

The strategy used in this study depends on serially interrogating sensors to study NBE stability through cyclic and square wave voltammetry in media with varied compositions to independently investigate signal deterioration causes. Cyclic voltammetry is used to monitor variations in oxygen reduction and capacitive currents, which can indicate the loss or rearrangement of blocking monolayer elements on the electrode surface. Square-wave voltammetry is used to monitor changes in electron transfer with high sensitivity. This technique specifically focuses on electron transfer resulting from the loss of reporter-modified oligos from the electrode surface.