SUPPORTING INFORMATION

Visible Light Promoted Synthesis of Disubstituted 1,2,3-Thiadiazoles

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**1H and 13CNMR Spectra of Compounds**

Figure S1a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-Acetyl-5-methylsulfanyl-1,2,3-thiadiazole (3a)

![NMR Spectrum](image)

Figure S1b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-Acetyl-5-methylsulfanyl-1,2,3-thiadiazole (3a)

![NMR Spectrum](image)
Figure S2a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3b)

![Figure S2a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3b)](image)

Figure S2b: $^{13}$C NMR (101 MHz, CDC$_{13}$) of 5-Methylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3b)

![Figure S2b: $^{13}$C NMR (101 MHz, CDC$_{13}$) of 5-Methylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3b)](image)
Figure S3a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Benzylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3c)

Figure S3b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Benzylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3c)
Figure S4a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Allylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3d)

Figure S4b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Allylsulfanyl-4-(2-thienoyl)-1,2,3-thiadiazole (3d)
Figure S5a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Allylsulfanyl-4-(2-furoyl)-1,2,3-thiadiazole (3e)

Figure S5b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Allylsulfanyl-4-(2-furoyl)-1,2,3-thiadiazole (3e)
Figure S6a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(2-Furoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3f)

Figure S6b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(2-Furoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3f)
Figure S7a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(N-Methylpyrrol-3-oyl)-5-methylsulfanyl-1,2,3-thiadiazole (3g)

Figure S7b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(N-Methylpyrrol-3-oyl)-5-methylsulfanyl-1,2,3-thiadiazole (3g)
Figure S8a: $^1\text{H}$ NMR (400 MHz, CDCl$_3$) of 4-Benzoyl-5-methylsulfanyl-1,2,3-thiadiazole (3h)

Figure S8b: $^{13}\text{C}$ NMR (101 MHz, CDCl$_3$) of 4-Benzoyl-5-methylsulfanyl-1,2,3-thiadiazole (3h)
Figure S9a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(2-Chlorobenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3i)

Figure S9b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(2-Chlorobenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3i)
Figure S10a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-Benzoyl-5-ethylsulfanyl-1,2,3-thiadiazole (3j)

Figure S10b: $^{13}$C NMR (101 MHz, CDC$_3$) of 4-Benzoyl-5-ethylsulfanyl-1,2,3-thiadiazole (3j)
Figure S11a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(4-Methylbenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3k)

Figure S11b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(4-Methylbenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3k)
Figure S12a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(4-Methoxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3l)

Figure S12b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(4-Methoxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3l)
Figure S13a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(3-pyridoyl)-1,2,3-thiadiazole (3m)

Figure S13b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(3-pyridoyl)-1,2,3-thiadiazole (3m)
Figure S14a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(4-trifluoromethylbenzoyl)-1,2,3-thiadiazole (3n)

Figure S14b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(4-trifluoromethylbenzoyl)-1,2,3-thiadiazole (3n)
Figure S15a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(4-phenylbenzoyl)-1,2,3-thiadiazole (3o)

Figure S15b: $^{13}$C NMR (101 MHz, CDC$_{13}$) of 5-Methylsulfanyl-4-(4-phenylbenzoyl)-1,2,3-thiadiazole (3o)
Figure S16a: $^1$H NMR (400 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(1-naphthoyl)-1,2,3-thiadiazole (3p)

Figure S16b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 5-Methylsulfanyl-4-(1-naphthoyl)-1,2,3-thiadiazole (3p)
Figure S17a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-(3,4-Methylenedioxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3q)

![NMR spectrum of 4-(3,4-Methylenedioxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3q)](image)

Figure S17b: $^{13}$C NMR (101 MHz, CDCl$_3$) of 4-(3,4-Methylenedioxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3q)

![NMR spectrum of 4-(3,4-Methylenedioxybenzoyl)-5-methylsulfanyl-1,2,3-thiadiazole (3q)](image)
Figure S18a: $^1$H NMR (400 MHz, CDCl$_3$) of 4-Benzoyl-5-benzylsulfanyl-1,2,3-thiadiazole (3r)

Figure S18b: $^{13}$C NMR (101 MHz, CDC$_3$) of 4-Benzoyl-5-benzylsulfanyl-1,2,3-thiadiazole (3r)