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Figure S1. DSSC device with *BODIPY 1* and DSSC device with *BODIPY 2*.

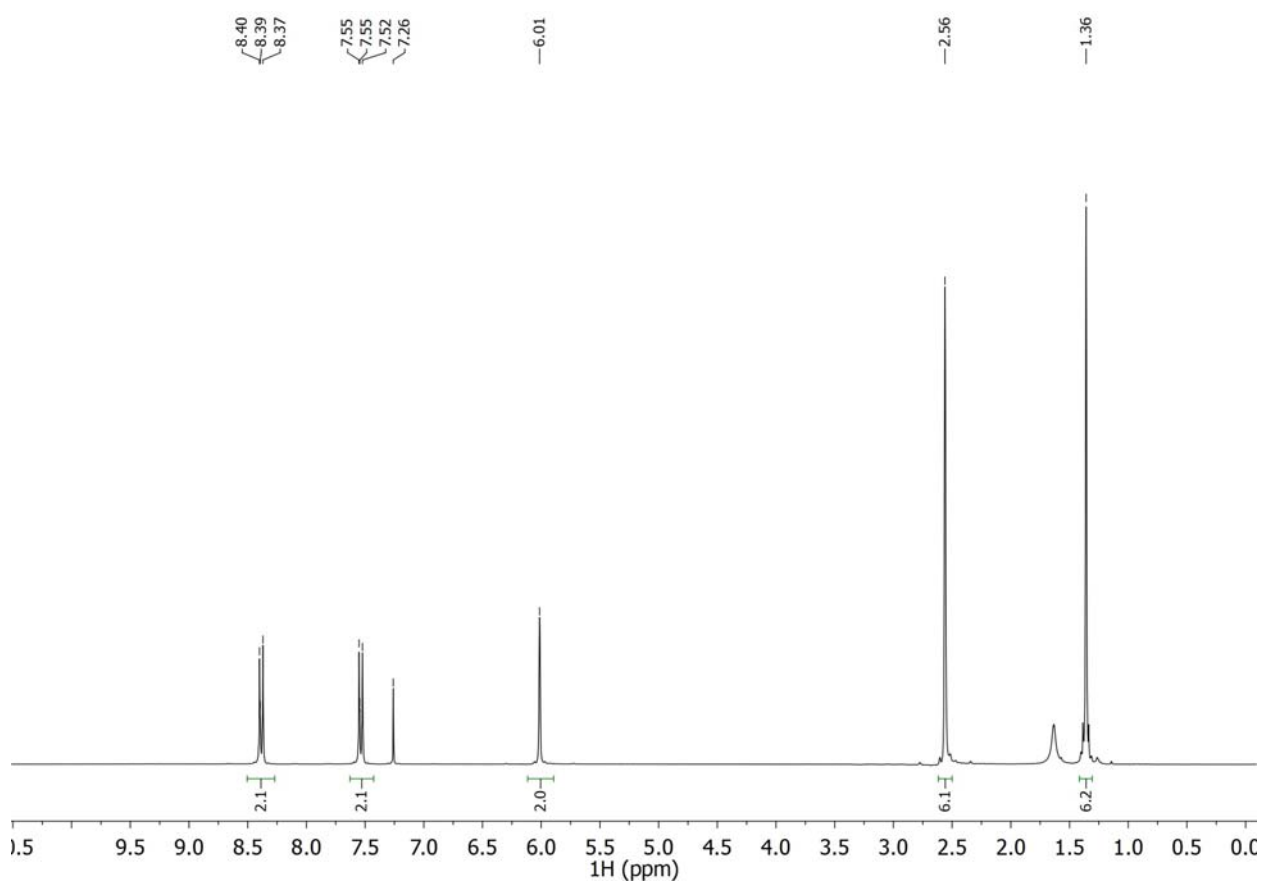


Figure S2. ^1H -NMR (500 MHz, CDCl_3) of 8-(*p*-nitrophenyl)-3,5,7,9-tetramethyl-BODIPY.

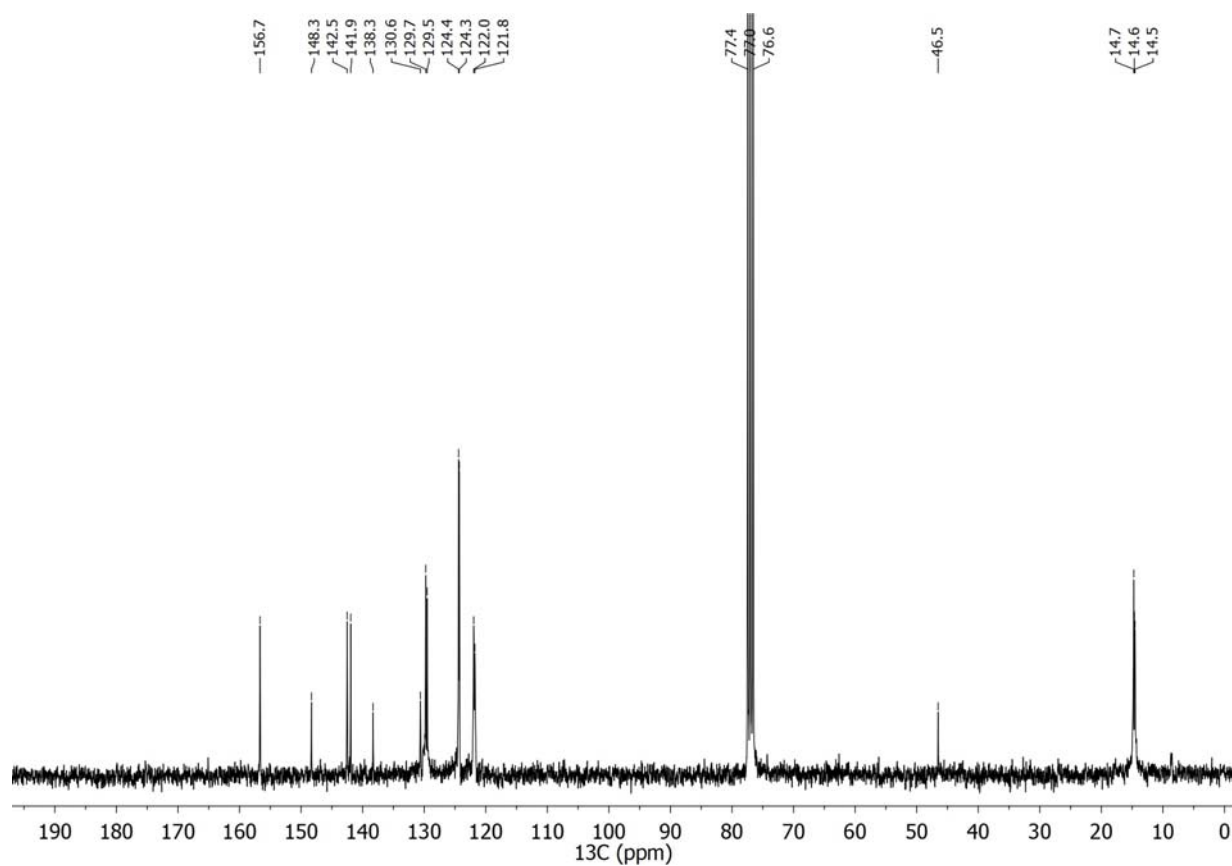


Figure S3. ^{13}C -NMR (125 MHz, CDCl_3) of 8-(*p*-nitrophenyl)-3,5,7,9-tetramethyl-BODIPY.

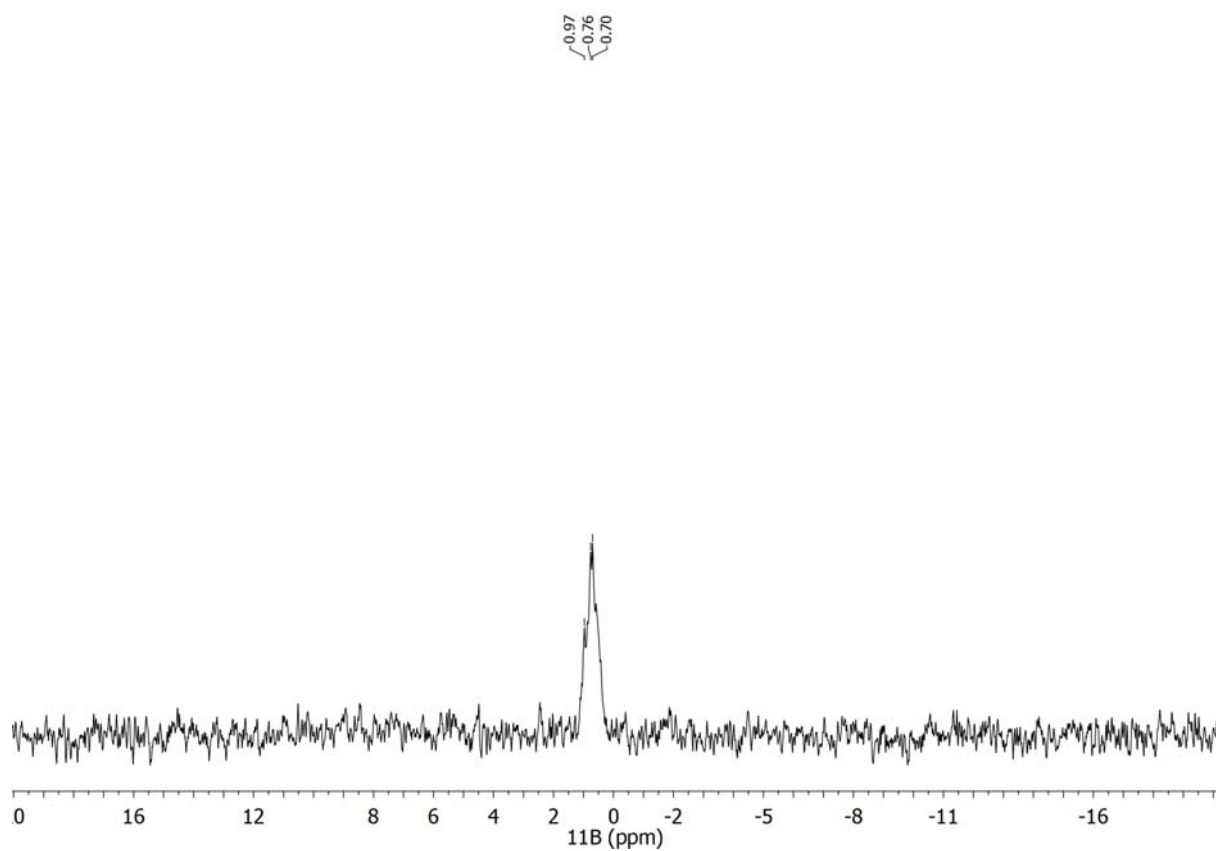


Figure S4. ^{11}B -NMR (128 MHz, CDCl_3) of 8-(*p*-nitrophenyl)-3,5,7,9-tetramethyl-BODIPY.

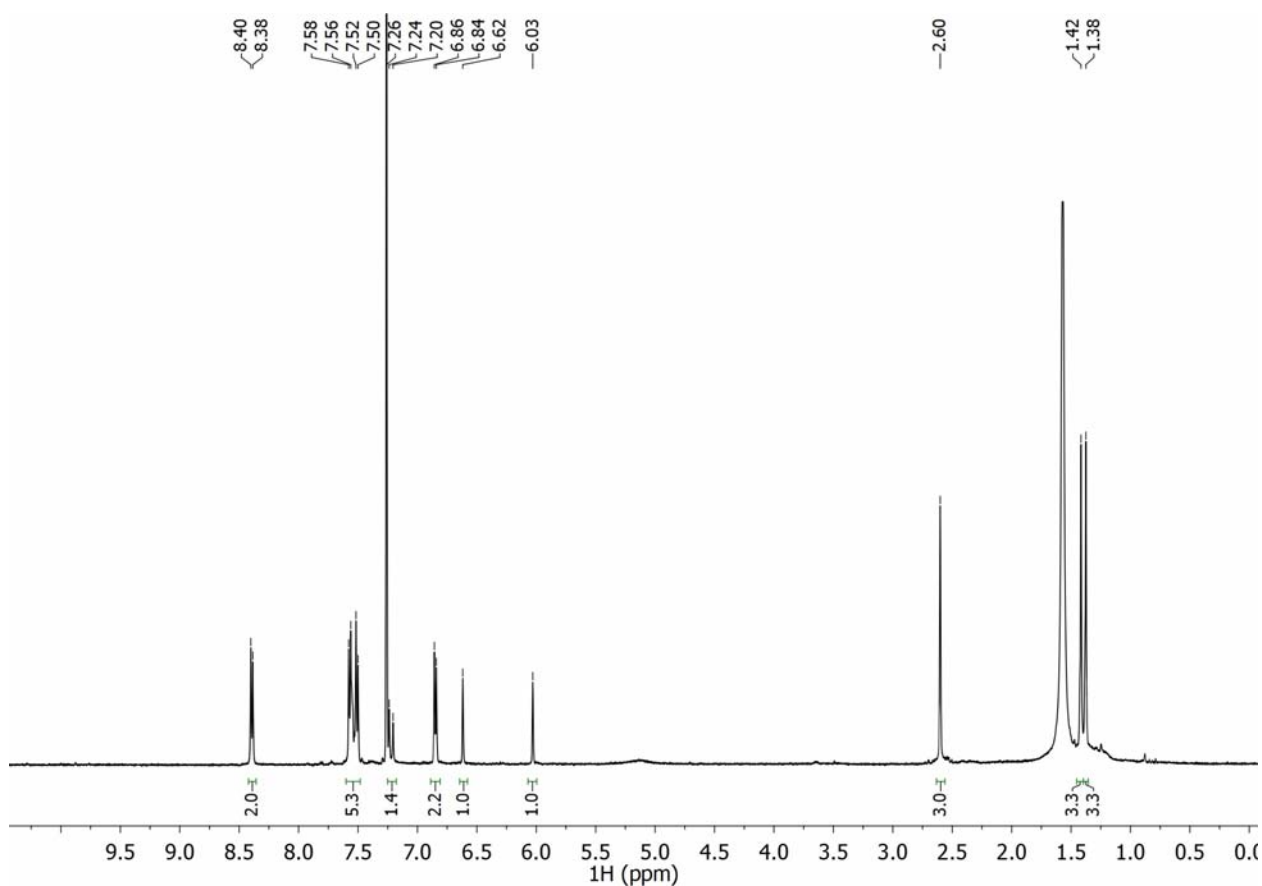


Figure S5. ¹H-NMR (500 MHz, CDCl₃) of styryl boronic acid BODIPY **1**.

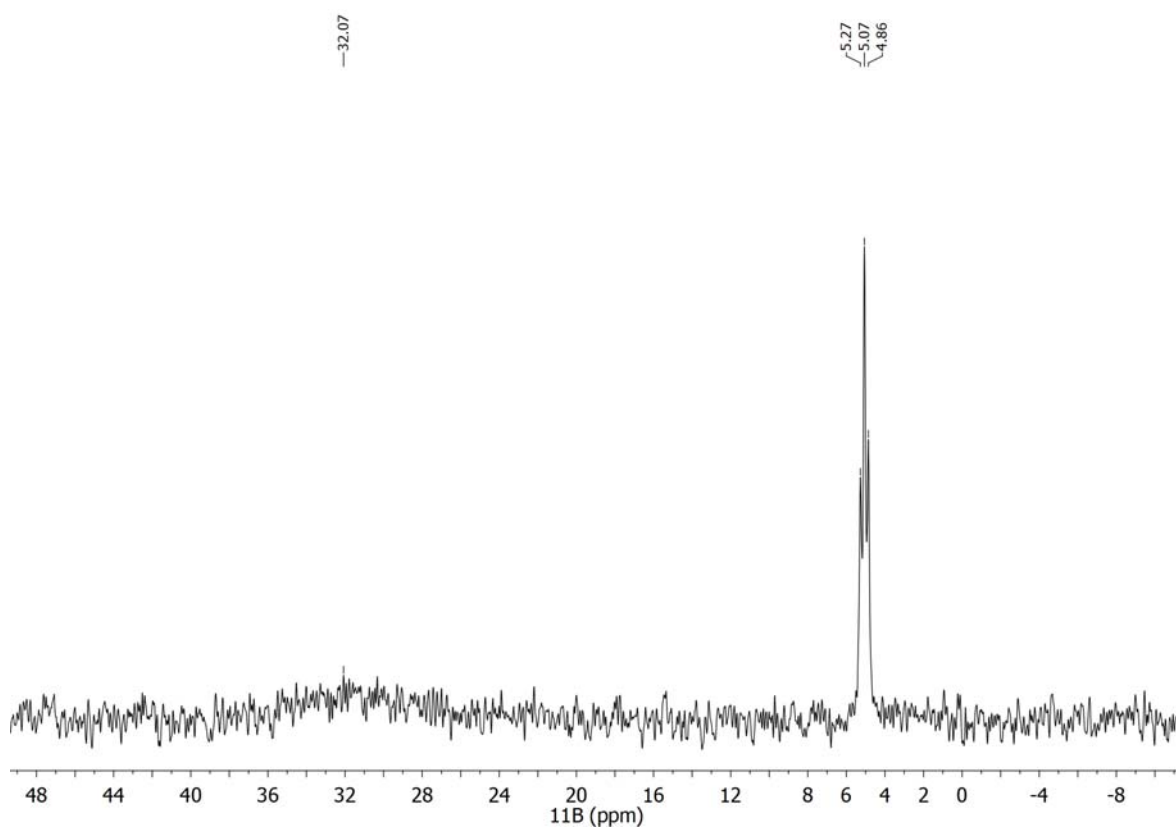


Figure S6. ¹¹B-NMR (128 MHz, CDCl₃) of styryl boronic acid BODIPY **1**.

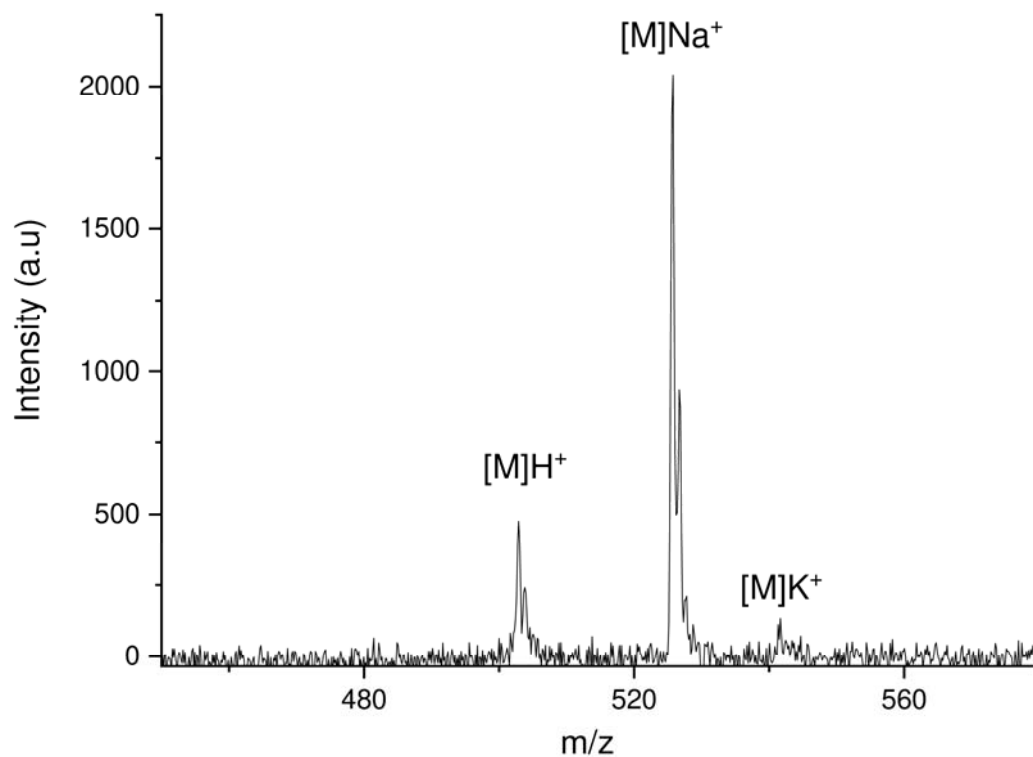


Figure S7. Mass of styryl boronic acid BODIPY 1.

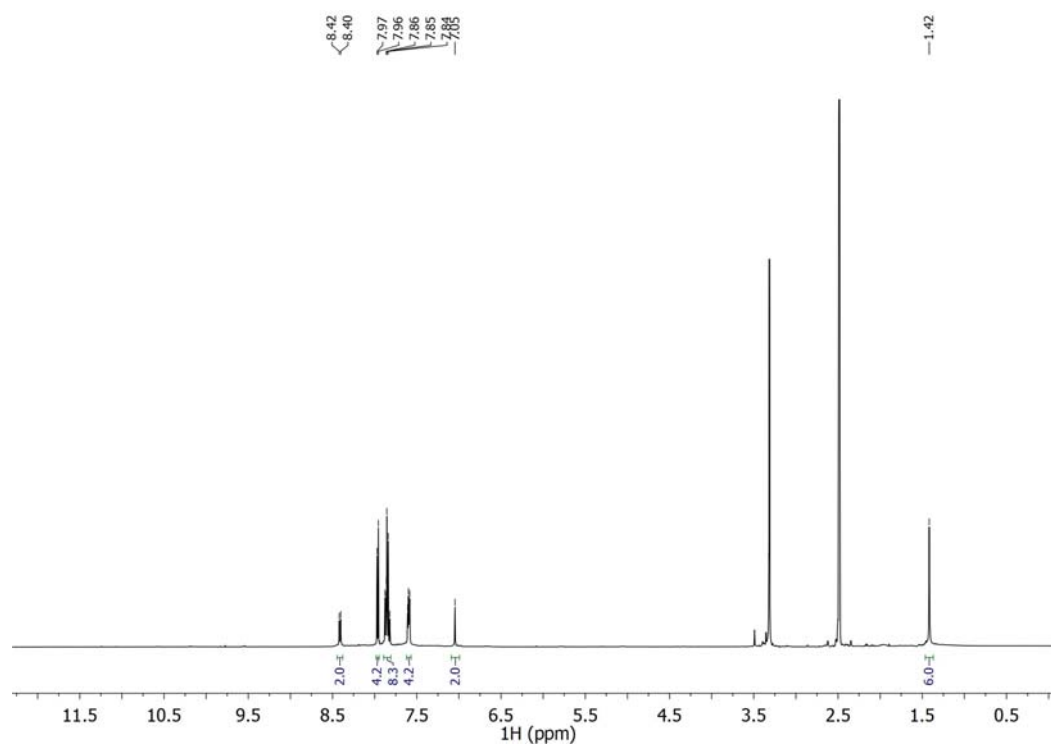


Figure S8. 1H -NMR (500 MHz, DMSO- d_6) of distyryl boronic acid BODIPY 2.

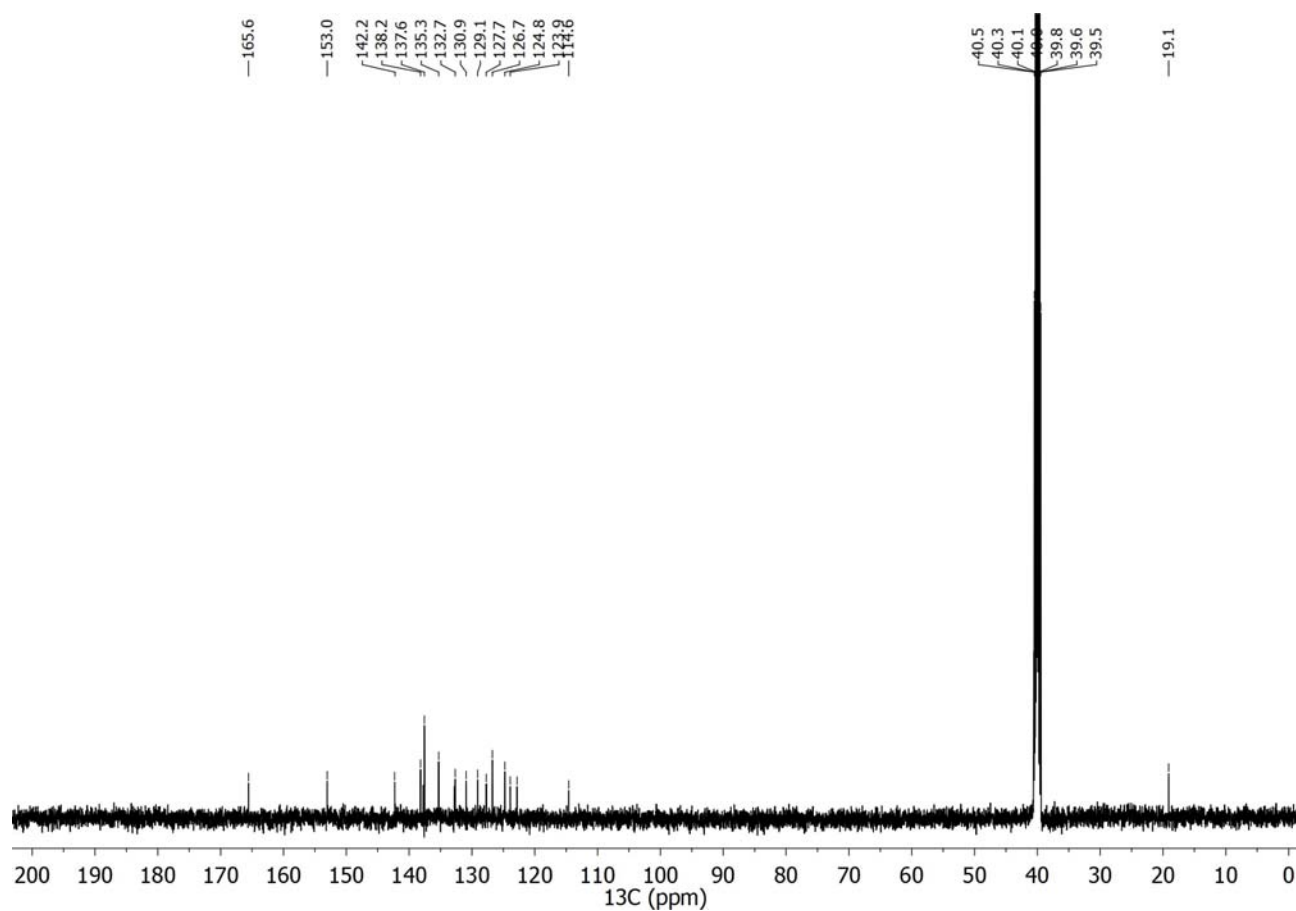


Figure S9. ^{13}C -NMR (125 MHz, DSMO-d_6) of distyryl boronic acid BODIPY 2.

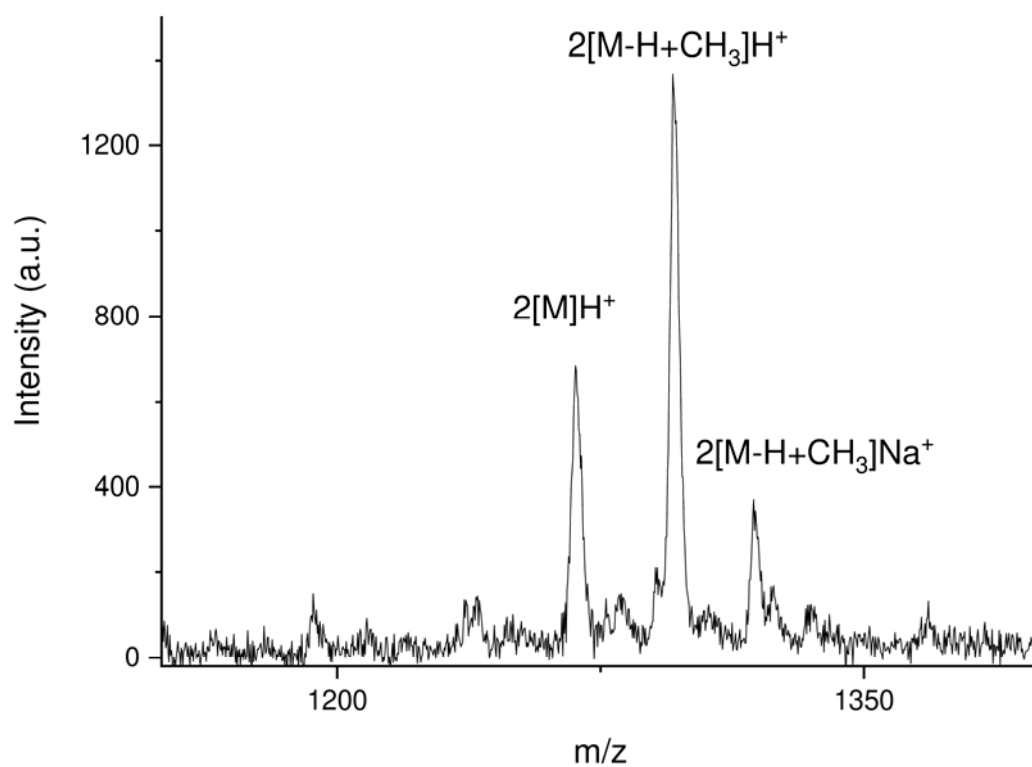


Figure S10. Mass of distyryl boronic acid BODIPY 2.

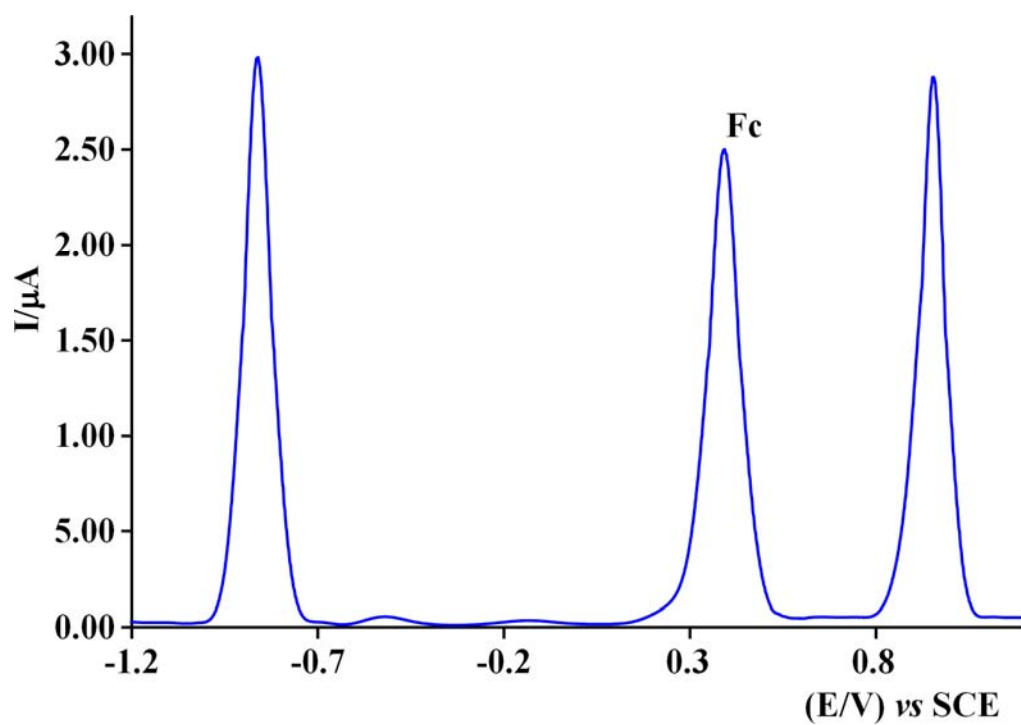


Figure S11. Differential pulse voltammograms of BODIPY 1 in acetonitrile (scan rate 20mV/s) (Fc= Ferrocene).

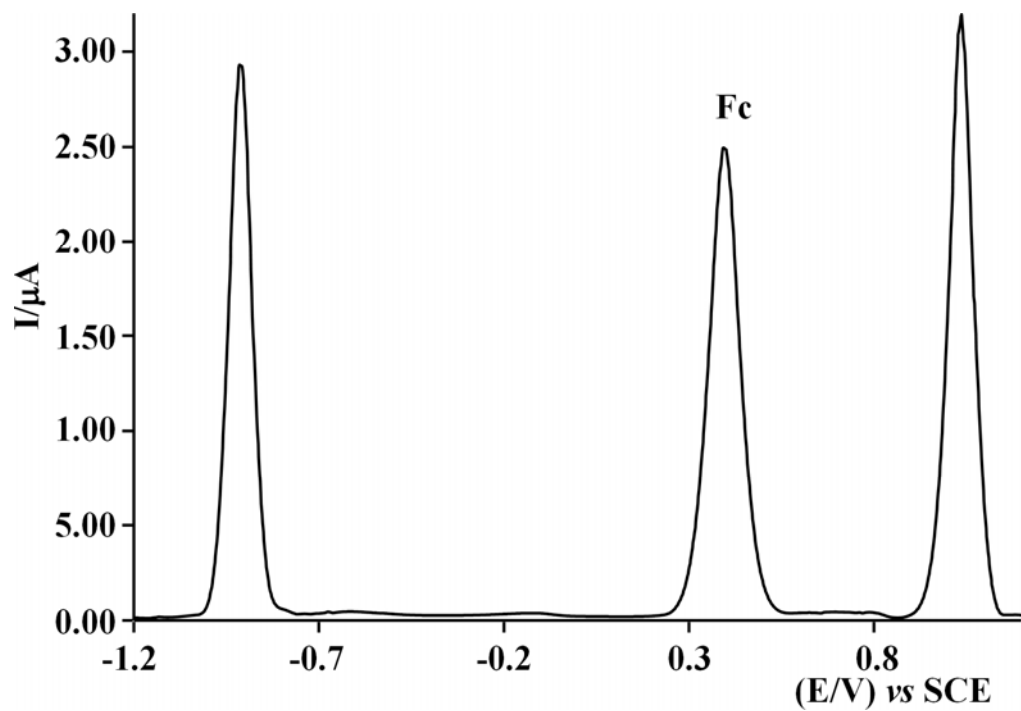


Figure S12. Differential pulse voltammograms of 1BODIPY 2 in acetonitrile (scan rate 20mV/s) (Fc= Ferrocene).

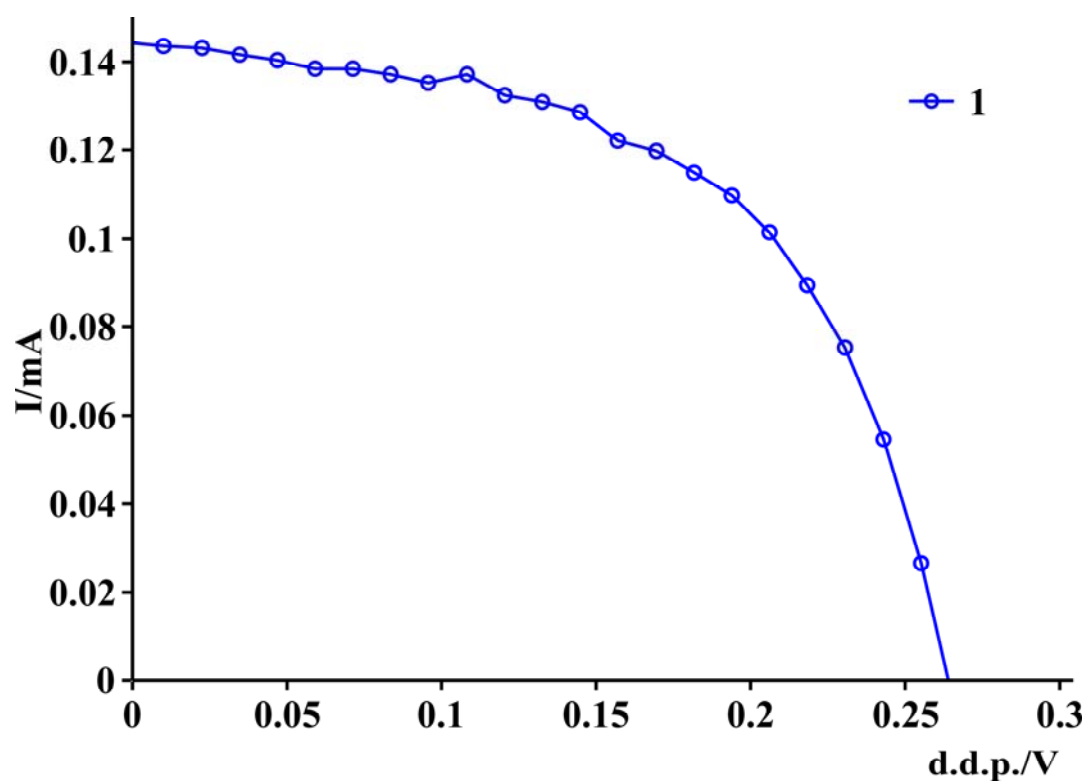


Figure S13. I-V curve of BODIPY 1.

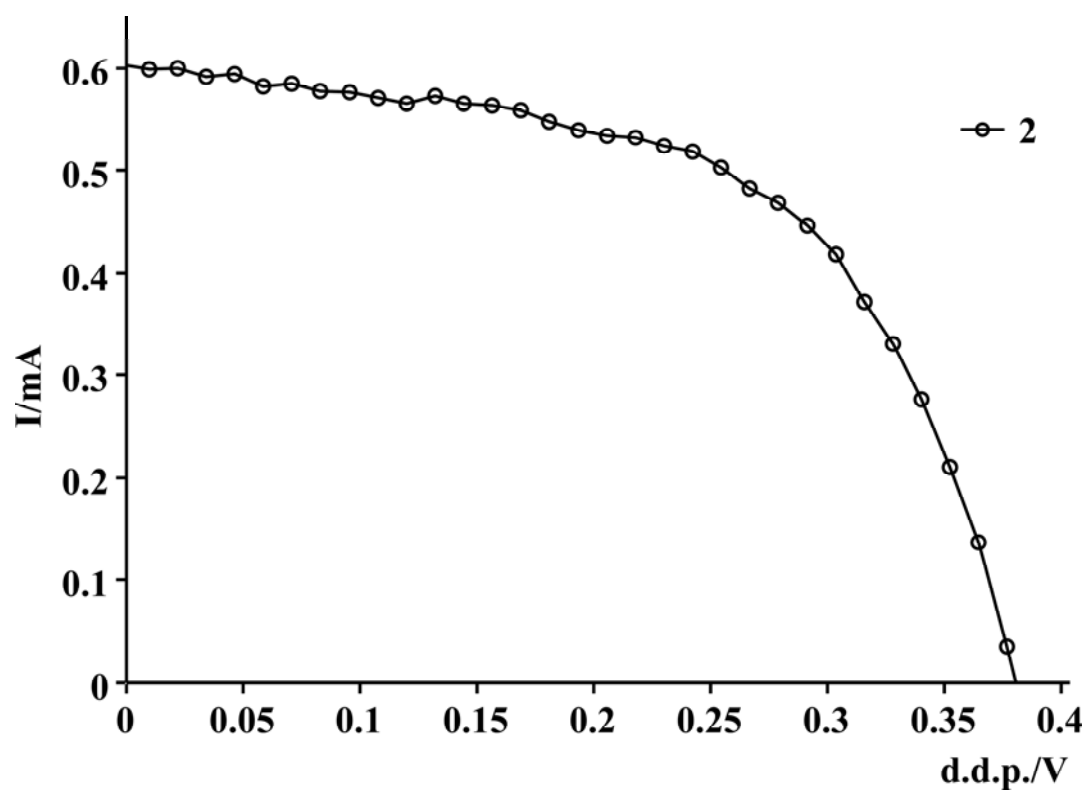


Figure S14. I-V curve of BODIPY 2.

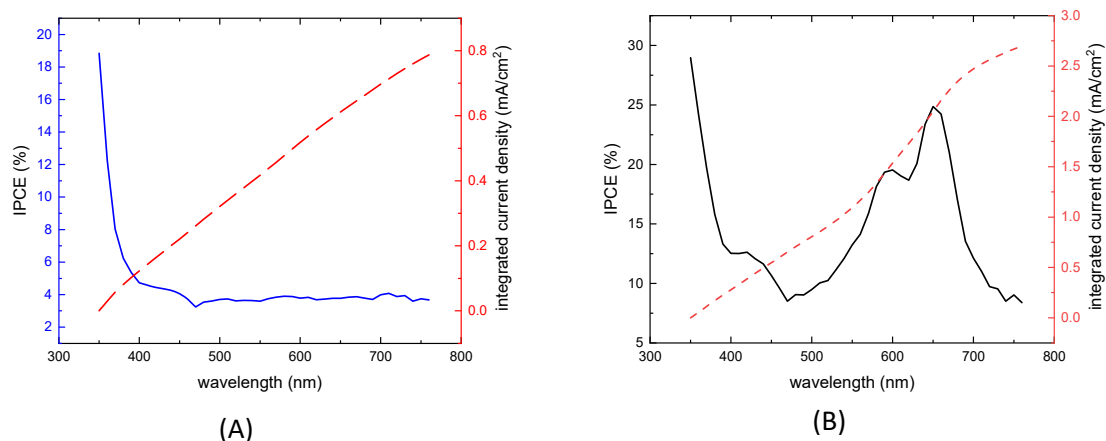


Figure S15. Incident photon-to-current conversion efficiency (IPCE) and Integrated current density for the best realized device of A) BODIPY 1 and B) BODIPY 2

Table S1. Photovoltaic performances of realized devices for BODIPY 1 and BPDIPY 2. In acetonitrile and I^-/I^{3-} as mediator.

	PCE (%)	Jsc (mA/cm ²)	Voc (V)	FF (%)
BODIPY 1	0.08	0.78	0.21	51
BODIPY 1	0.08	0.46	0.28	62
BODIPY 2	0.4	2.53	0.29	53
BODIPY 2	0.3	1.28	0.30	57

Table S2. Photovoltaic performances of realized devices for BODIPY 1 and BPDIPY 2. In water and Q/H₂Q as mediator.

	PCE (%)	Jsc (mA/cm ²)	Voc (V)	FF (%)
BODIPY 1	0.0004	0.0237	0.057	28.4
BODIPY 1	0.0001	0.018	0.014	34
BODIPY 2	0.00101	0.0194	0.128	38.5
BODIPY 2	0.00102	0.0195	0.128	38.8