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Electrochemical measurements of synthesized polyaniline nanofibers by different method

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Over the last three decades, Polyaniline (PANI) has been of great interest to many researchers because of its reasonably good conductivity, stability, easy preparation and redox properties. In this investigation, nanoscale PANI was prepared using two different methods (hydrothermal and chemical precipitation) in order to study the influence of different key parameters. The nano-PANI structural and morphological properties were characterized by different techniques, such as, X-Ray Diffraction (XRD), Fourier Transform Infrared (FTIR), Raman spectroscopy and Field Emission Scanning Electron Microscopy (FESEM). After that, electrochemical measurements of these PANI nano-wires carried out in the three-electrode system in 6M KOH aqueous electrolyte depicted very interesting specific capacitance around 1304 F/g at 5 mVs⁻¹ scan rate showing their potential as suitable materials for energy storage devices.

Biography

F Djefafalia is a Permanent Researcher in LEREC laboratory in Algeria. She has completed her PhD from Des Frère Mantouri University of Constantine, Algeria. She has published three papers in reputed journals. She is currently working on conducting polymers in nanoscale for energy storage and environment application.

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