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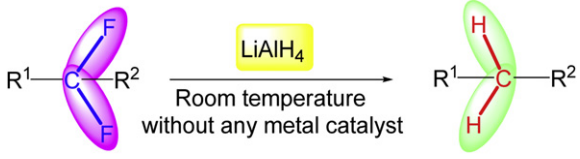
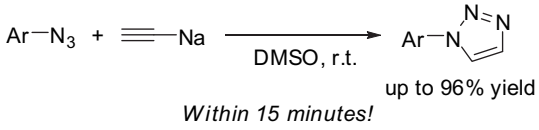
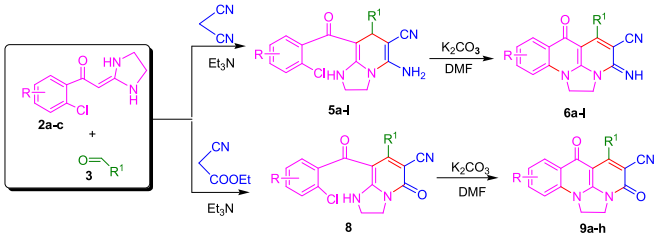
Contents

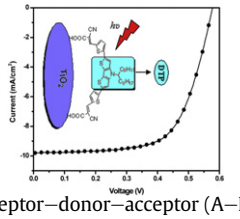
ARTICLES



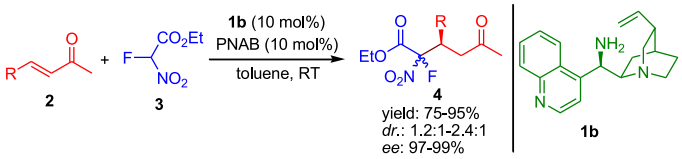
An unexpected hydrodefluorination of unactivated aliphatic C–F bonds of CF_2 derivatives with $LiAlH_4$ at room temperature without any added metal catalyst was reported. Deuterium-labeling experiments suggested that the hydrogens introduced into the products originated from $LiAlH_4$.



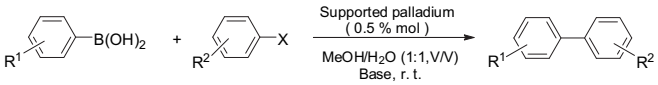


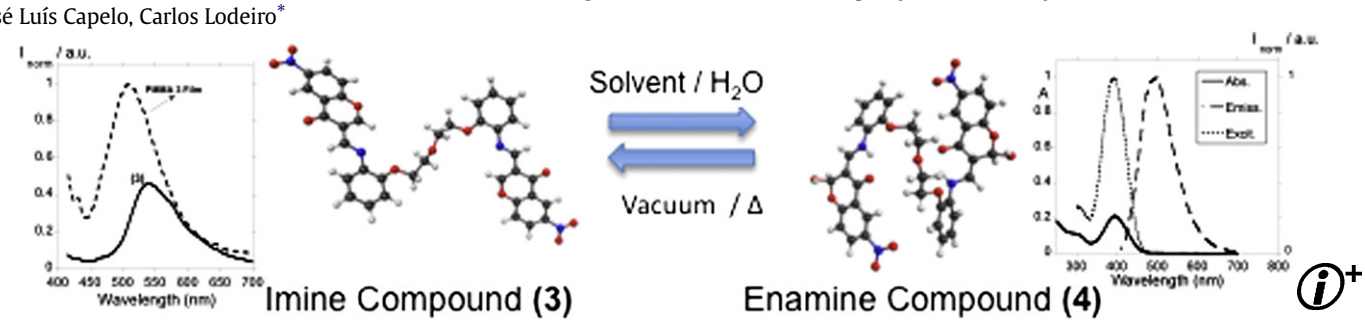


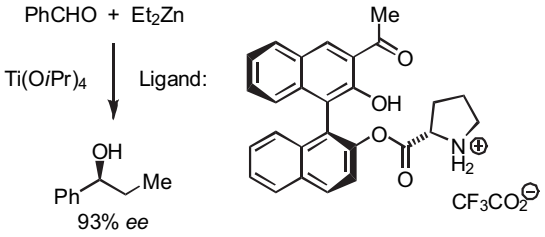
Four novel symmetrical organic dyes (**S1**–**S4**) configured with acceptor–donor–acceptor (A–D–A) structures containing electron donating fluorene (**S1** and **S2**) and *N*-alkyl dithieno[3,2-*b*:2′,3′-*d*]pyrrole (DTP) (**S3** and **S4**) cores terminated with two anchoring cyanoacrylic acids (as electron acceptors) were synthesized and applied to the applications to dye-sensitized solar cells (DSSCs). The DSSC device based on **S2** dye showed the best photovoltaic performance with a short circuit current (J_{SC}) of 11.91 mA/cm^2, an open circuit voltage (V_{OC}) of 0.61 V, a fill factor (FF) of 0.66, and an overall power conversion efficiency (η) of 4.83%.

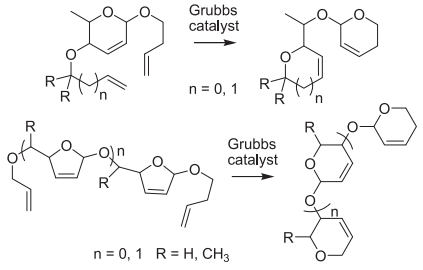


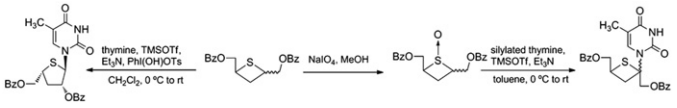
Primary amines perform as efficient organocatalysts for the asymmetric addition of α-fluorinated nitroacetate to enones, giving the Michael adducts with two contiguous stereogenic centers, one of which is a fluorinated quaternary chiral center in good to excellent yields and enantioselectivities.

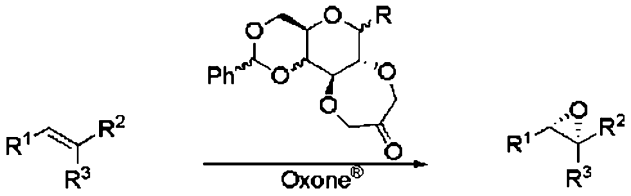


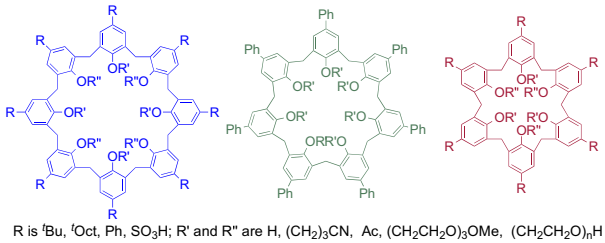


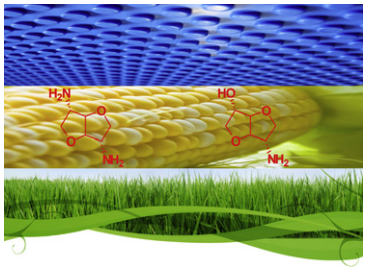




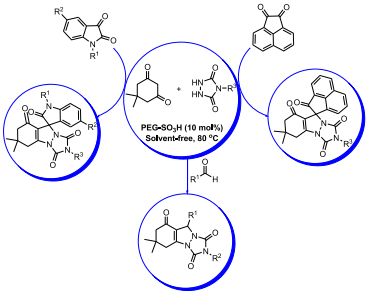


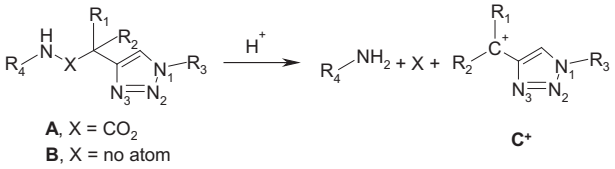


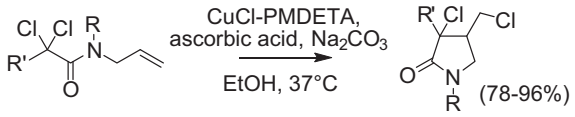


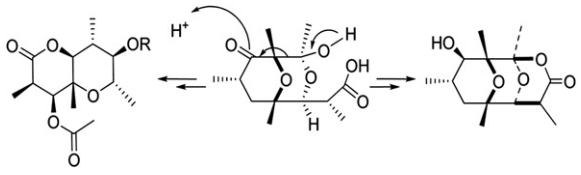


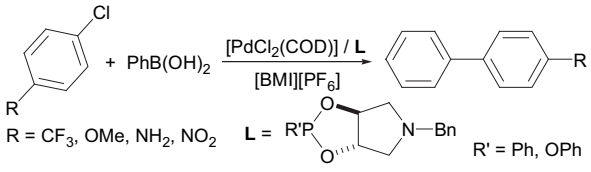
This manuscript describes a dramatically improved synthetic route towards 2,5-diamino-2,5-dideoxy-1,4-3,6-dianhydroiditol and 2-amino-2-deoxy-1,4-3,6-dianhydroiditol. These highly interesting bio-based chiral building blocks are presently the subject of several investigations with regard to high performance bio-based polymers, such as polyamides and polyurethanes.

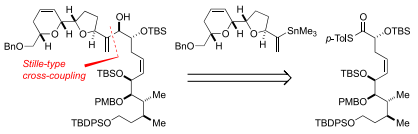


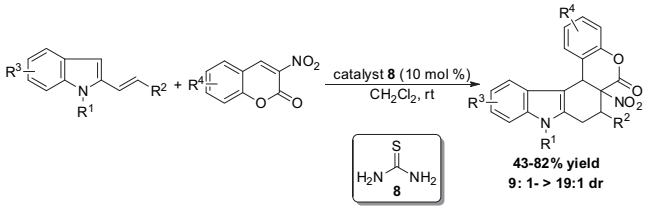


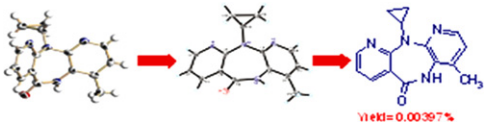


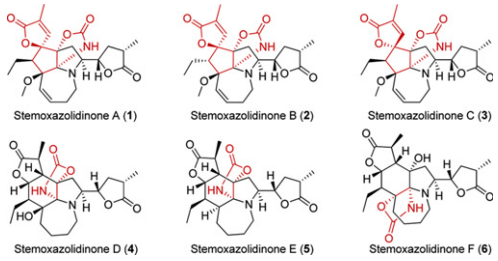


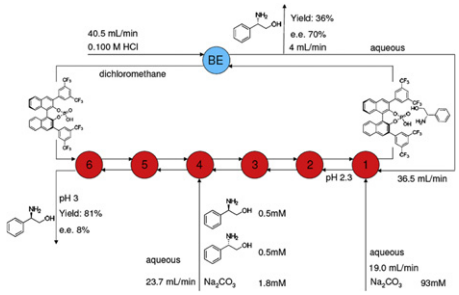


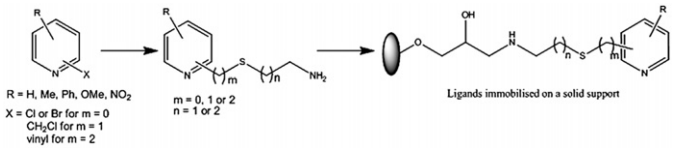


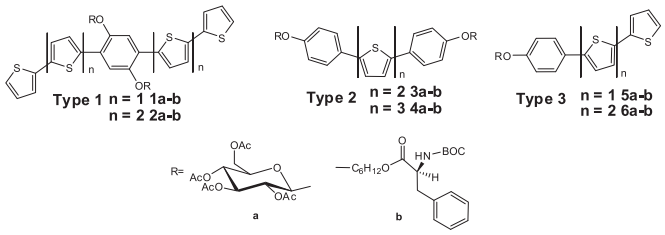




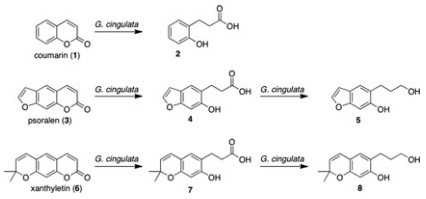


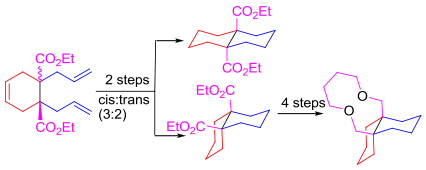


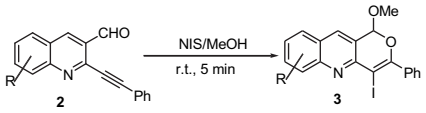


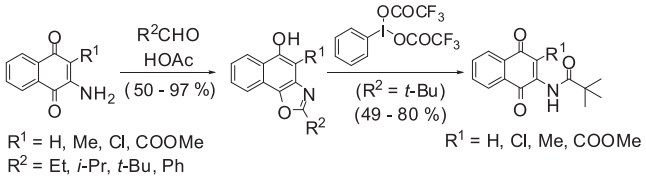


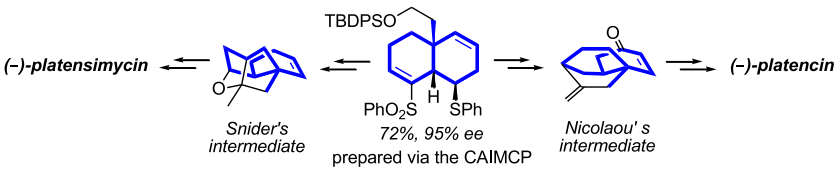
A versatile synthetic approach to several phenylene–thiophene oligomers decorated with peracetylated β-D-glucose or *N*-BOC protected L-phenylalanine as chiral substituents is reported.

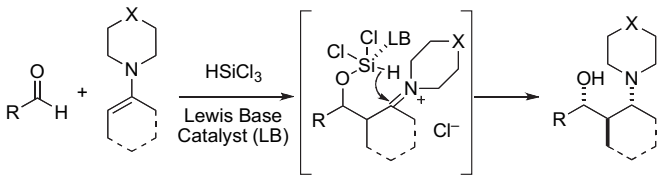


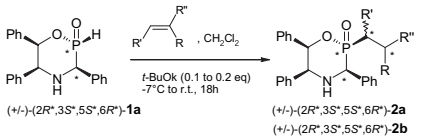


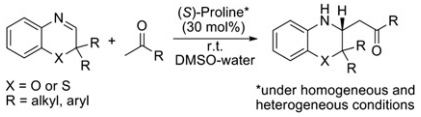


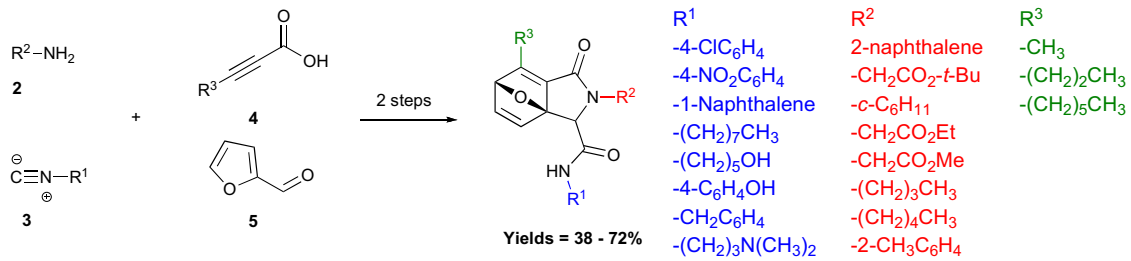












OTHER CONTENT

COVER

γ-Lactams were prepared from *N*-allyl-α-polychloroamides through a green route, using a copper catalyzed ARGET-ATRC in ethanol and exploiting the reducing feature of ascorbic acid to limit, at a low level, the amount of catalyst.
Details can be found in Tetrahedron, **2011**, *67*, 408–416.

*Corresponding author
Supplementary data available via ScienceDirect

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