

Efficient Stereoselective Nucleophilic Addition of Pyrroles to Chiral Nitrones

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Electronic Supporting Information

Tools, Reagents, Solvents and Procedures

p 2

**Copies of ^1H and ^{13}C NMR spectra for compounds 3a, 3b, 3c, 3d, 4a, 4b, 5a,
5b, 5c, 7a, 7b, 7c, 7d, 9, 10a, 10b, 11, 12, 13, 15a, 15b, 15c, 16a,b, 17, 18, 19
and 20**

pp 3-33

Copies of ORTEP diagram for compounds 7a, 7b, 11 and 17

pp 34-37

Tools, Reagents, Solvents and Procedures

Reactions were performed using oven dried glasswares under an atmosphere of dry argon. They were monitored by thin layer chromatography (TLC) using commercial aluminium-backed silica gel plates (Merck, Kieselgel 60 PF₂₅₄). TLC spots were viewed under ultraviolet light and by heating the plate after treatment with an appropriate revelatory (KMnO₄, TTC, phosphomolybdic acid, ninhydrine).

Solvents and reagents: Tetrahydrofuran was refluxed over sodium-benzophenone and then distilled. Dichloromethane and pyrrole were dried by refluxing over CaH₂ and then distilled. Methanol was refluxed over magnesium turnings and then distilled. Unless otherwise noted, all reagent-grade chemicals and solvents were used as supplied (analytical or HPLC grade) without prior purification.

Chromatography purifications were performed by column chromatography using Kieselgel 60 silica (40-60 mesh).

Melting points were obtained on a Büchi B35 apparatus and are uncorrected.

Optical rotations were determined with a Perkin-Elmer 341 polarimeter with a water-jacketed 10 cm cell. Specific rotations are reported in 10⁻¹ deg cm² g⁻¹ and concentrations in g per 100 mL.

Infrared spectra (IR) were recorded on a Nicolet Impact-400 Fourier transform infrared spectrometer (FTIR) as either thin films on NaCl plates (thin film) or a KBr disc (KBr disc), as stated. Data are reported in cm⁻¹.

¹H NMR Spectra (300 or 400 MHz) and **¹³C NMR spectra** (75 or 100 MHz) were recorded on either a Bruker Advance300 or Advance400 spectrometers in the deuterated solvent as stated. The field was locked by external referencing to the relevant deuteron resonance. Chemical shifts are given in ppm (δ) and were referenced to the internal solvent signal or to TMS used as an internal standard. When ambiguous, proton and carbon assignments were established using COSY, HMQC and/or DEPT experiments. Multiplicities are declared as follows: *s* (singlet), *br s* (broad singlet), *d* (doublet), *t* (triplet), *q* (quadruplet), *sept* (septet), *dd* (doublet of doublet), *ddd* (doublet of doublet of doublet), *dt* (doublet of triplet), *dq* (doublet of quadruplet), *m* (multiplet), *AB_q* (*AB_q* system). Coupling constants *J* are given in Hertz.

Low Resolution Mass Spectra (LRMS) were recorded on a Bruker Esquire 3000 plus (ESI) or a ThermoFinnigan PolarisQ ion-trap spectrometer, using DCI (ammonia/isobutane 63/37). **Accurate Mass measurements (HRMS)** were run in the "Structure et Fonction de Molécules Bioactives" laboratory, Paris, France.

Elemental analysis were performed by the microanalysis service of the Département de Chimie Moléculaire, Grenoble, France.