

عنوان مقاله:

Electrochemical fabrication of polypyrrole nanofibers and their characterization

محل انتشار:

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نویسنده:

خلاصه مقاله:

Polypyrrole (PPy) nanofibers have been fabricated on glassy carbon electrode (GCE) using electrochemical technique. Electropolymerization of pyrrole (Py) for the fabrication of PPy nanofibers was occurred on GCE by applying a fixed potential of about 0.85 V for 120 sec in a mild basic solution containing sodium carbonate and sodium perchlorate. In the mild basic media, the monomer, Py, is oxidized on GCE at a potential of about 0.85 V vs. Ag/AgCl and the oxidation product of Py i.e. polypyrrole nanofibers is strictly adsorbed on the electrode surface. Cyclic voltammetry, electrochemical impedance spectroscopy and scanning electron microscopy were used for studying the electrochemical and morphological properties of electropolymerized PPy conducting polymer. These techniques confirm the electropolymerization of Py as PPy nanofibers on the electrode surface.

کلمات کلیدی:

Conducting Polymers, Electropolymerization, Polypyrrole, Nanofibers

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