ABSTRACT

FeTAPc-single walled carbon nanotube (SWCNT) dendrimers are employed as glassy carbon electrode modifiers for the electrocatalytic oxidations of amitrole and diuron. The catalytic rate constants were 4.55×10^3 M^{-1} s^{-1} and 1.79×10^4 M^{-1} s^{-1} for amitrole and diuron, respectively using chronoamperometric studies. The diffusion constants were found to be 1.52×10^{-4} cm^2 s^{-1} and 1.91×10^{-4} cm^2 s^{-1} for diuron and amitrole, respectively. The linear concentration range for both were from 5.0×10^{-5} to 1.0×10^{-4} M and sensitivities of 0.6603 μA/μM and 0.6641 μA/μM for amitrole and diuron, with corresponding limits of detection of 2.15×10^{-7} and 2.6×10^{-7} M using the 3δ notation, respectively.