Electrochemistry and Electrogenerated Chemiluminescence of *Twisted* Anthracene-Functionalized Bimesitylenes

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Supporting Information

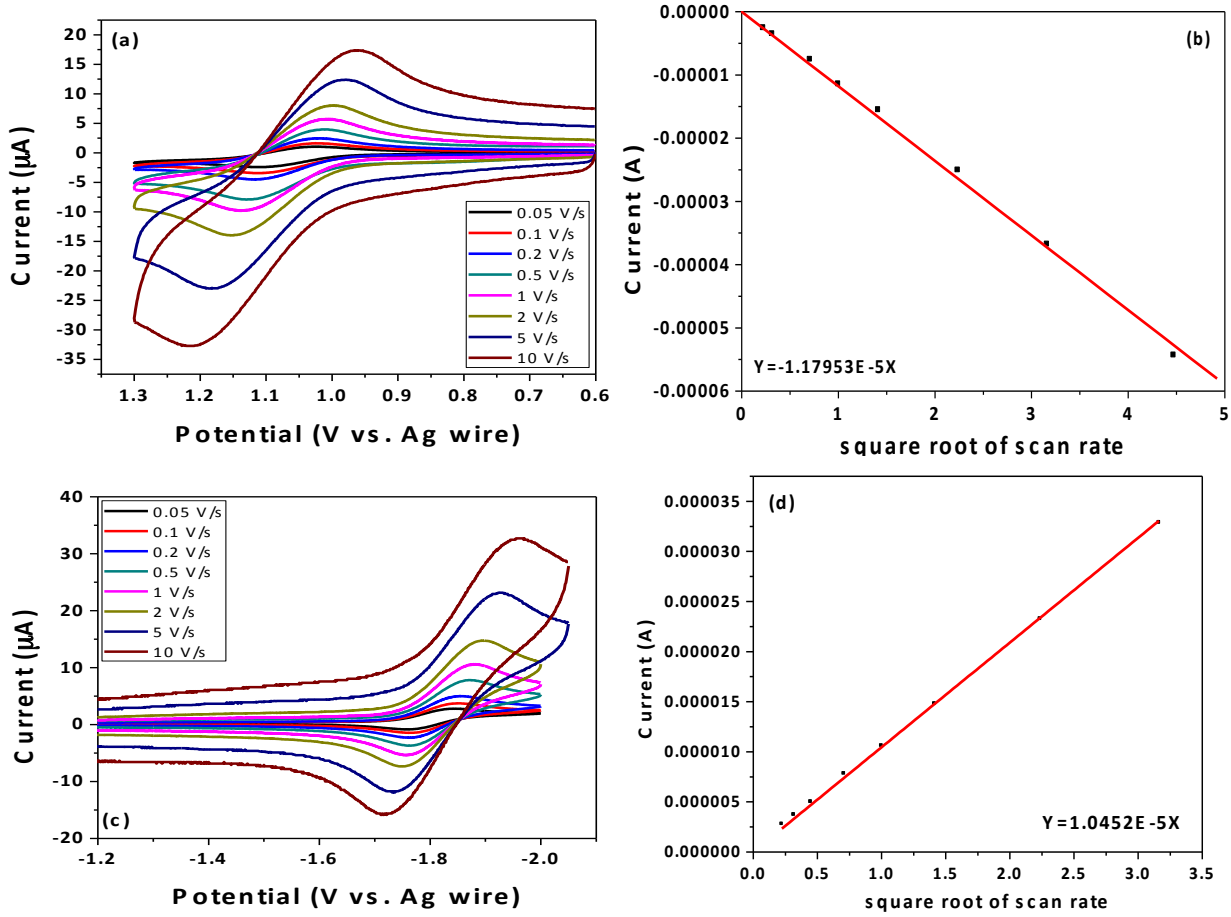

Figure S1. (a) Oxidation CV of 0.5 mM **AB1** in 3:1 Bz: MeCN at various scan rates (b) Oxidation peak current versus the square root of the scan rate ($v^{1/2}$) (c) Reduction CV of 0.5 mM

AB1 in 3:1 Bz: MeCN at various scan rates (d) Reduction peak current versus the square root of the scan rate ($v^{1/2}$)

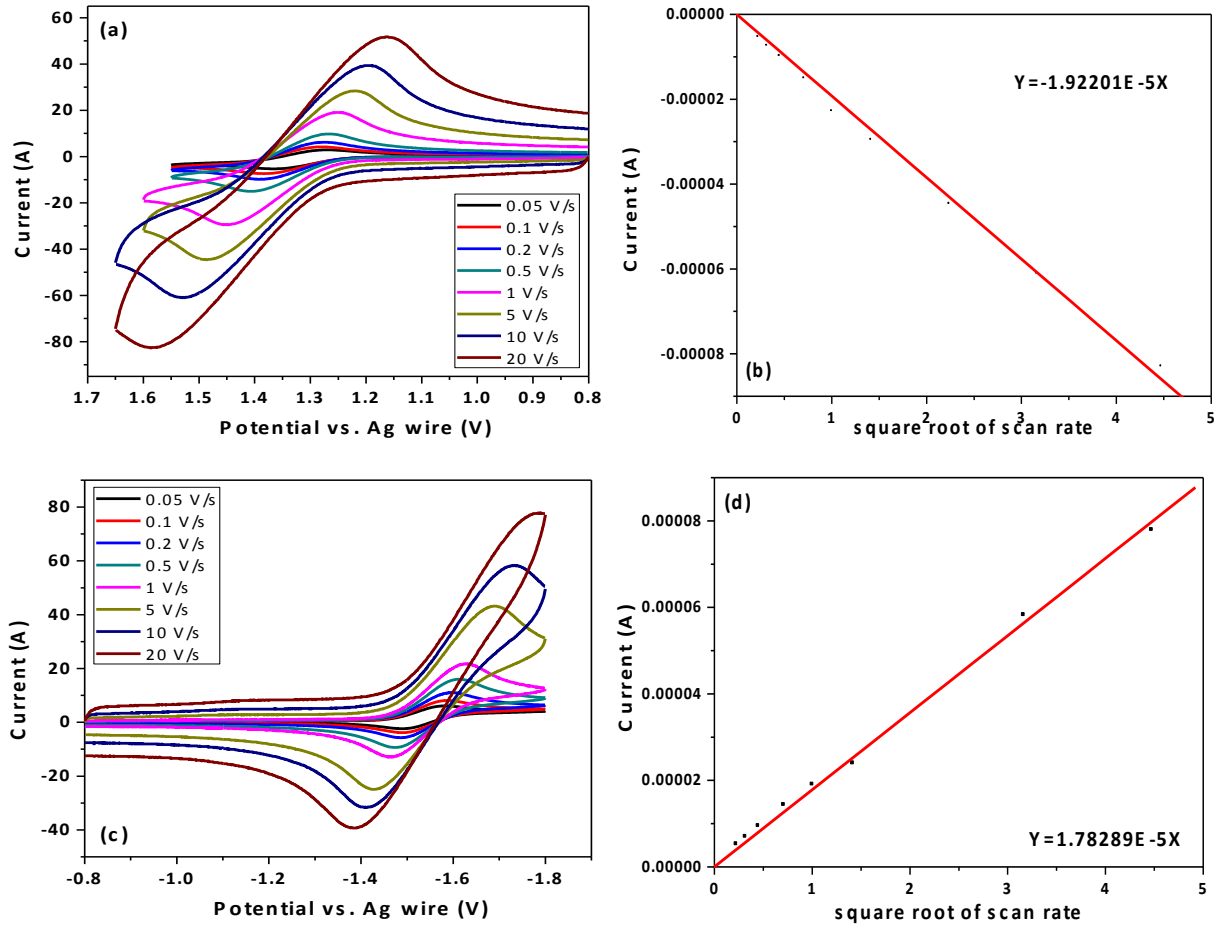

Figure S2. (a) Oxidation CV of 0.5 mM **AB3** in 3:1 Bz: MeCN at various scan rates (b) Oxidation peak current versus the square root of the scan rate ($v^{1/2}$) (c) Reduction CV of 0.5 mM **AB3** in 3:1 Bz: MeCN at various scan rates (d) Reduction peak current versus the square root of the scan rate ($v^{1/2}$)

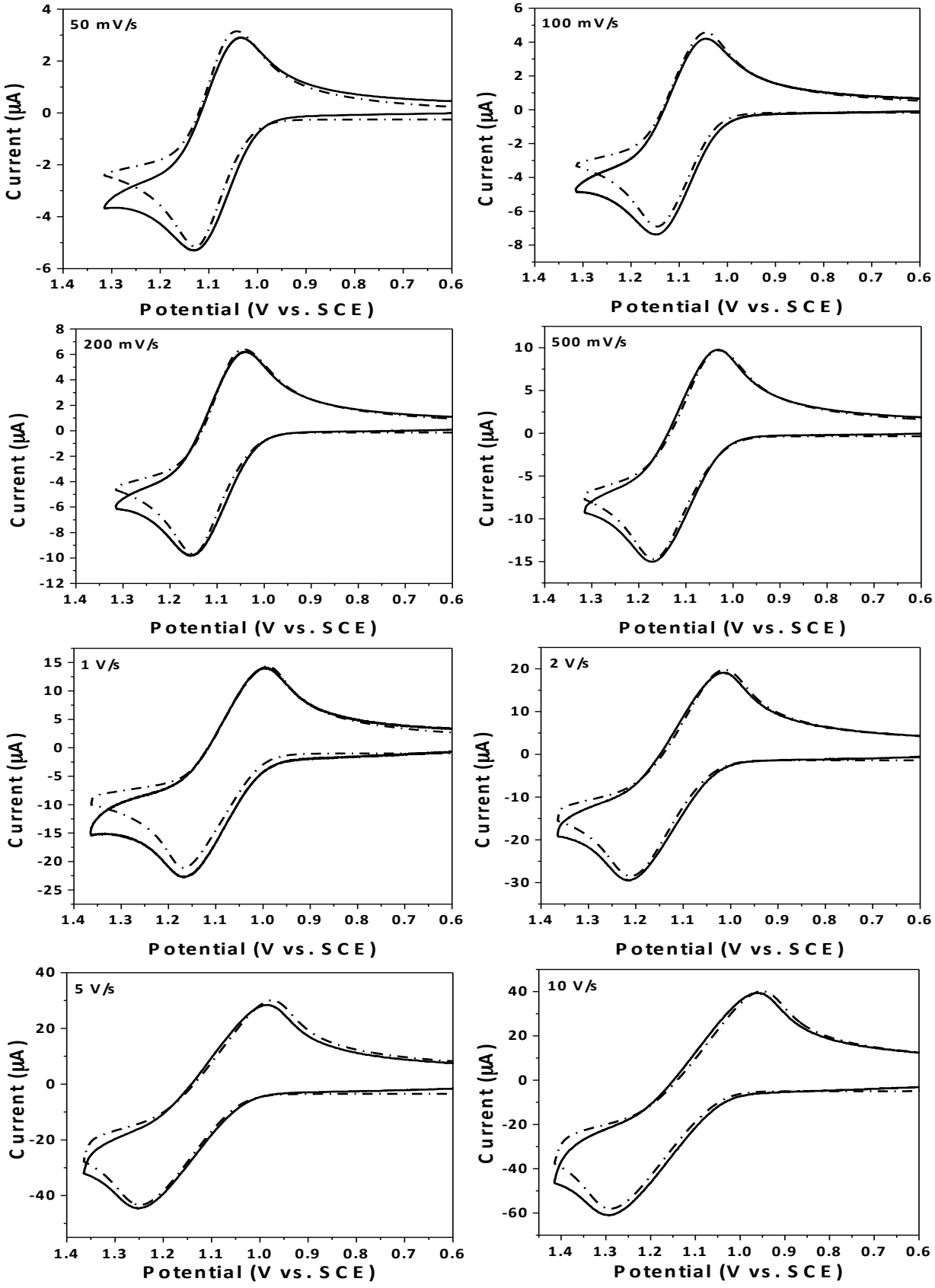
50 mV/s
100 mV/s
200 mV/s
500 mV/s
1 V/s
2 V/s
5 V/s
10 V/s
Current (µA)
Potential (V vs. SCE)

Figure S3. Experimental (solid line) and simulated (dot-dashed line) cyclic voltammograms of 0.5 mM **AB3** oxidation with scan rate from 50 mV/s to 10 V/s. Simulation mechanism is four, one electron oxidation and corrected for resistance (2470 Ω) and capacitance (700 nF): $E°_{1,ox}$ = 1.05 V, $E°_{2,ox}$ = 1.09 V, $E°_{3,ox}$ = 1.10 V, $E°_{4,ox}$ = 1.13 V vs. SCE, $k°> 10^4$ cm/s, α= 0.5.

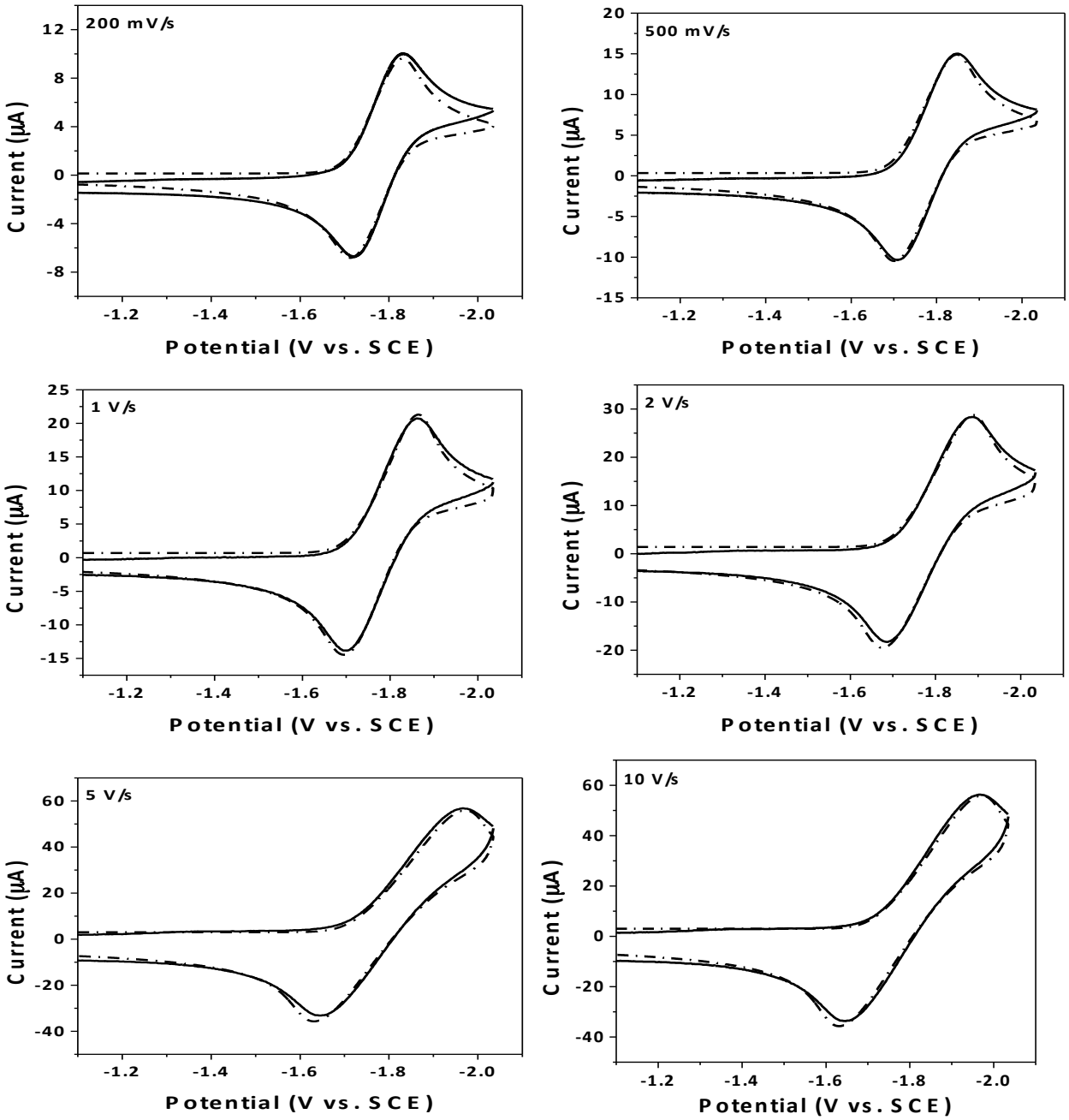

Figure S4. Experimental (solid line) and simulated (dot-dashed line) cyclic voltammograms of

0.5 mM **AB3** reduction with scan rate from 50 mV/s to 10 V/s. Simulation mechanism is four, one electron reduction and corrected for resistance (2470 Ω) and capacitance (700 nF): $E°_{1,red}$ = - 1.735 V, $E°_{2,red}$ = - 1.755 V, $E°_{3,red}$ = - 1.785 V, $E°_{4,red}$ = - 1.8 V vs. SCE, $k°$> 10^4 cm/s, α= 0.5.

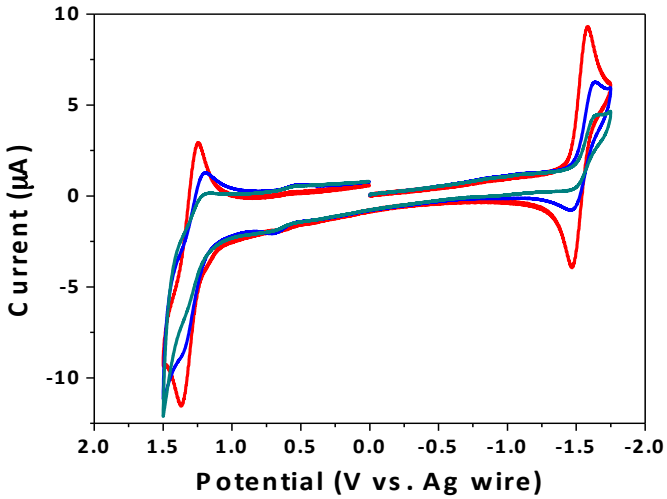

Figure S5. Cyclic voltammogram of 0.5 mM **AB3** in 3:1 benzene: MeCN with 0.1 M $TBAPF_6$ before (red line) and after ECL experiment (after 1st ECL experiment with 3 min integration: blue line and after 2nd ECL experiment with 3 min integration: green line). WE: Pt disk, CE: Pt coil, RE: Ag wire as a QRE. Scan rate was 0.5 V/s.