

## Supplementary Materials

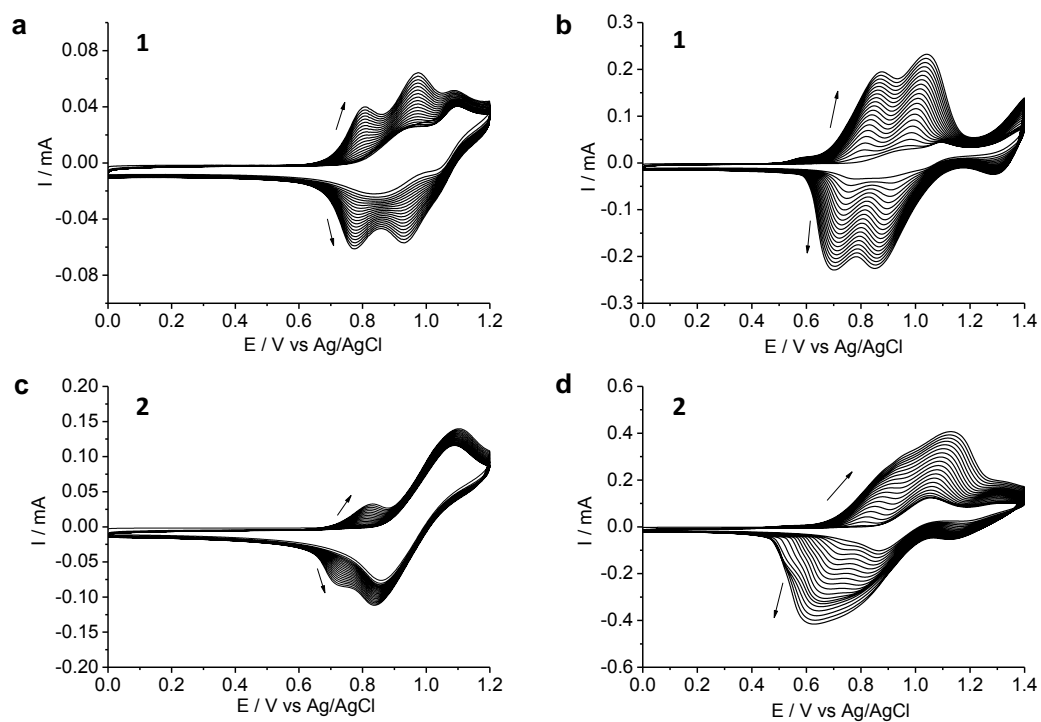
# Electrochromism in electropolymerized films of pyrene-triphenylamine derivatives

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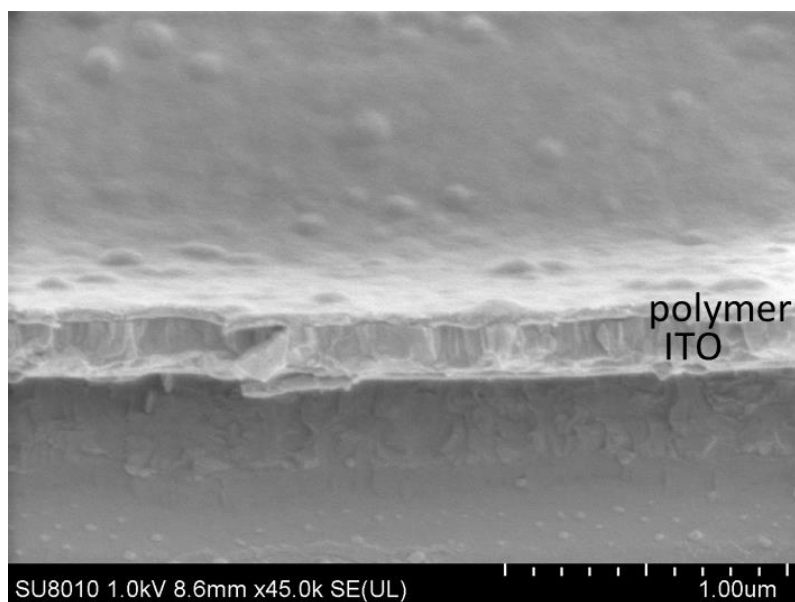
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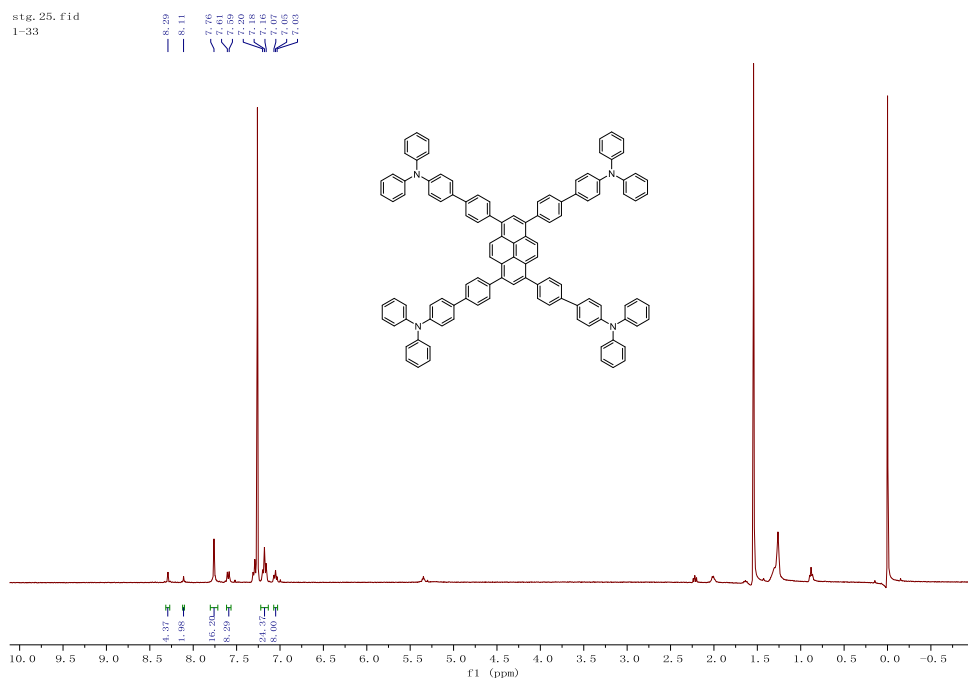


**Figure S1.** CVs recorded during the oxidative electropolymerization of (a,b) **1** and (c,d) **2** on an ITO glass electrodes by 20 repeated potential scan cycles between (a,c) 0 and +1.2 V or (b,d) 0 and +1.4 V at 100 mV/s.



**Figure S2.** SEM images of **P1**/ITO glass film. Images were obtained using a field-emission microscope (JEOL S-4800) operated at an acceleration voltage of 1 kV. Prior to measurement, an ultrathin conductive Au coating was deposited on the top of the polymeric films on ITO glass electrodes by low vacuum sputter coating of the sample.



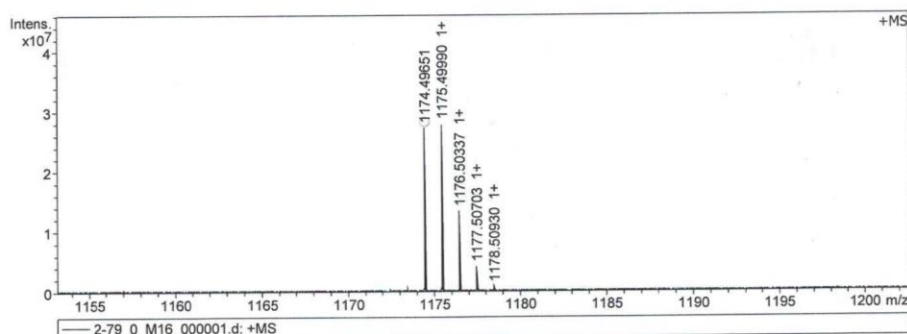
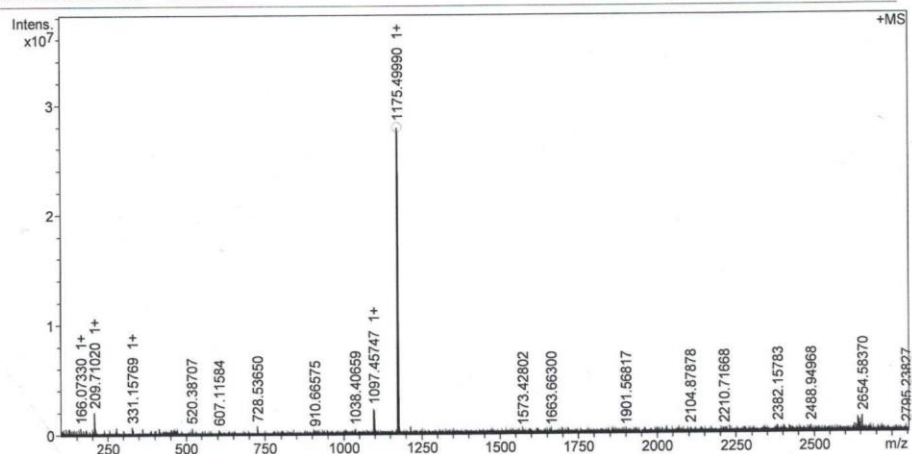


**Figure S5.**  $^1\text{H}$  NMR spectrum of compound **2** (400 MHz,  $\text{CDCl}_3$ , 298 K).

# MALDI,2-79,20181023

**Analysis Info**  
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 Sample Name MURU-N-ESI  
 Comment  
 Acquisition Date 10/23/2018 6:05:22 PM  
 Operator  
 Instrument solarix

**Acquisition Parameter**  
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 Broadband Low Mass 101.1 m/z  
 Broadband High Mass 2800.0 m/z  
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 Ion Accumulation Time 0.300 sec  
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 No. of Cell Fills 1  
 No. of Laser Shots 10  
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 Laser Shot Frequency 0.020 sec  
 Calibration Date Mon Oct 22 05:40:57  
 Data Acquisition Size 2098152  
 Data Processing Size 4194304  
 Apodization Sine-Bell Multiplication



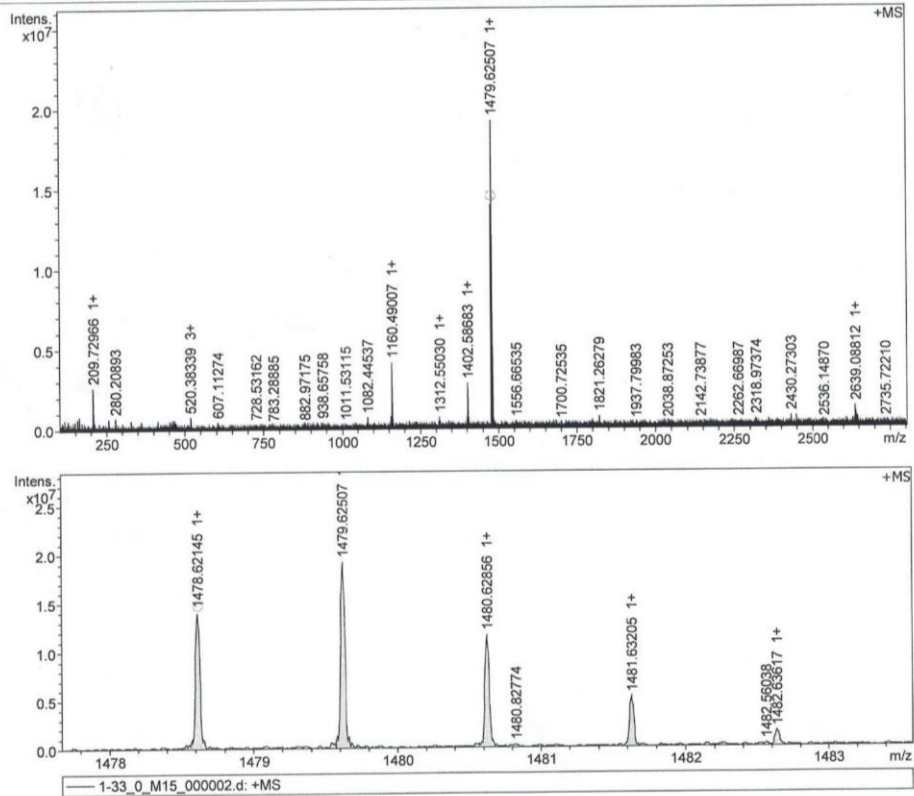
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Figure S6. HRMS data of compound 1.

# MALDI,1-33,20181023

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 Operator  
 Instrument solariX

**Acquisition Parameter**  
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 Broadband High Mass 2800.0 m/z  
 Source Accumulation 0.001 sec  
 Ion Accumulation Time 0.300 sec  
 Acquired Scans 4  
 No. of Cell Fills 1  
 No. of Laser Shots 10  
 Laser Power 28.0 lp  
 Laser Shot Frequency 0.020 sec  
 Calibration Date Mon Oct 22 05:40:57  
 Data Acquisition Size 2098152  
 Data Processing Size 4194304  
 Apodization Sine-Bell Multiplication



Meas. m/z	#	Ion Formula	Score	m/z	err [ppm]	Mean err [ppm]	mSigma	rdb	e <sup>-</sup> Conf	N-Rule
1478.621450	1	C <sub>112</sub> H <sub>78</sub> N <sub>4</sub>	100.00	1478.622100	0.4	0.2	31.5	76.0	odd	ok

Figure S7. HRMS data of compound 2.