Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry

Supporting Information for:

Synthesis and photophysical properties of phosphorus (V) porphyrins functionalized with axial carbazolylvinylnaphthalimides

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Table S1. Photophysical data of phosphorus (V) porphyrins **1**, **2** and **12**.

	Absorption (λ_{max}/nm) ($\varepsilon\times10^{-4}$/M^{-1} cm^{-1})[a]					Emission(nm)[b]
Compound			Soret	Q1	Q2	
1	300 (7.51)	350 (5.05)	440 (26.25)	564 (1.94)	611(1.00)	620, 672
2	300 (7.69)	350 (8.20)	440 (16.60)	564 (1.40)	610 (0.64)	620, 672
12	300 (0.44)	350 (0.35)	437 (5.71)	563 (0.45)	606 (0.34)	618, 669

[a] measured in $CHCl_3$ (1.0×10^{-6} M) at room temperature.

[b] measured in $CHCl_3$ (1.0×10^{-6} M) at room temperature, excited at 570 nm.

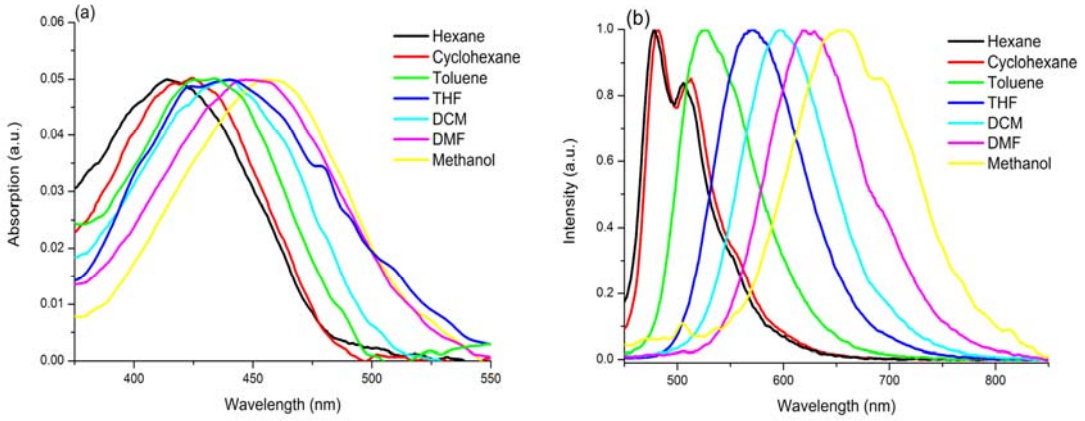

Fig. S1 Normalized (a) UV-vis absorption and (b) Fluorescence emission spectra of compound **8** in different solvents (1.0×10^{-6} M, λ_{ex} = 440 nm).

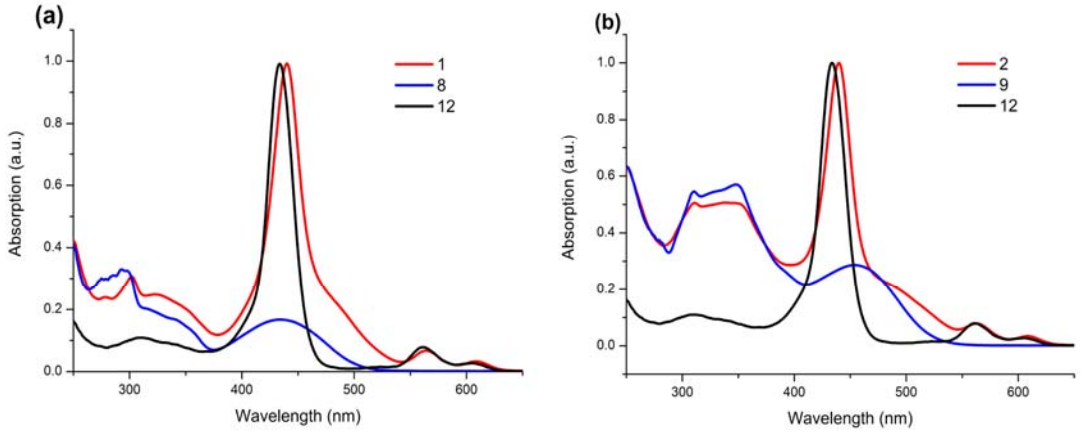

Fig. S2 Normalized UV-vis absorption of (a) phosphorus (V) porphyrins **1** and **12** (5.0×10^{-6} M), and compound **8** (1.0×10^{-5} M) in chloroform; (b) phosphorus (V) porphyrins **2** and **12** (5.0×10^{-6} M), and compound **9** (1.0×10^{-5} M) in chloroform.

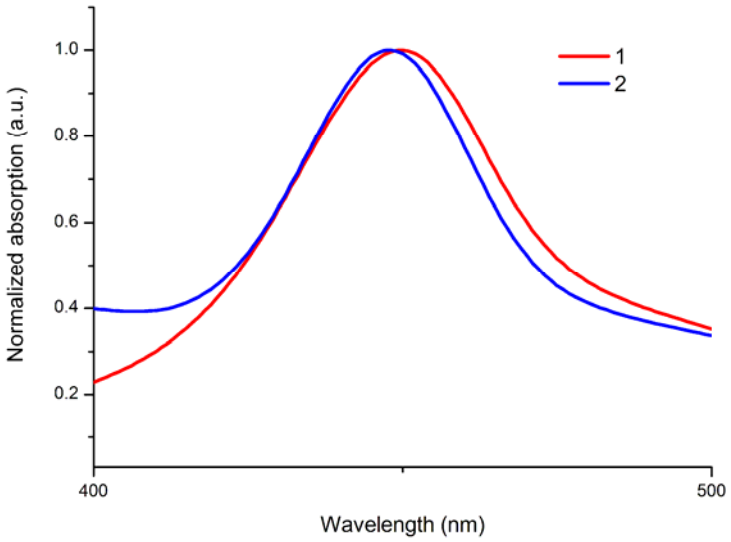

Fig. S3 Normalized UV-vis absorption spectra of phosphorus (V) porphyrins **1** and **2** in the film.

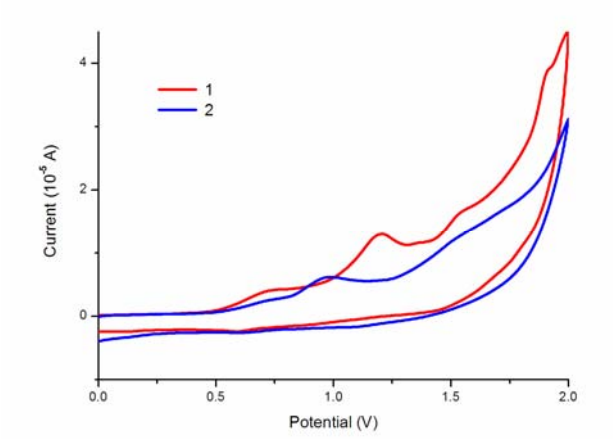

Fig. S4 Cyclic voltammogram diagrams of phosphorus (V) porphyrins **1** and **2** in anhydrous CH_2Cl_2 with 0.1 M Bu_4NBF_4 as electrolyte at a scan rate of 100 mV s^{-1}.

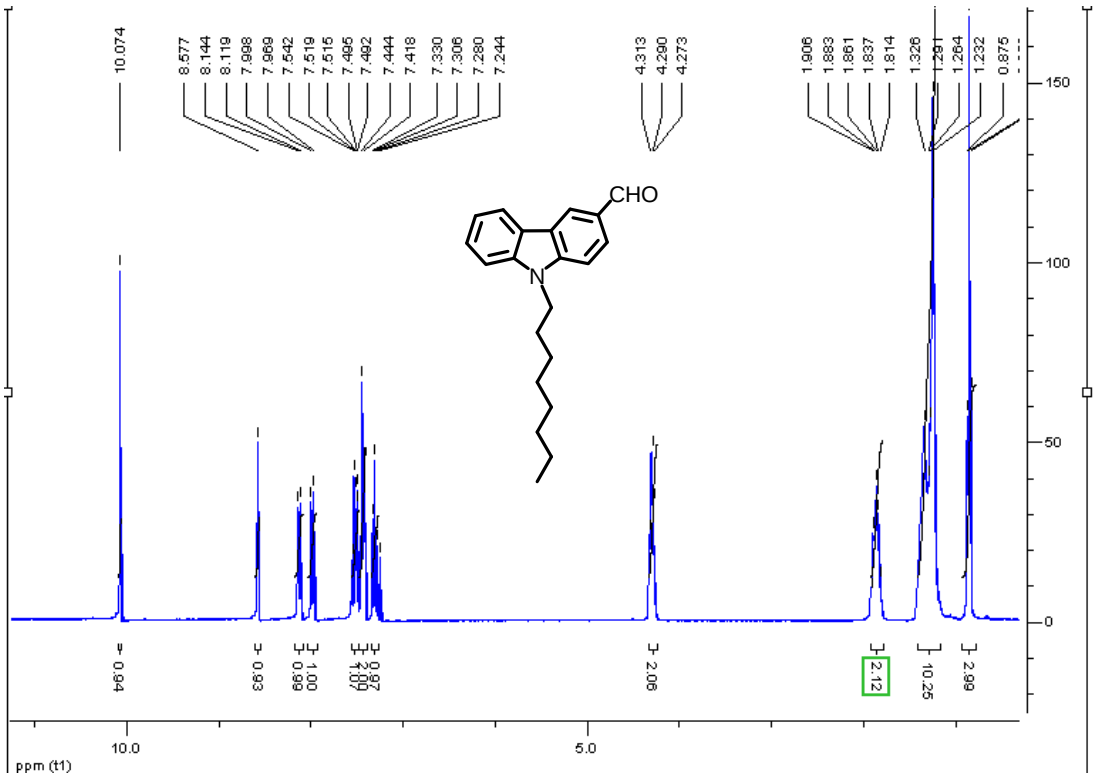

Fig. S5 ^{1}H-NMR (300 MHz, $CDCl_3$) spectrum of compound **3**.

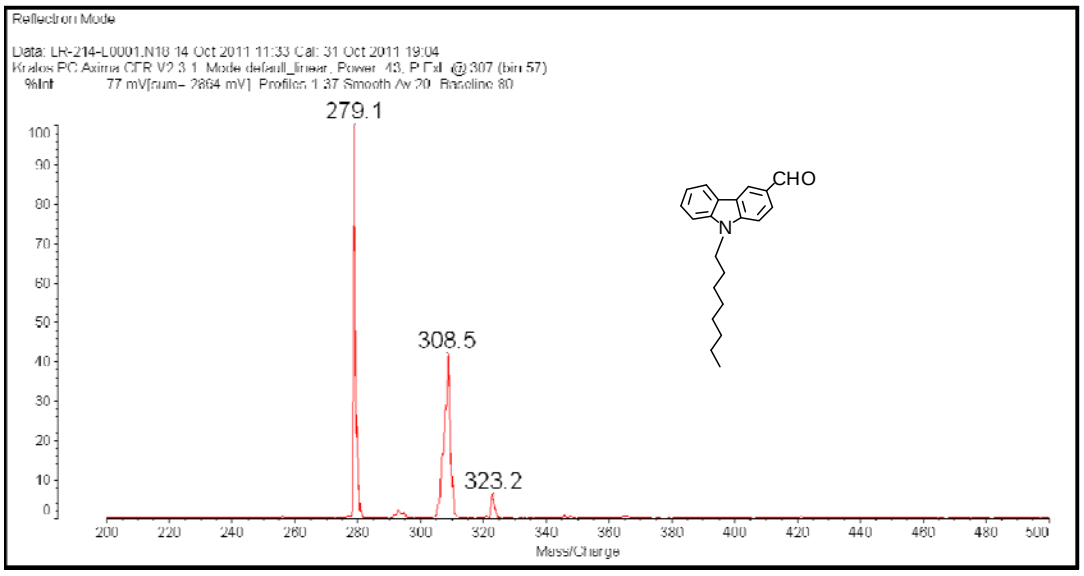

Fig. S6 MALDI/TOF MS spectrum of compound **3**.

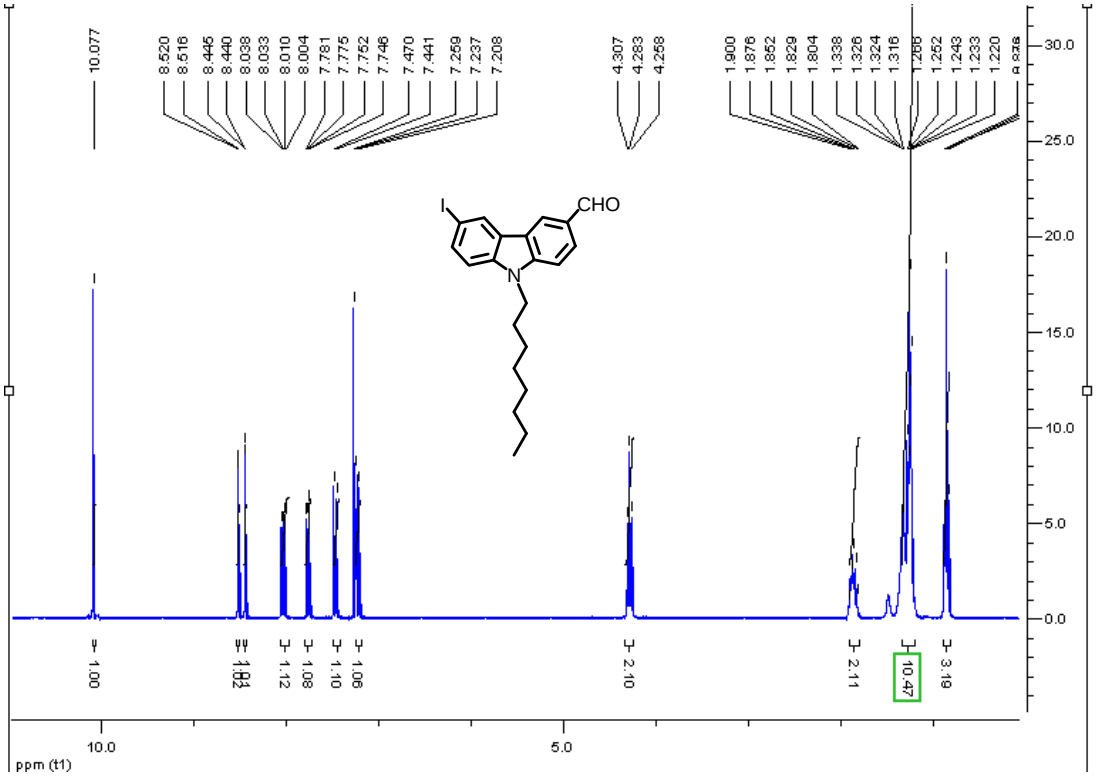

Fig. S7 ^{1}H-NMR (300 MHz, $CDCl_3$) spectrum of compound **4**.

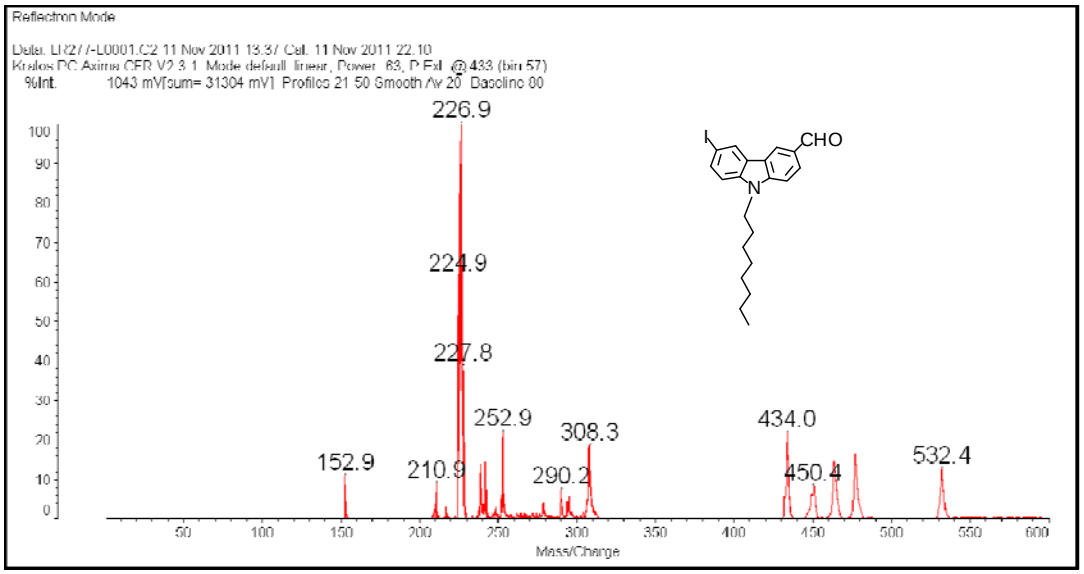

Fig. S8 MALDI/TOF MS spectrum of compound **4**.

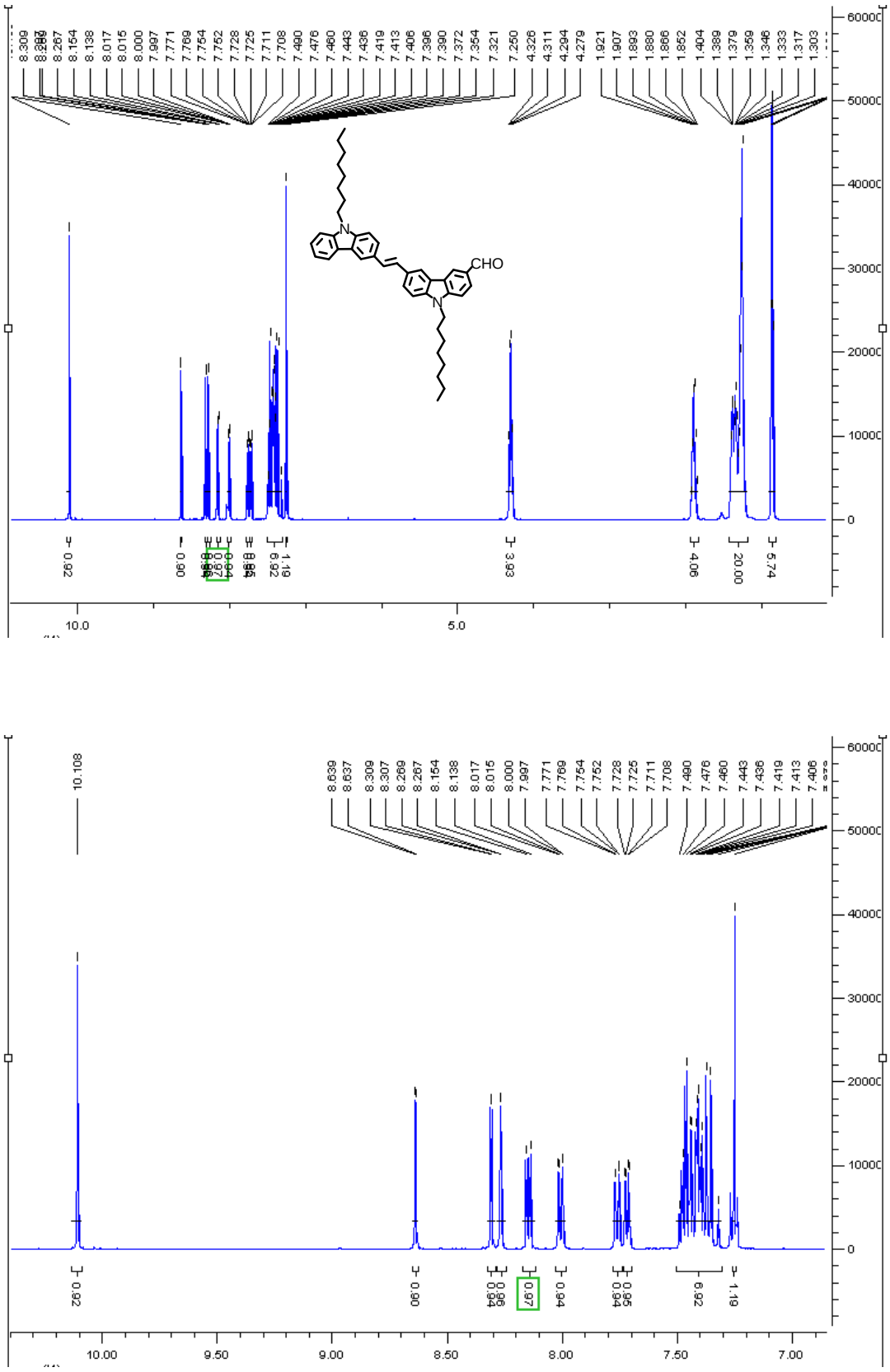

Fig. S9 ^{1}H-NMR (500 MHz, $CDCl_3$) spectrum of compound **6**.

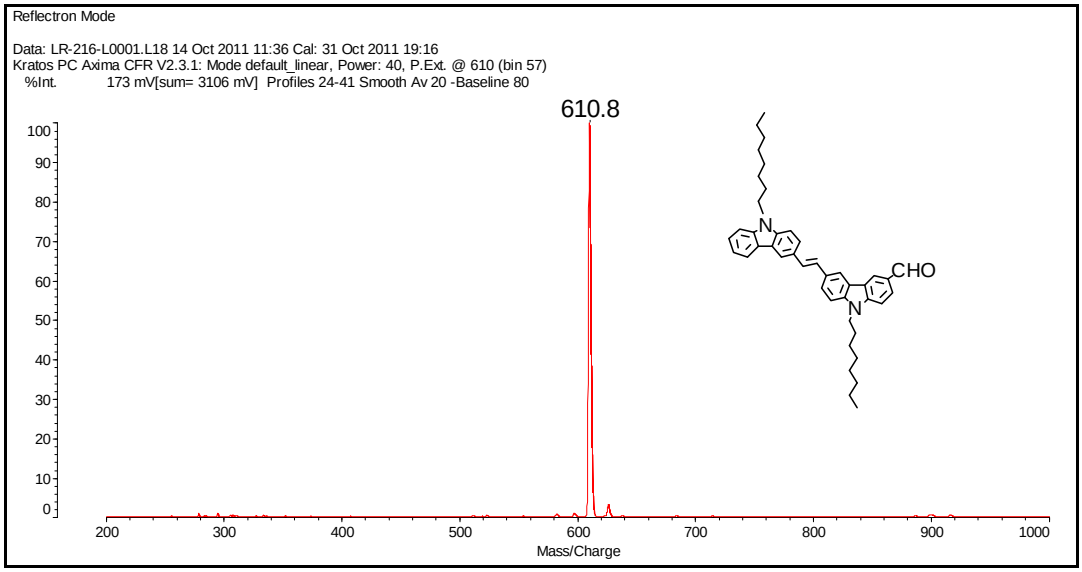

Fig. S10 MALDI/TOF MS spectrum of compound **6**.

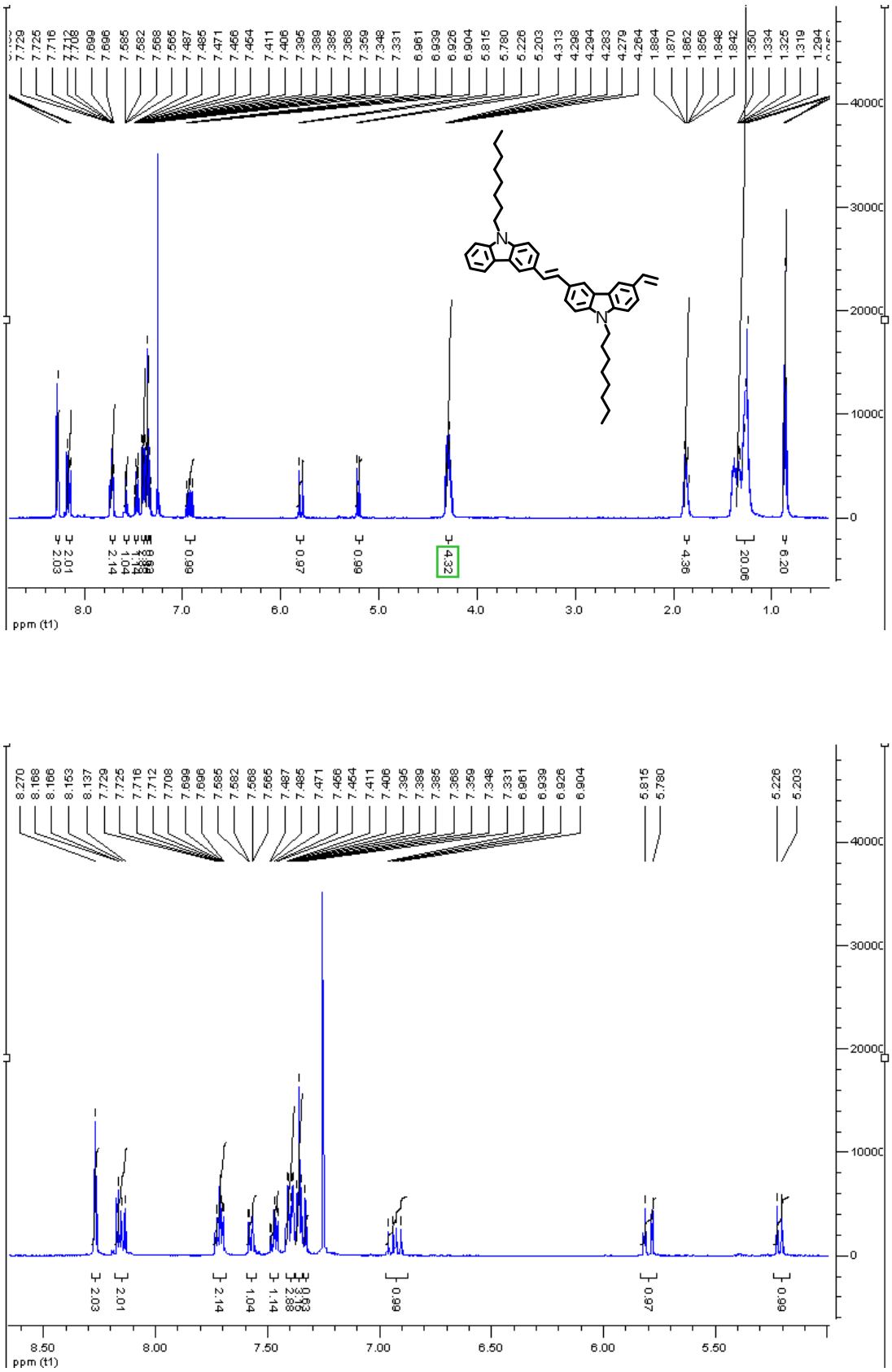

Fig. S11 ^{1}H-NMR (500 MHz, $CDCl_3$) spectrum of compound **7**.

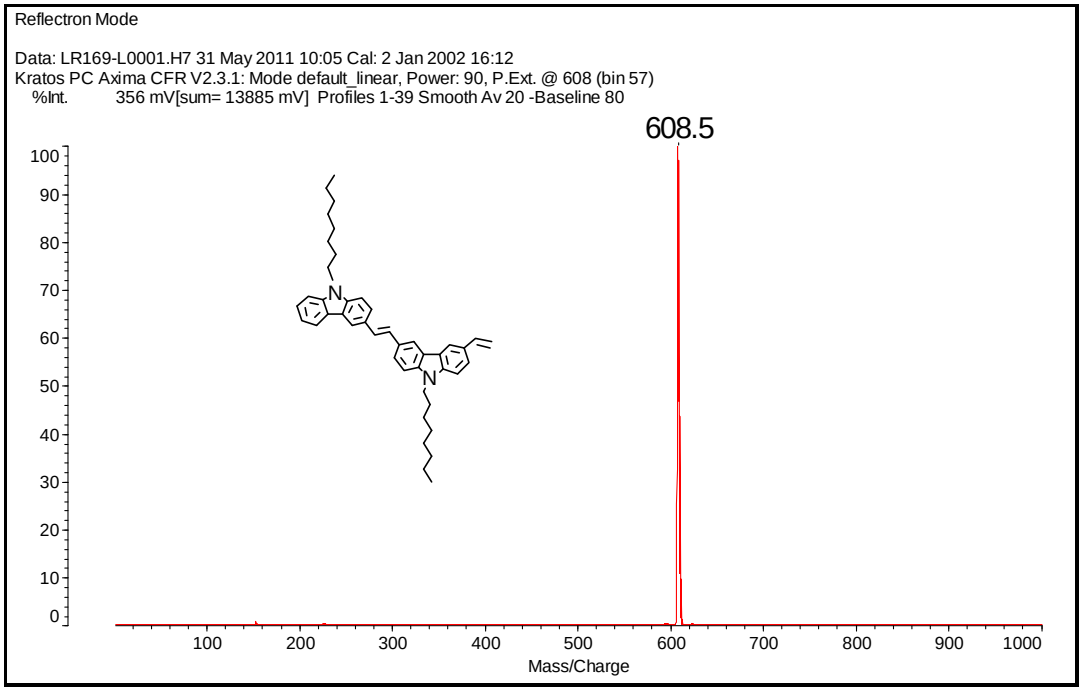

Fig. S12 MALDI/TOF MS spectrum of compound **7**.

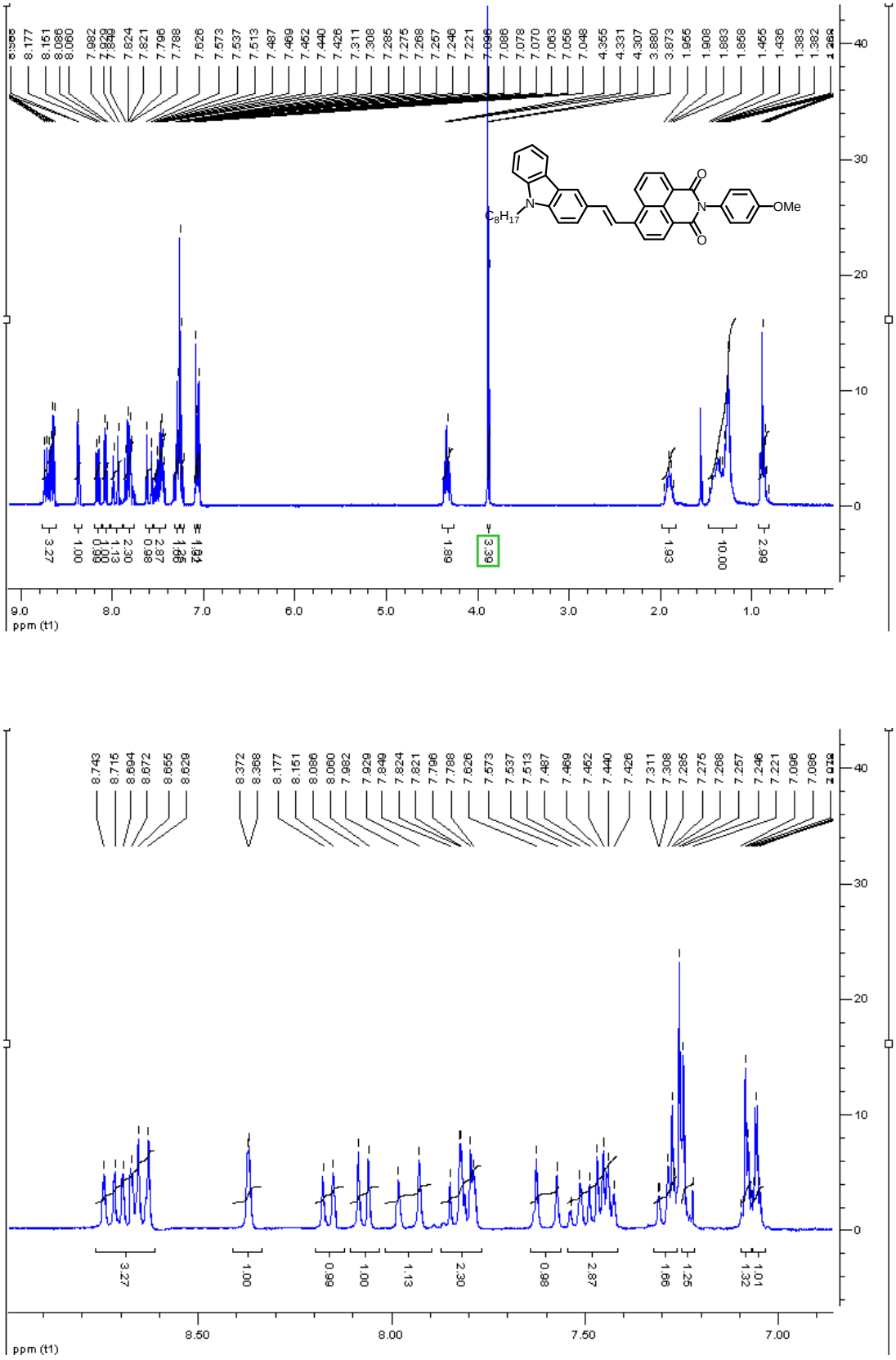

Fig. S13 ^{1}H-NMR (300 MHz, $CDCl_3$) spectrum of compound **8**.

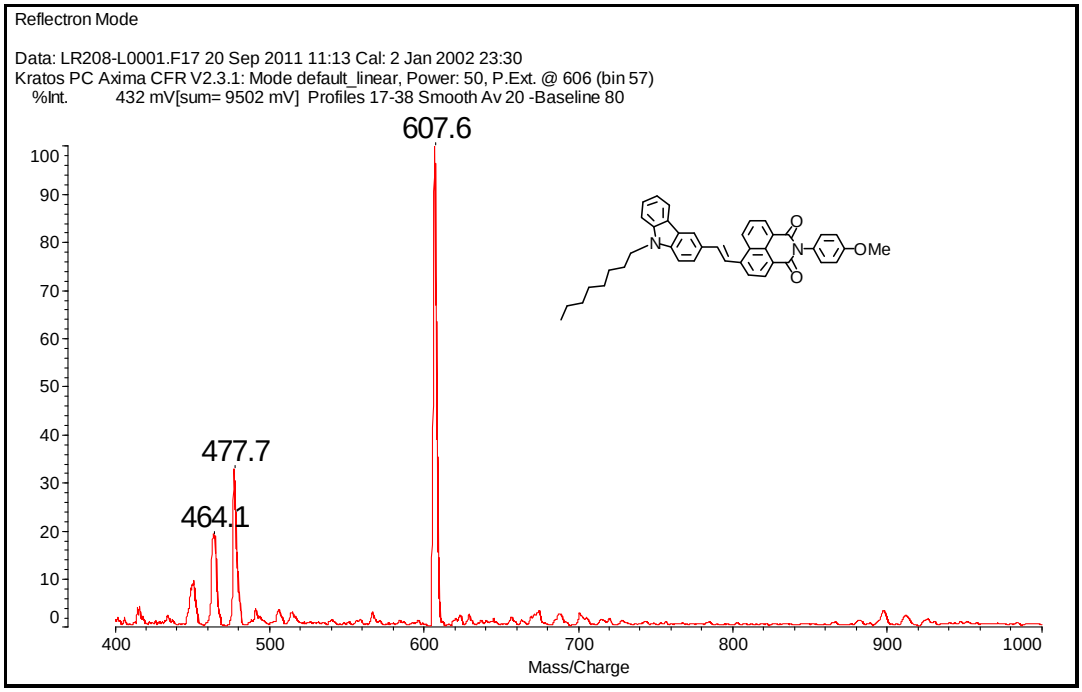

Fig. S14 MALDI/TOF MS spectrum of compound **8**.

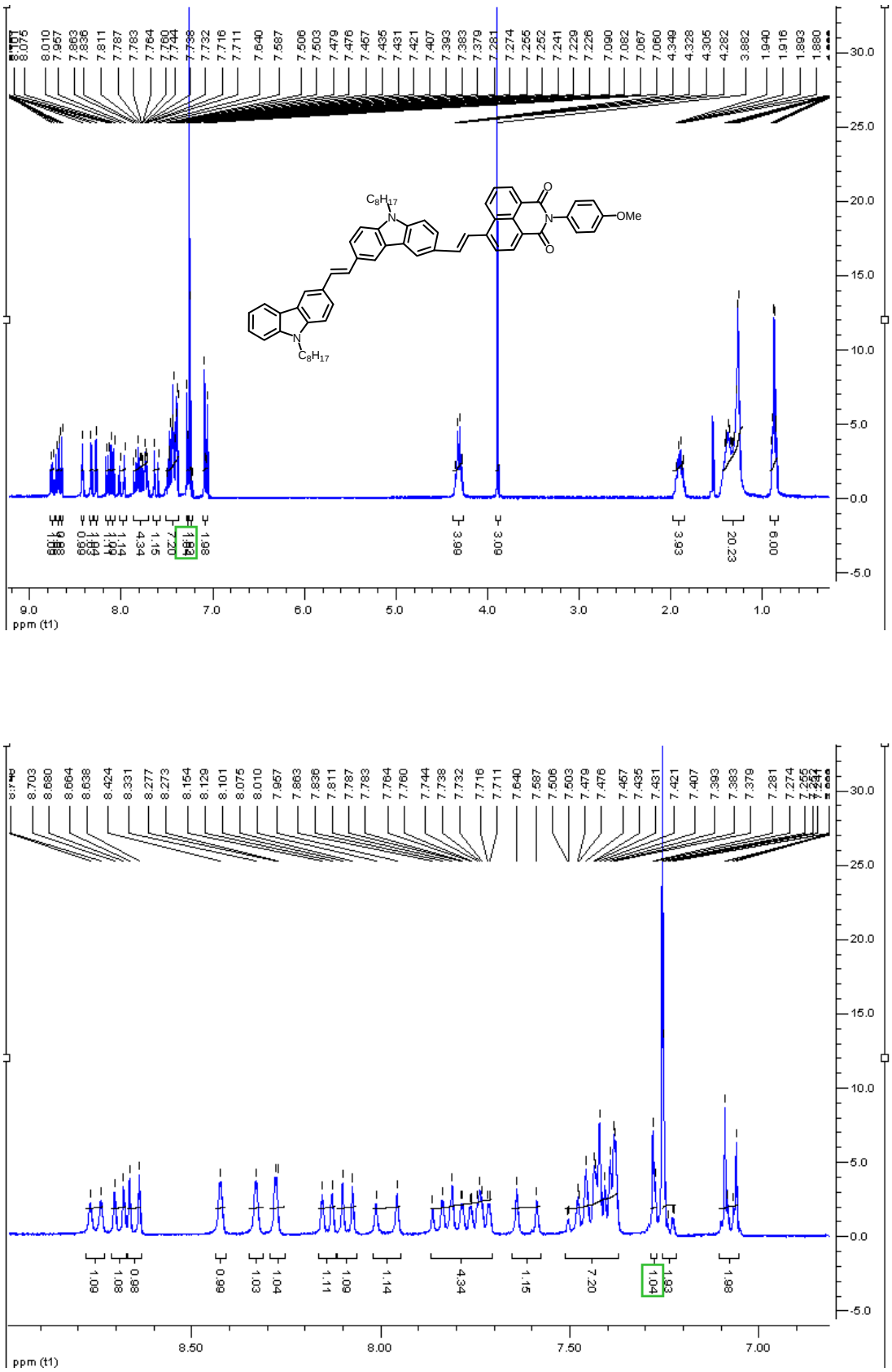

Fig. S15 ^{1}H-NMR (300 MHz, $CDCl_3$) spectrum of compound **9**.

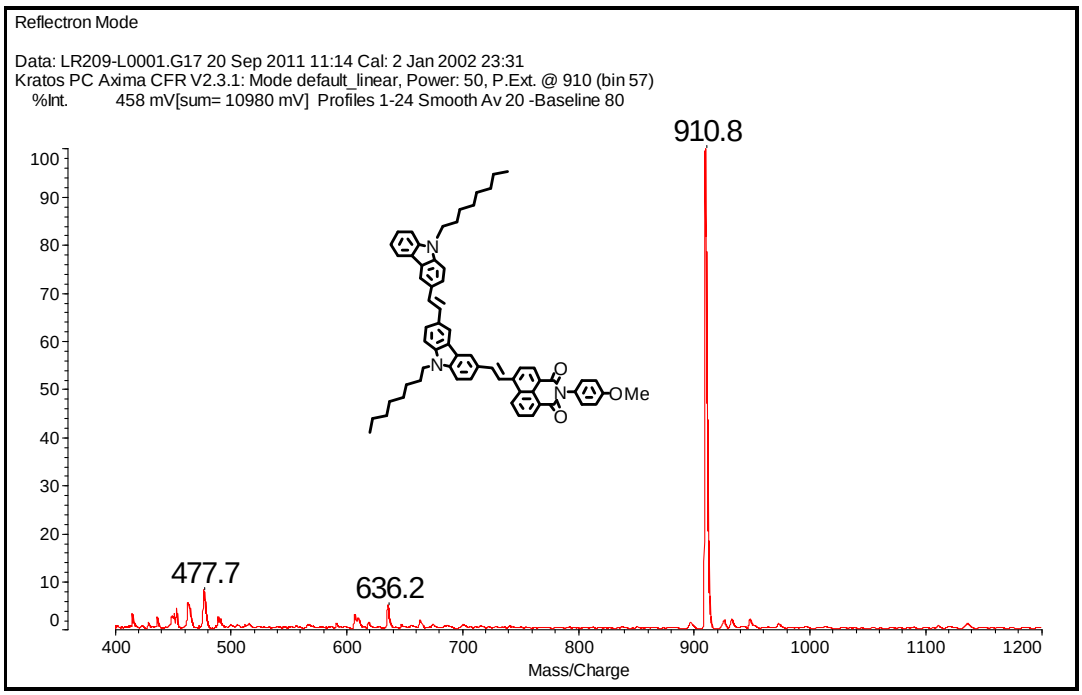

Fig. S16 MALDI/TOF MS spectrum of compound **9**.

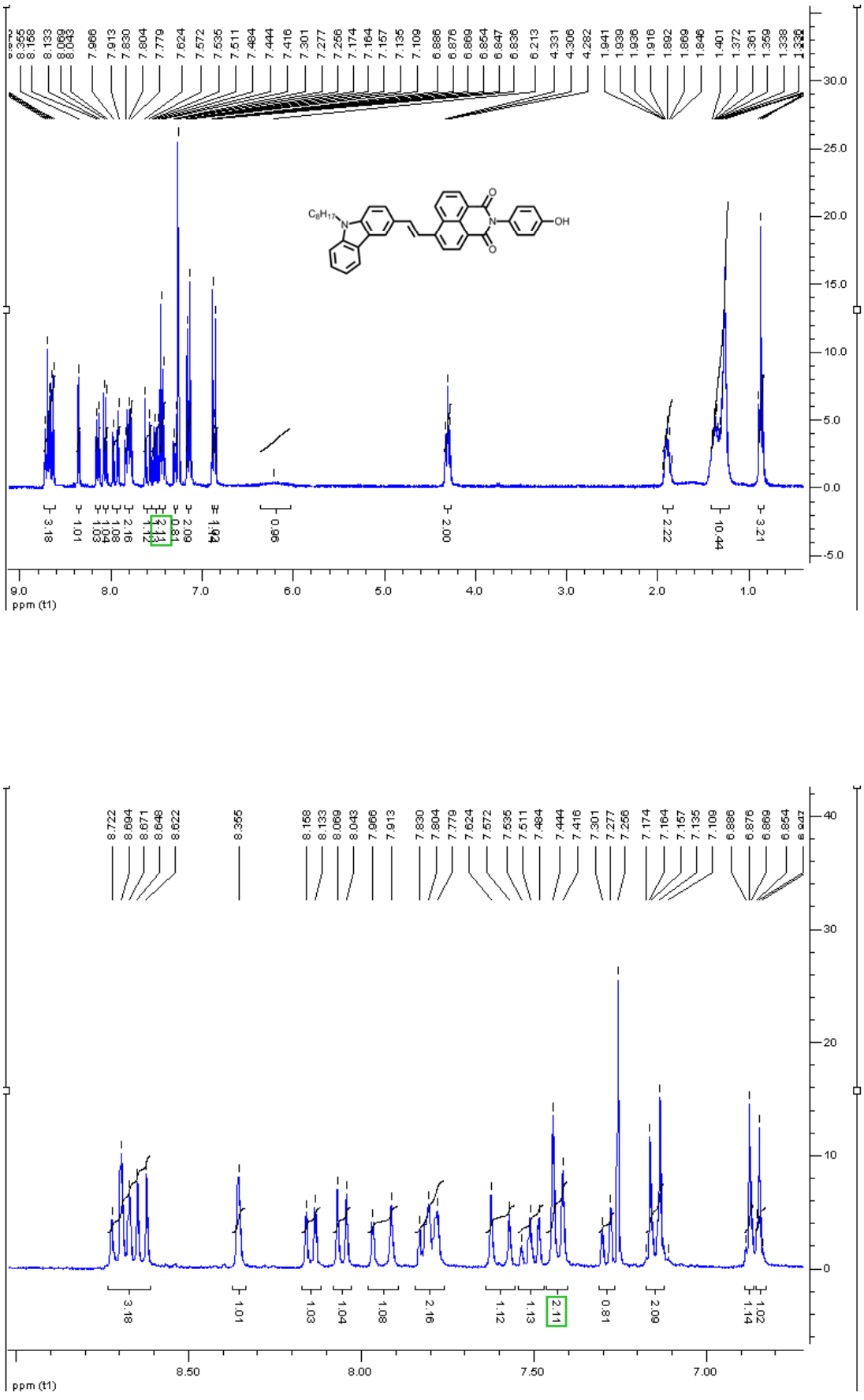

Fig. S17 ^{1}H-NMR (300 MHz, $CDCl_3$) spectrum of compound **10**.

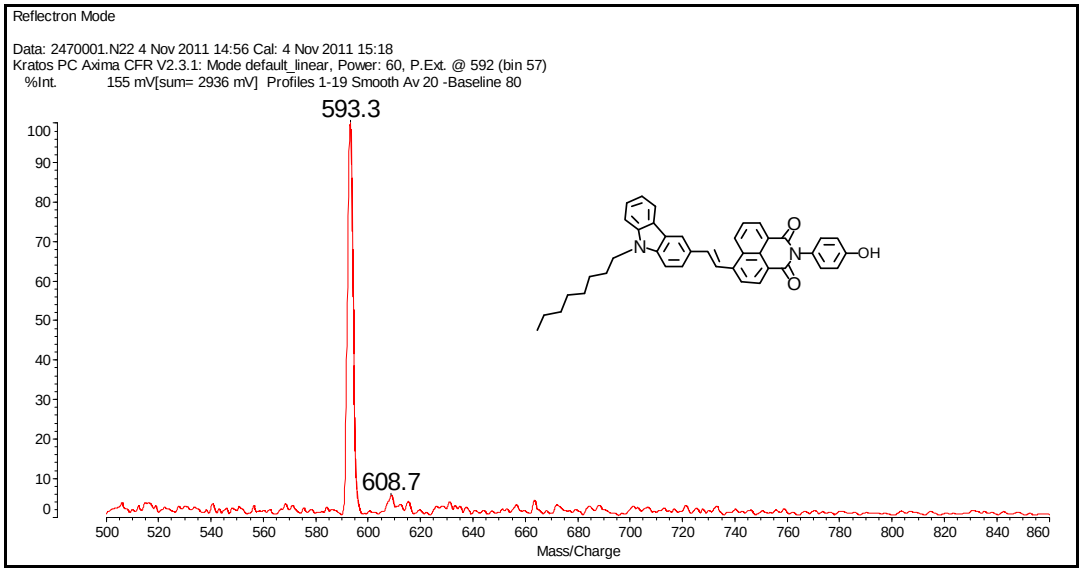

Fig. S18 MALDI/TOF MS spectrum of compound **10**.

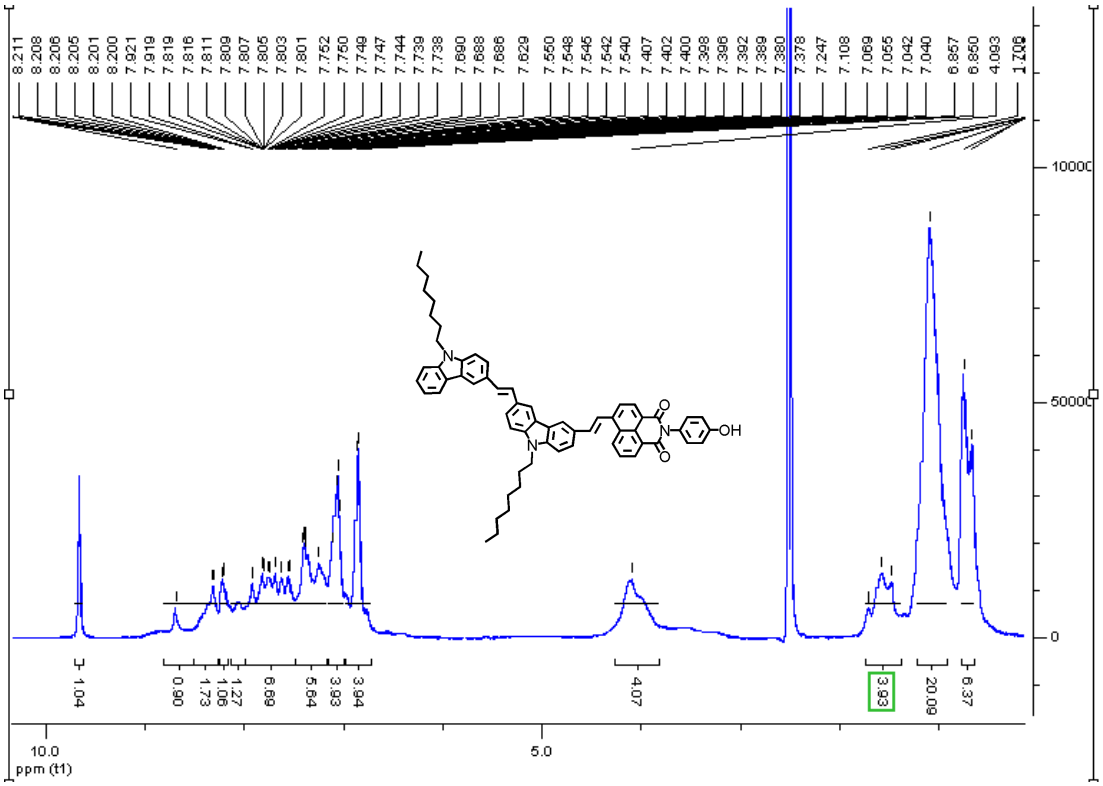

Fig. S19 ^{1}H-NMR (300 MHz, DMSO-d_6) spectrum of compound **11**.

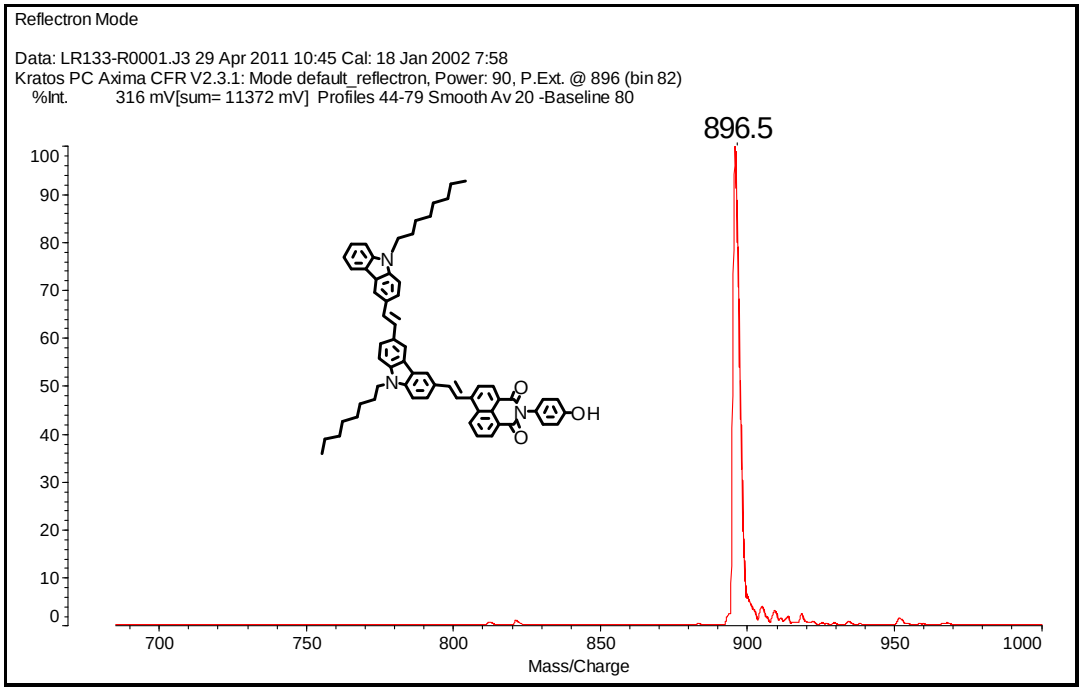

Fig. S20 MALDI/TOF MS spectrum of compound **11**.

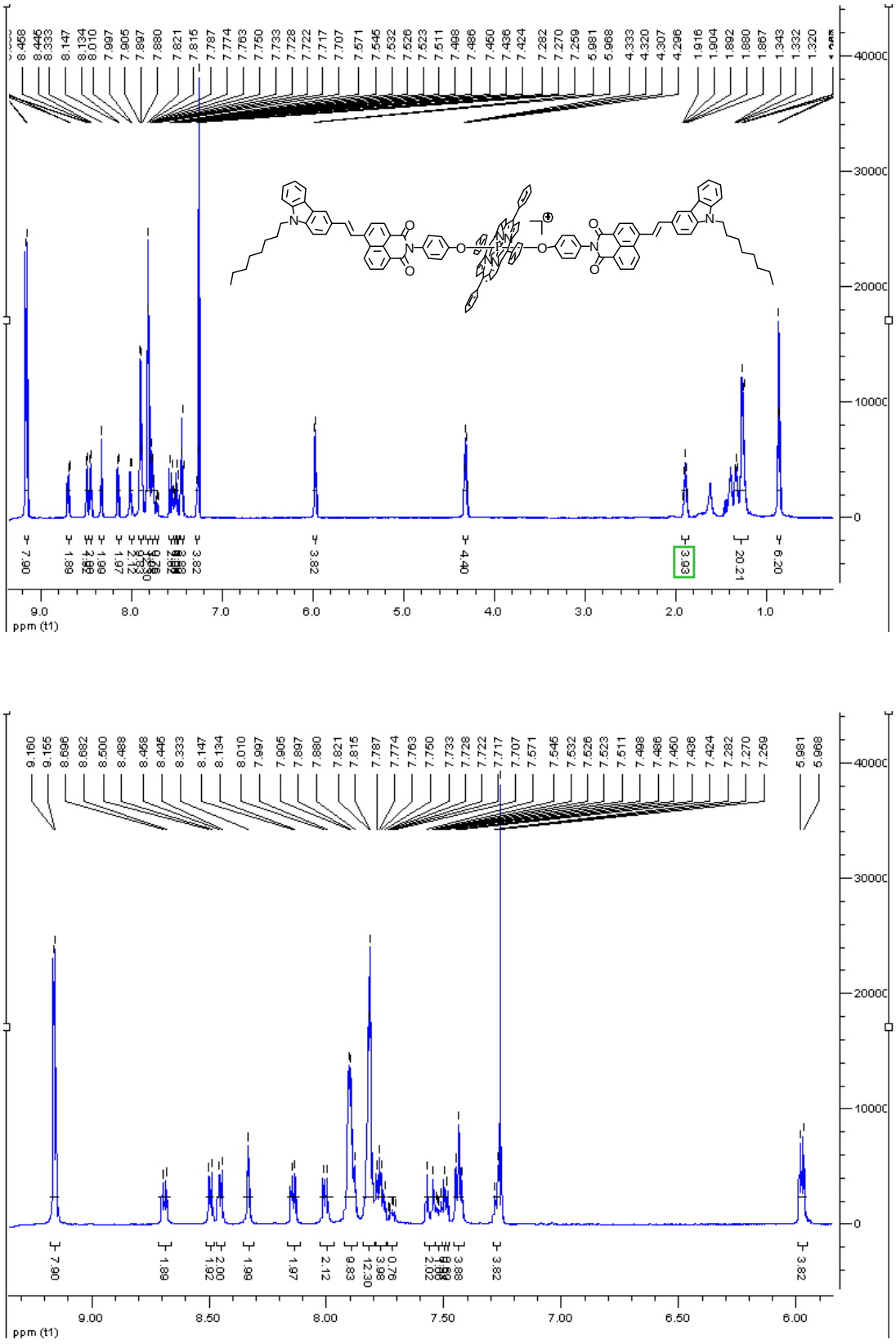

Fig. S21 ^{1}H-NMR (600 MHz, $CDCl_3$) spectrum of compound **1**.

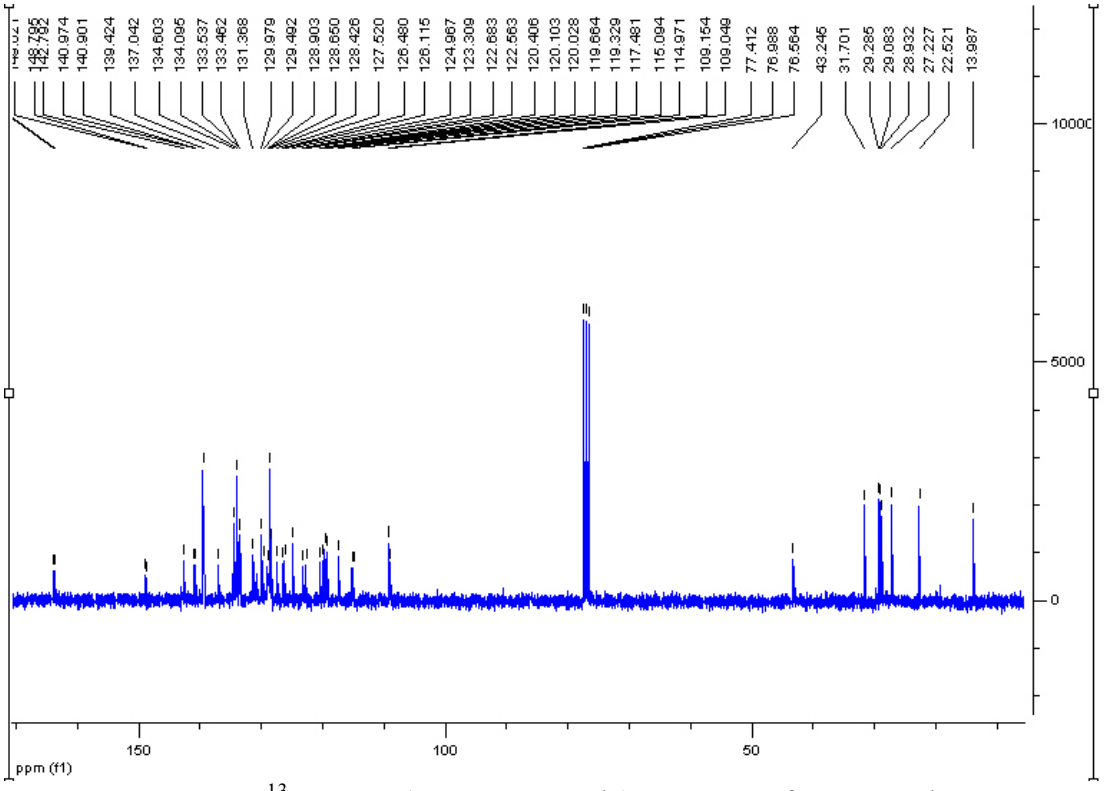

Fig. S22 ^{13}C-NMR (75 MHz, $CDCl_3$) spectrum of compound **1**.

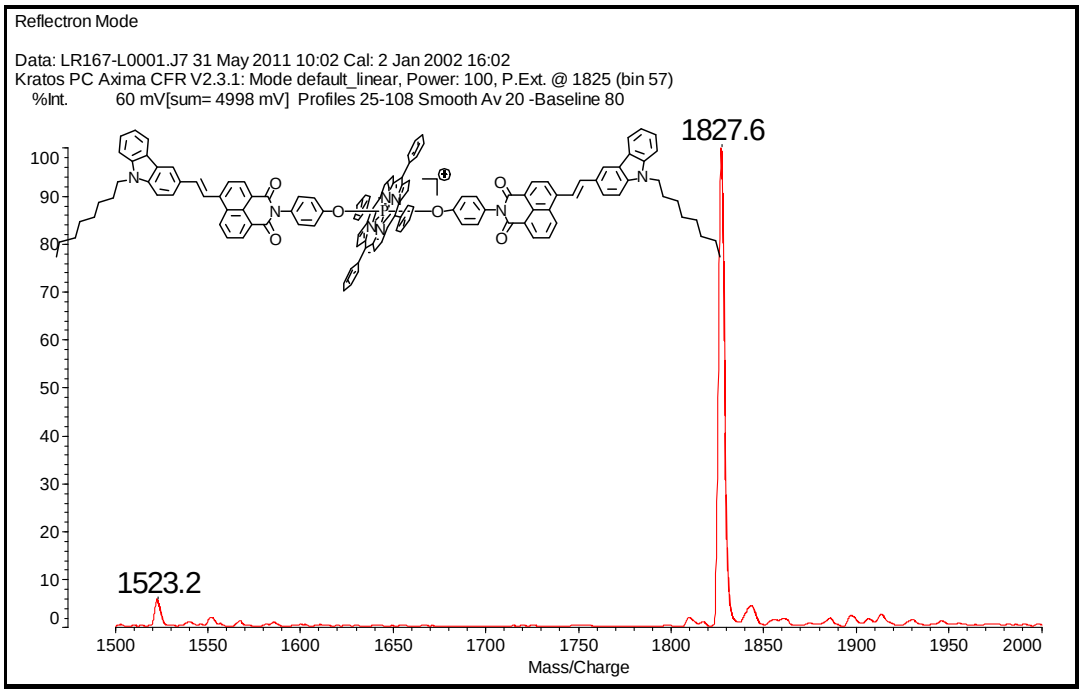

Fig. S23 MALDI/TOF MS spectrum of compound **1**.

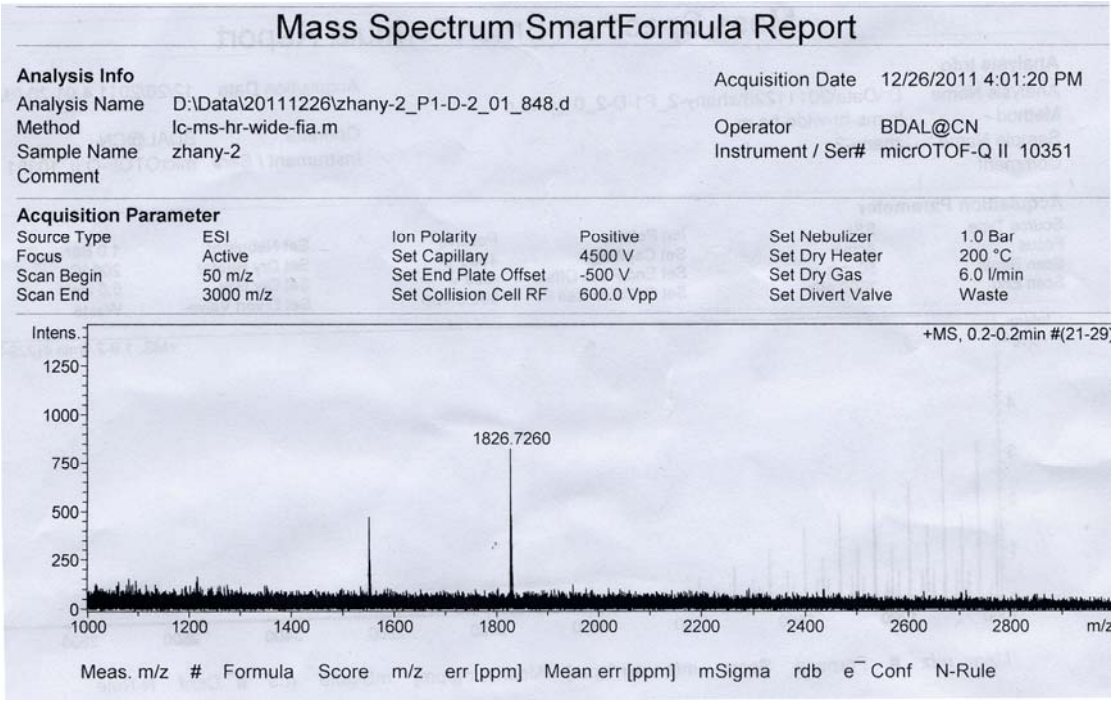

Fig. S24 High resolution mass spectrum of compound **1**.

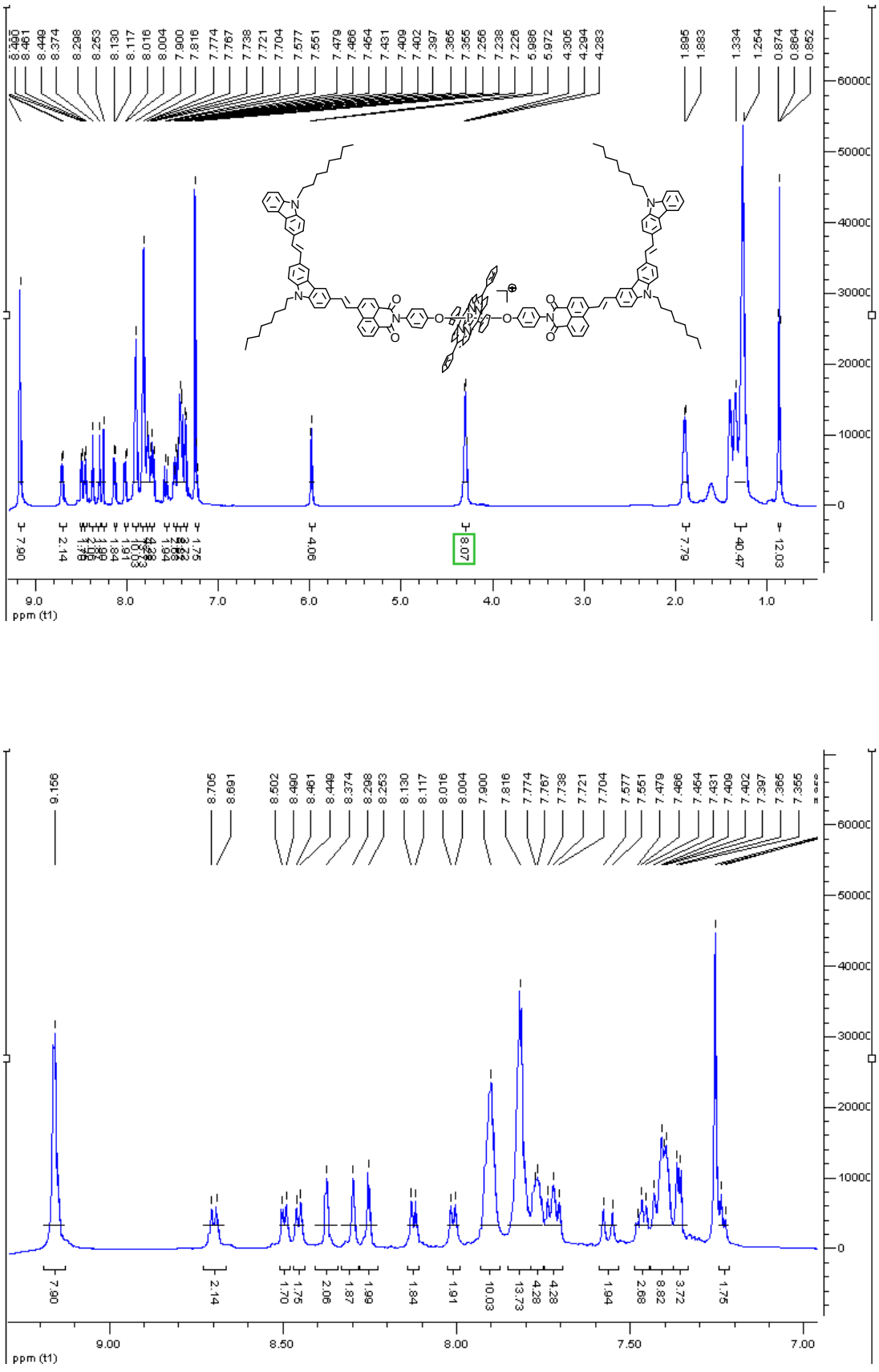

Fig. S25 ^{1}H-NMR (600 MHz, $CDCl_3$) spectrum of compound **2**.

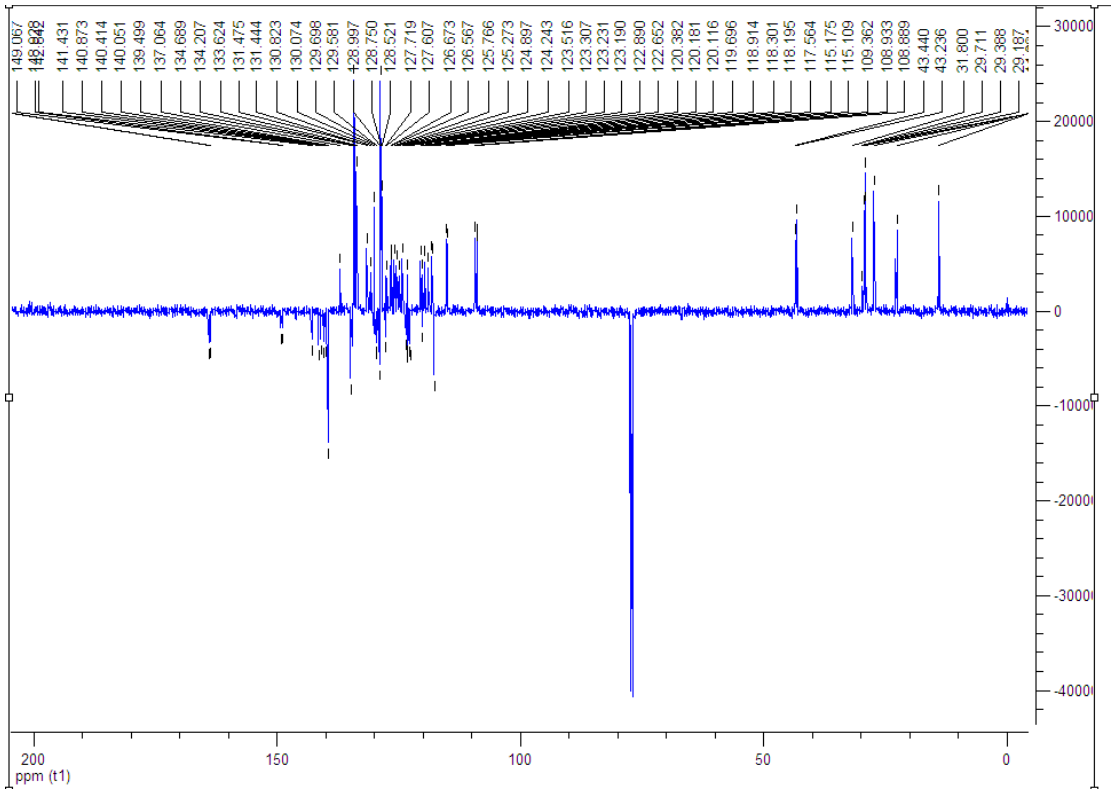

Fig. S26 ^{13}C-NMR (125 MHz, $CDCl_3$) spectrum of compound **2**.

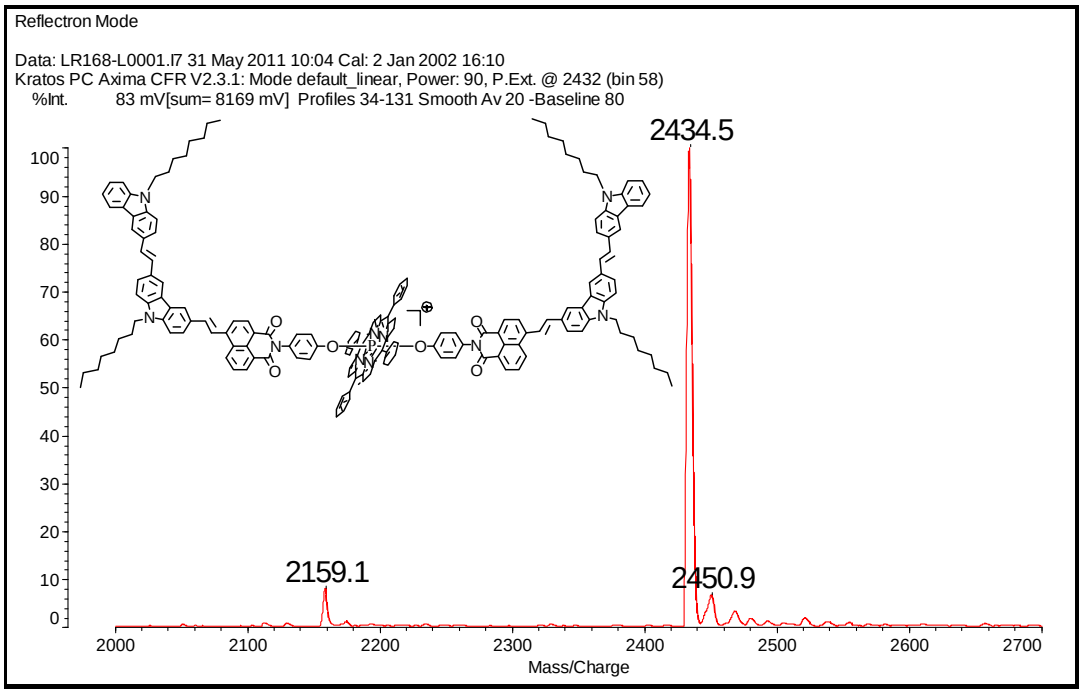

Fig. S27 MALDI/TOF MS spectrum of compound **2**.

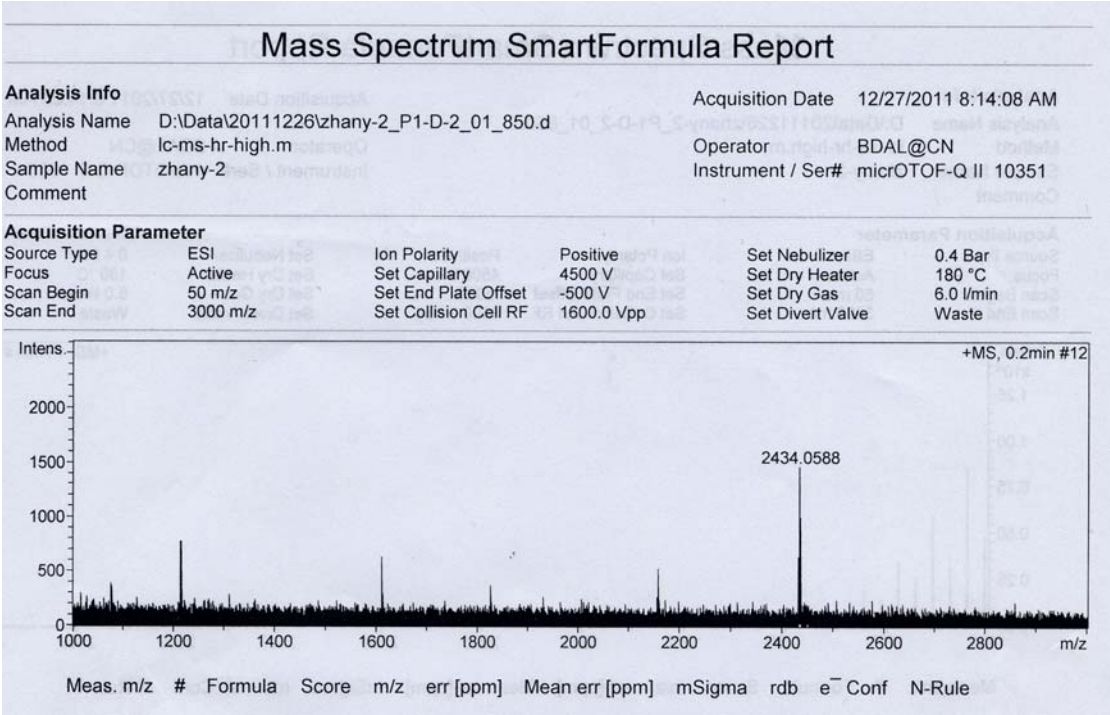

Fig. S28 High resolution mass spectrum of compound **2**.