CAN Catalyzed Regioselective Synthesis of Pyrido[2,3-c]carbazoles through Povarov Reaction

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Analytical Data

$^1$H NMR of 7-ethyl-3-methyl-7$H$-pyrido[2,3-c]carbazole (4a)
$^{13}$C NMR of 7-ethyl-3-methyl-$7H$-pyrido[2,3-c]carbazole (4a)
DEPT of 7-ethyl-3-methyl-7H-pyrido[2,3-c]carbazole (4a)
LC-MS of 7-ethyl-3-methyl-7H-pyrido[2,3-c]carbazole (4a)
Elemental analysis of 7-ethyl-3-methyl-7H-pyrido[2,3-c]carbazole (4a)
$^{1}\text{H NMR of 3-methyl-7H-pyrido}[2,3-c]\text{carbazole (4b)}$
$^{13}$C NMR of 3-methyl-7H-pyrido[2,3-c]carbazole (4b)
DEPT of 3-methyl-7H-pyrido[2,3-c]carbazole (4b)
LC-MS of 3-methyl-7H-pyrido[2,3-c]carbazole (4b)
Elemental analysis of 3-methyl-7H-pyrido[2,3-c]carbazole (4b)
$^1$H NMR of 10-bromo-7-butyl-3-methyl-7H-pyrido[2,3-c]carbazole (4c)
$^{13}$C NMR of 10-bromo-7-butyl-3-methyl-7$H$-pyrido[2,3-c]carbazole (4c)
DEPT of 10-bromo-7-butyl-3-methyl-7H-pyrido[2,3-c]carbazole (4c)
LC-MS of 10-bromo-7-butyl-3-methyl-7H-pyrido[2,3-c]carbazole (4c)
Elemental analysis of 10-bromo-7-butyl-3-methyl-7H-pyrido[2,3-c]carbazole (4c)
$^1$H NMR of 7-butyl-8,10-dichloro-3-methyl-7H-pyrido[2,3-c]carbazole (4d)
$^{13}$C NMR of 7-butyl-8,10-dichloro-3-methyl-7$H$-pyrido[2,3-c]carbazole (4d)
DEPT of 7-butyl-8,10-dichloro-3-methyl-7H-pyrido[2,3-c]carbazole (4d)
LC-MS of 7-butyl-8,10-dichloro-3-methyl-7H-pyrido[2,3-c]carbazole (4d)
Elemental analysis of 7-butyl-8,10-dichloro-3-methyl-7H-pyrido[2,3-c]carbazole (4d)
$^1$H NMR of 10-chloro-3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4e)
$^{13}$C NMR of 10-chloro-3,7-dimethyl-7$H$-pyrido[2,3-c]carbazole (4e)
DEPT of 10-chloro-3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4e)
LC-MS of 10-chloro-3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4e)
Elemental analysis of 10-chloro-3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4e)
$^1$H NMR of 3,7-dimethyl-7$H$-pyrido[2,3-c]carbazole (4f)
$^{13}$C NMR of 3,7-dimethyl-7$H$-pyrido[2,3-c]carbazole (4f)
DEPT of 3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4f)
LC-MS of 3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4f)
Elemental analysis of 3,7-dimethyl-7H-pyrido[2,3-c]carbazole (4f)
$^1$H NMR of 7-benzyl-3-methyl-7$H$-pyrido[2,3-c]carbazole (4g)
$^{13}$C NMR of 7-benzyl-3-methyl-7$H$-pyrido[2,3-$c$]carbazole (4g)
DEPT of 7-benzyl-3-methyl-7$H$-pyrido[2,3-$c$]carbazole (4g)
LC-MS of 7-benzyl-3-methyl-7H-pyrido[2,3-c]carbazole (4g)
Elemental analysis of 7-benzyl-3-methyl-7H-pyrido[2,3-c]carbazole (4g)
$^1$H NMR of 2,5,11-trimethyl-6$H$-pyrido[3,2-\textit{b}]carbazole (4h)
$^{13}$C NMR of 2,5,11-trimethyl-6$H$-pyrido[3,2-$b$]carbazole (4h)
DEPT of 2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4h)
LC-MS of 2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4h)
Elemental analysis of 2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4h)
$^1$H NMR of 6-ethyl-2,5,11-trimethyl-6$H$-pyrido[3,2-$b$]carbazole (4i)
$^{13}$C NMR of 6-ethyl-2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4i)
DEPT of 6-ethyl-2,5,11-trimethyl-6\(H\)-pyrido[3,2-\(b\)]carbazole (4i)
LC-MS of 6-ethyl-2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4i)
Elemental analysis of 6-ethyl-2,5,11-trimethyl-6H-pyrido[3,2-b]carbazole (4i)
$^1$H NMR of 2-methyl-11$H$-pyrido[2,3-$a$]carbazole (4j)
$^{13}$C NMR of 2-methyl-11$H$-pyrido[2,3-$a$]carbazole (4j)
DEPT of 2-methyl-11H-pyrido[2,3-a]carbazole (4j)
LC-MS of 2-methyl-11H-pyrido[2,3-a]carbazole (4j)
Elemental analysis of 2-methyl-11H-pyrido[2,3-a]carbazole (4j)