

### عنوان مقاله:

A New Platform Based on the FerrOr Nanoparticles, Ligand and Ionic Liquid: Application to the Sensitive Electrochemical Determination of the Lead Ion in Water and Fish Samples

محل انتشار:

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#### خلاصه مقاله:

In the present paper, the use of a modified electrochemical sensor for the determination of Pbr+ is described. The sensor is based on a carbon paste electrode modified with Nitro benzoil diphenyl methylene phosphorane, N-octylpyridiumhexafluorophosphate (OPPF<sup>F</sup>) and Fe<sup>m</sup>O<sup>F</sup> nanoparticles. In this work, the oxidation of lead at the modified electrodes were investigated by square wave voltammetry (SWV). The structure of the nanoparticle was investigated by X-ray Powder Diffraction (XRD), Scanning electron microscopy (SEM) and Energy dispersive X-ray spectrum. The effective parameters on response of the electrode such as effect of the electrode composition, pH of solution, deposition potential and accumulation time and also instrumental SWV method were studied. In optimum conditions, the Anodic stripping voltammetry (ASV) was used for the determination of Pbr+. It is found that the calibration graphs of Pbr+ are linear in the concentration ranges from 1.ro–1ro nM. The detection limit of the method .was o.9 nM. The sensor was applied to validate its capability for the analysis of Pbr+ in the water and fish samples

# کلمات کلیدی:

Voltammetric determination, Lead ion, Modified electrode, anodic stripping voltammetry, FerrOr nanoparticle, Ionic Liquid

## لینک ثابت مقاله در پایگاه سیویلیکا:

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