

Phenyliminophenothiazine based self-organization of polyaniline nanowires and application as redox probe in electrochemical sensors

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Electronic Supplementary Information

1. GC–MS
2. NMR

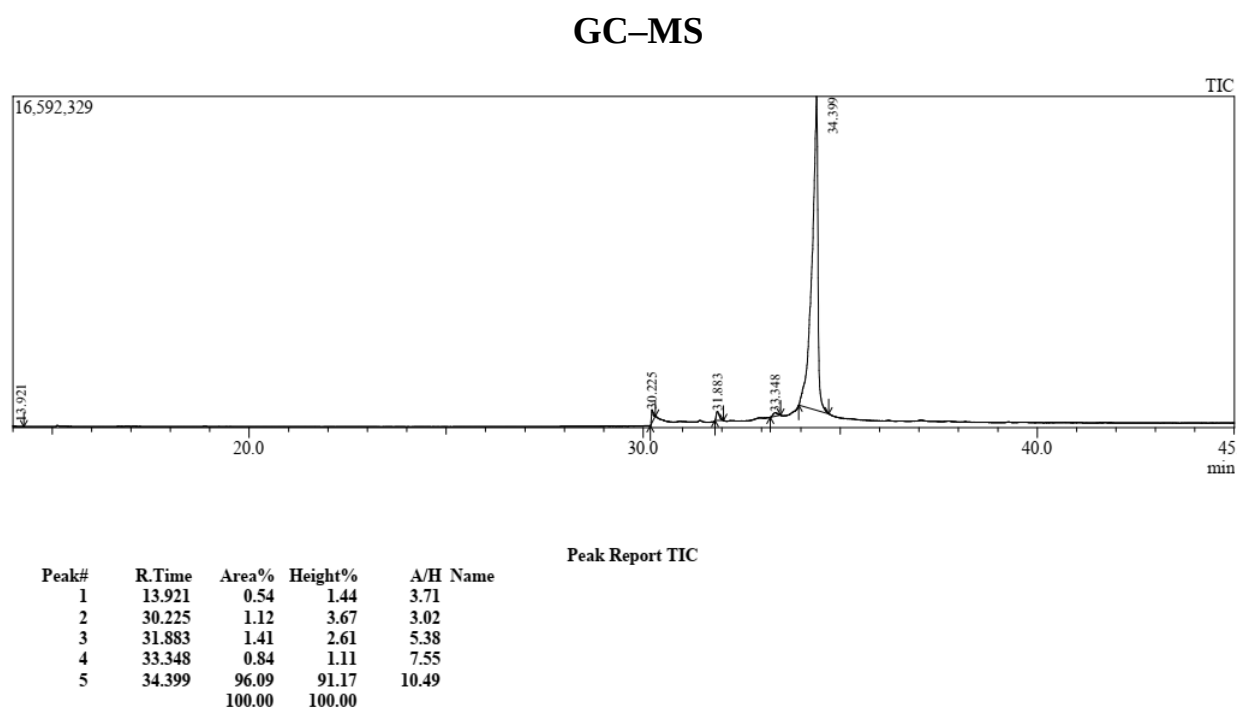


Fig. S1. Gas chromatography - mass spectrometry (GC-MS) of (E)-*N*-phenyl-3H-phenothiazin-3-imine reaction mixture (Peak Report)

Spectrum

Line# 1 R Time: 13.970 (Scan#: 2495)

Mass Peaks: 737

Raw Mode: Single 13.970 (2495) Base Peak: 199 (19611)

BG Mode: None Group 1 - Event 1 Scan

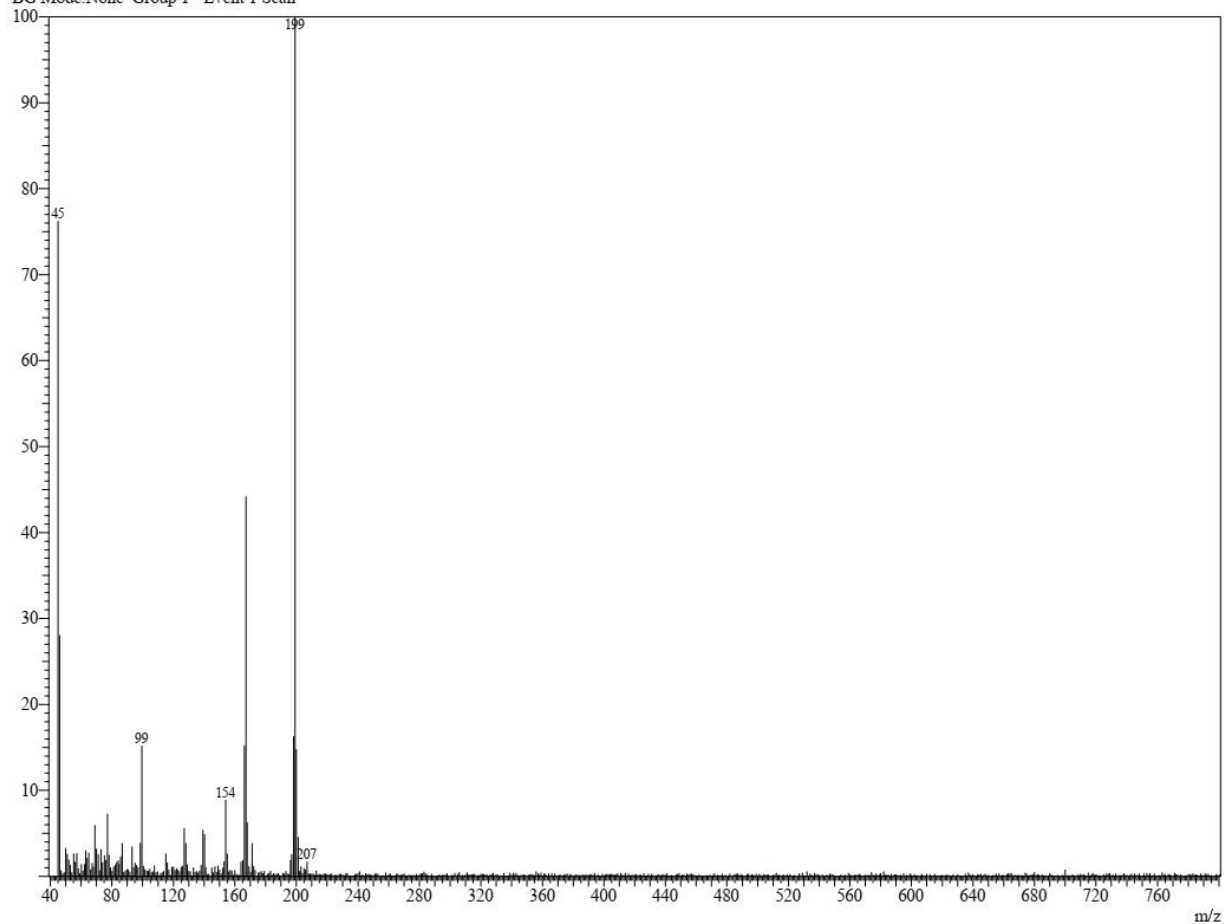


Fig. S2 Mass spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine reaction mixture. Line 1 – phenothiazine.

Line#:2 R.Time:30.235(Scan#:5748)
MassPeaks:477
RawMode:Single 30.235(5748) BasePeak:290(69046)
BG Mode:30.295(5760) Group 1 - Event 1 Scan

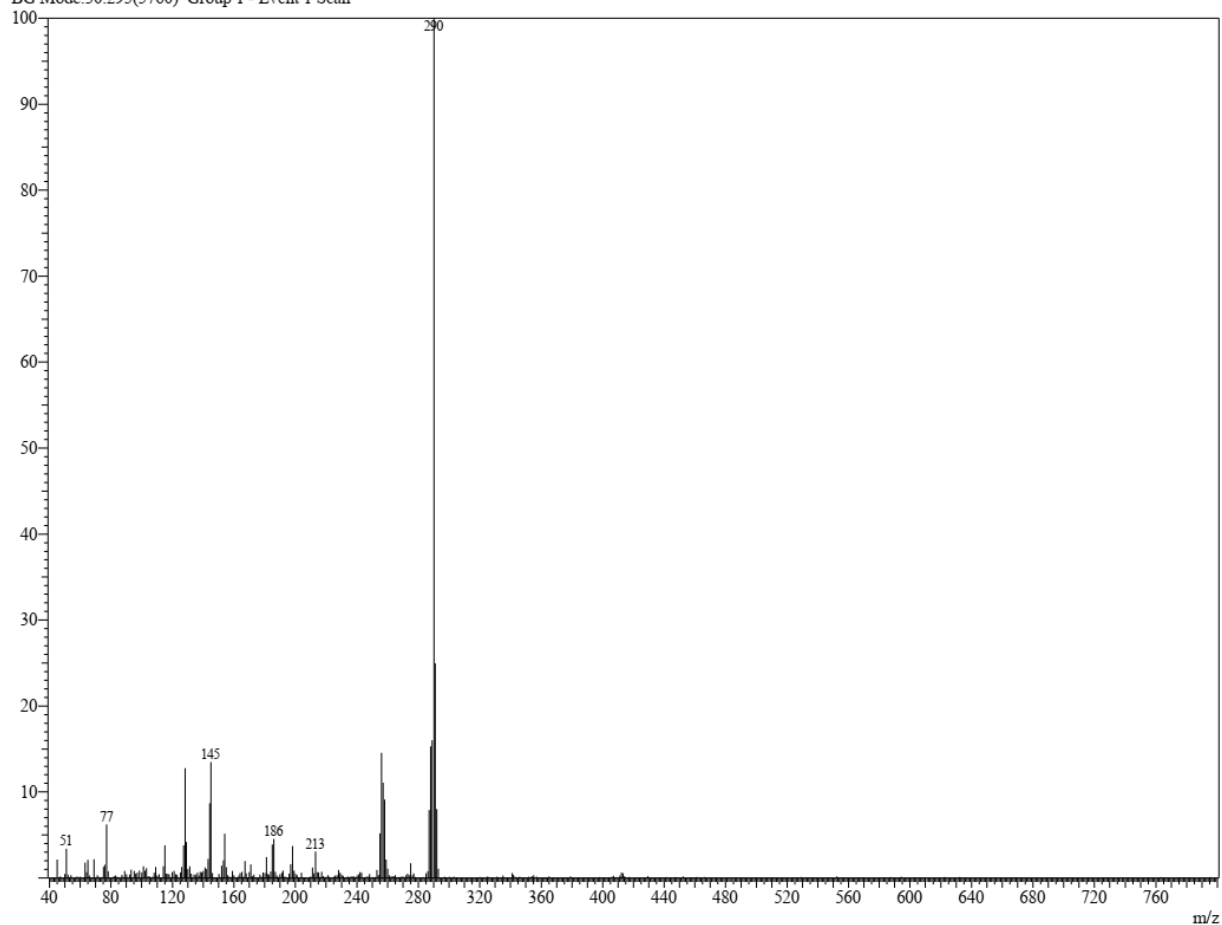


Fig. S3 Mass spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine reaction mixture. Line 2 – (E)-N-phenyl-3H-phenothiazin-3-imine isomer

Line# 3 R Time: 31.885 (Scan# 6078)
Mass Peaks: 568
Raw Mode: Averaged 31.835-31.990 (6068-6099) Base Peak: 290 (103270)
BG Mode: 31.790 (6059) Group 1 - Event 1 Scan

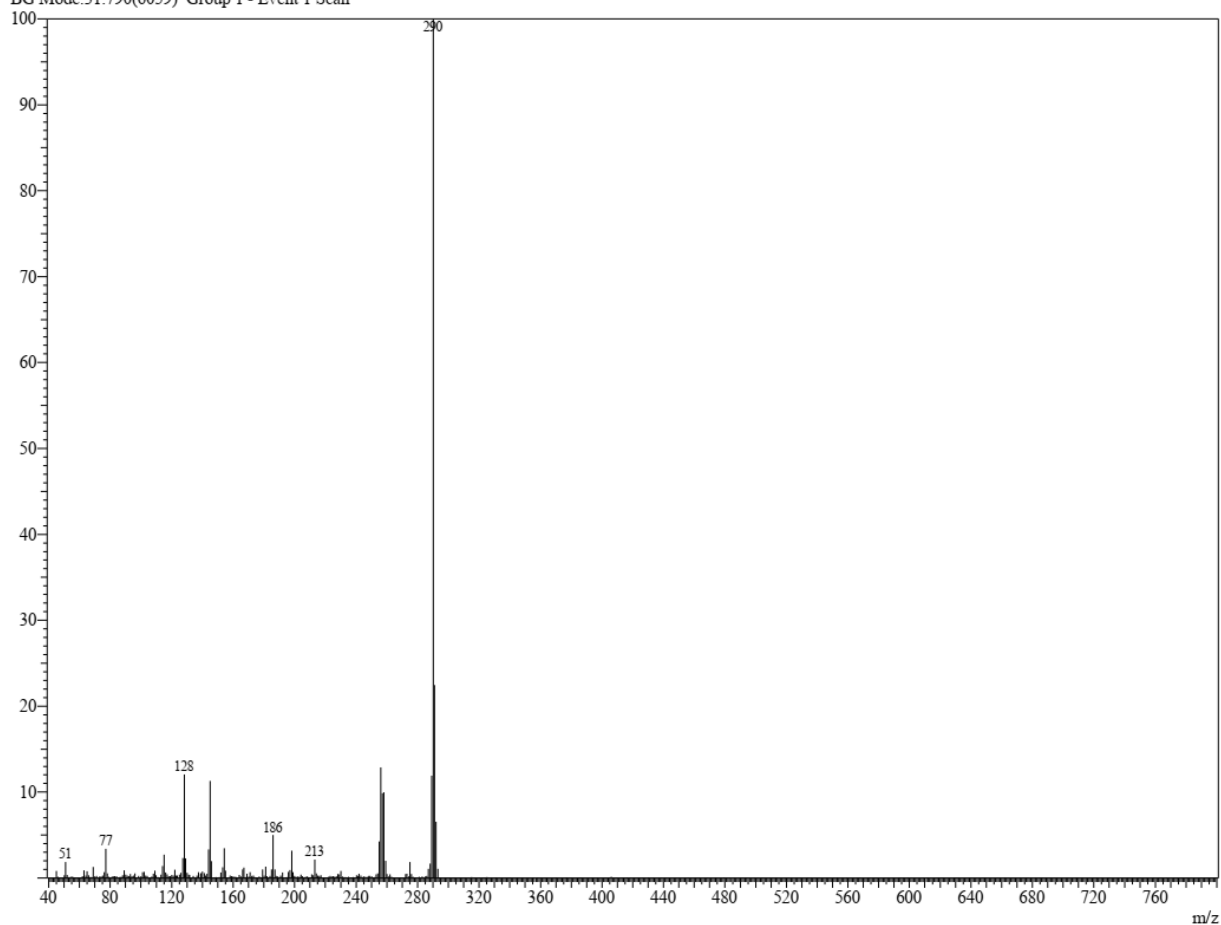


Fig. S4 Mass spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine reaction mixture. Line 3 – (E)-N-phenyl-3H-phenothiazin-3-imine isomer

Line#:4 R.Time:33.350(Scan#:6371)
MassPeaks:494
RawMode:Averaged 33.275-33.430(6356-6387) BasePeak:290(69991)
BG Mode:33.205(6342) Group 1 - Event 1 Scan

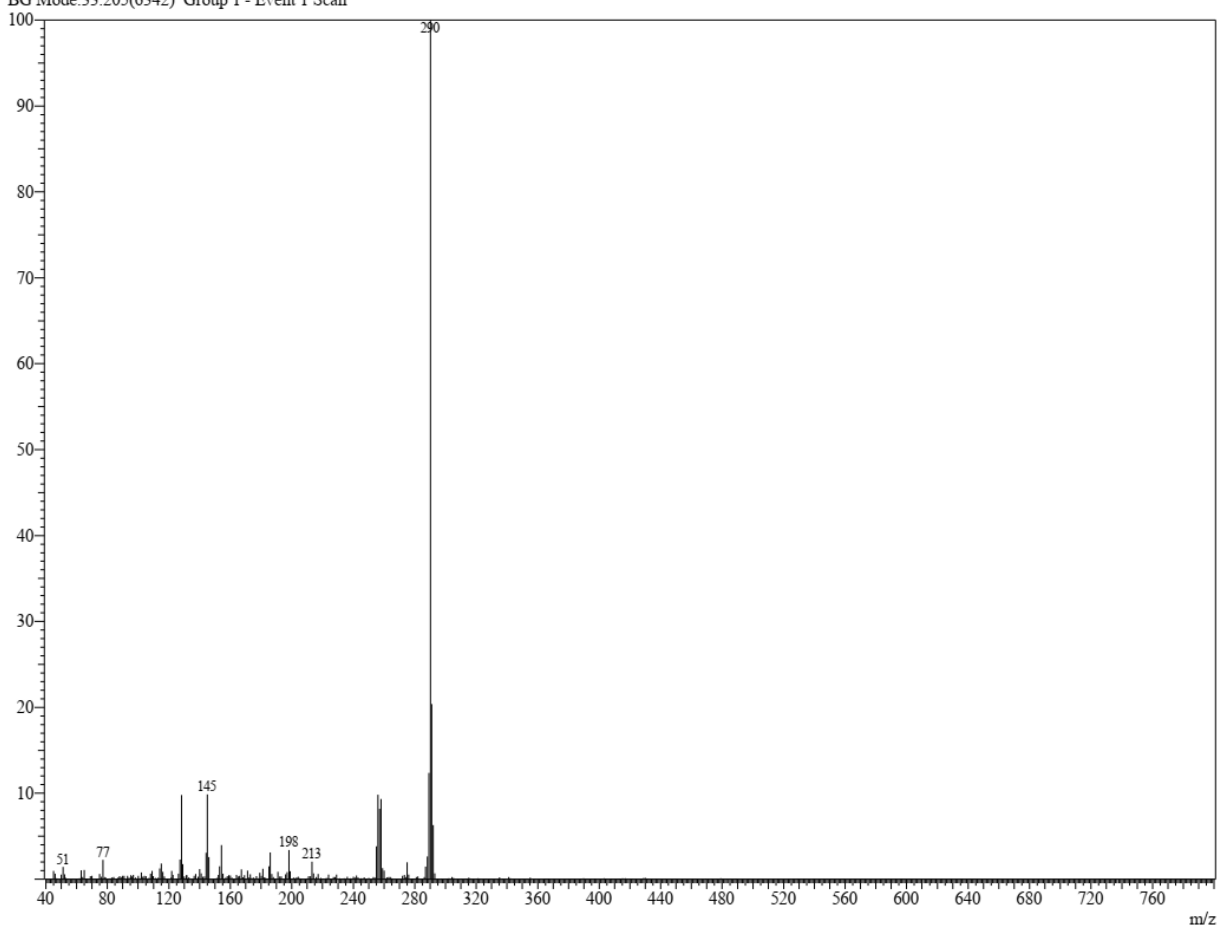


Fig. S5 Mass spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine reaction mixture. Line 4 – (E)-N-phenyl-3H-phenothiazin-3-imine isomer

Line#: 5 R.Time: 34.400 (Scan#: 6581)
MassPeaks: 501
RawMode: Averaged 34.225-34.490 (6546-6599) BasePeak: 290 (2902351)
BG Mode: 34.715 (6644) Group 1 - Event 1 Scan

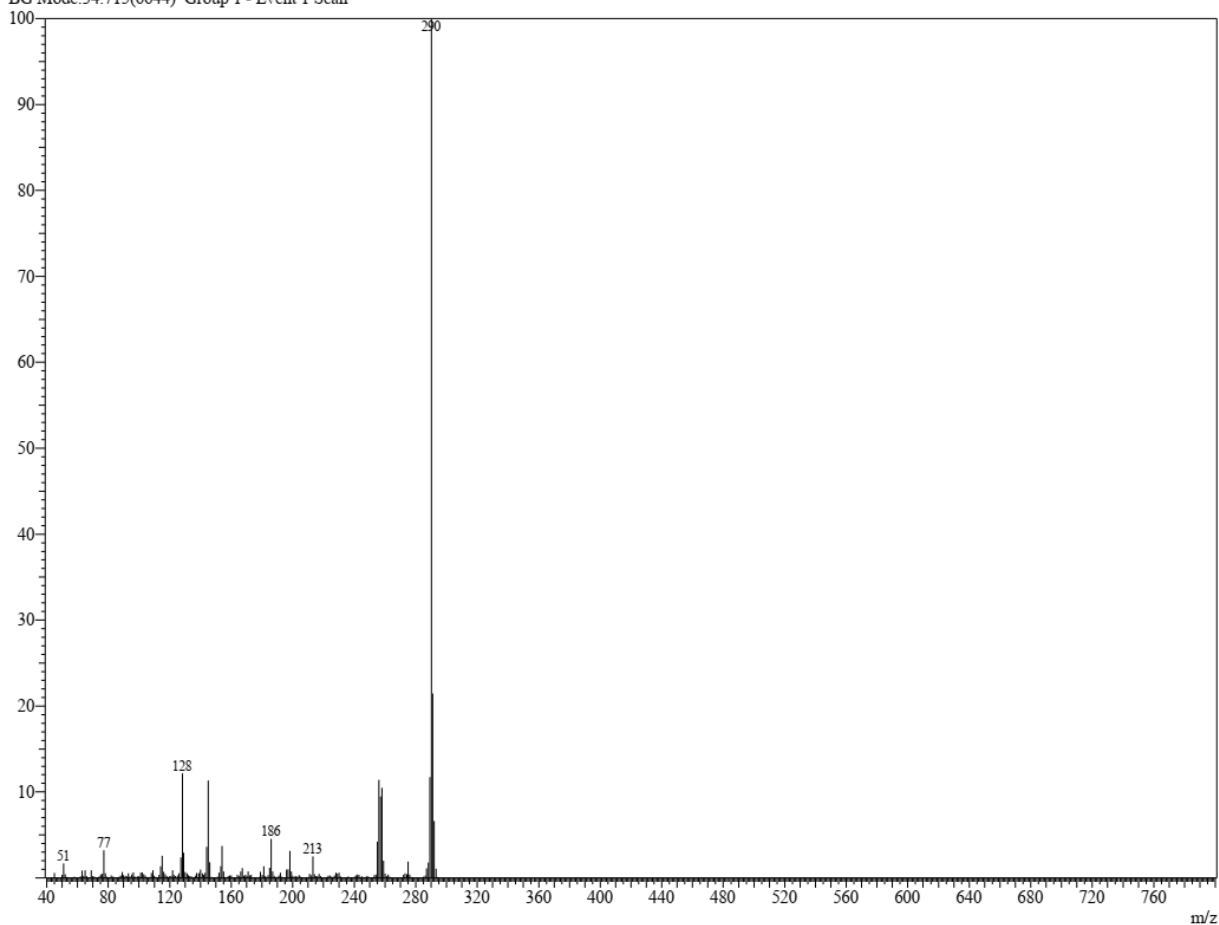


Fig. S6 Mass spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine reaction mixture. Line 5 – (E)-N-phenyl-3H-phenothiazin-3-imine

NMR

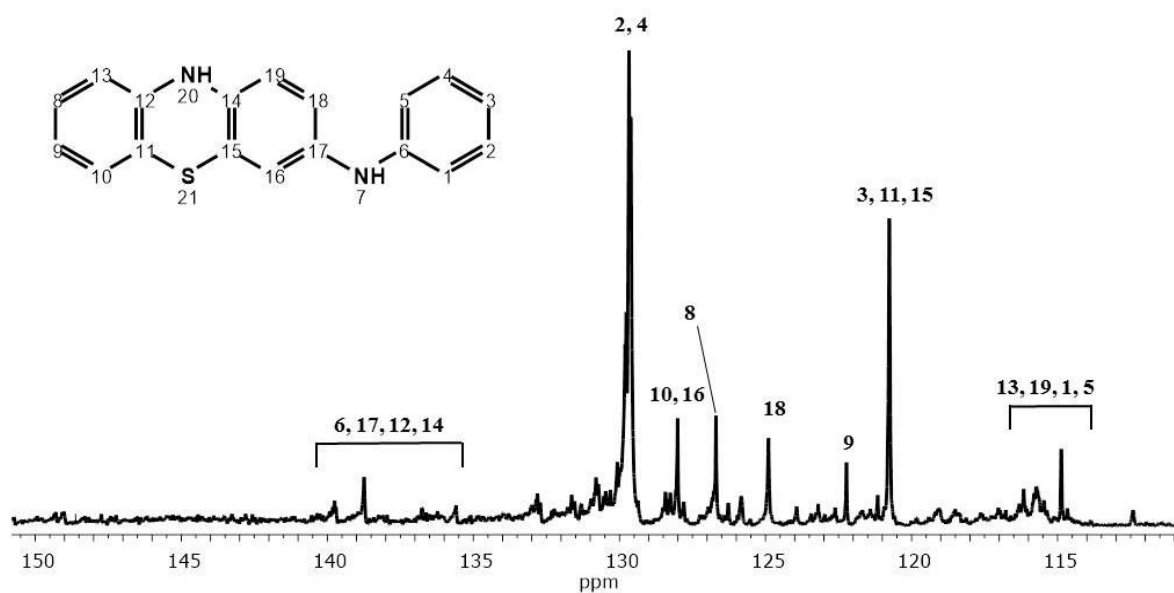


Fig. S7. ^{13}C NMR spectrum of (E)-N-phenyl-3H-phenothiazin-3-amine, reduced with phenylhydrazine $(\text{CD}_3)_2\text{SO}$, 100 MHz.

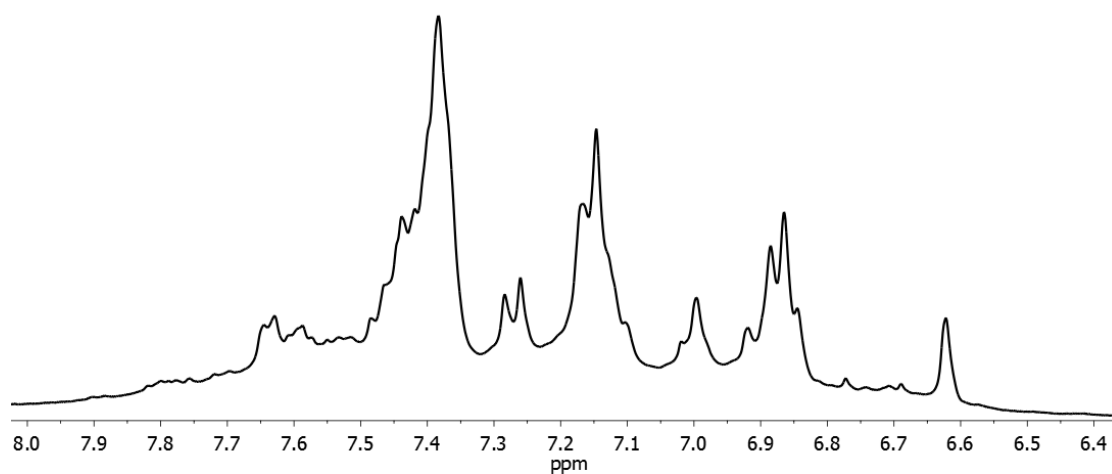


Fig. S8. ^1H NMR spectrum of (E)-N-phenyl-3H-phenothiazin-3-imine, $(\text{CD}_3)_2\text{SO}$, 400 MHz.

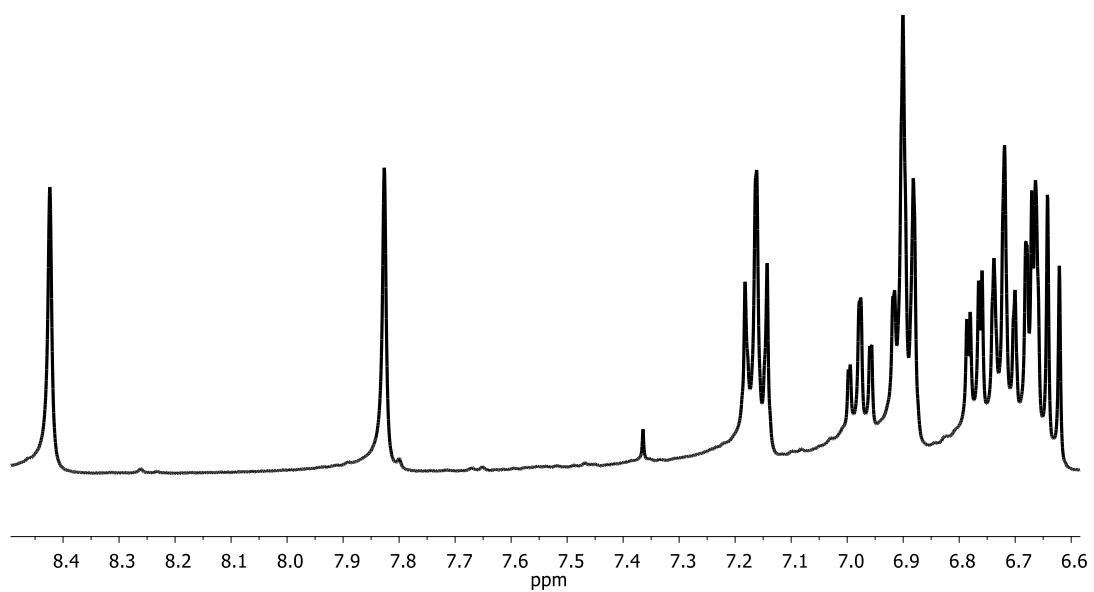


Fig. S9. ^1H NMR spectrum of (E)-*N*-phenyl-3H-phenothiazin-3-amine, reduced with phenylhydrazine, $(\text{CD}_3)_2\text{SO}$, 400 MHz.