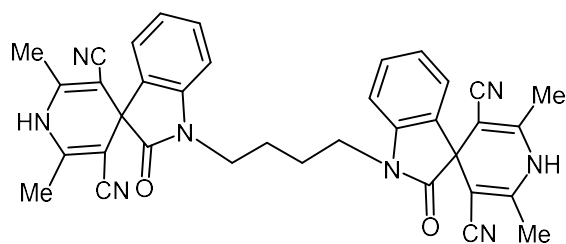
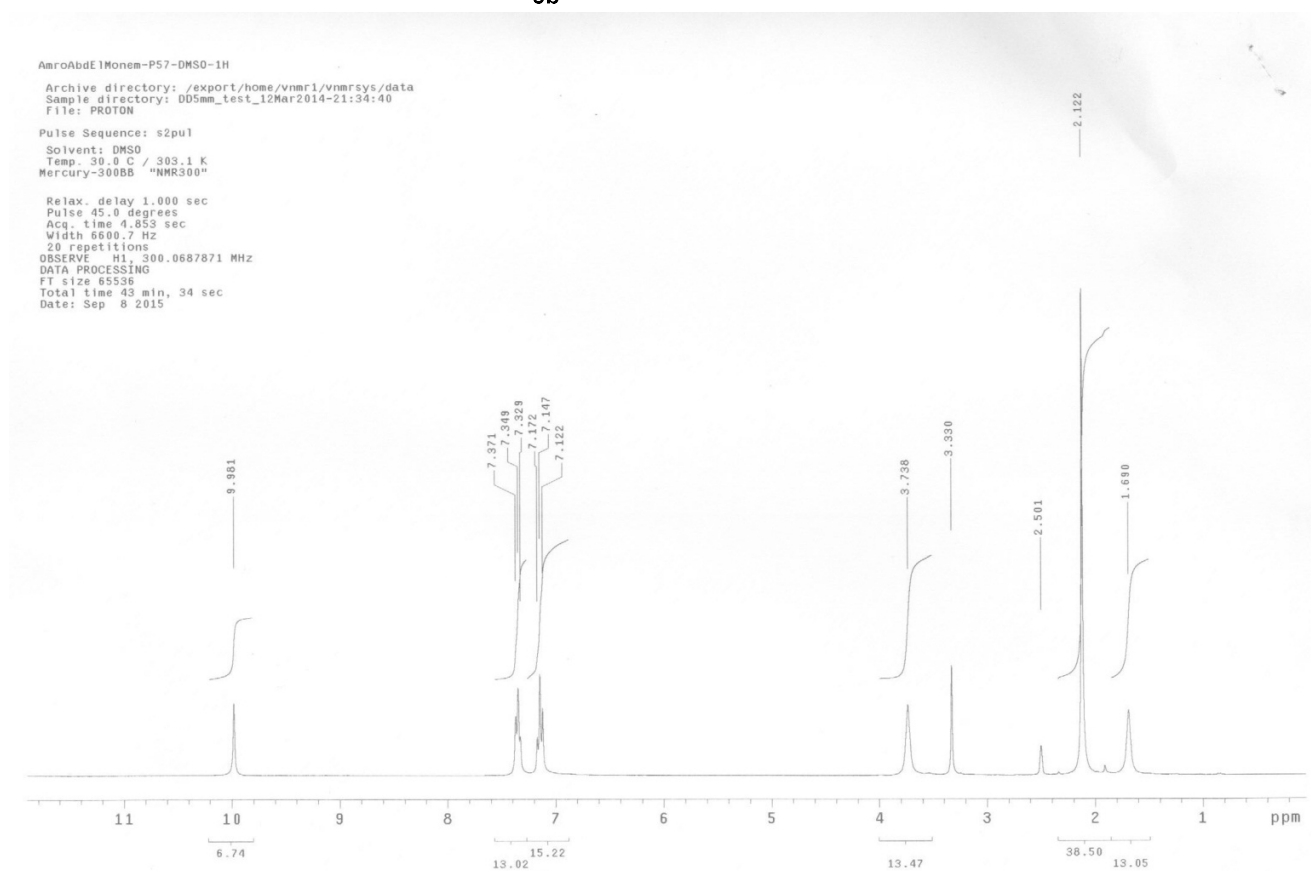


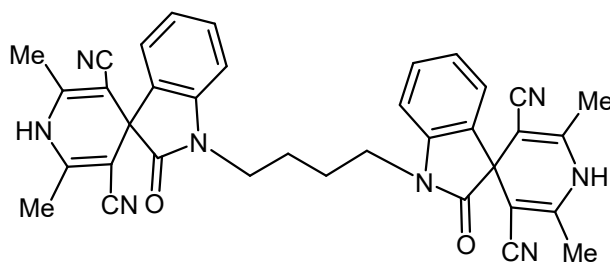
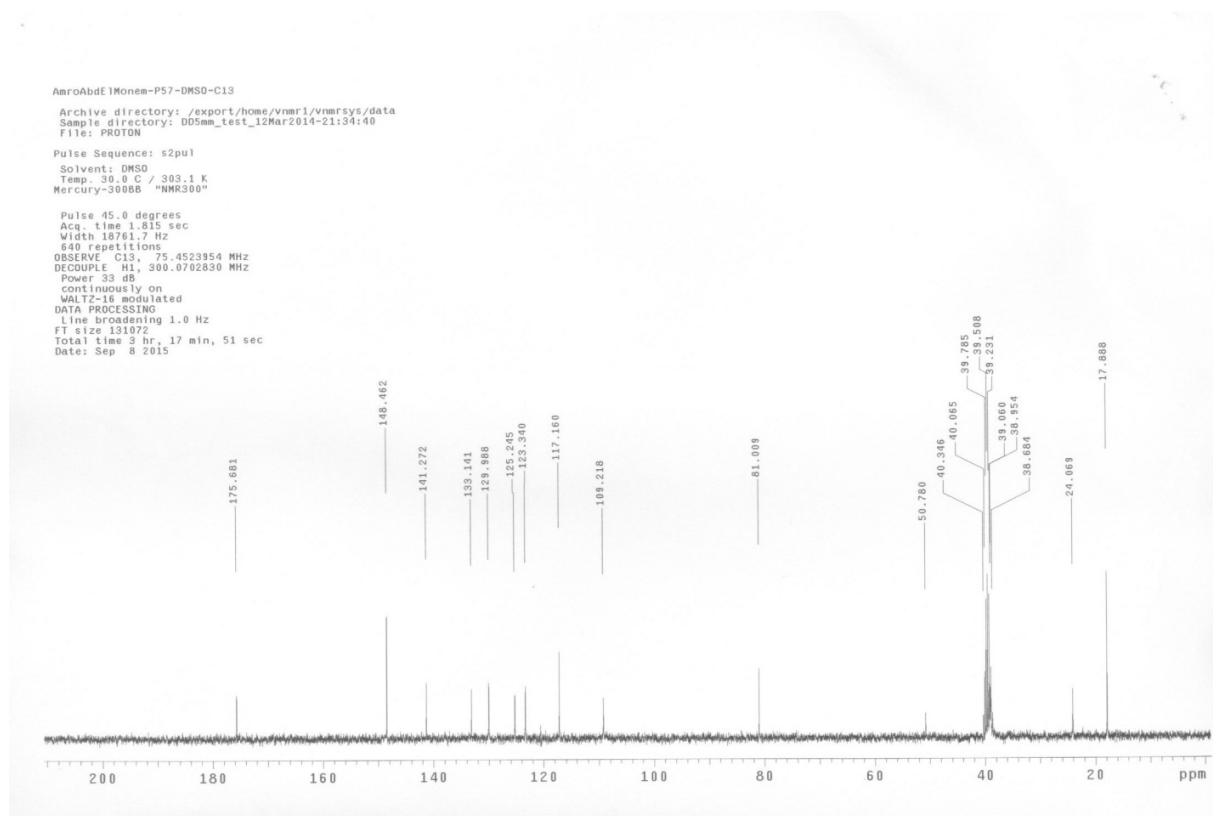
Bis(indol-2,3-diones):Versatile precursors for novel bis(2',6'-dimethyl-2-oxo-1'H-spiro[indoline-3,4'-pyridine]-3',5'-dicarbonitrile) derivatives

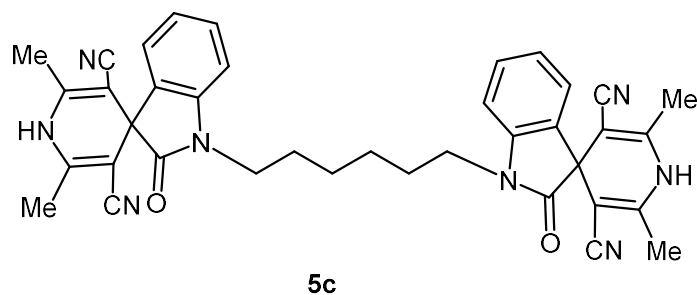
Amr M. Abdelmoniem, Ahmed H. M. Elwahy,* and Ismail A. Abdelhamid*

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E-mail: aelwahy@hotmail.com, ismail_shafy@yahoo.com

**5b****¹H NMR spectrum of compound 5b**

**5b****¹³CNMR spectrum of compound 5b**



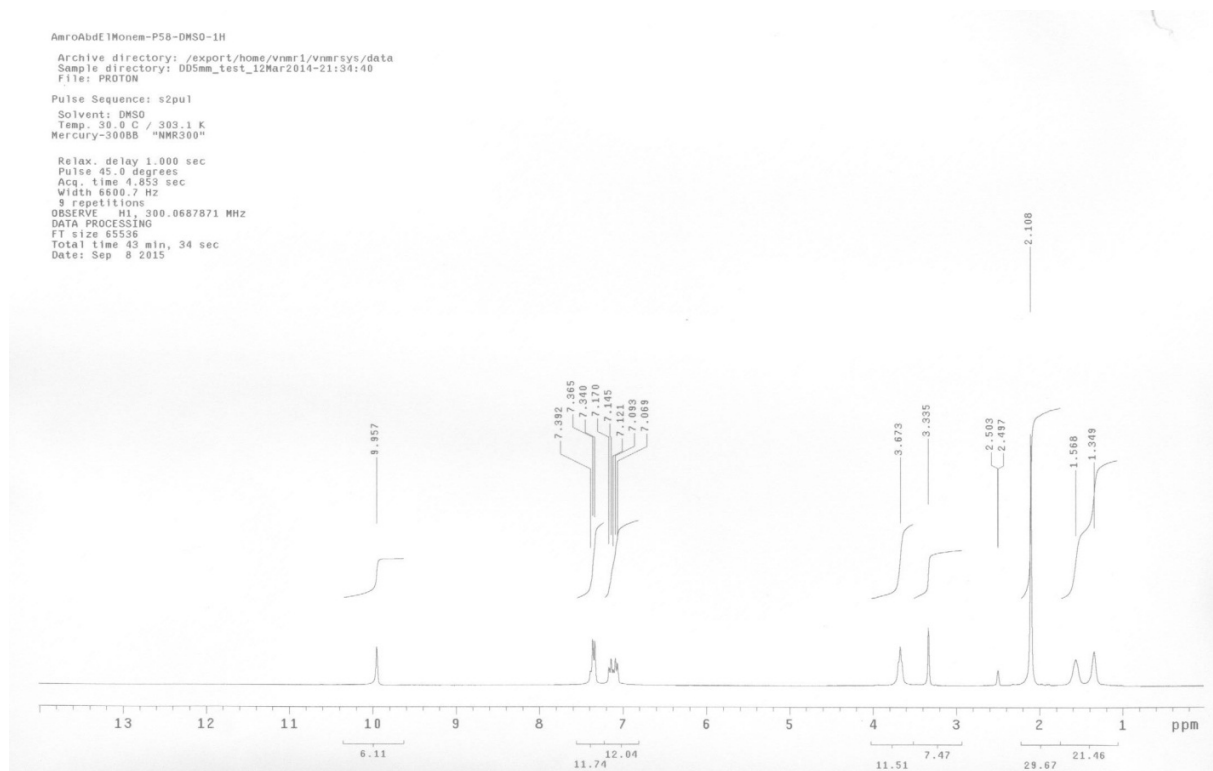
AmrOAbdE1Monem-P58-DMSO-1H

Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory: DD5mm_test_12Mar2014-21:34:40
File: PROTON

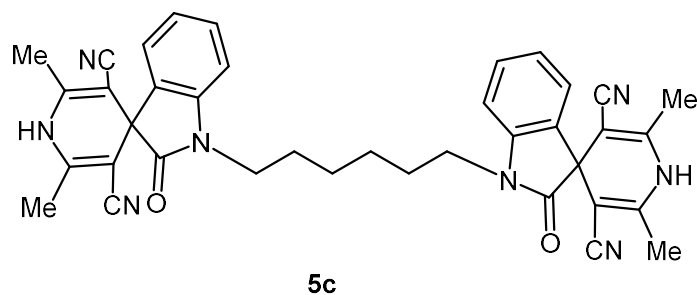
Pulse Sequence: s2pu1

Solvent: DMSO
Temp. 30.0 C / 303.1 K
Mercury-300BB "NMR300"

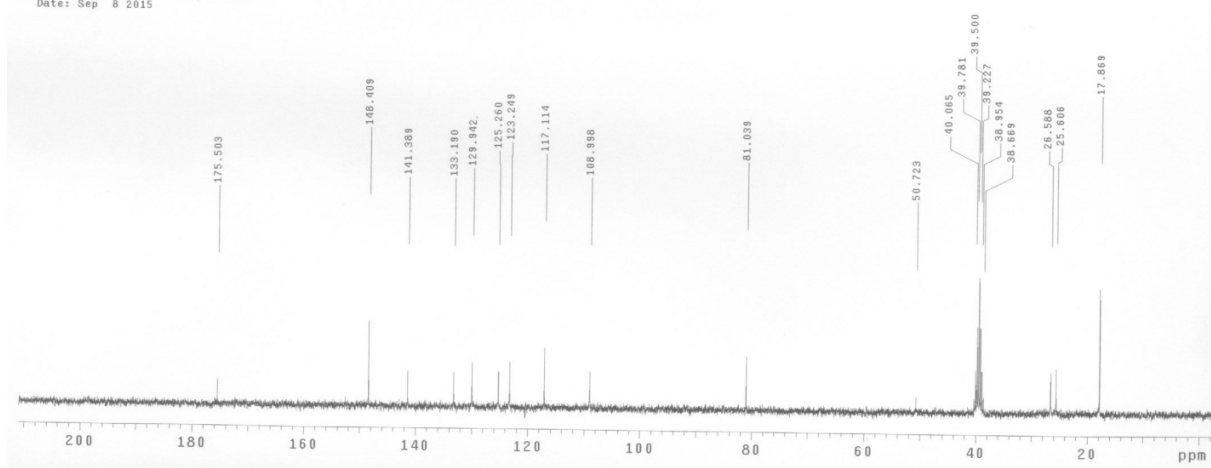
Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 4.853 sec
Width 6600.7 Hz
3 repetitions
OBSERVE H1, 300.0687871 MHz
DATA PROCESSING
FT size 65536
Total time 43 min, 34 sec
Date: Sep 8 2015



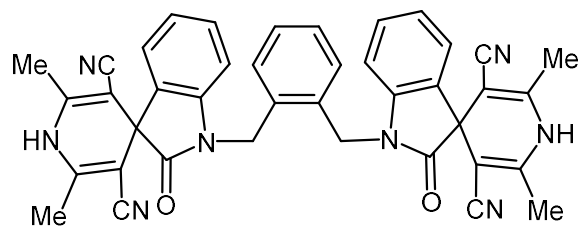
¹H NMR spectrum of compound 5c



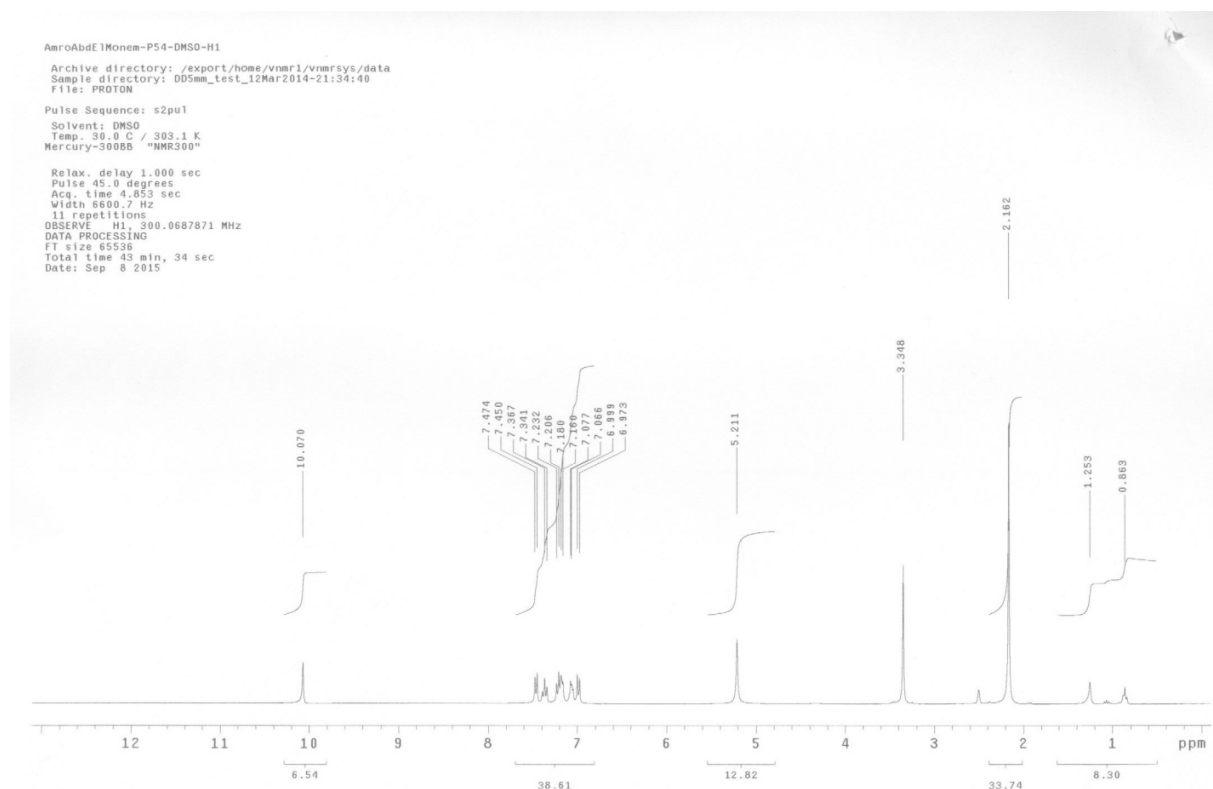
AmroAbdElMonem-P58-DMSO-C13

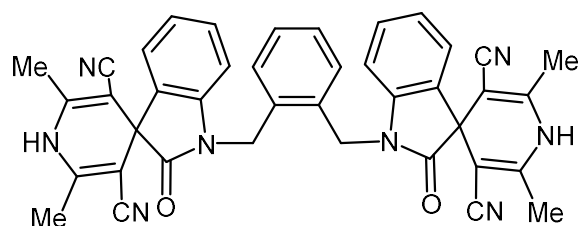
Archive directory: /export/home/vnmr1/vnmrsys/data
Sample directory: D05mm_test_12Mar2014-21:34:40
File: PROTONPulse Sequence: s2pu1
Solvent: DMSO
Temp: 30.0 C / 303.1 K
Mercury-300BB "NMR300"Pulse 45.0 degrees
Acq. time 1.815 sec
Width 18761.7 Hz
472 repetitions
OBSERVE C13, 75.4523954 MHz
DECOUPLE H1, 300.0702830 MHz
Power 33 dB
Continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 131072
Total time 3 hr, 17 min, 51 sec
Date: Sep 8 2015

¹³CNMR spectrum of compound 5c

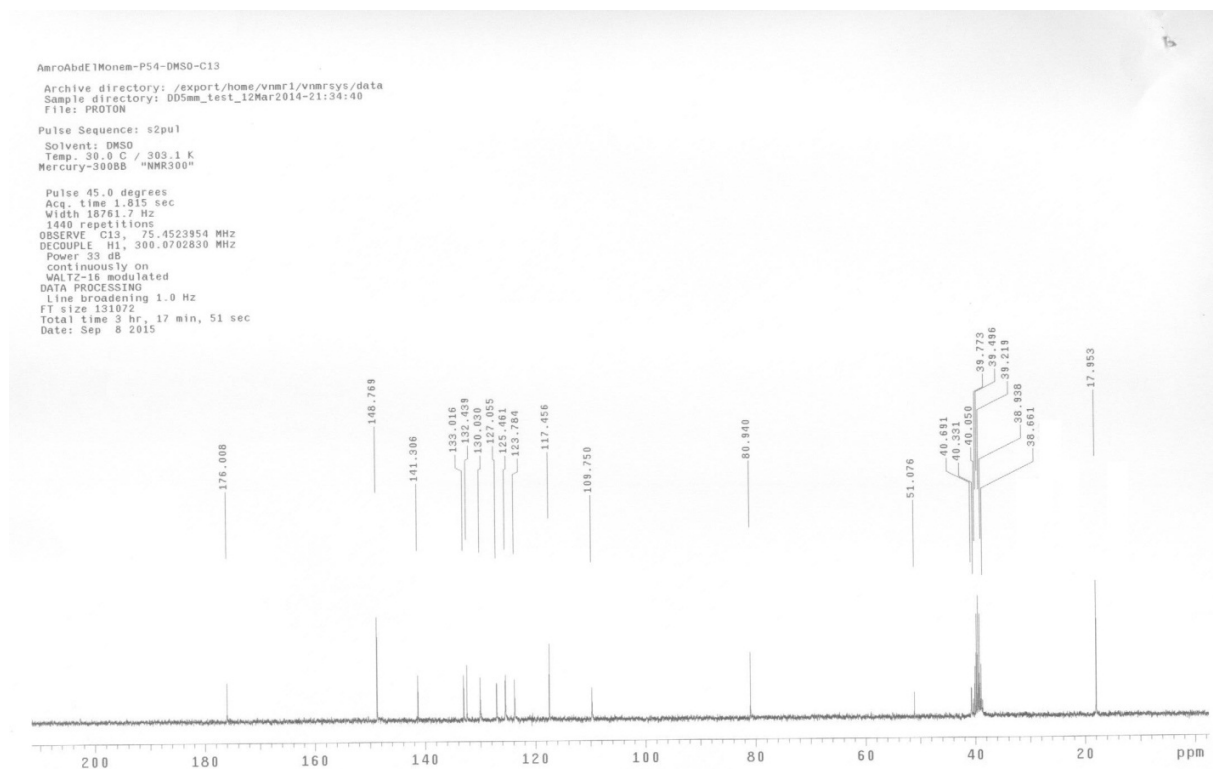


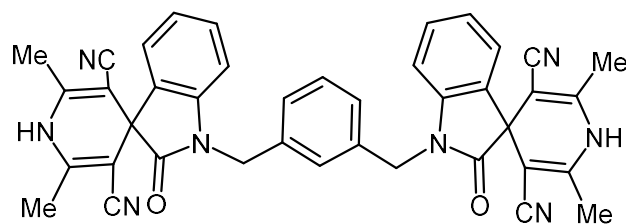
5d

¹H NMR spectrum of compound 5d

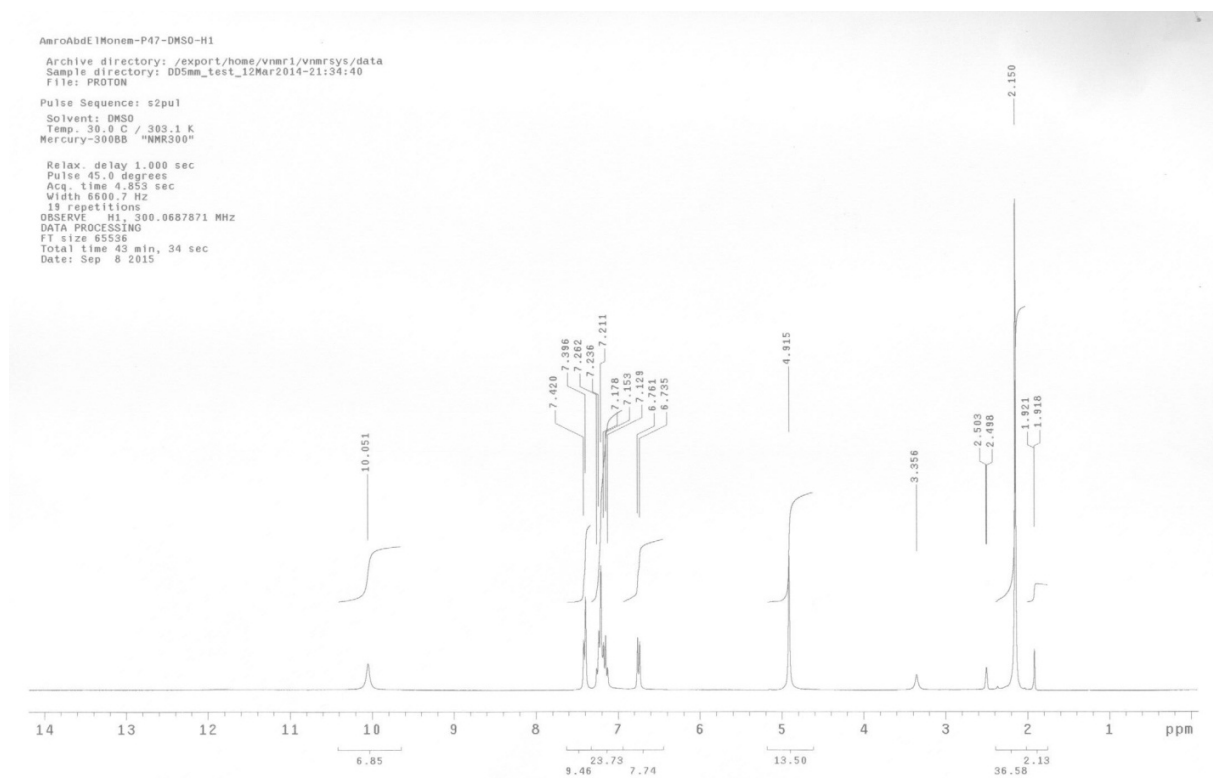


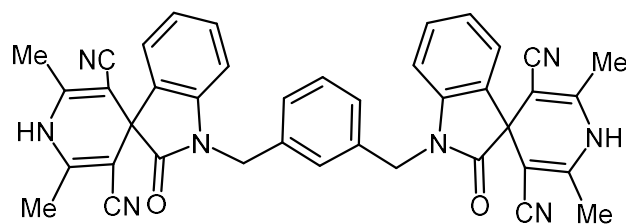
5d

¹³CNMR spectrum of compound 5d

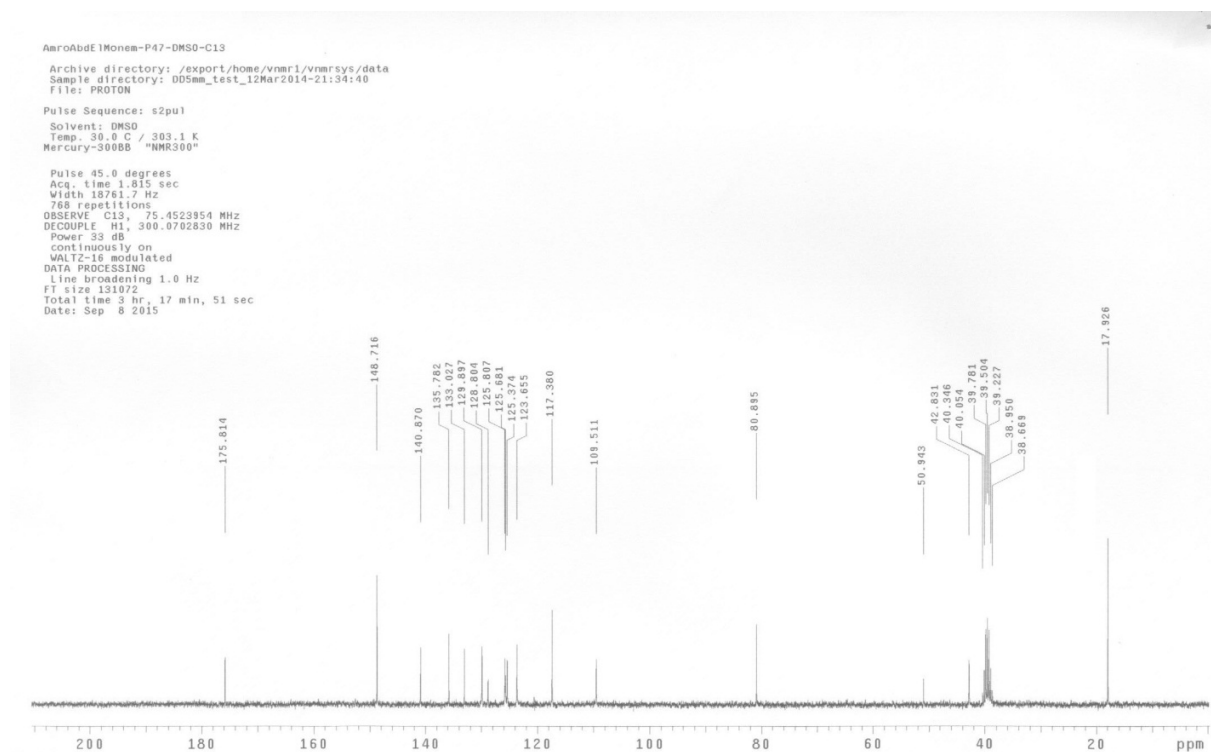


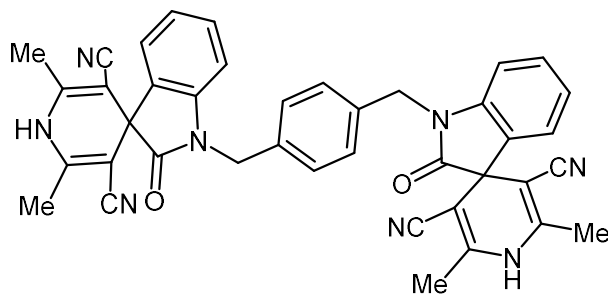
5e

**¹H NMR spectrum of compound 5e**

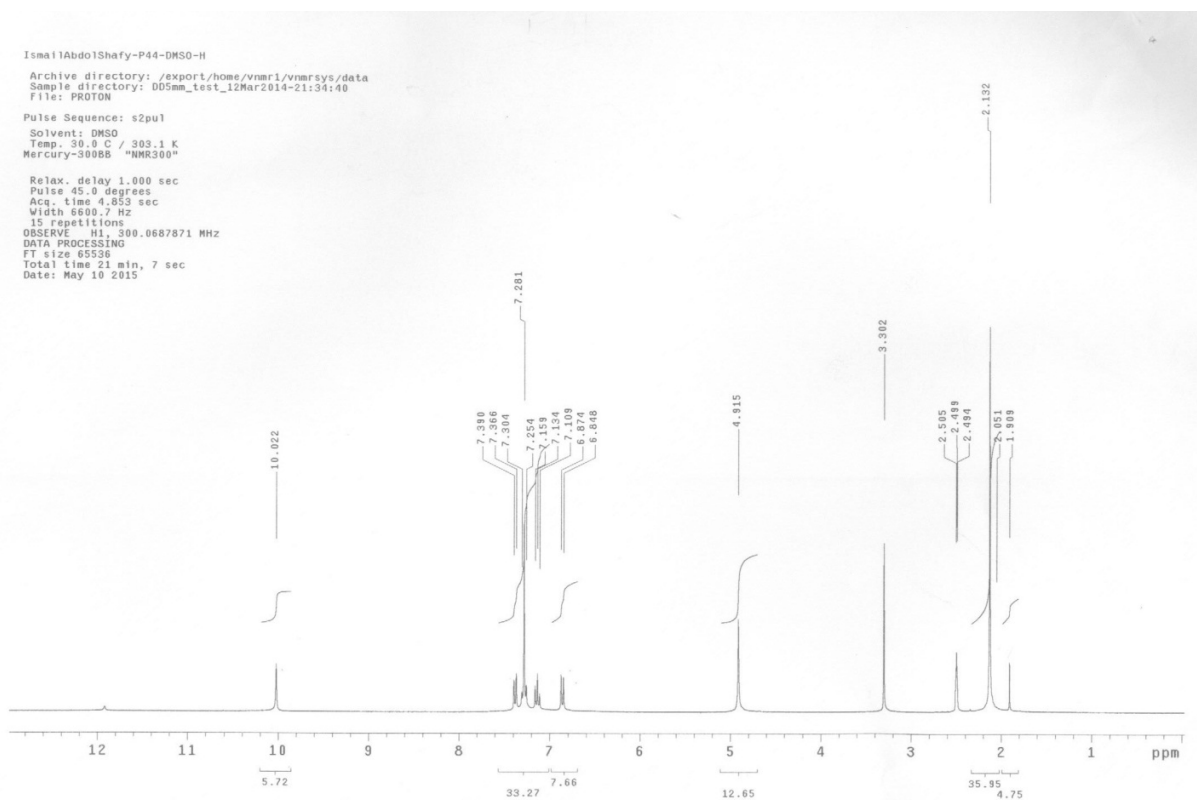


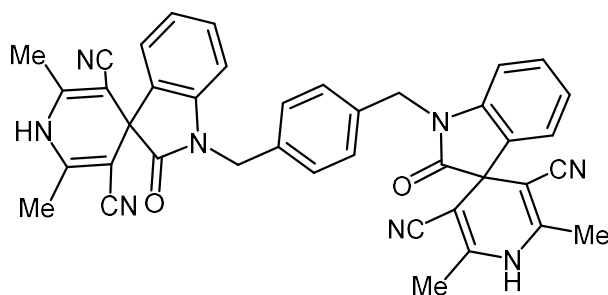
5e

¹³CNMR spectrum of compound 5e

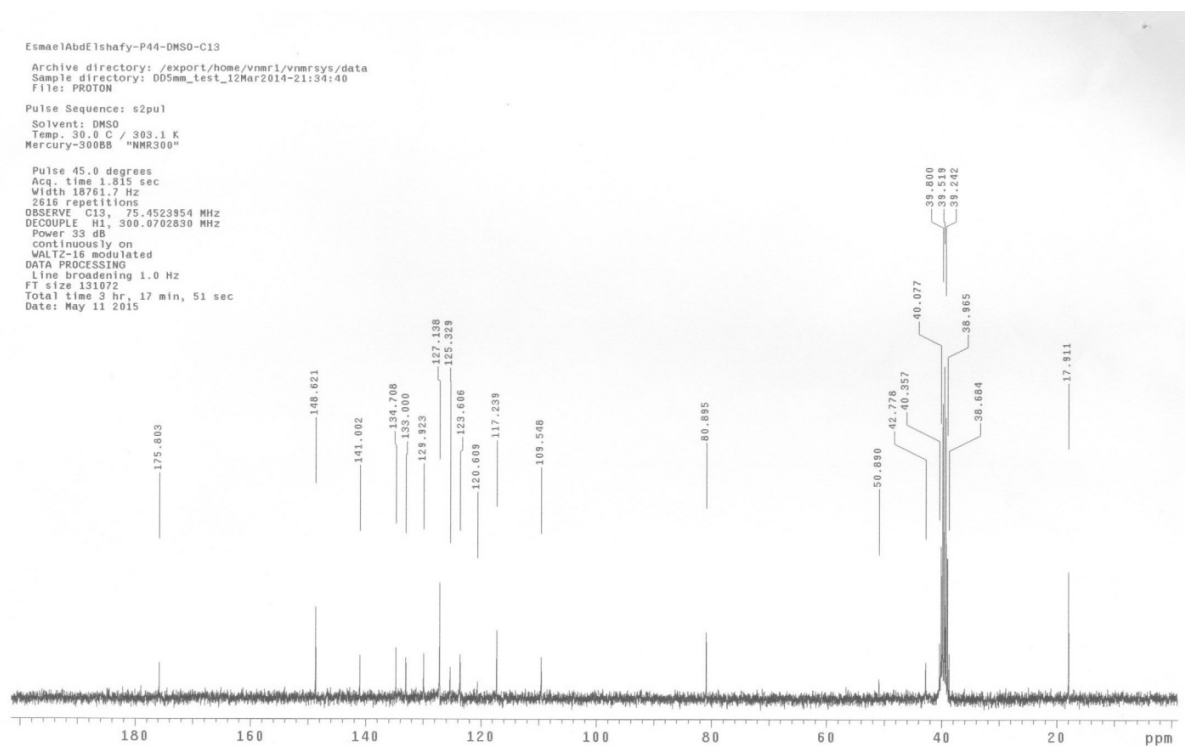


5f

¹H NMR spectrum of compound 5f



5f

¹³CNMR spectrum of compound 5f