Appendix

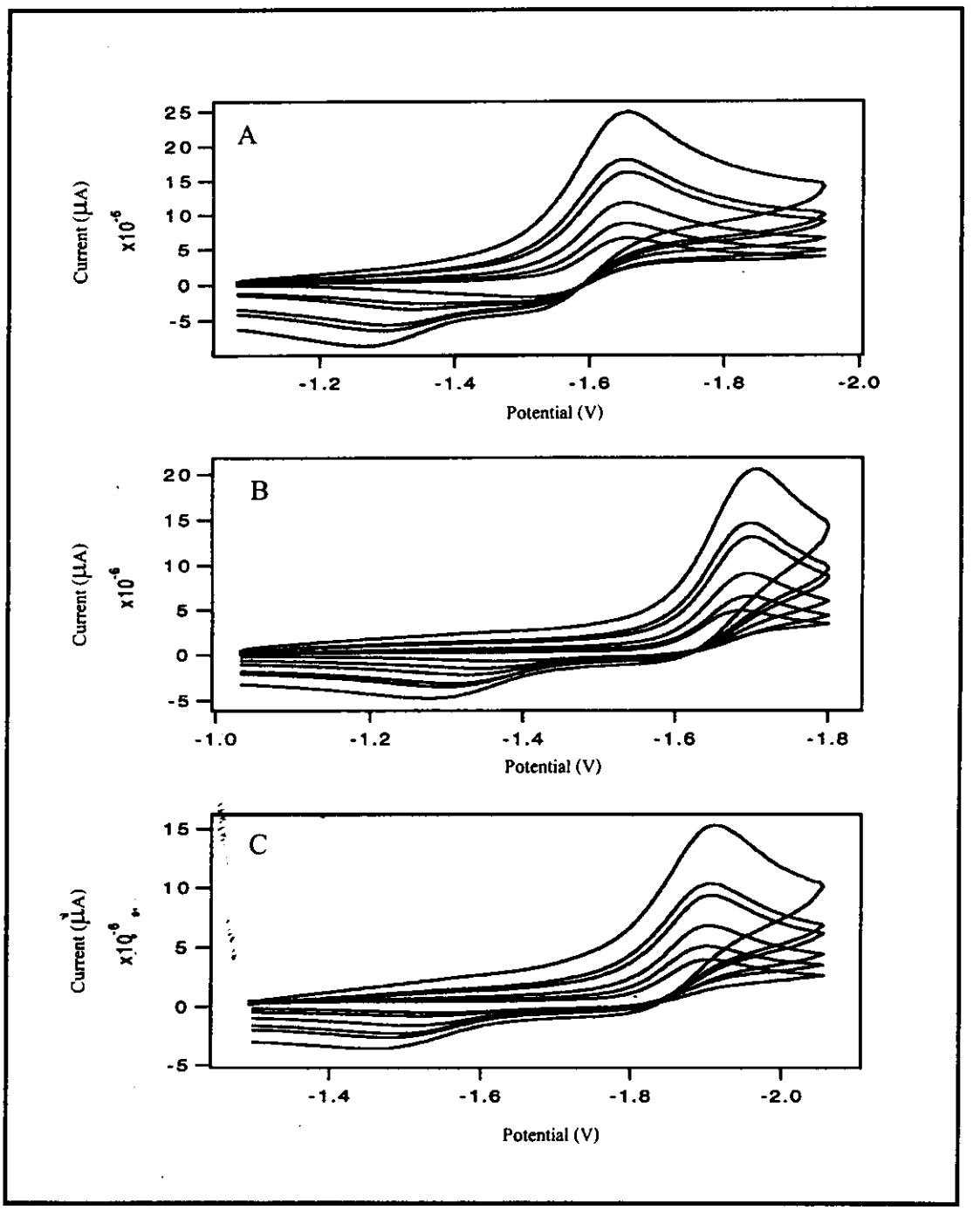

Figure 70 Cyclic voltammograms of azpy (A), dmazpy (B) and deazpy (C) with various scan rates (50-1000 mV/s) in reduction range.

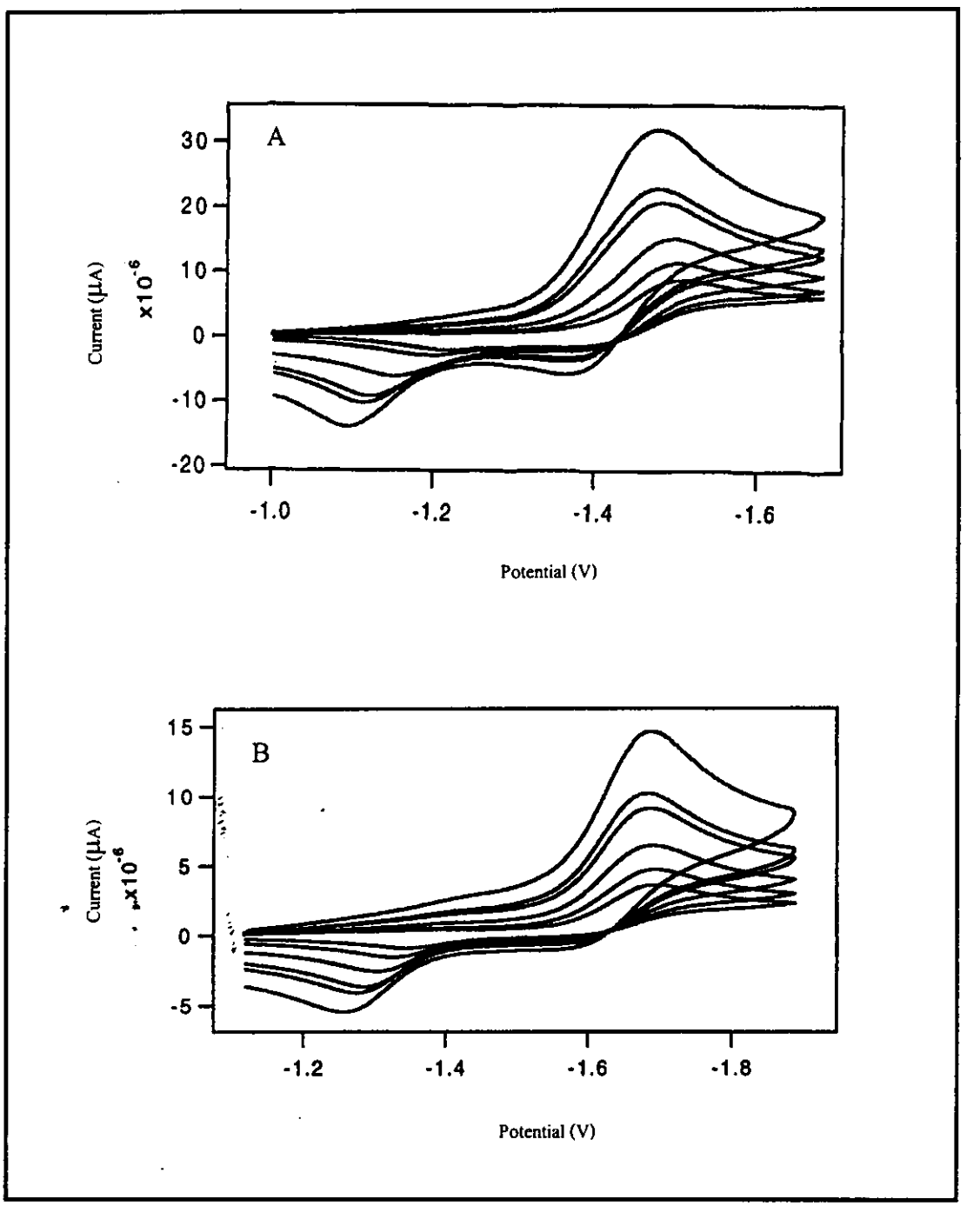

Figure 71 Cyclic voltammogram of azpym (A) and deazpym (C) with various scan rates (50-1000 mV/s) in reduction range.

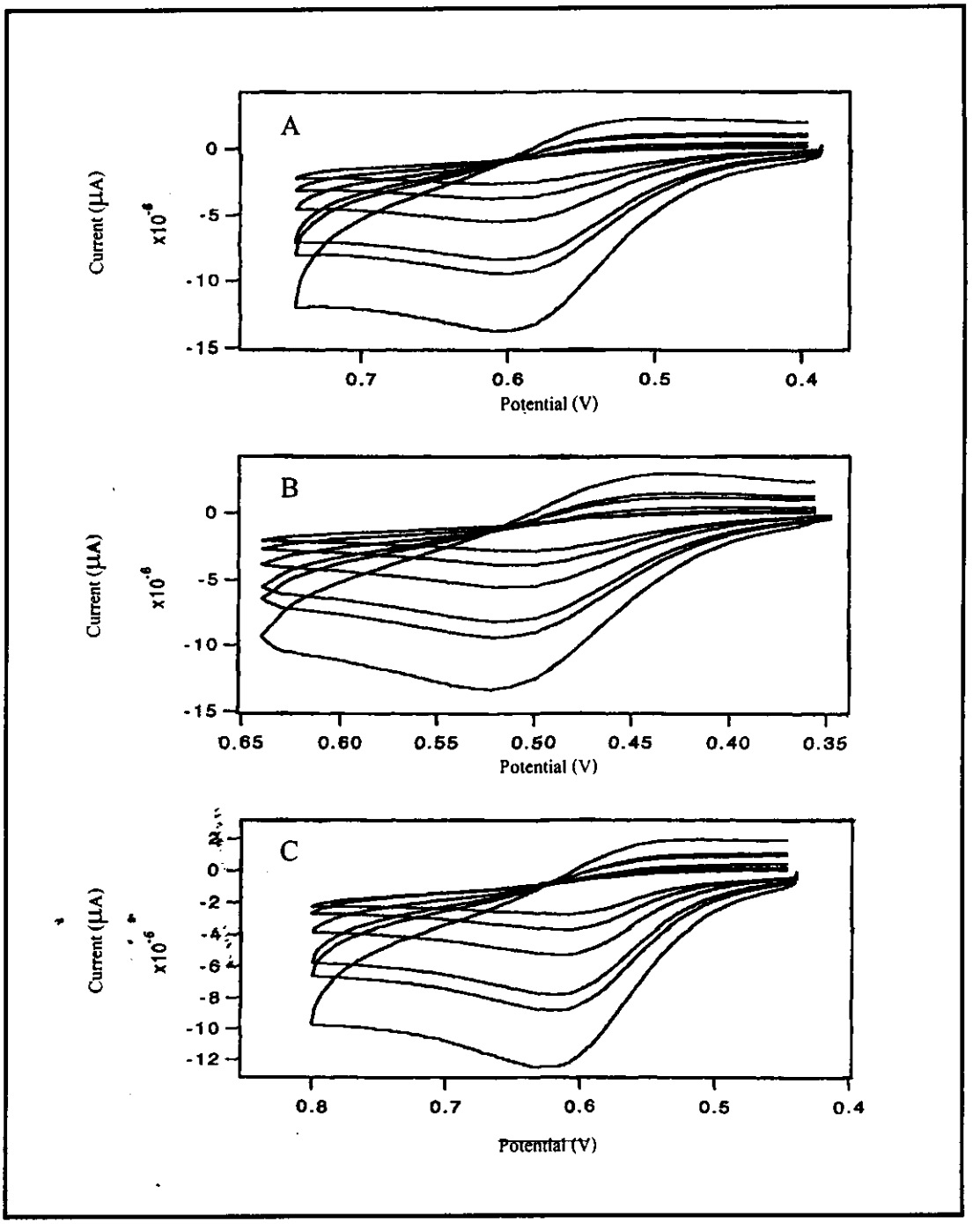

Figure 72 Cyclic voltammograms of dmazpy (A), deazpy (B) and deazpym (C) - in the range +0.45 - +0.8 V with variousscan rates 50-1000 mV/s.

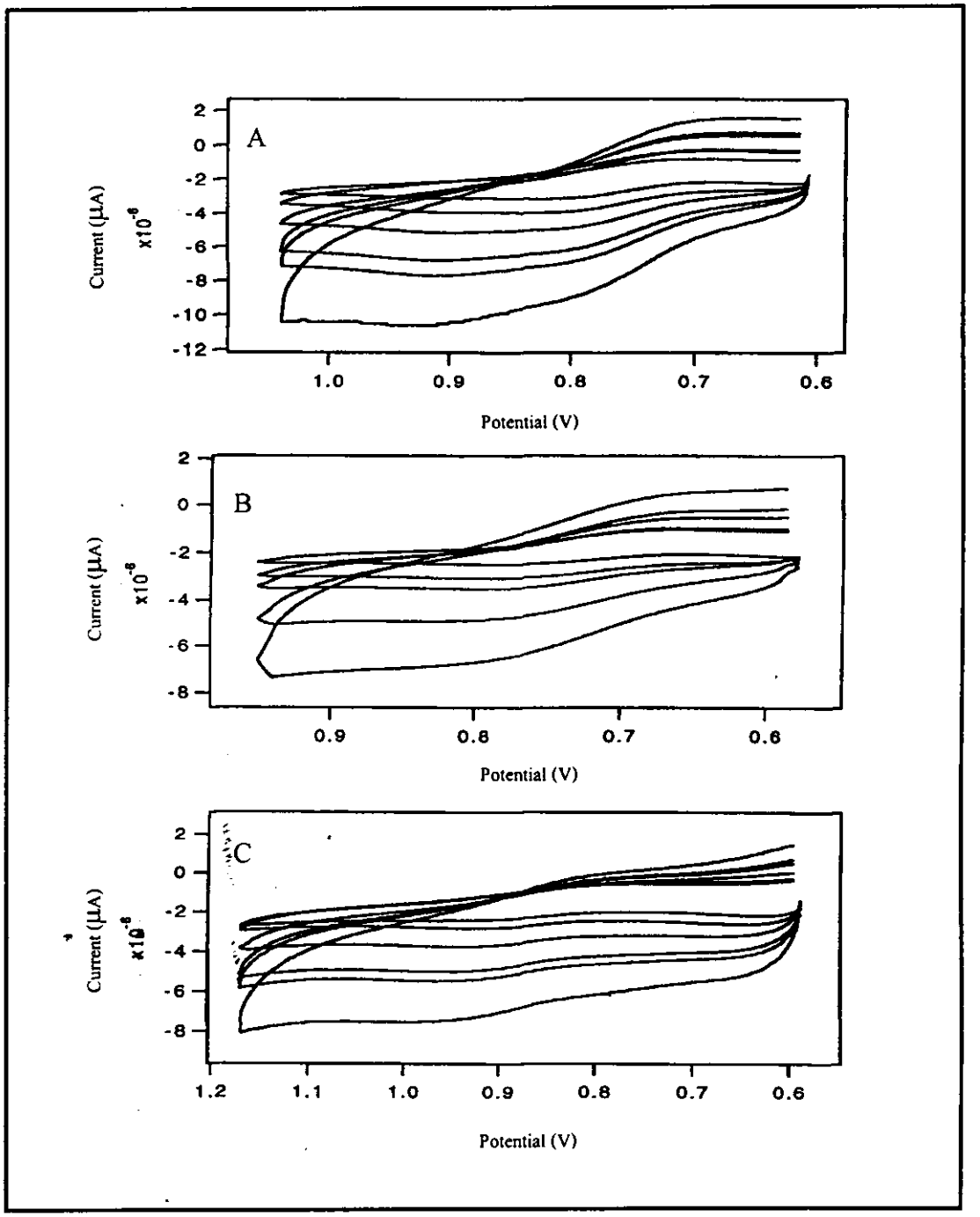

Figure 73 Cyclic voltammogram of dmazpy (A), deazpy (B) and deazpym (C) - in the range +0.6 - +1.5 V with various scan rates 50-1000 mV/s.

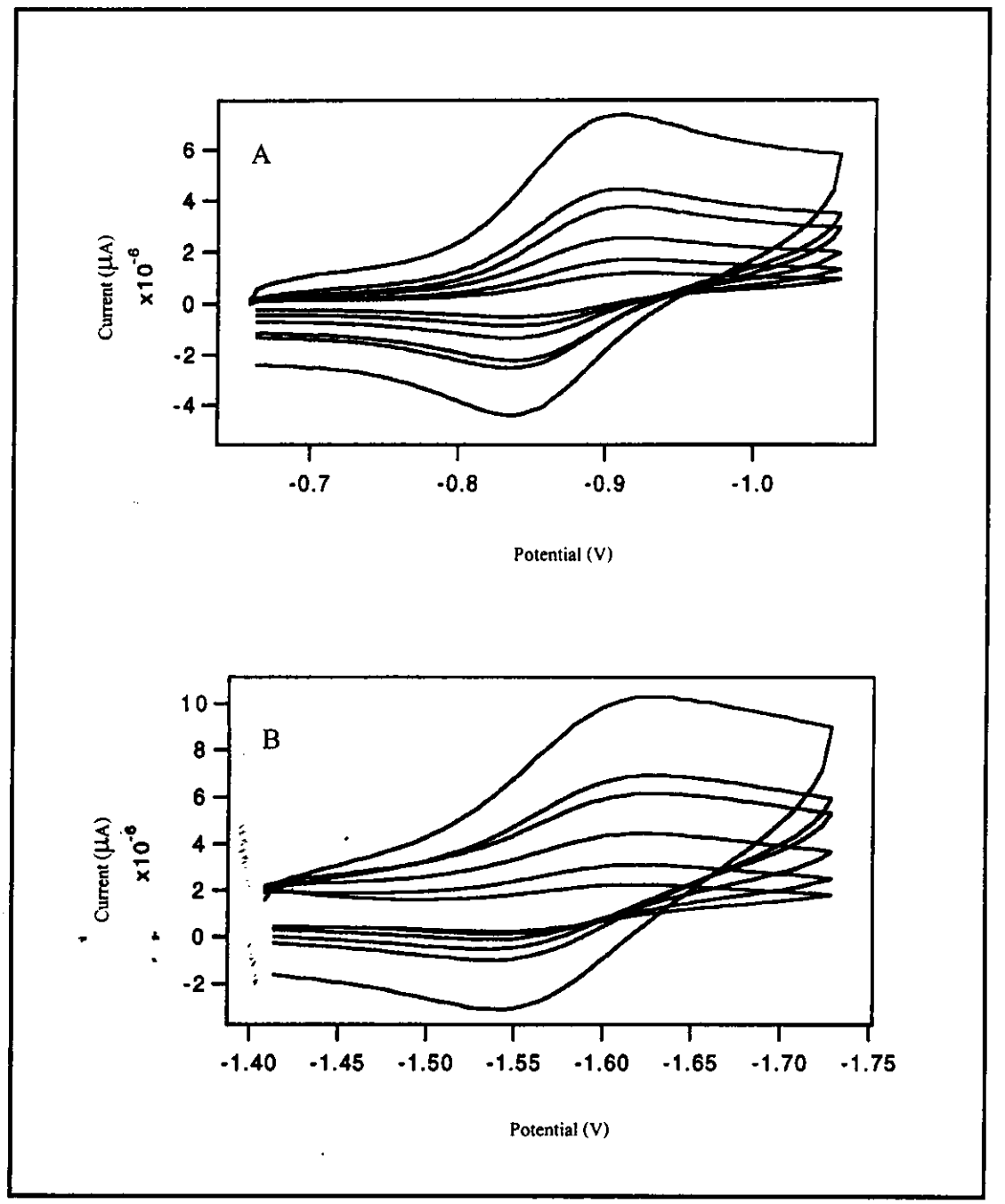

Figure 74 Cyclic voltammogram of $[Ru(phen)_2azpy](BF_4)_2$ - couple I (A) and II (B) with various scan rates 50-1000 mV/s in reduction range.

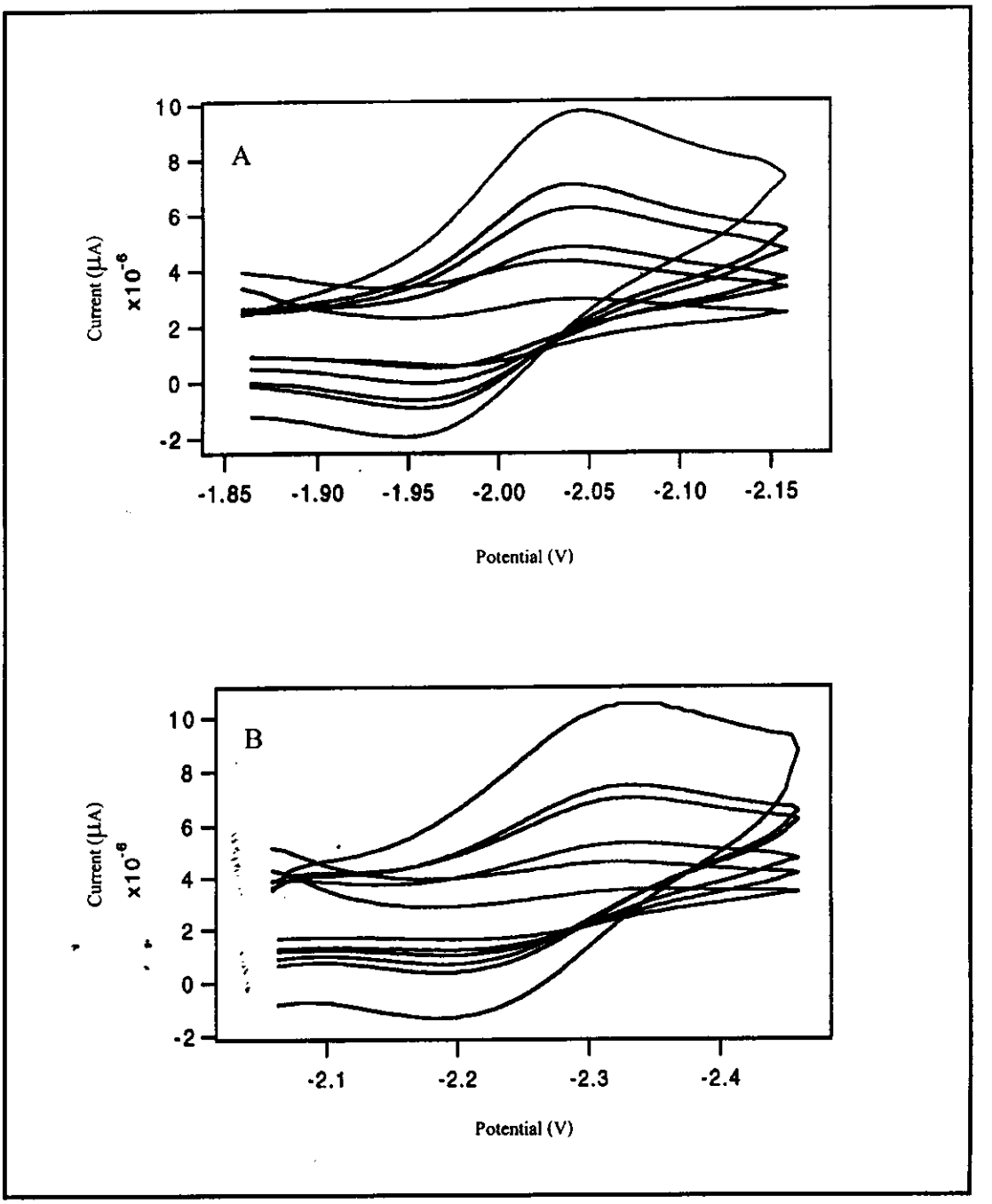

Figure 75 Cyclic voltammogram of $[Ru(phen)_2azpy](BF_4)_2$ - couple III (A) and IV (B) with various scan rates 50-1000 mV/s in reduction range.

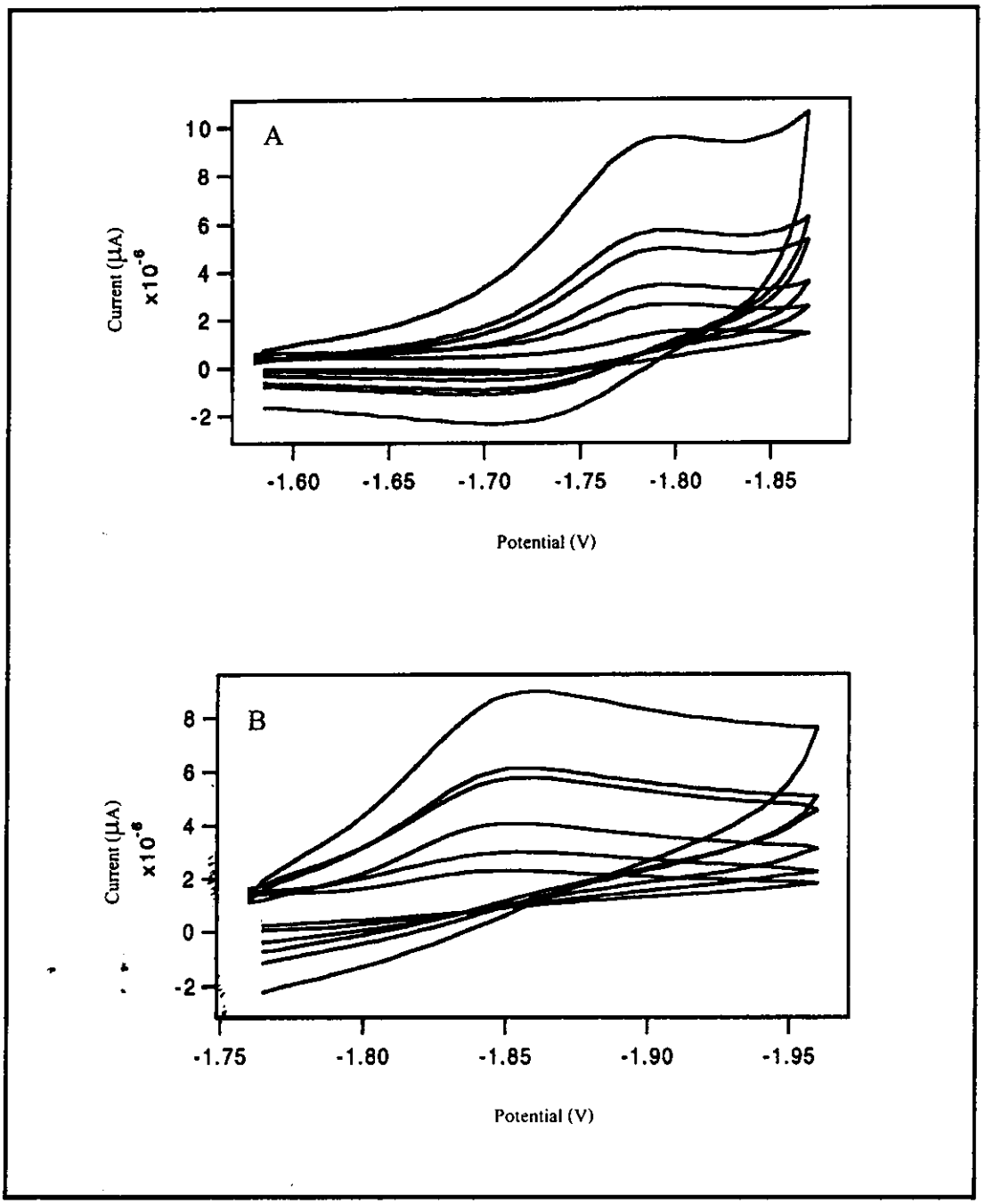

Figure 76 Cyclic voltammogram of $[Ru(phen)_3](BF_4)_2$ - couple I (A) and peak II (B)

with variousscan rates 50-1000 mV/s in reduction range .

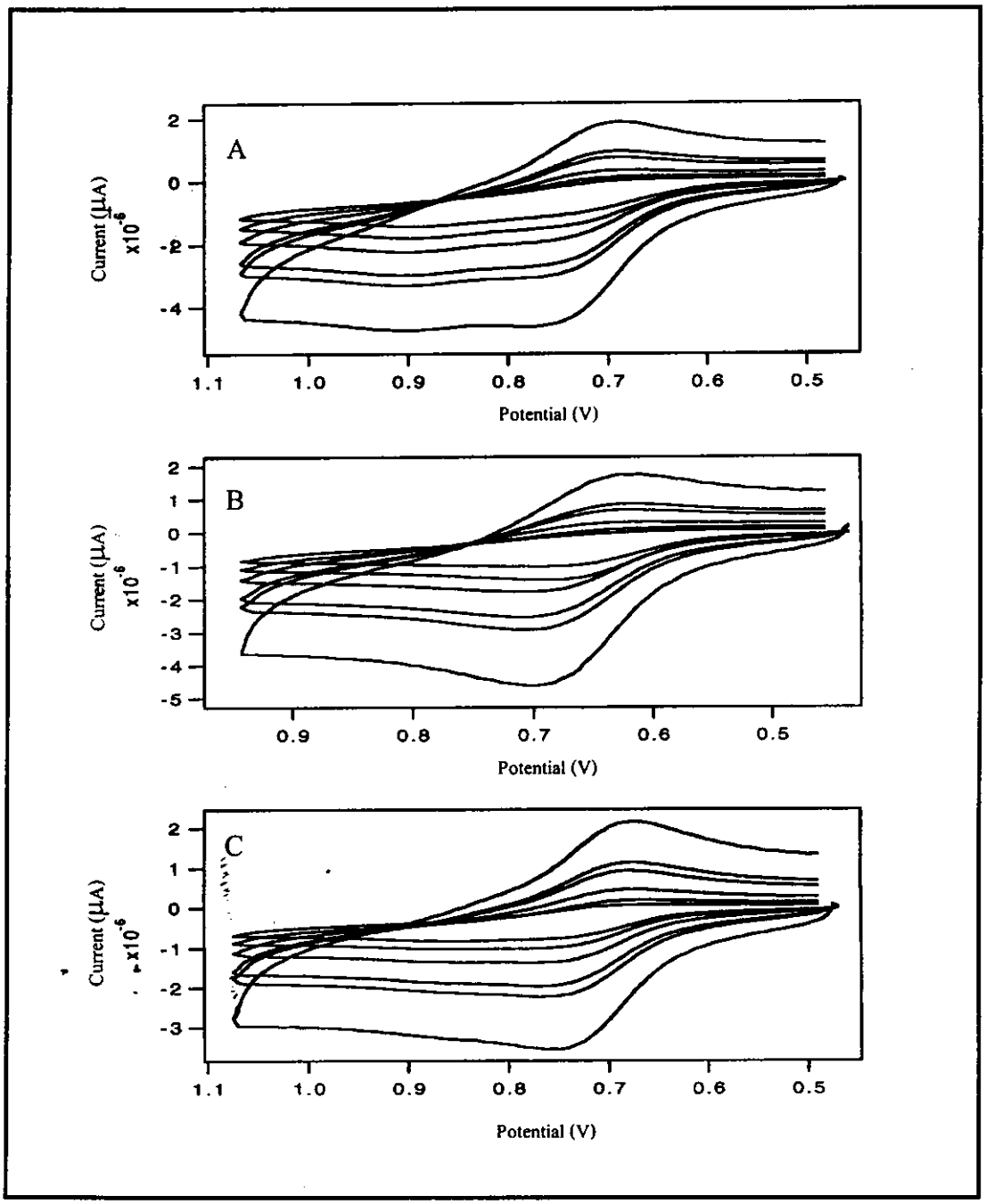

Figure 77 Cyclic voltammogram of $[Ru(phen)_2L](PF_6)_2$ - substituent couple, where L = dmazpy (A), deazpy (B) and deazpym (C), with various scan rates 50-1000 mV/s in oxidation range

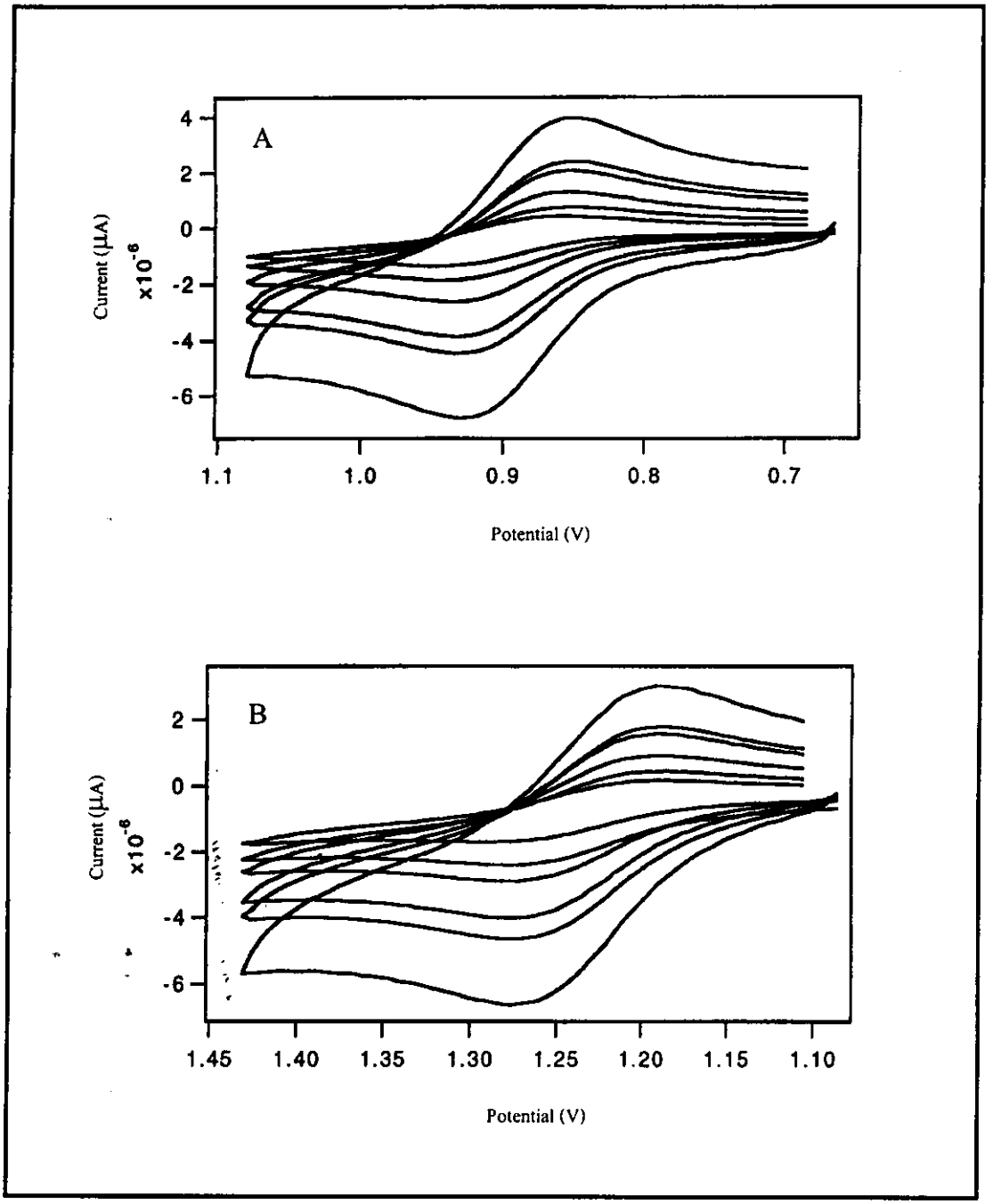

Figure 78 Cyclic voltammograsm of $[Ru(phen)_2L](BF_6)_2$ - couple Ru(II/III), where L = phen (A) and azpy (B) ligands, with various scan rates 50-1000 mV/s in oxidation range

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