

Supplementary Information

Scheme S1. Optimization of the reaction conditions for the synthesis of **1a**.

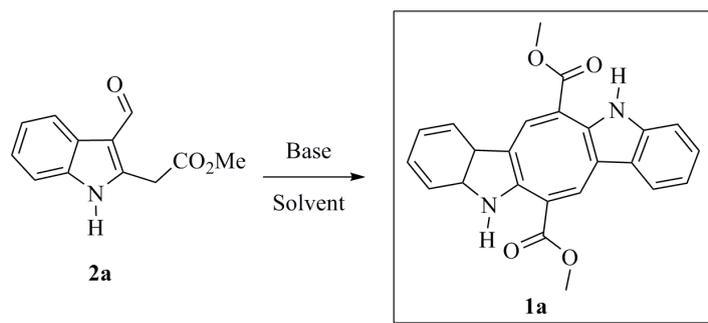


Table S1. Optimization of the reaction conditions for the synthesis of **1a**.

Entry	Base	Concentration (M)	Solvent	Temperature (°C)	Time (h)	Yield (%)
1	Diethylamine Piperidine	0.01	Methanol	reflux	48	2 ⁹
2	Diethylamine Piperidine	0.01	Xylene	reflux	3	12
3	Diethylamine Piperidine	0.023	Xylene	reflux	3	32
4	Diethylamine Piperidine	0.038	Xylene	reflux	3	31
5	Diethylamine Piperidine	0.076	Xylene	reflux	4	32
6	Diethylamine Piperidine	0.230	Xylene	reflux	6	15
7	Diethylamine Piperidine	0.076	Toluene	reflux	4.5	24
8	Diethylamine Piperidine	0.230	Toluene	reflux	7.5	12

Anti-Tuberculosis Activity

Figure S1. IC₅₀ values of compounds **1a**, **1b**, **1d** and **1e** against the *M. tuberculosis* strain H37Rv. Values are the means \pm S.E.M., $n = 5$.

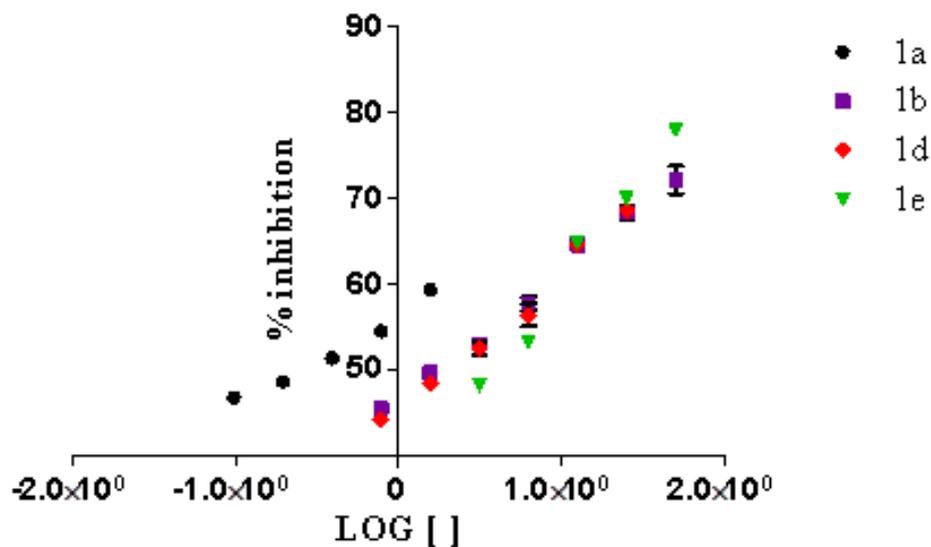


Figure S2. Concentration-response curve of compound **1a** against the *M. tuberculosis* strain H37Rv. This compound was tested at a concentration of 50–1.56 μ M. Values are the means \pm S.E.M., $n = 5$.

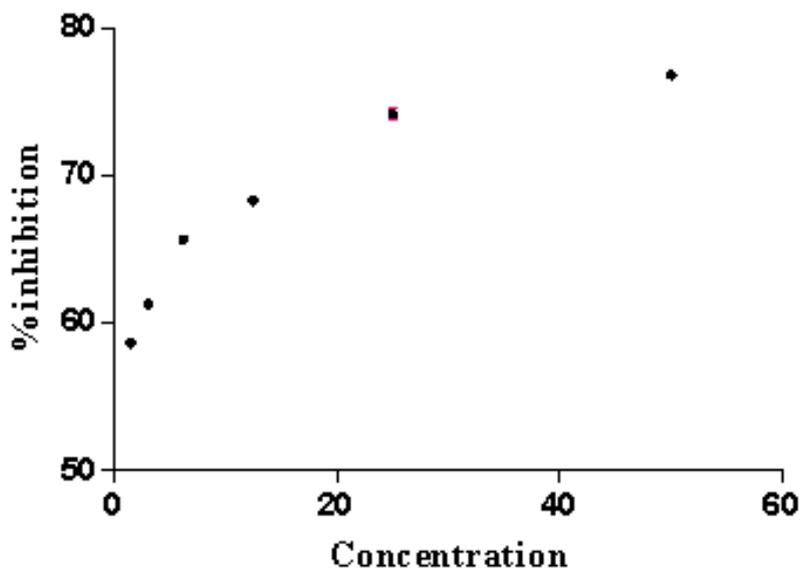


Figure S3. IC₅₀ values of rifampin against the *M. tuberculosis* strain H37Rv. Values are the means ± S.E.M., *n* = 5.

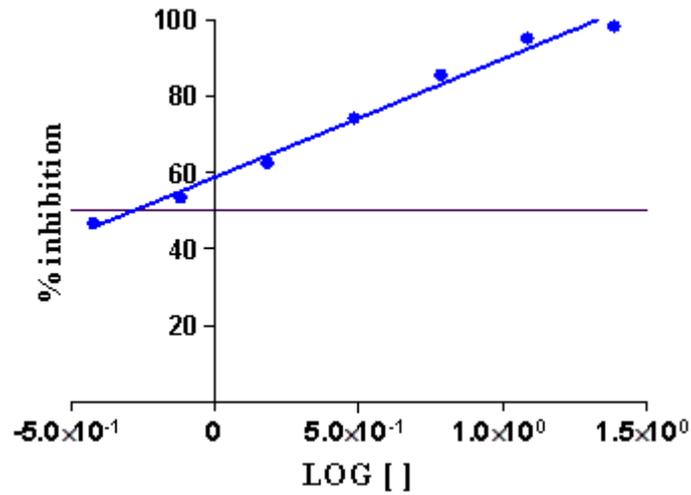


Figure S4. ¹H NMR spectrum of the Caulerpin (1a).

Caulerpin 1H NMR (300 MHz, CDCl₃ + DMSO-d₆)

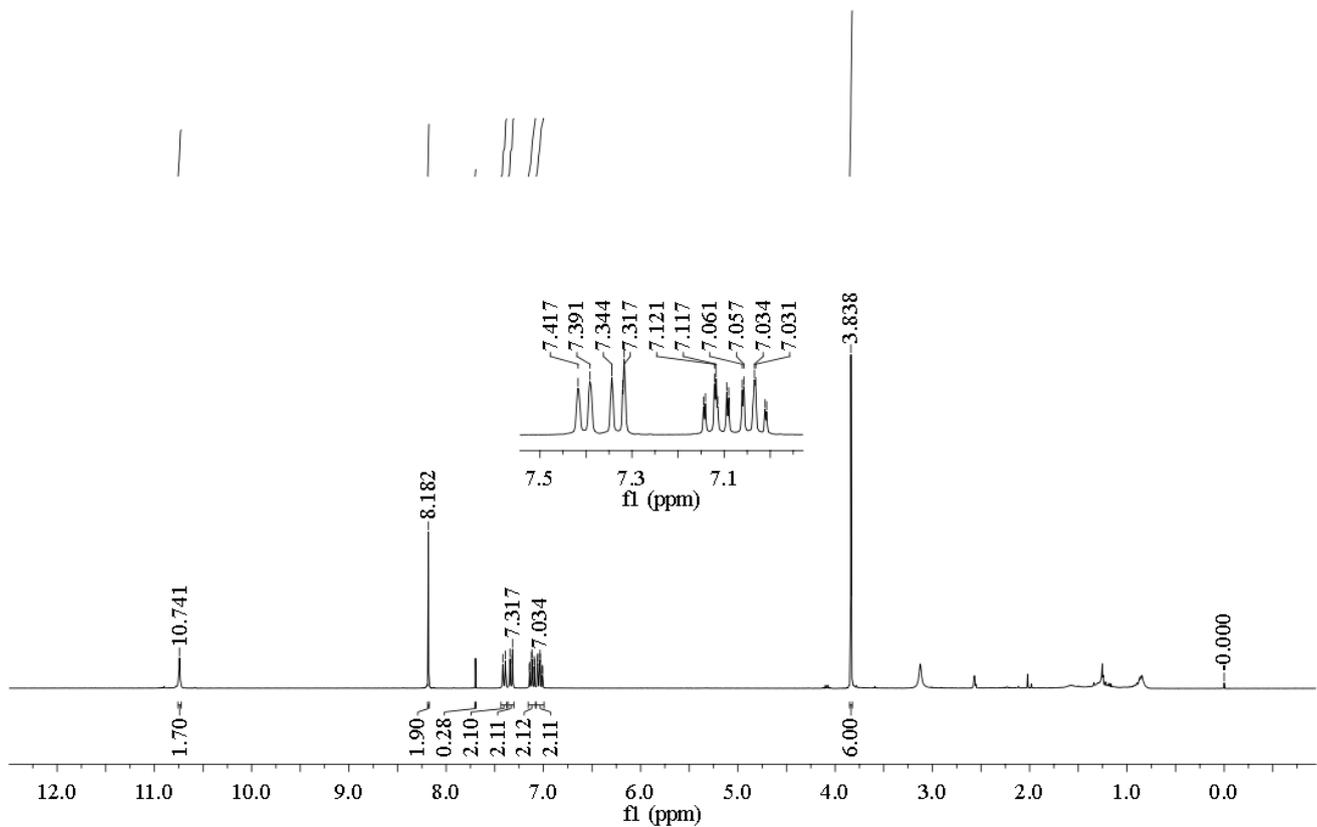
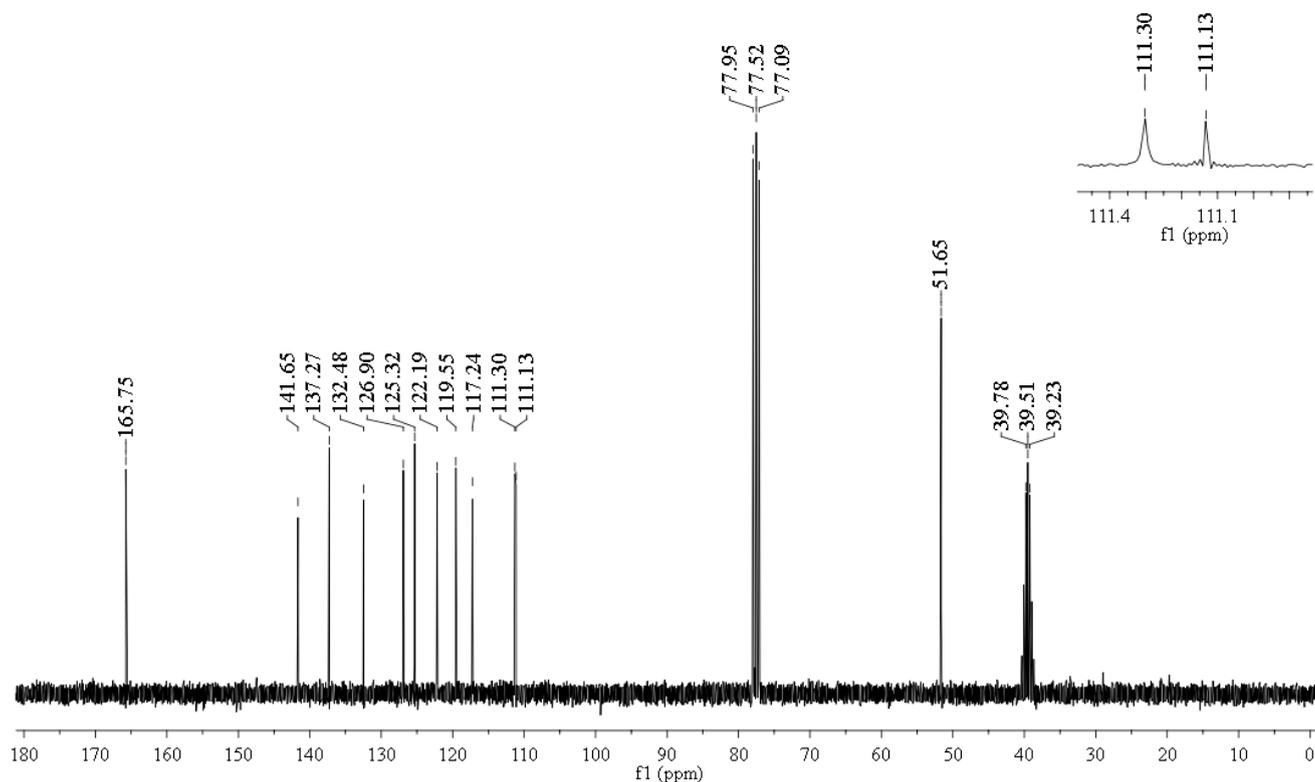


Figure S5. ^{13}C NMR spectrum of the Caulerpin (**1a**).Caulerpin ^{13}C NMR (300 MHz, $\text{CDCl}_3 + \text{DMSO-d}_6$)**Figure S6.** Elemental composition of the Caulerpin (**1a**).

```

[ Elemental Composition ]
Data : Dr-Roberto-Martinez003      Date : 02-Dec-2013 13:24      Page: 1
Sample: 2616 1a
Note : -luis-velasco
Inlet : Direct                      Ion Mode : FAB+
RT : 1.04 min                       Scan# : (2,7)
Elements : C 40/0, H 49/0, O 5/0, N 3/1
Mass Tolerance : 1000ppm, 1mmu if m/z > 1
Unsaturation (U.S.) : -0.5 - 20.0

Observed m/z   Int%
398.1266       100.0
Estimated m/z  Error[ppm]  U.S.   C   H   O   N
398.1267       -0.3         17.0  24  18  4   2

```

Figure S7. Mass spectrum of the Caulerpin (1a).

Caulerpin, 1a

[Mass Spectrum]
Date : Dr-Martinez-Roberto-071 Date : 30-Jun-2011 17:25
Sample: 1626 JeolFXS65HA
Note : Javier Perez
Inlet : Direct Ion Mode : EI+
Spectrum Type : Normal Ion (MF-Linear)
RT : 0.16 min Scan# : (5,8)
BP : m/z 398.0000 Int. : 44.91
Output m/z range : 11.0694 to 435.6083 Cut Level : 0.00 %
473614

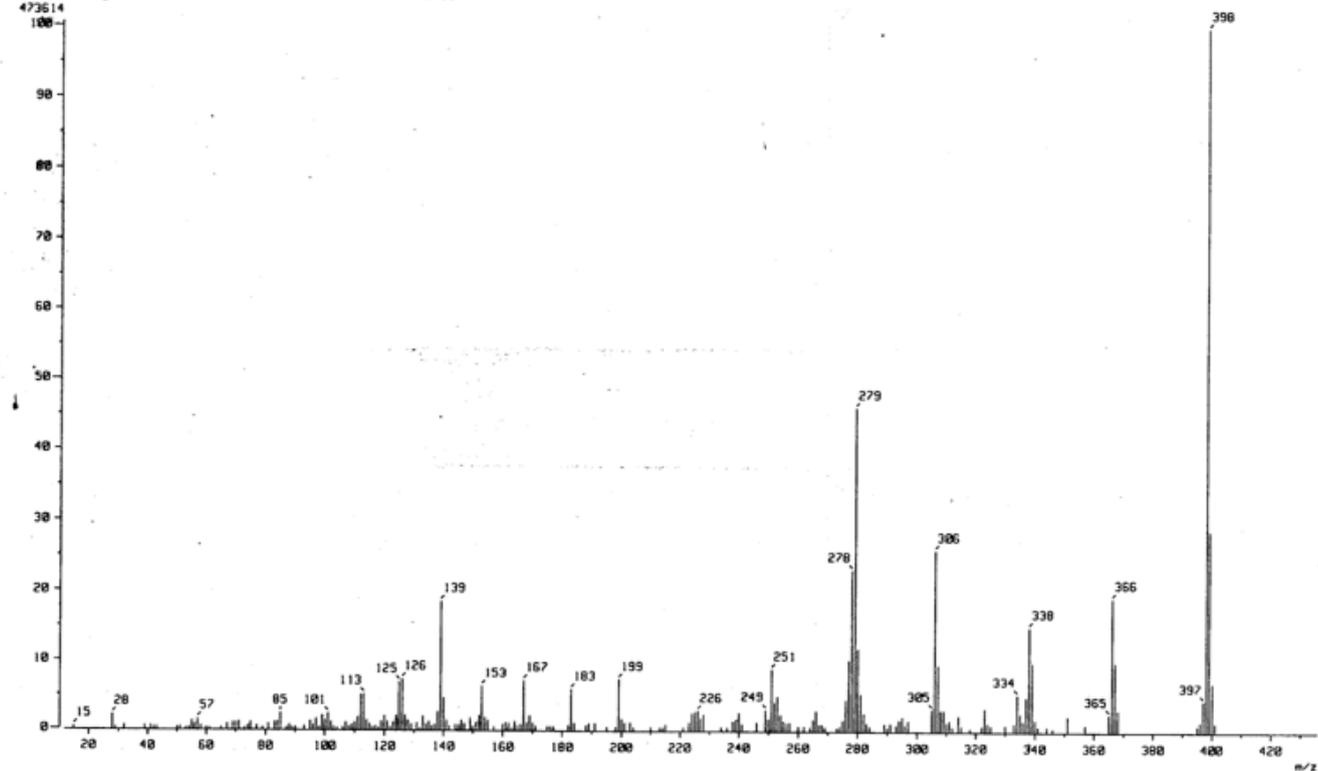
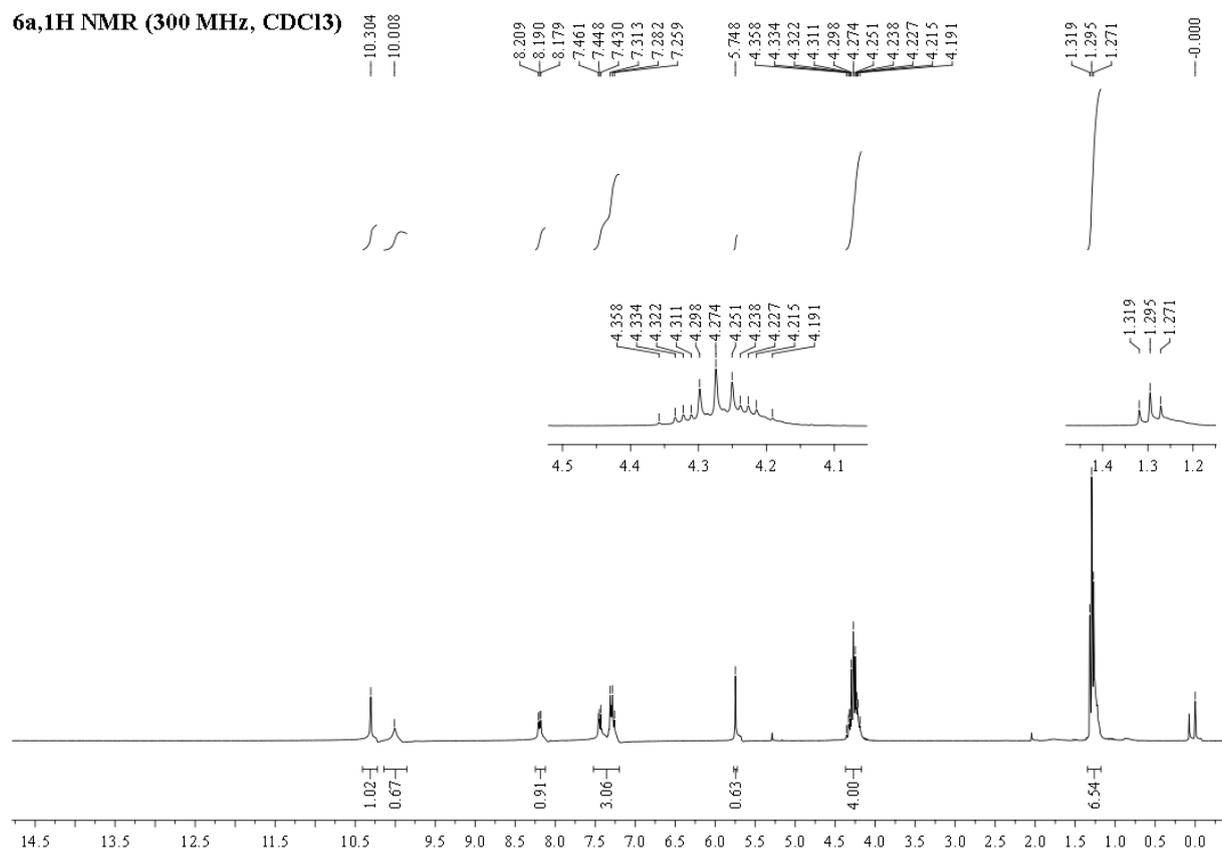


Figure S8. ^1H NMR spectrum of diethyl 2-(3-formyl-1*H*-indol-2-yl)malonate (**6a**).**Figure S9.** ^{13}C NMR spectrum of diethyl 2-(3-formyl-1*H*-indol-2-yl)malonate (**6a**).

6a, ^{13}C NMR (75 MHz, CDCl_3)

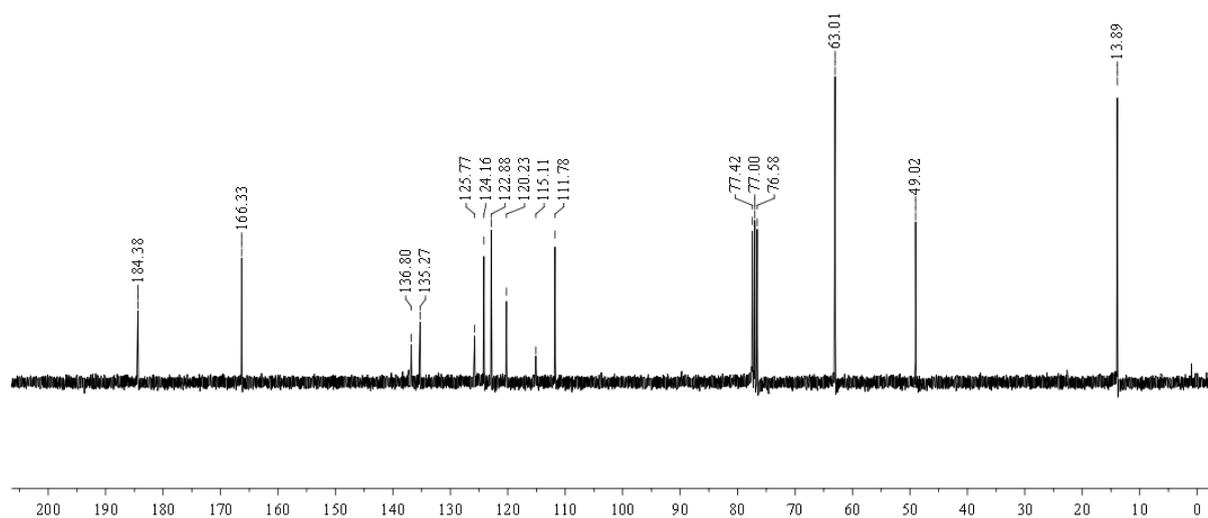
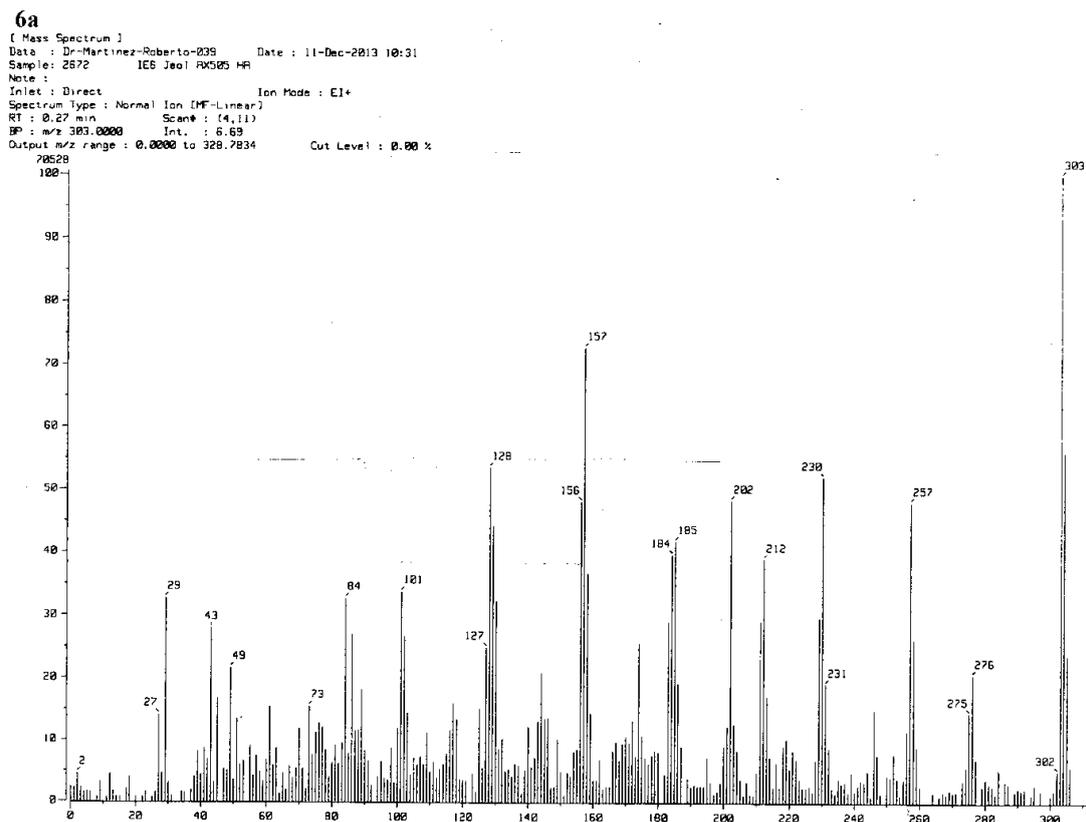


Figure S10. Mass spectrum of diethyl 2-(3-formyl-1*H*-indol-2-yl)malonate (**6a**).**Figure S11.** ¹H NMR spectrum of dimethyl 2,9-dimethyl-5,12-dihydrocycloocta [1,2-*b*:5,6-*b'*]-diindole-6,13-dicarboxylate (**1f**).

1f, ¹H NMR (300 MHz, CDCl₃ + DMSO-*d*₆)

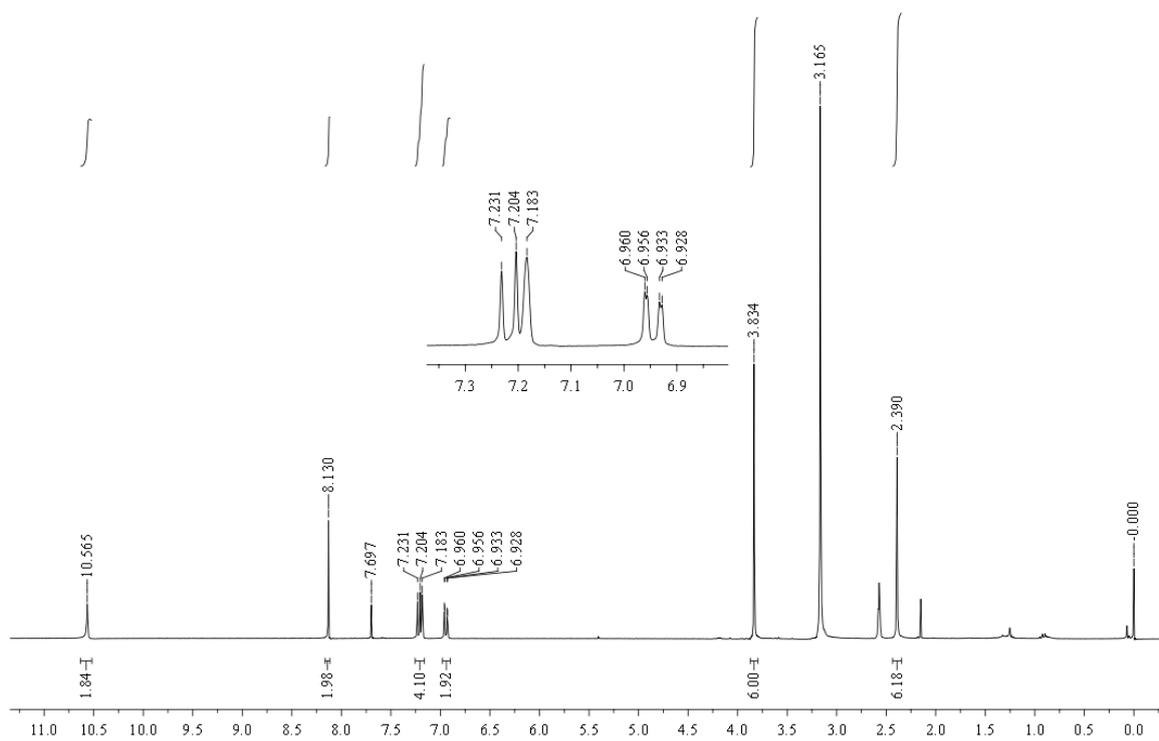


Figure S12. ^{13}C NMR spectrum of dimethyl 2,9-dimethyl-5,12-dihydrocycloocta [1,2-*b*:5,6-*b'*]-diindole-6,13-dicarboxylate (**1f**).

1f, ^{13}C NMR (75 MHz, $\text{CDCl}_3 + \text{DMSO-}d_6$)

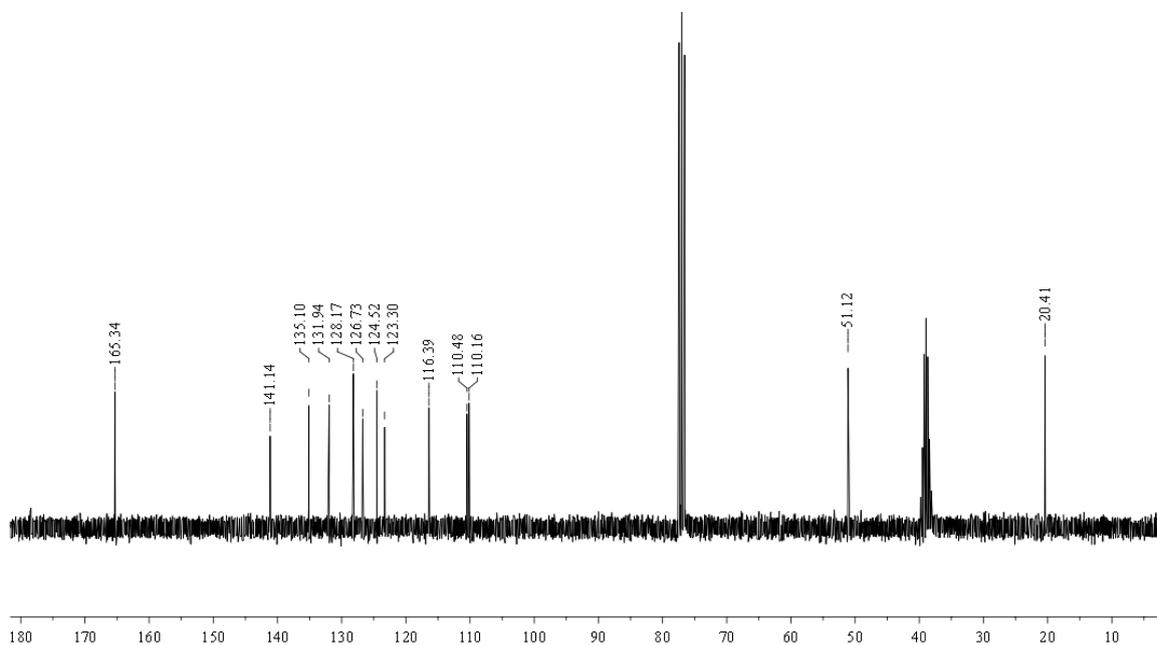


Figure S13. Mass spectrum of dimethyl 2,9-dimethyl-5,12-dihydrocycloocta [1,2-*b*:5,6-*b'*]-diindole-6,13-dicarboxylate (**1f**).

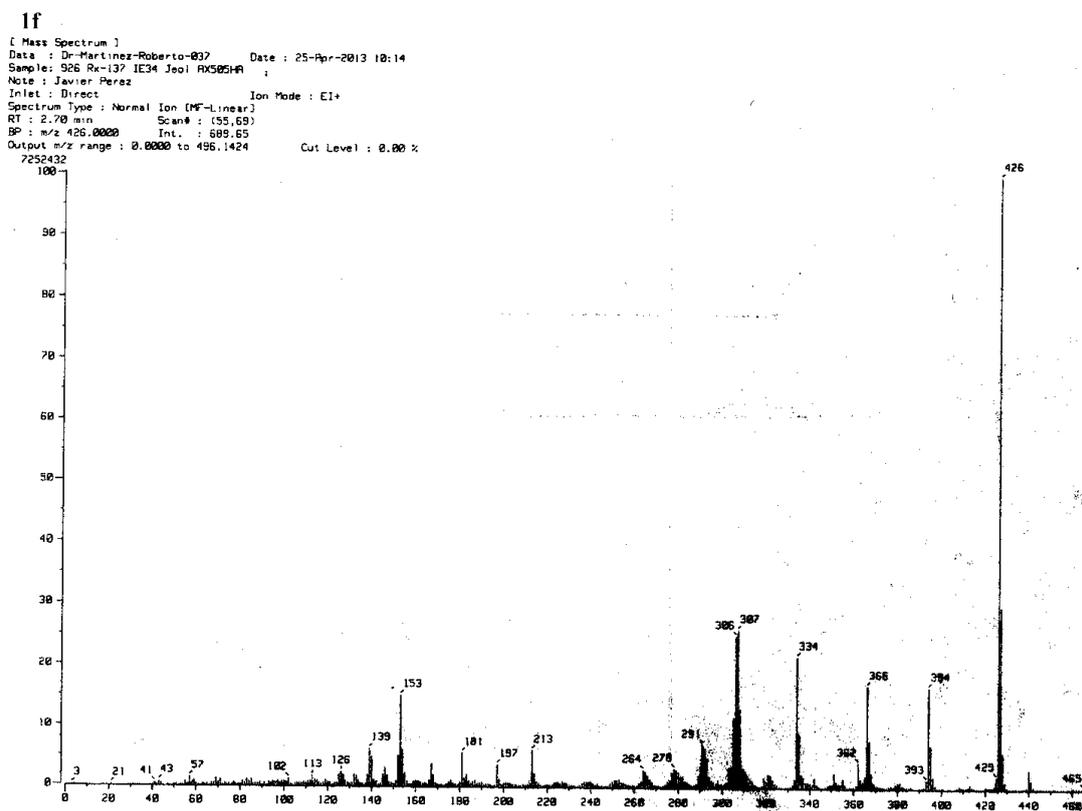


Figure S14. Elemental composition of dimethyl 2,9-dimethyl-5,12-dihydrocycloocta [1,2-*b*:5,6-*b'*]-diindole-6,13-dicarboxylate (**1f**).

1f

[Elemental Composition]

Data : Dr-Roberto-Martinez026

Date : 11-Jun-2013 14:00

Page: 1

Sample: 1351 Rx-137

Note : -luis-velasco

Inlet : Direct

Ion Mode : FAB+

RT : 2.67 min

Scan#: (9,13)+(4,6)

Elements : C 40/0, H 49/0, O 7/0, N 3/0

Mass Tolerance : 1000ppm, 1mmu if m/z > 1

Unsaturation (U.S.) : 0.0 - 34.0

Observed m/z	Int%	Estimated m/z	Error [ppm]	U.S.	C	H	O	N
426.1573	100.0	426.1580	-1.6	17.0	26	22	4	2

Figure S15. ¹H NMR spectrum of diethyl 2-(3-formyl-5-methyl-1*H*-indol-2-yl)malonate (**6f**).

6f, 1H NMR (300 MHz, CDCl₃)

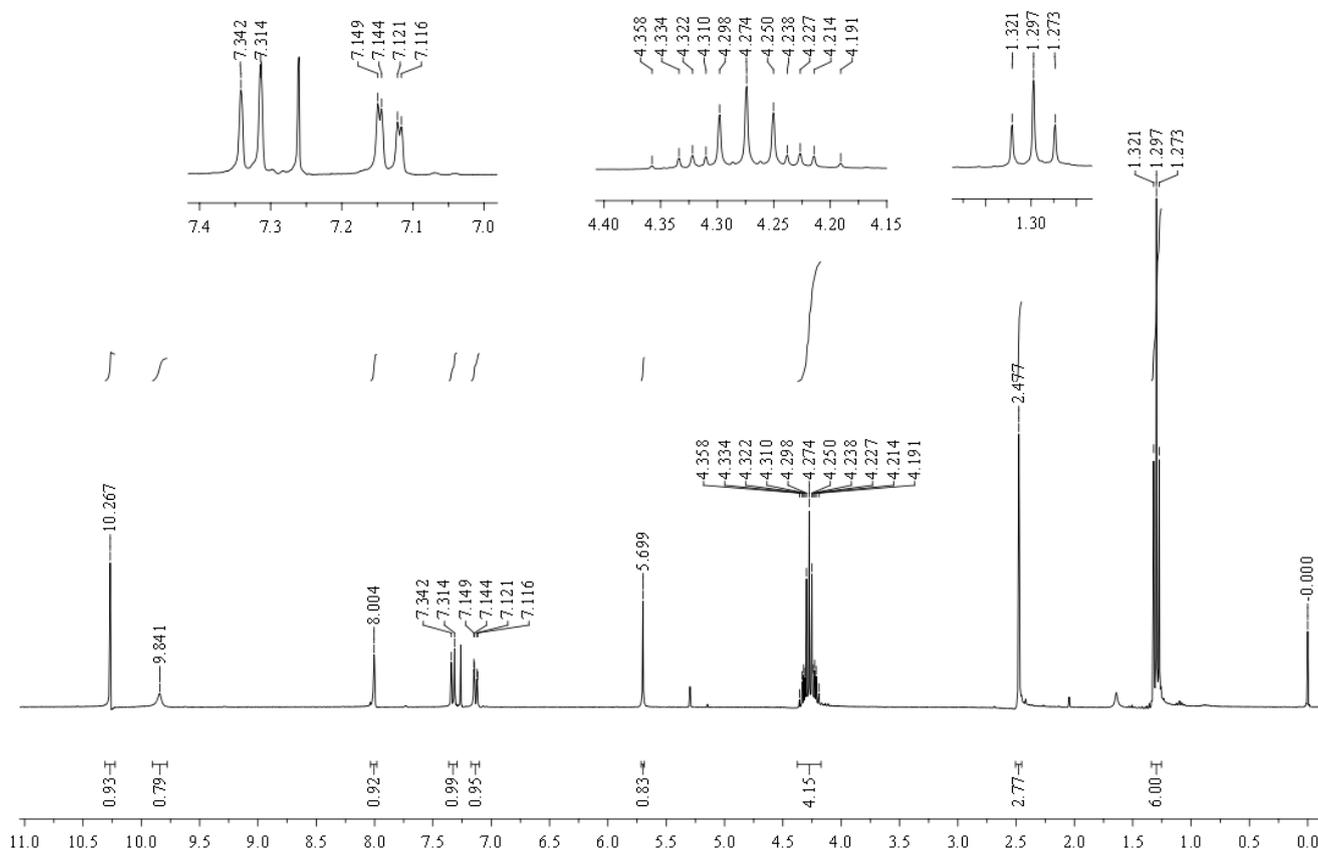


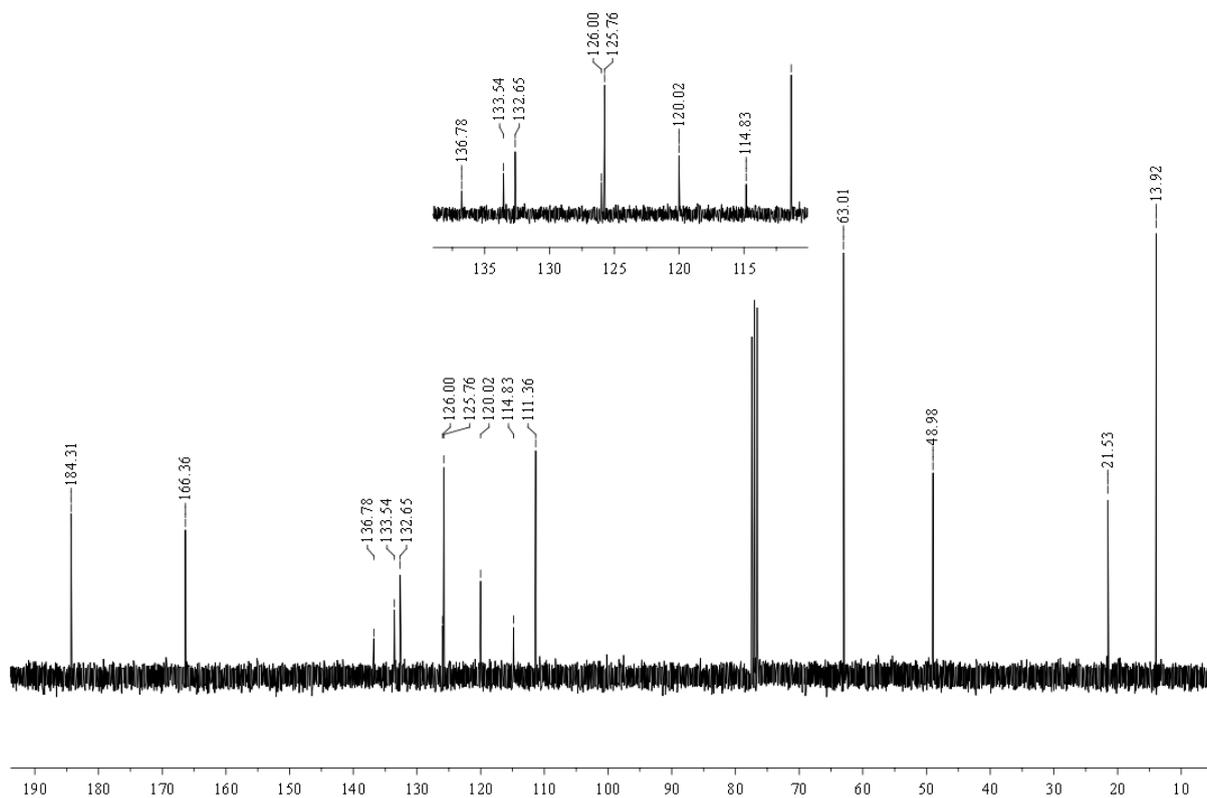
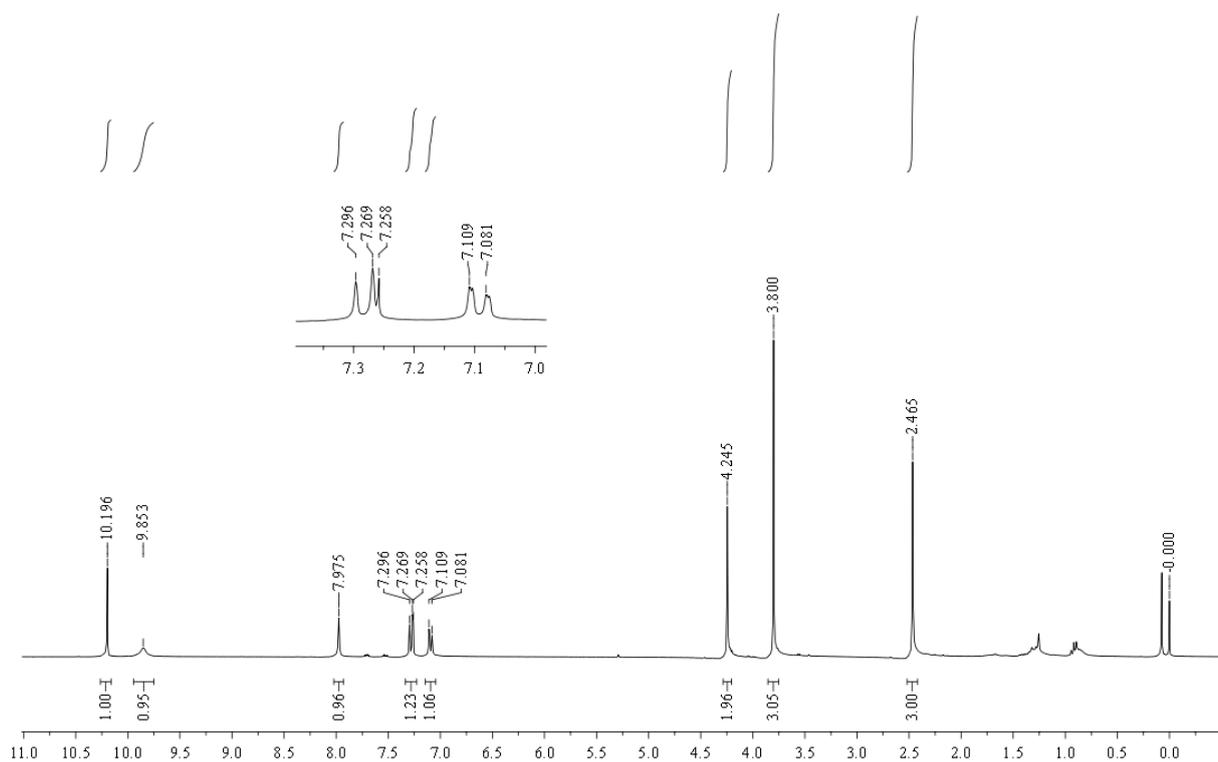
Figure S16. ^{13}C NMR spectrum of diethyl 2-(3-formyl-5-methyl-1*H*-indol-2-yl)malonate (**6f**).**6f**, ^{13}C NMR (75 MHz, CDCl_3)**Figure S17.** ^1H NMR spectrum of methyl 2-(3-formyl-5-methyl-1*H*-indol-2-yl)acetate (**2f**).**2f**, ^1H NMR (300 MHz, CDCl_3)

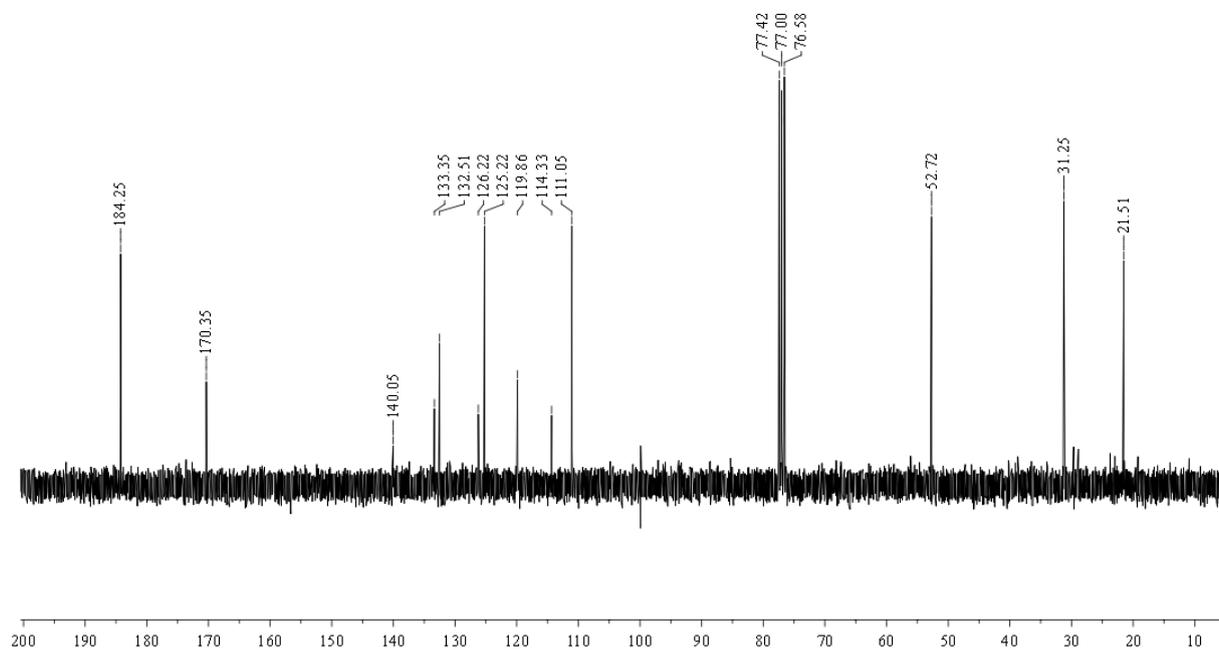
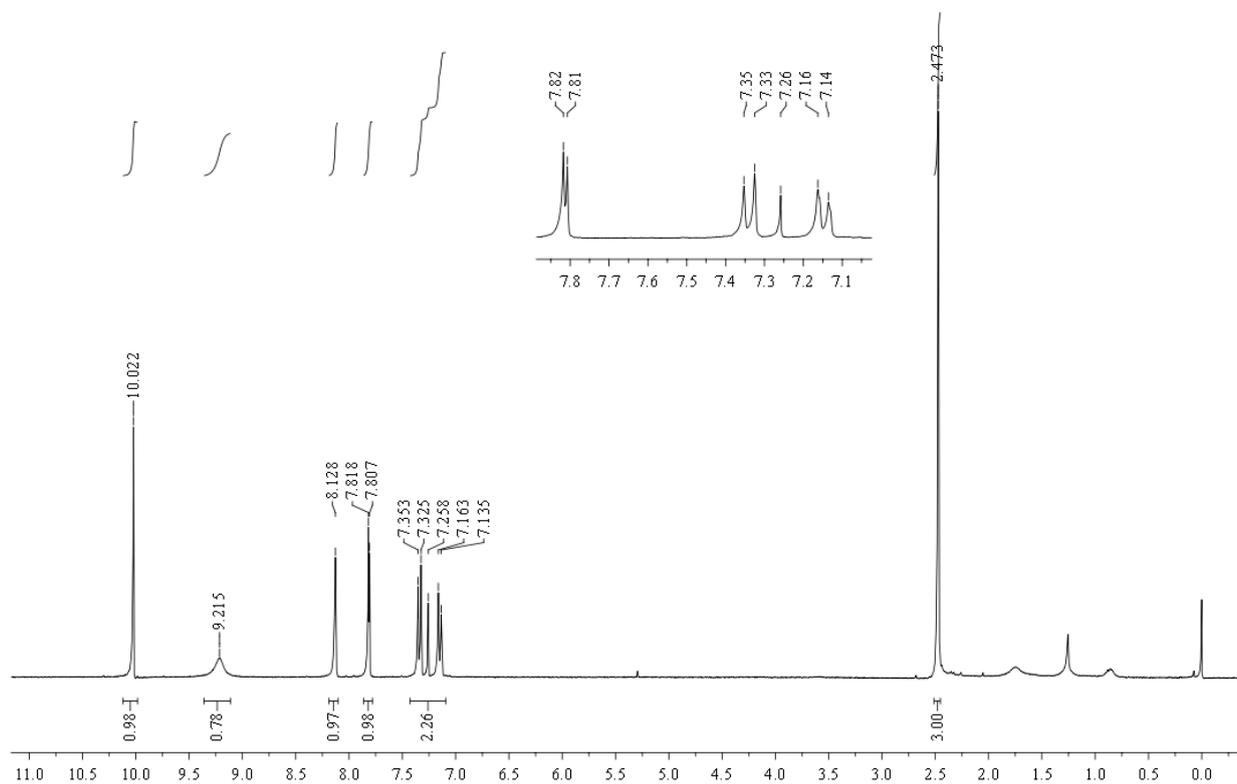
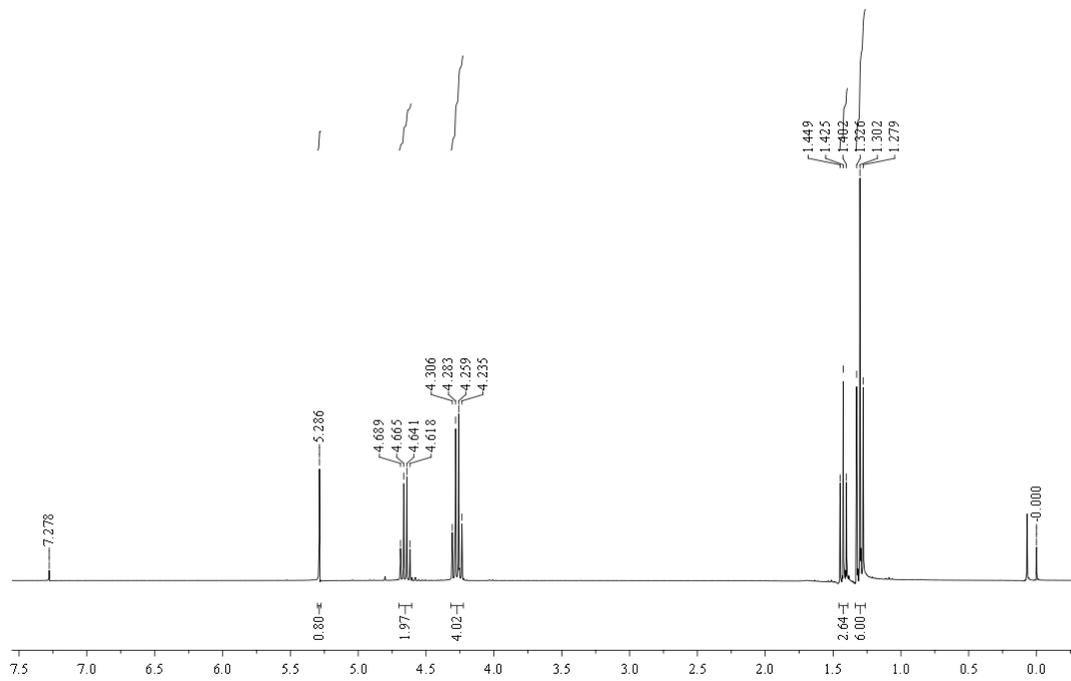
Figure S18. ^{13}C NMR spectrum of methyl 2-(3-formyl-5-methyl-1*H*-indol-2-yl)acetate (**2f**).**2f**, ^{13}C NMR (75 MHz, CDCl_3)**Figure S19.** ^1H NMR spectrum of 5-methyl-1*H*-indole-3-carbaldehyde (**4f**).**4f**, ^1H NMR (300 MHz, CDCl_3)

Figure S20. ^1H NMR spectrum of diethyl 2-(ethoxycarbonothioylthio)malonate (**3**).**3**, ^1H NMR (300 MHz, CDCl_3)**Figure S21.** ^{13}C NMR spectrum of diethyl 2-(ethoxycarbonothioylthio)malonate (**3**).**3**, ^{13}C NMR (75 MHz, CDCl_3)