Supporting Information

5,5'-Bis[9-(2-ethylhexyl)-9*H*-carbazol-3-yl]-4,4'-diphenyl-2,2'-bithiazole

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S1. UV-vis Spectrum of Bithiazole 6

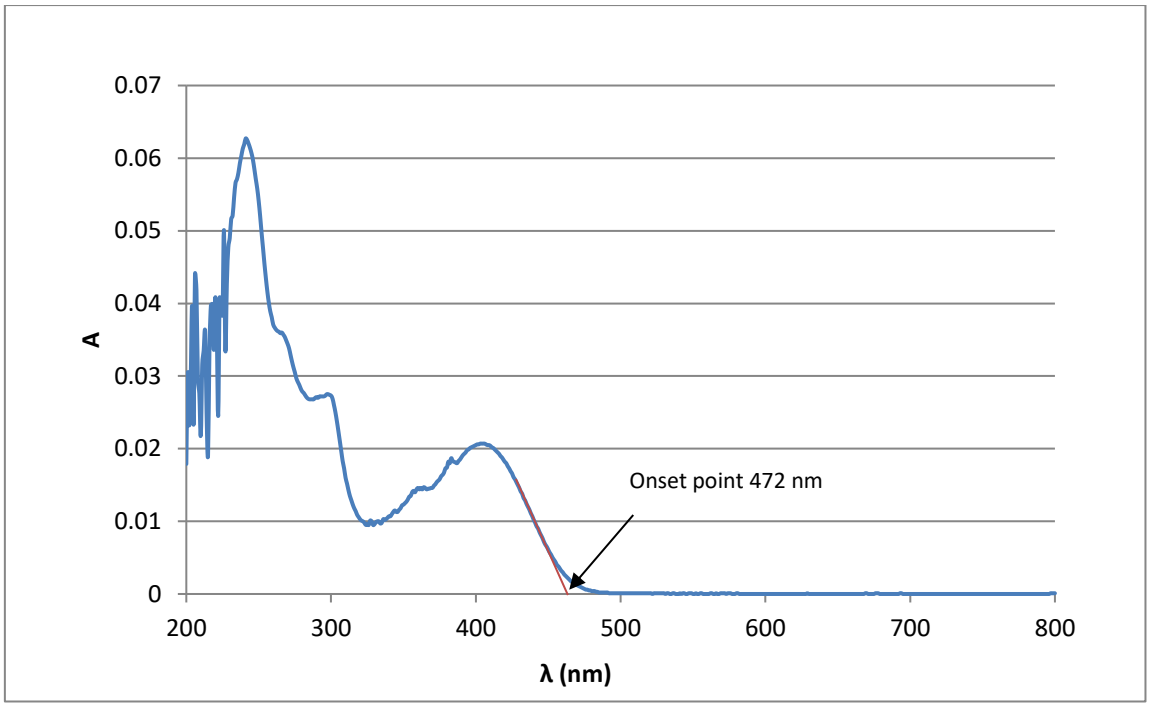


Figure S1. UV-vis absorption spectrum of bithiazole **6** in CH_2Cl_2 at 0.010 mM. Peaks: 241 (log ε 3.78), 265 inf (3.54), 298 inf (3.43), 363 inf (3.15), 383 inf (3.25), 405 (3.30).

Calculation of optical band gab

The optical band gap was calculated using the formula (derived from Beer-Lambert Law):

$$E_g^{opt} = \frac{h \times c}{\lambda_{max}^{onset}}$$

Where h is Plank's constant (6.626×10^{-34} J·s), c is the speed of light (3.0×10^{8} m·s^{-1}) and λ_{max}^{onset} (m) is onset of the absorption band with the highest wavelength. Conversion factor: 1 eV = 1.6×10^{-19} J.

S2. Cyclic Voltammetry

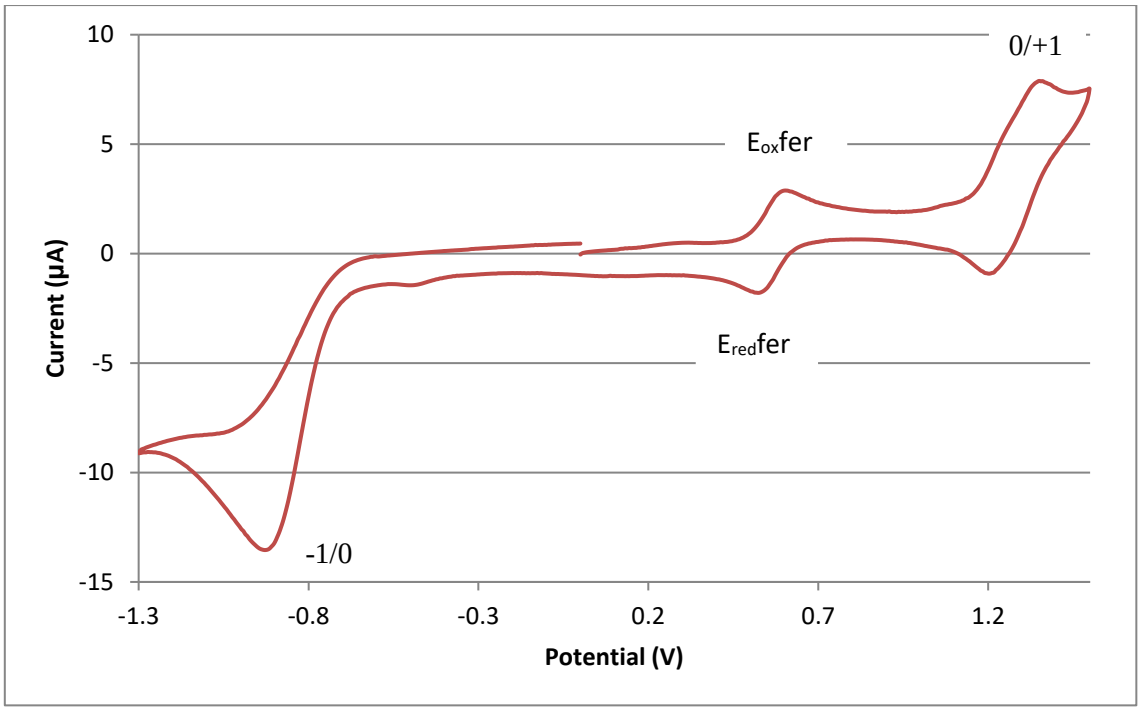


Figure S2. Cyclic voltammogram of bithiazole **6**. The voltammogram was run in a 1.0 mM solution of compound **6** in dry (over CaH_2), HPLC grade DCM containing $TBABF_4$ (0.1 M) as an electrolyte. A three-electrode electrochemical cell was used with an Au working electrode (ø 3 mm), Pt wire as counter electron and Ag/AgCl (1.0 M KCl) as reference electrode. Scan rate 50 $mV \cdot s^{-1}$. Temperature = 20 °C. Fc/Fc^+ ($E_{Fc/Fc+}$ = 0.475 V *vs.* SCE [1]) was used as an internal reference.

Calculation of HOMO/LUMO values and electrochemical band gab

E_{HOMO} = -[($E_{1/2}^{+1/0}$ - $E_{Fc/Fc+}$) + 5.1] eV

E_{LUMO} = -[($E_{1/2}^{0/-1}$ - $E_{Fc/Fc+}$) + 5.1] eV

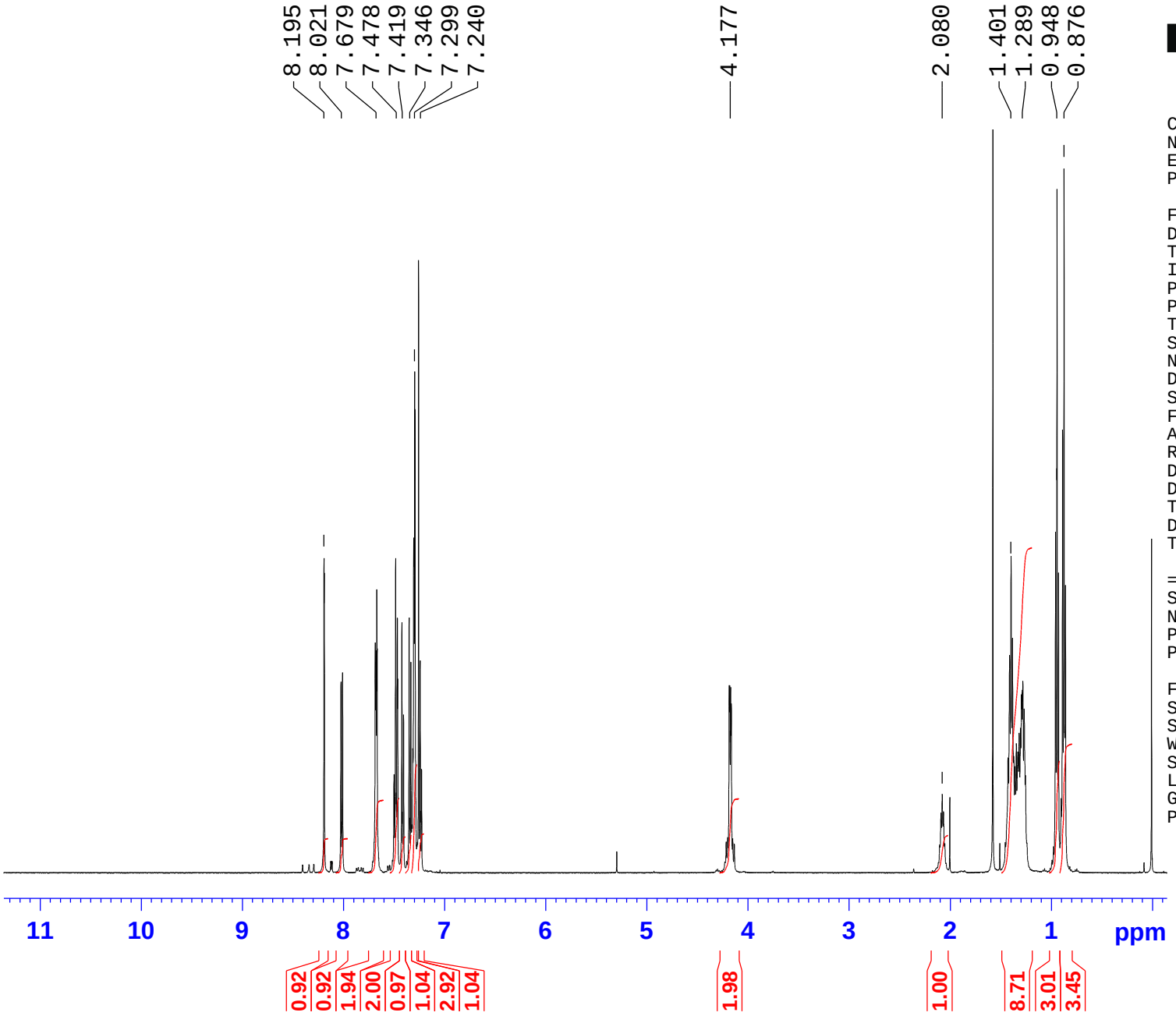
$E_g^{echem} = E_{1/2}^{+1/0} - E_{1/2}^{0/-1}$

S3. References

[1] Aranzaes, J. R.; Daniel, M.-C.; Astruc, D. Metallocenes as references for the determination of redox potentials by cyclic voltammetry - Permethylated iron and cobalt sandwich complexes, inhibition by polyamine dendrimers, and the role of hydroxy-containing ferrocenes. *Can. J. Chem.* **2006**, *84*, 288-299. DOI: 10.1139/v05-262.

S4. ^{1}H, ^{13}C NMR and Mass Spectra of Bithiazole 6

AK520



BRUKER

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TE                   296.0 K
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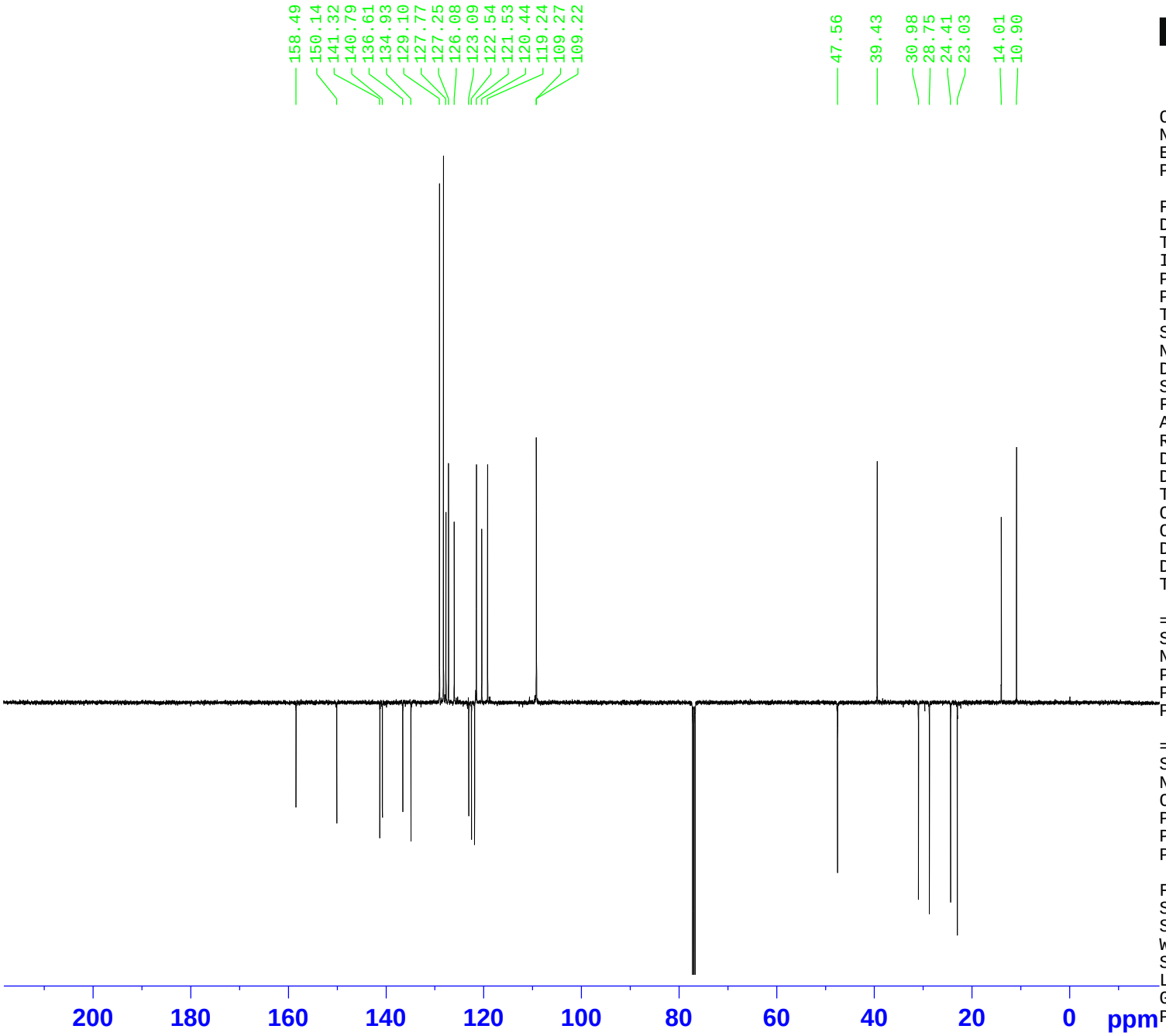

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PROCNO 1

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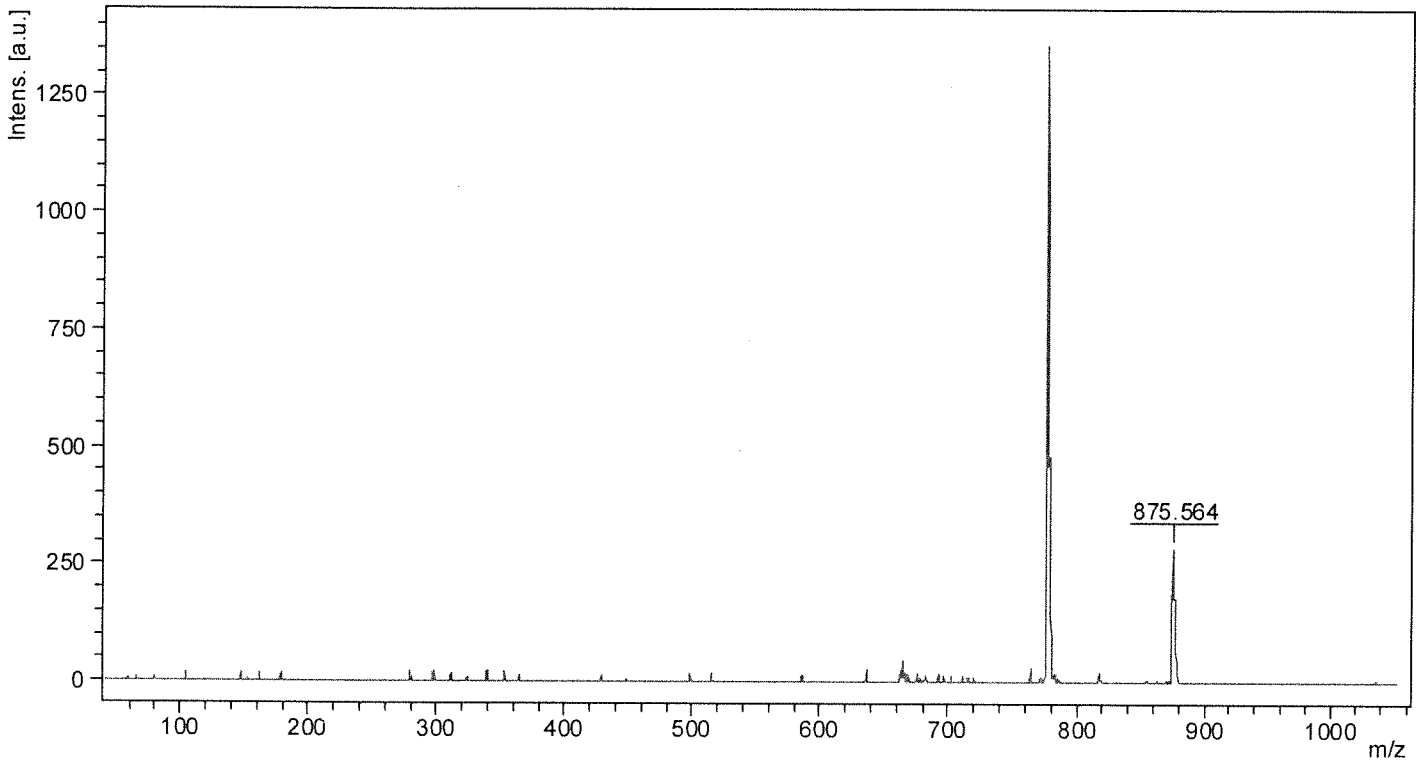
AK517



	m/z	Rel. Intens.
M^+ - heptene →	776.540	100
	777.573	62
	778.607	35
	779.608	10
	780.595	5
M^+ →	875.564	21
	876.635	13
	877.700	6
	878.725	3
	879.752	1

Acquisition Parameter

Aquisition operation mode	Reflector
Voltage polarity	POS