Supporting Information

S1 General Experimental Information

S2-S85 Copies of $^1$H and $^{13}$C NMR spectra of new compounds reported in the paper

General Information

NMR spectra were recorded on a Varian XL 300, Varian Unity 400 or Bruker AMX500 spectrometers. The chemical shifts (δ) are reported in ppm downfield of trimethylsilane and the coupling constants (J) in Hertz. Splitting patterns are abbreviated as follows: singlet (s), doublet (d), triplet (t), quartet (q), quintet (qn), septet (sp), multiplet (m), broad (b), or a combination of these. Low resolution mass spectra (EI, CI) were recorded on a Fisons VG Trio 2000. High resolution mass spectra (accurate mass measurement) were recorded on a Kratos Concept-IS mass spectrometer, and are accurate to ± 0.001 daltons. Infrared spectra were recorded on a Perkin-Elmer Spectrum RX I FT-IR instrument as an evaporated film on sodium chloride plate and only absorption maxima ($v_{\text{max}}$) of interest are reported and quoted as wavenumbers (cm$^{-1}$). Microanalysis were carried out using Carlo-Erba automatic analyser by members of staff of the University of Manchester. Melting points (m.p.) were determined on a Gallenkamp apparatus and are uncorrected. Thin layer chromatography was performed using commercially available pre-coated plates (Macherey-Nagel alugram. Sil $G_{\text{UV254}}$) and Flash chromatography was carried out using Fluorochem Davilsil 40-63u 60A silica.

All reactions were conducted in dried glassware with magnetic stirring under a nitrogen atmosphere unless otherwise stated. Tetrahydrofuran (THF) and diethyl ether were distilled from Sodium and benzophenone under nitrogen. Dichloromethane and toluene were obtained by distillation from calcium hydrade under nitrogen. Anhydrous dimethylformamide was obtained by distillation from calcium sulfate under reduced pressure. Petrol refers to the fraction of light petroleum ether boiling between 40-60°C. All other solvents and commercially obtained reagents were used as received or purified using standard procedures. $t$-Butyllithium was obtained as a solution in pentane. $s$-Butyllithium was obtained as a solution in cyclohexane and $n$-Butyllithium was obtained as a solution in cyclohexane. All the above organolithium solutions were titrated prior to use.