Supporting Information

Mn(II)-Catalyzed N-Acylation of Amines
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1. General information
Preparative thin-layer chromatography was performed for product purification using Sorbent Silica Gel 60 F254 TLC plates and visualized with ultraviolet light. IR spectra were recorded on a new Fourier transform infrared spectroscopy. $^1$H, $^{13}$C and $^{19}$F NMR spectra were recorded on 400, 100, 377 MHz NMR spectrometer using CDCl$_3$ as solvent unless otherwise stated. HRMS were made by means of ESI. Melting points were measured on micro melting point apparatus and uncorrected. Unless otherwise noted, all reagents were weighed and handled in air, and all reactions were carried out in a sealed tube under an atmosphere of argon. Unless otherwise noted, all reagents were purchased from reagent company, and used without further purifications.
2. Copies of $^1$H, $^{19}$F and $^{13}$C NMR spectra

$^1$H NMR spectrum of 2a (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2a (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of $2b$ (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of $2b$ (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2c (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2c (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2d (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2d (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2e (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2e (100 MHz, CDCl$_3$)
$\text{H NMR spectrum of 2f (400 MHz, CDCl$_3$)}$

$\text{C NMR spectrum of 2f (100 MHz, CDCl$_3$)}$
$^1$H NMR spectrum of 2g (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2g (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of $2h$ (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of $2h$ (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2i (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2i (100 MHz, CDCl$_3$)
\textbf{H NMR spectrum of 2j (400 MHz, CDCl}_3\textbf{)}

\textbf{C NMR spectrum of 2j (100 MHz, CDCl}_3\textbf{)}

\textbf{13C NMR spectrum of 2j (100 MHz, CDCl}_3\textbf{)}
$^1$H NMR spectrum of 2k (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2k (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2I (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2I (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2m (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2m (100 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2n (400 MHz, CDCl$_3$)

$^{13}$C NMR spectrum of 2n (100 MHz, CDCl$_3$)
H NMR spectrum of 2o (400 MHz, CDCl₃)

13C NMR spectrum of 2o (100 MHz, CDCl₃)
$^{19}$F NMR spectrum of 2o (377 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2p (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2p (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2q (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2q (100 MHz, CDCl₃)

$^1$H NMR spectrum of 2r (400 MHz, CDCl₃)
$^{13}$C NMR spectrum of $2r$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of $2s$ (400 MHz, CDCl$_3$)
$^1$H NMR spectrum of 2t (400 MHz, CDCl$_3$)

$^1$C NMR spectrum of 2s (100 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2t (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2u (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of $2u$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of $2v$ (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of $2v$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of $2w$ (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2w (100 MHz, CDCl₃)

$^1$H NMR spectrum of 2x (400 MHz, CDCl₃)
$\text{C NMR spectrum of } \text{2x} \ (100 \text{ MHz, CDCl}_3)$

$\text{1H NMR spectrum of } \text{2y} \ (400 \text{ MHz, CDCl}_3)$
$^{13}$C NMR spectrum of 2y (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2z (400 MHz, CDCl$_3$)
$^1$C NMR spectrum of 2z (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2za (400 MHz, CDCl$_3$)
\[ ^{13}\text{C} \text{NMR spectrum of } 2\text{za (100 MHz, CDCl}_3) \]

\[ ^1\text{H} \text{NMR spectrum of } 2\text{zb (400 MHz, CDCl}_3) \]
$^{13}$C NMR spectrum of 2$^{zb}$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2$^{zc}$ (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zc (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2zd (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zd (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2ze (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of $2ze$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of $2zf$ (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zf (100 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zg (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2zh (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of $2zh$ (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of $2zi$ (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zi (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2zj (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zj (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2zk (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2zk (100 MHz, CDCl$_3$)

$^1$H NMR spectrum of 2zl (400 MHz, CDCl$_3$)
$^{13}$C NMR spectrum of 2z1 (100 MHz, CDCl$_3$)