SUPPLEMENTARY INFORMATION

Non-Aggregated Axially Disubstituted Silicon Phthalocyanines Bearing Electropolymerizable Ligands and Their Aggregation, Electropolymerizaton, Thermal Properties

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1.1. Materials

$SiPc(Cl)_2$ was synthesized according to the literature.[1] 4-Aminophenethyl alcohol, 4-dimethylaminobenzaldehyde, 4-diethylaminobenzaldehyde were purchased from the Aldrich. All reagents and solvents were of reagent grade quality and were obtained from commercial suppliers. All solvents were dried and purified as described by Perrin and Armarego.[2]

1.2. Equipment

The IR spectra were recorded on a Perkin Elmer 1600 FT-IR Spectrophotometer, using KBr pellets. ^1H and ^{13}C-NMR spectra were recorded on a Bruker Avance III 400 MHz spectrometers in $CDCl_3$ and chemical shifts were reported (δ) relative to Me_4Si as internal standard. Mass spectra were measured on a Micromass Quatro LC/ULTIMA LC-MS/MS spectrometer and MALDI-MS of complexes were obtained in dihydroxybenzoic acid as MALDI matrix using nitrogen laser accumulating 50 laser shots using Bruker Microflex LT MALDI-TOF mass spectrometer Bremen, Germany). Optical spectra in the UV-vis region

were recorded with a Perkin Elmer Lambda 25 spectrophotometer. Melting points were measured on an electrothermal apparatus and are uncorrected. The elemental analyses were performed on a Costech ECS 4010 instrument. A Seiko II Exstar 6000 thermal analyzer was used to record DTA curves under nitrogen atmosphere with a heating rate of 20 °Cmin^{-1} in the temperature range 30-900 °C using platinium crucibles.

1.3. Electrochemical measurements

The cyclic voltammetry (CV) and square wave voltammetry (SWV) measurements were carried out with Gamry Interface 1000 potentiostat/galvanostat controlled by an external Pc and utilizing a three-electrode configuration at 25°C. The working electrode was a Pt disc with a surface area of 0.071 cm^2. A Pt wire served as the counter electrode. Saturated calomel electrode (SCE) was employed as the reference electrode and separated from the bulk of the solution by a double bridge. Electrochemical grade TBAP in extra pure DCM was employed as the supporting electrolyte at a concentration of 0.10 mol dm^{-3}.

References

[1] M. K. Lowery, A. J. Starshak, J. N. Esposito, P. C. Krueger, M. E. Kenney, *Inorg. Chem*., 1965, **4**, 128-128.

[2] D. D. Perrin, W. F. L. Armarego, Purification of Laboratory Chemicals (2nd edn), Pergamon Press: Oxford; 1989.

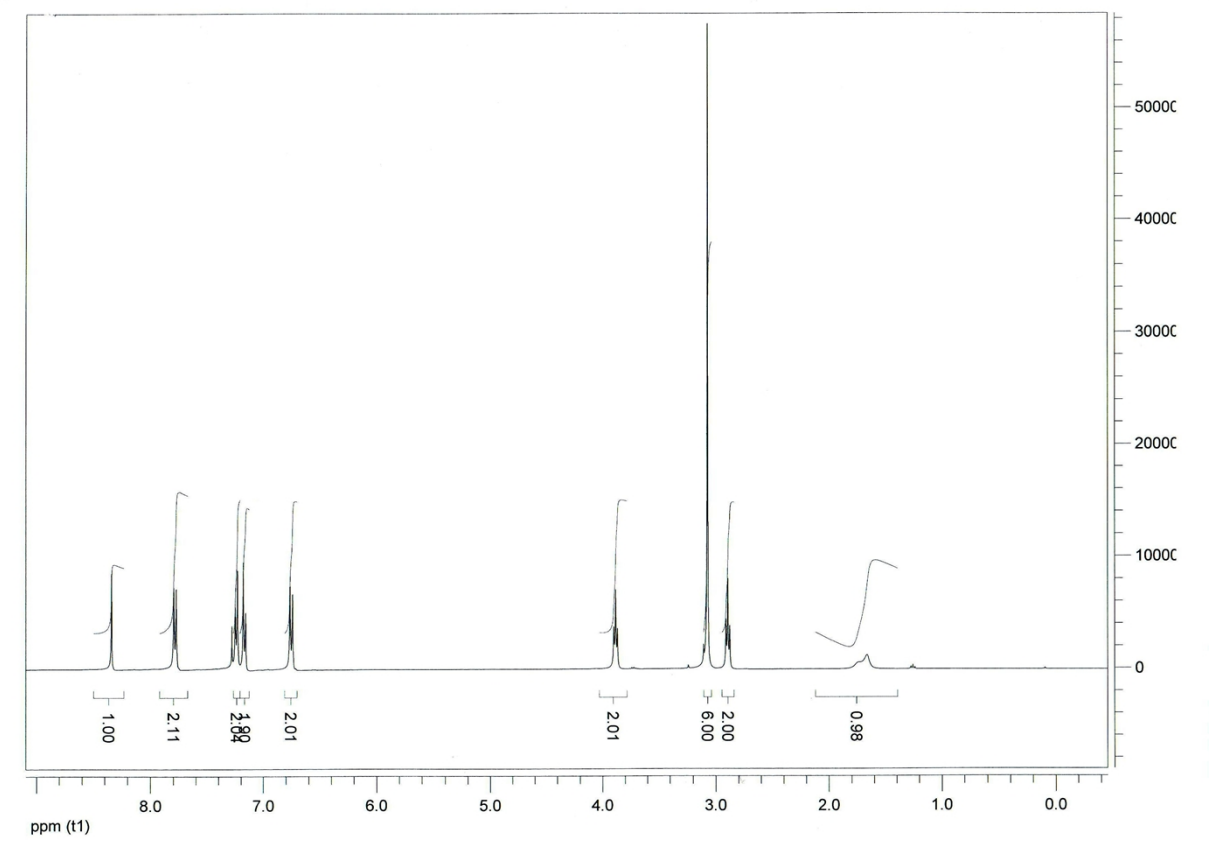

Figure S1. ^{1}H-NMR spectrum of compound **2**.

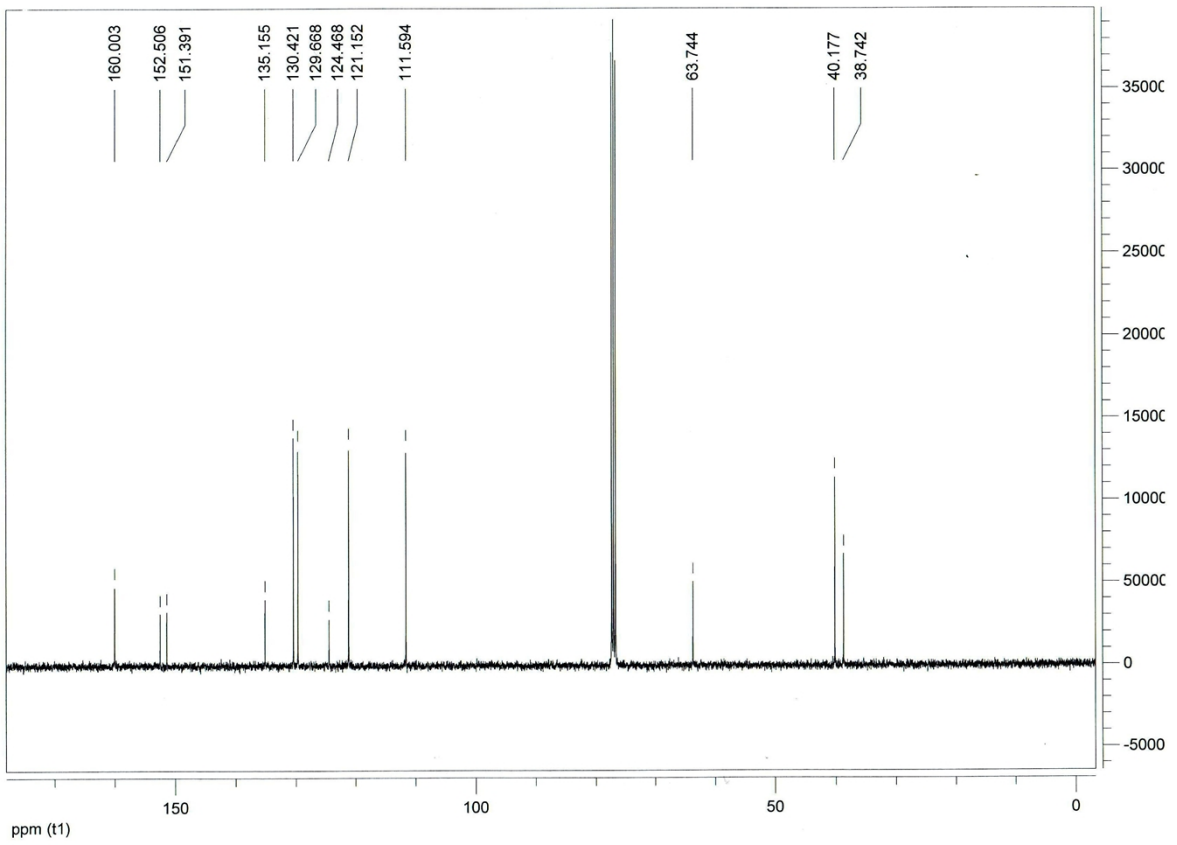

Figure S2. ^{13}C-NMR spectrum of compound **2**.

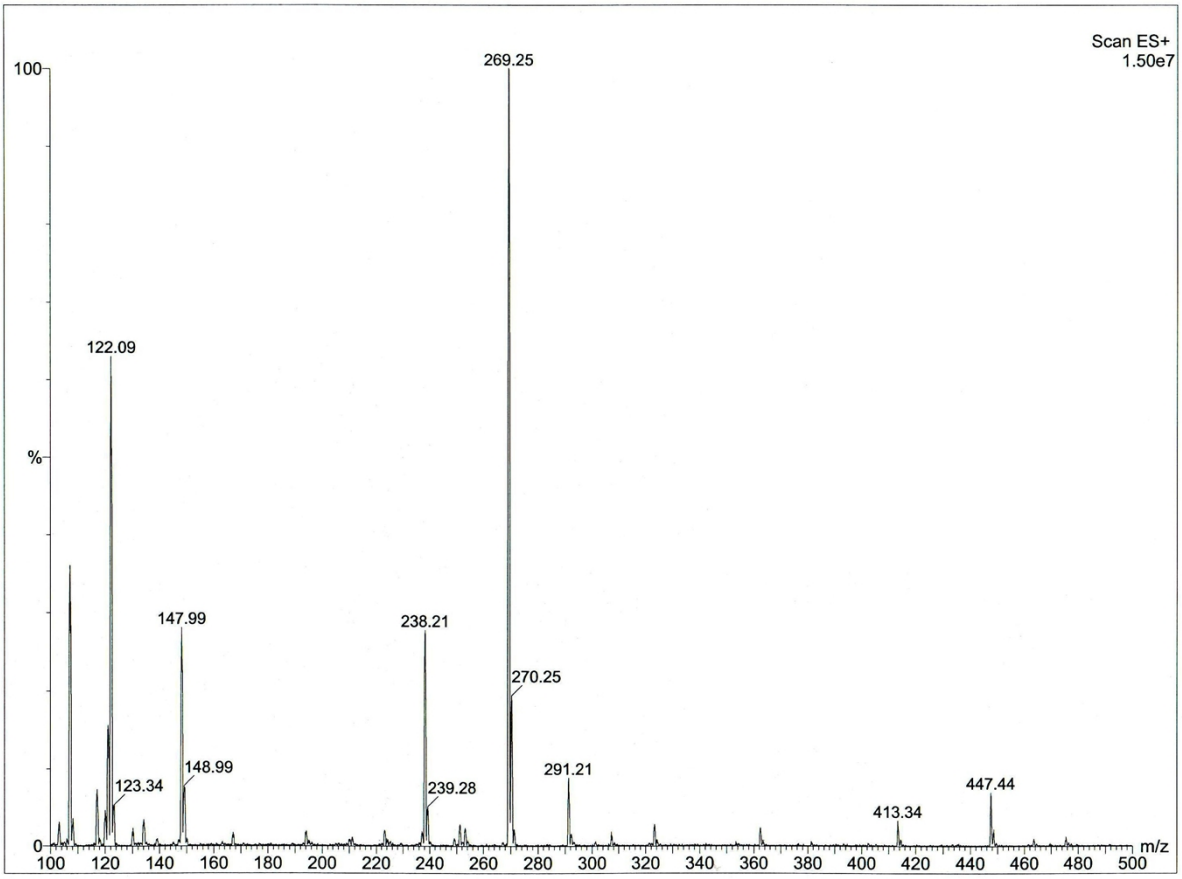

Figure S3. MS spectrum of of compound **2**.

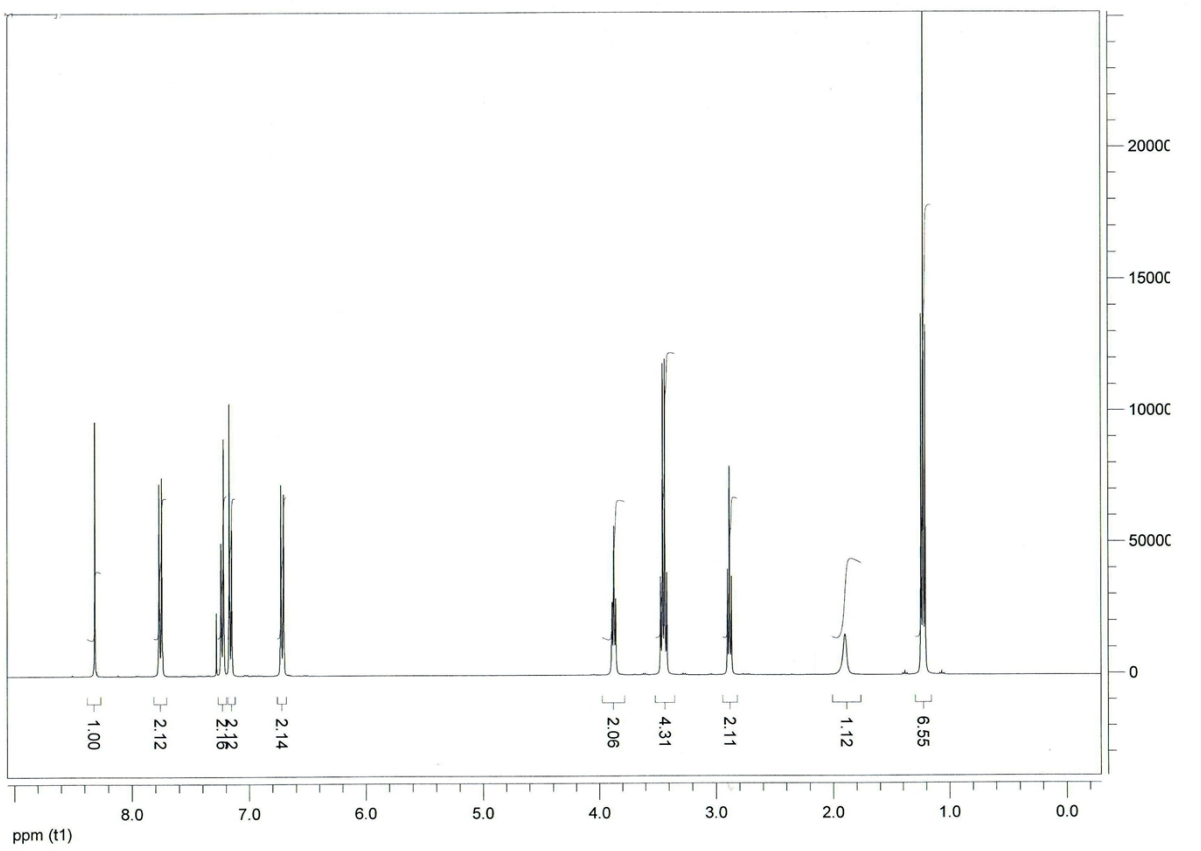

Figure S4. ^{1}H-NMR spectrum of compound **3**.

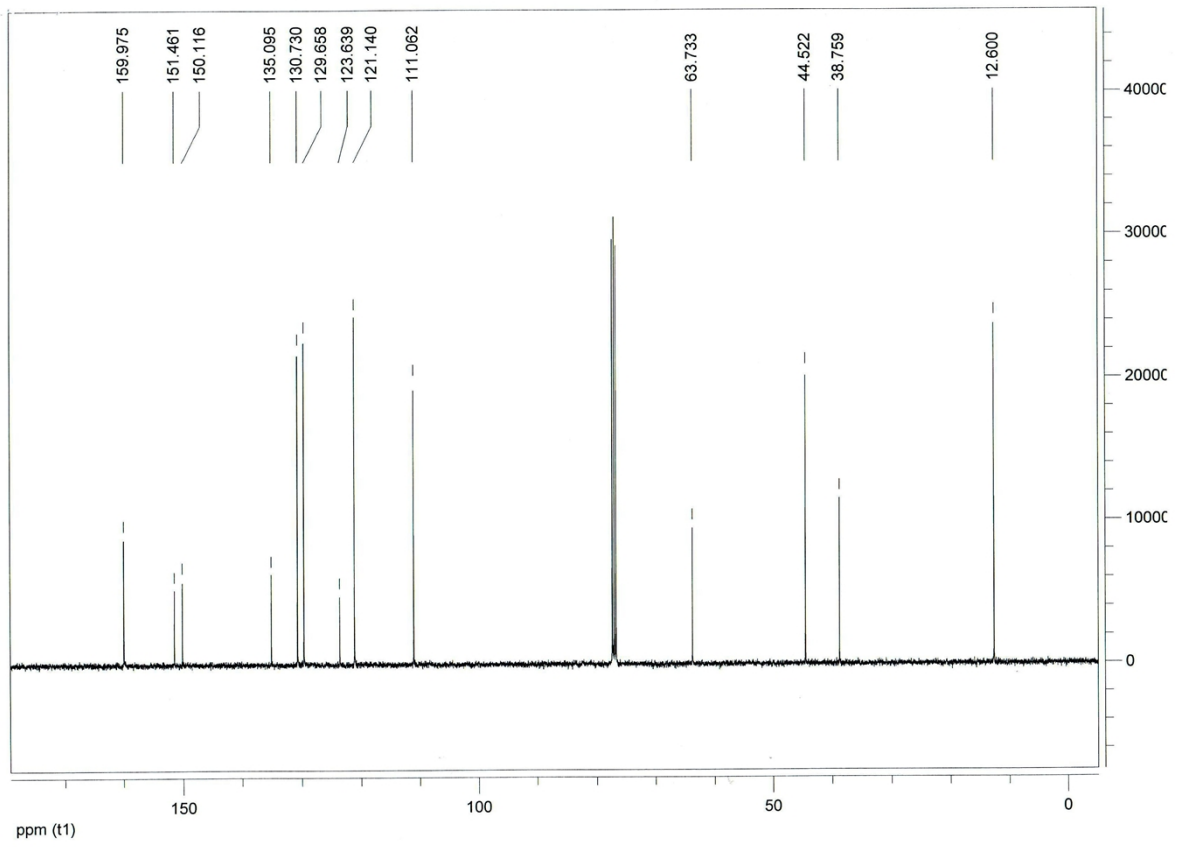

Figure S5. ^{13}C-NMR spectrum of compound **3**.

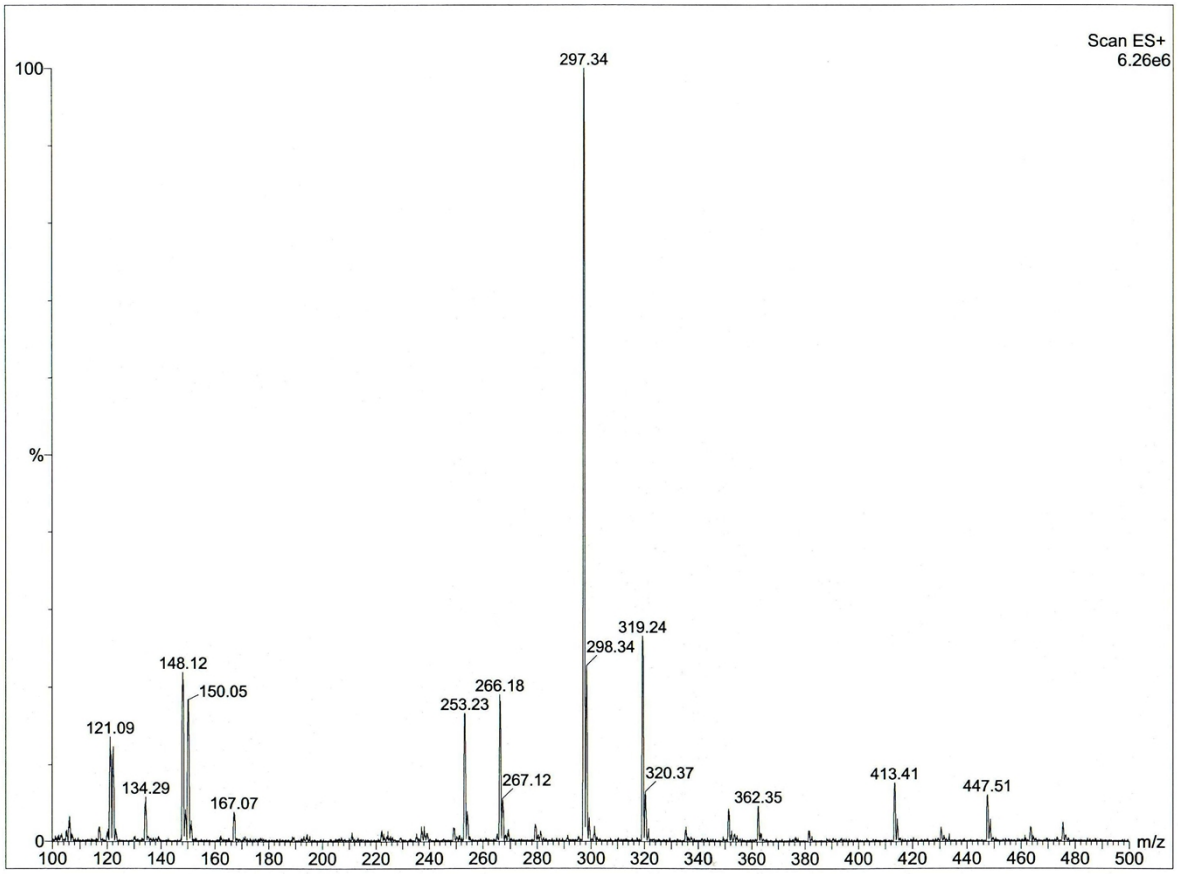

Figure S6. MS spectrum of of compound **3**.

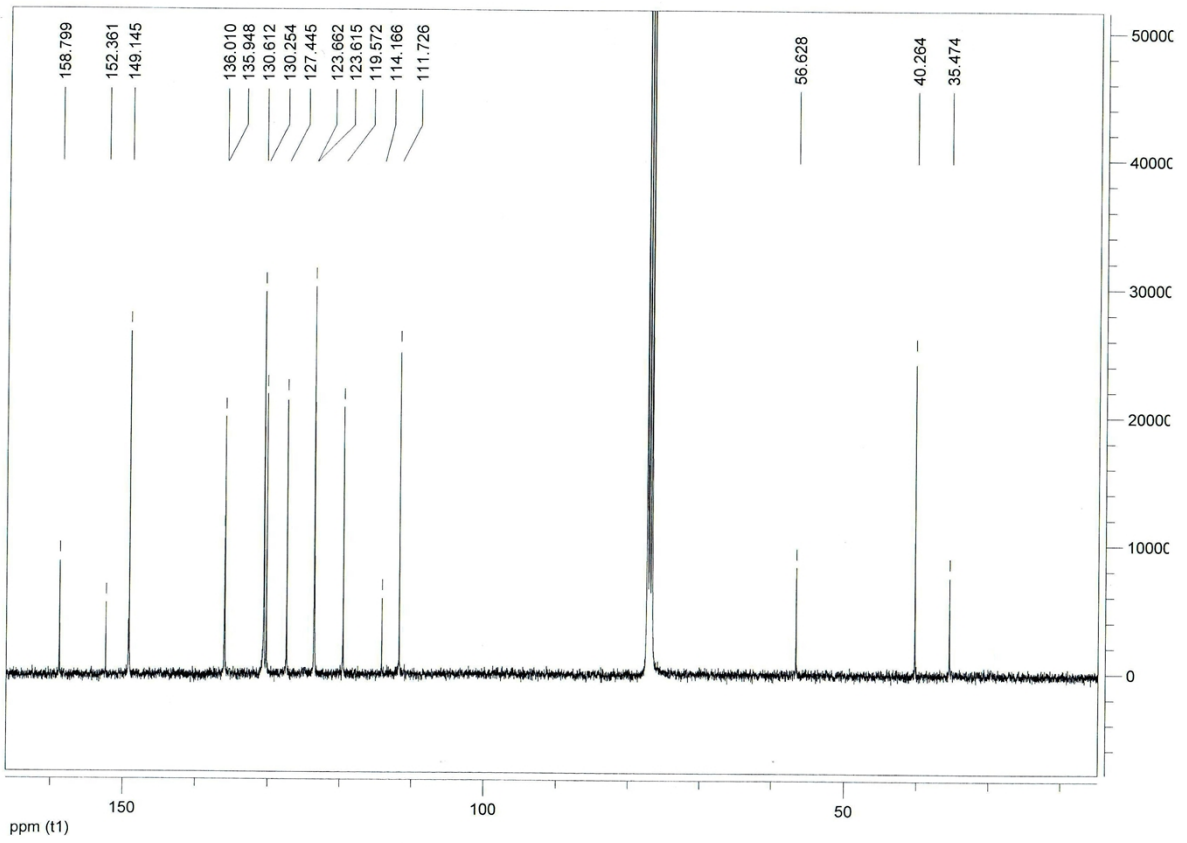

Figure S7. ^{13}C-NMR spectrum of silicon phthalocyanine **2a**.

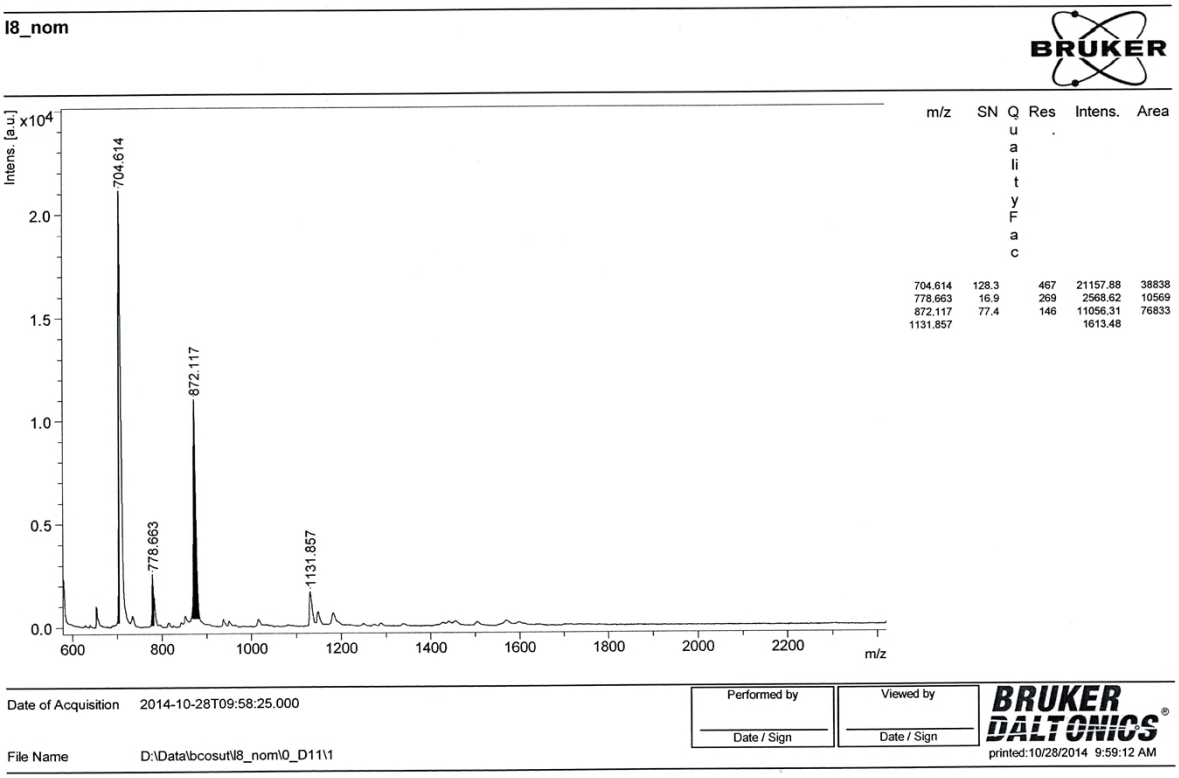

Figure S8. MALDI-TOF MS spectrum of complex **3a**.

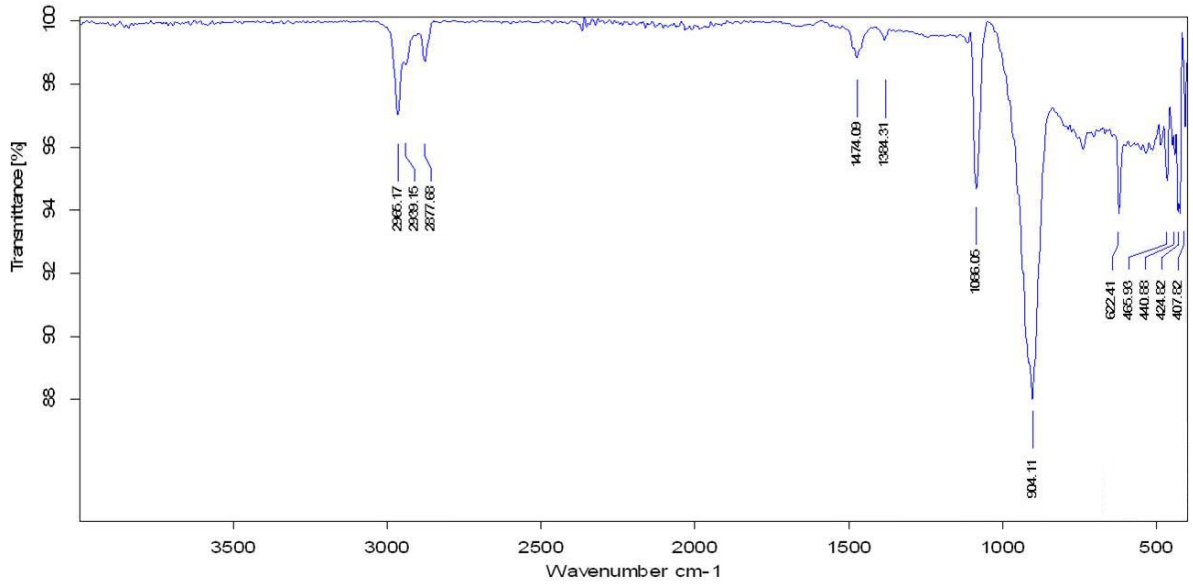

Figure S9. IR of SiPc film 3a.