

## عنوان مقاله:

Investigation of Electromechanical and Electrochemical Behavior of Ionic Polymer Metal Nano-Composite (IPMNC) In the presence of Ionic Liquid and Various Li<sup>+</sup> Salts

## محل انتشار:

یازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1393)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

Nafion-based Ionic Polymer Metal Nano-composite (IPMNCs) actuators were fabricated using an electroless plating method with Pt nanoparticles as the electrode layer, incorporated at the subsurface of Nafion polymer and their electrochemical properties were investigated while they were impregnated with different Li salts (LiBF<sub>4</sub>, LiOH and LiClO<sub>4</sub>) to find best Li<sup>+</sup> salt in the actuation response. In other experiment, in order to overcoming the water loss, the various amount of Li<sup>+</sup> cations in the presence of EMIBF<sub>4</sub> were penetrated to IPMNC. All of the changes were investigated by the electrochemical tests (Cyclic voltammetry and Impedance Spectroscopy) and the electromechanical tests (under the DC and AC voltage). The obtained results illustrated that the Li<sup>+</sup> salts and imidazolium based ionic liquids greatly improves the electrochemical performance of Nafion-based IPMNC actuators

## کلمات کلیدی:

actuators, IPMNC, Ionic liquid, Li salts

## لینک ثابت مقاله در پایگاه سیویلیکا:

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