

## **Applications in pharmaceuticals and pollutants analysis of Nano-structure materials**

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The Nano-structure materials were used as a modifier and for pollutants removal. The work aimed to synthesis, characterize and applying a Nano-materials in modification of carbon paste electrode and removal of pollutants. Carbon paste electrodes (CPEs) which consists of a mixture carbon (graphite) with organic liquid, was used as a working electrode for selective and sensitive determination of some pharmaceuticals and pollutants. To enhance the sensitivity, the carbon paste electrode

was modified using different additives such as fatty acids, nanostructure materials and others were added to the paste. This specific area of applied analytical chemistry offers extraordinary wide employment of CPEs and MCPEs using nanomaterials to determine drugs, pollutants and anions. On using Volta metric procedures, different compounds accumulated and adsorbed on the electrode surface and reduced or oxidized giving a peak current corresponds the concentration of investigated analytic. The methods were applied to determine pharmaceuticals and pollutants indifferent media, a detection limit of about  $1 \times 10^{-10}$ M was achieved in some cases. The prepared Nano materials were added to media containing some pollutants and good results were obtained in which up to 80 % of some pollutant was removed.

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