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## **DECONTAMINATION OF POLLUTED SOILS WITH HEAVY METALS BY ELECTROKINETIC METHODS (I)**

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### **Abstract**

In this study has been followed the effects of an electric field application on the migration capacity and the inter-phases distribution of some heavy metals in soils was investigated from polluted soils decontamination point of view. It was found that the electric field modified both physic-chemical properties of soils (pH,  $E_n$ , mineral and colloidal phase stability) and the mobility of ionic species from soil. In these conditions, heavy metals redistribution between soil solution, solid phases (metals fixed by mineral particles, or complexes with organic mater) and colloidal phases took place. The direct consequences of electric field action on the migration are reflected by the relative increase of them mobility (being determined a relative accumulation tendency in zones around the electrodes), or a local immobilization (by local fixation as oxy-hydroxides, carbonates or sulphates insoluble forms), depending on each metal chemistry. These results recommend the application of electrokinetic methods for the decontamination soils polluted with heavy metals.

*Keywords:* heavy metals, polluted soils, electrokinetic decontamination

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