

Real-Time Electrochemical Monitoring of Nitroaromatic Explosive in Marine Environments

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Abstract: This presentation will describe the design, optimization, characterization, and testing of a remote voltammetric sensor for monitoring trace levels of TNT and related nitroaromatic explosives. The sensor is based on rapid square-wave voltammetry at a submersible carbon-fiber electrode assembly. It offers highly sensitive and selective direct repetitive measurements of low (ppb) levels of TNT at short (sec) time intervals. Factors influencing the performance will be discussed, along with applications to various marine environments.