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ABSTRACT BOOK



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INNOVATIVE APPROACH FOR WIRELESS ELECTROCHEMICAL REMEDIATION OF
CYANOTOXINS BASED ON BIPOLAR ELECTROCHEMISTRY

1. Monitoring Chemicals for a Safer Environment

#P1000

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Abstract

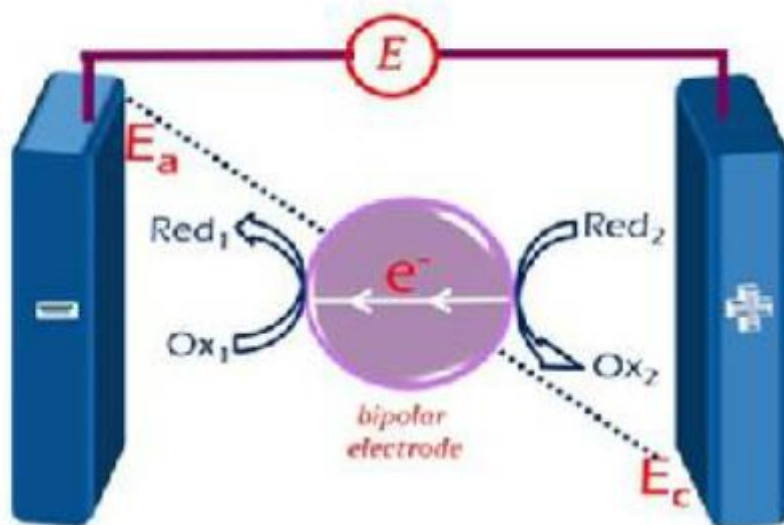
Bipolar electrochemistry (BPE) is an unconventional method to address conducting and semiconducting particles in a wireless manner¹. Unique features of BPE when compared to conventional electrochemical setup where electrochemical reactions take place at the surface of two different electrodes both connected to a potentiostat, allow us to address bipolar electrode electrochemically in a wireless fashion because there is no direct connection with the power supply (see Figure 1.). Herein, we used the concept of BPE for the electrochemical remediation of cyanotoxins following the formed products by HPLC-MS/MS. Due to the high toxicity of cyanotoxins presenting potential global health problem, highly efficient remediation methods have been under development in recent years, with advanced oxidation processes focused on mineralization as major target. Electrochemical remediation arose as an interesting alternative with few reported protocols to date.

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References

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Figure 1. Schematic illustration of the principle



Keyword 1

environmental protection

Keyword 2

environmental analytical chemistry

Keyword 3

cyanotoxins

Keyword 4

electrochemistry