Synthesis of 4-methyl-2,3-disubstituted quinolines scaffolds via environmentally benign Fe(III) catalysed sequential condensation, cyclization and aromatization of 1,3-diketone and 2-ethynyl aniline

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1H NMR spectrum of 3,4-dihydro-3,3,7,9-tetramethylacridin-1(2H)-one 3i
$^{13}$C NMR spectrum of 3,4-dihydro-3,3,7,9-tetramethylacridin-1(2H)-one 3i
$^1$H NMR spectrum of 7-chloro-3,4-dihydro-3,3,9-trimethylacridin-1(2H)-one 3j
$^{13}$C NMR spectrum of 7-chloro-3,4-dihydro-3,3,9-trimethylacridin-1(2H)-one 3j
$^1$H NMR spectrum of 3,4-dihydro-3,3,9-trimethyl-7-nitroacridin-1(2H)-one 3k
$^{13}$C NMR spectrum of 3,4-dihydro-3,3,9-trimethyl-7-nitroacridin-1(2$H$)-one 3k
$^1$H NMR spectrum of 3,4-dihydro-5-methoxy-3,3,9-trimethyl-7-nitroacridin-1(2$H$)-one 31
$^{13}$C NMR spectrum of 3,4-dihydro-5-methoxy-3,3,9-trimethyl-7-nitroacridin-1(2$H$)-one 3l
\(^1\)H NMR spectrum of 3,4-dihydro-2,2,9-trimethylacridin-1(2H)-one 3d
$^{13}$C NMR spectrum of 3,4-dihydro-2,2,9-trimethylacridin-1(2$H$)-one 3d
HSQC of 3,4-dihydro-2,2,9-trimethylacridin-1(2H)-one 3d
HMBC of 3,4-dihydro-2,2,9-trimethylacridin-1(2H)-one 3d