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Electrochemical Oxidation of Pesticide Thiamethoxam on Boron Doped Diamond Anode:
Role of Operating Parameters and Matrix Effect

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Highlights

- Commercial formulation of pesticide thiamethoxam is electrooxidized on BDD anode
- BDD is more efficient than platinum or stainless steel anodes with Na₂SO₄ electrolyte
- The water composition (pH, presence of organic matter and anions) affects degradation
- Actual matrices, especially treated wastewater, are detrimental to the degradation
- In addition to TMX degradation, mineralization to CO₂ and water also occurs

Abstract

The electrochemical oxidation of the neonicotinoid pesticide thiamethoxam (TMX) on a boron-doped diamond (BDD) anode was investigated. The effect of several operating

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