A previous report [1] indicated that 3,5-bis(1,1-dimethylethyl)-4-oxo-2,5-cyclohexadienylideneacetonitrile dimerized upon electroreduction. Since diagnostic criteria for various nuances of dimerization of anion radicals arising upon electroreduction of substrates are available in literature [2], pulsed voltammetric study of 3,5-bis(1,1-dimethylethyl)-4-oxo-2,5-cyclohexadienylideneacetonitrile was undertaken at platinum electrode in acetonitrile containing sodium perchlorate. Figure 1 shows the reduction peak centered about -1.1 V for differential pulsed voltammetric reduction of 3,5-bis(1,1-dimethylethyl)-4-oxo-2,5-cyclohexadienylideneacetonitrile.

The main peak in Figure 1 was simulated as per criteria in literature [2]. However, the full width at half peak height of the experimental voltammogram (200 mV, Figures 1) compared unfavorably with full width at half peak height of the corresponding simulated voltammogram (not shown) presumably because simulation did not feature resistance of the background electrolyte.

References


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