

APPLICATION OF POTASSIUM FERRATE(VI) FOR OXIDATION OF SELECTED POLLUTANTS IN AQUATIC ENVIRONMENT – SHORT REVIEW

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Abstract

The paper provides comprehensive information on the recent progress of the use of potassium ferrate(VI) (K_2FeO_4) for the removal of selected pollutants from water and wastewater. K_2FeO_4 provides great potential for diverse environmental applications without harm to the natural environment. Therefore K_2FeO_4 was used in removal of cyanides from gold ore purification processes, degradation of dyes and organic compounds in wastewater and algae removal in the water treatment process. The quoted research results indicate that K_2FeO_4 due to its strong oxidizing and coagulating properties, could be an alternative to the use of Advanced Oxidation Processes (AOPs) or be an additional option to conventional methods of water and wastewater treatment. As a result of using K_2FeO_4 , the emerge intermediates of the impurities decomposition are nontoxic or show less toxicity than the initial substrates. The use of K_2FeO_4 is also associated with certain limitations of technical and technological nature, which requires further research in order to use its high efficiency in the degradation of various types of contamination on a technical scale.

Keywords: Potassium ferrate(VI); K_2FeO_4 ; Cyanides; Organic compounds; Dyes; Algae.