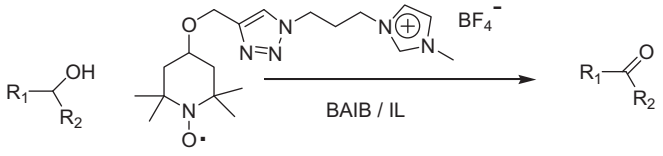


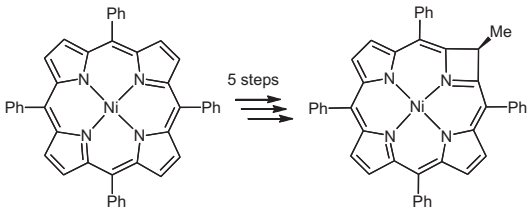




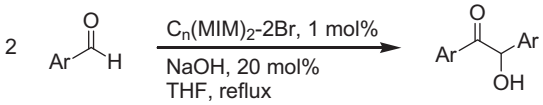
Application of Wittig olefination–Claisen rearrangement protocol for the short synthesis of furo[2,3-*b*]indoles is described.

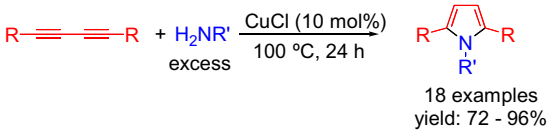


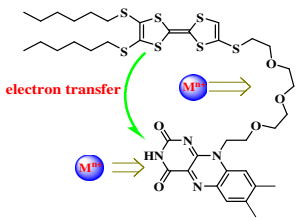




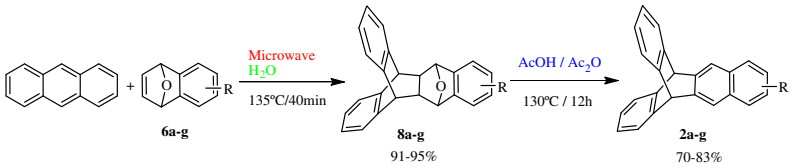
The final steps in the formal conversion of [*meso*-tetra-phenylporphyrinato]Ni(II) into the corresponding chlorin analogue [2-methylazeteochlorinato]Ni(II) are described.

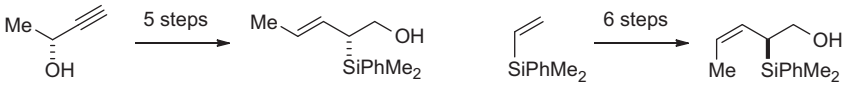


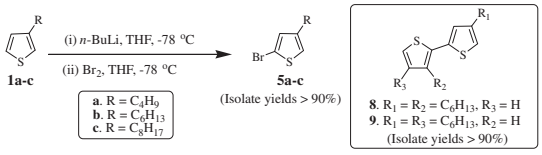




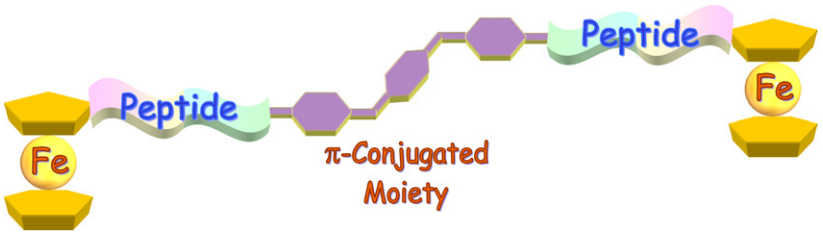
Intramolecular electron transfer in tetrathiafulvalene–flavin dyads was observed in the presence of a metal ions.

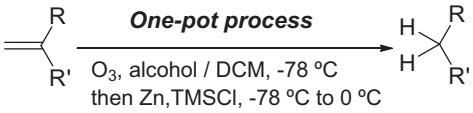




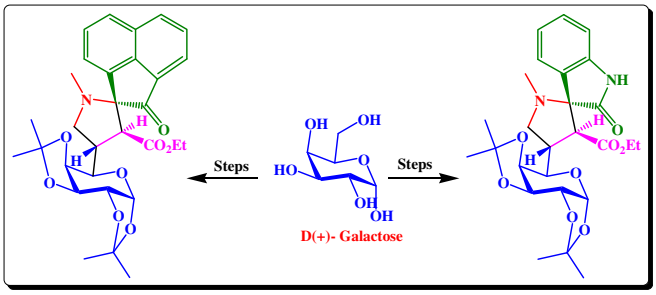


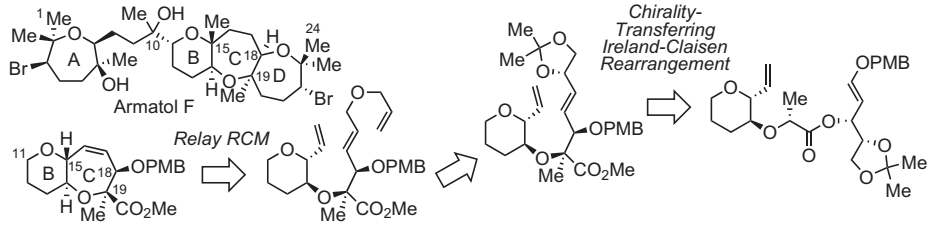
A clean and selective method for the synthesis of 2-bromo-4-alkylthiophenes (**5a–c**) was developed, and the desired products were obtained in excellent yields (>90%). The proposed methodology was based on the regioselective lithiation of 3-alkylthiophenes (**1a–c**) with *n*-BuLi at −78 °C and the reaction of the lithiated intermediate with bromine. A simple and efficient protocol for the synthesis of dihexyl-2,2′-bithiophenes from 2-bromo-4-hexylthiophene (**5b**) was developed via Kumada and Suzuki cross-coupling reactions in high yields (>90%) and excellent selectivity for the head-to-tail (HT) and tail-to-tail (TT) regioisomers.

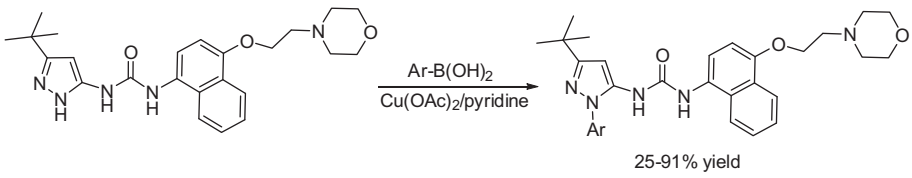


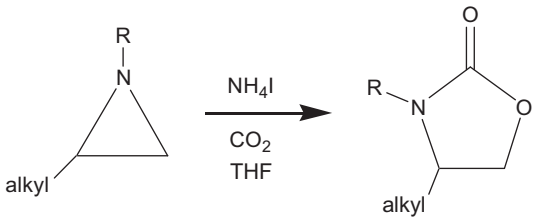


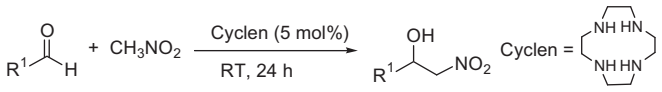
A one-pot *exo*-olefin reductive cleavage was for the first time developed. The reaction could proceed under a mild condition avoiding the use of hazardous and expensive reagents. Meanwhile, a TMSCl-mediated Clemmensen reduction in alcoholic solvent was also examined.



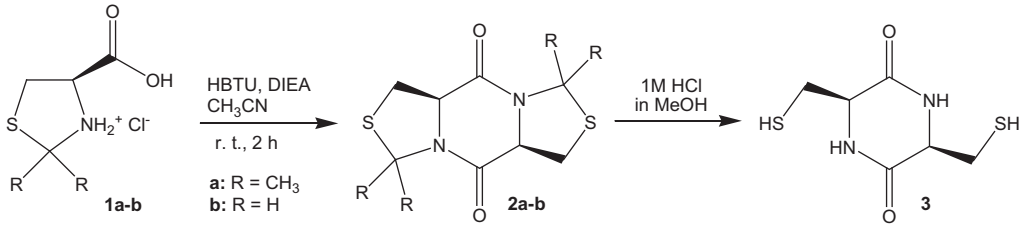




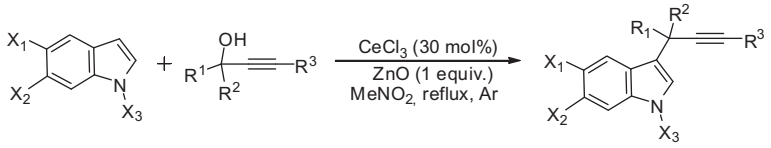


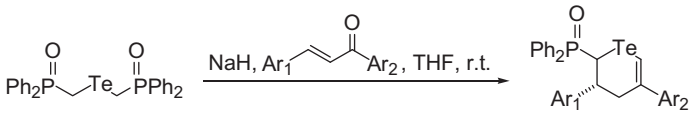


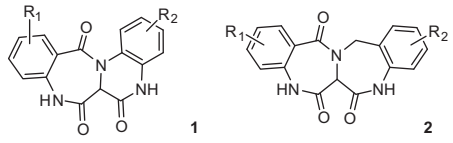
A convenient cyclen-catalyzed Henry reaction of aldehydes with nitroalkanes under mild and neutral conditions is reported. This procedure constitutes the first cyclen-catalyzed synthesis of nitroalcohols and is adapted to the condensation of both aromatic and aliphatic aldehydes with nitromethane in THF at room temperature without addition of stoichiometric amount of the base. A wide range of β-nitroalcohols were obtained in moderate to good yields (up to 98%) using this methodology.



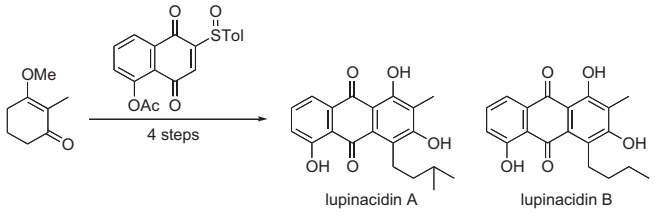
The preparation of cysteine-derived 2,5-diketopiperazines (DKPs) by cyclization of tetrahydrothiazole-4-carboxylic acids is reported in high yield. The DKPs have been fully characterized and one has been hydrolyzed to *cyclo*-Cys-Cys.

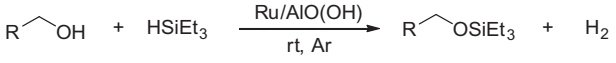


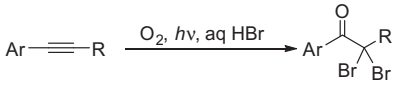




Novel two-step solution phase protocols for the synthesis of fused 6,7,6,6-quinoxalinone-benzodiazepines **1** and 6,7,7,6-bis-benzodiazepines **2** are reported. Optimization of the methodology to produce these tetracyclic scaffolds was enabled by microwave irradiation and the use of the convertible isocyanide, 4-*tert*-butyl cyclohexen-1-yl isocyanide. The methodology employs the Ugi reaction to assemble the desired diversity and acid treatment enables sequential ring-closing transformations.







*Corresponding author
Supplementary data available via ScienceDirect

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