

Abstract

Today, different pollutants are transferred into the soil due to various industrial, agricultural and human activities. Among these pollutants, polycyclic aromatic hydrocarbons are such an important for environment. Extraction of pollutants in some soils, especially in fine soils, has low efficiency, so new technologies including electrokinetic remediation have to develop to remediate such soils. In addition, as electrokinetic remediation is basically for ionic pollutant and PAHs are non-ionic and non-polar, so for remediate these pollutants, modified electrokinetic should be used. In this research Naphthalene (2 benzene rings), Anthracene (3 benzene rings) and Benzo(a)Pyrene (5 benzene rings) removal by non-uniform AC field with different frequencies is assessed. Results showed that the maximum removal for Naphthalene accrued at 1 Hz (30%), for Anthracene at 1 Hz and 1 MHz (10%) and for Benzo(a)Pyrene at 1 MHz (47%).

Keywords: PAHs, Alternating current, Non-uniform electrical field, soil remediation



University of Zabol
Graduate school
Faculty of Water and Soil
Department of Water Engineering

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**Assessment of alternating electrical current
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saturated soil.**

Supervisors

Dr. S.M. Tabatabaey

Dr. M. Sanchooli

Advisor

Dr. M. Nejati

By

M.R.Jargeh

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