

## The Effect of PEG/PEI Blend on the Electrochemical Behavior based on PEO Electrolytes

김주현, 김 석\*

부산대학교

(seokkim@pusan.ac.kr\*)

Polymer electrolytes are promising materials as electrolytes in advanced electrochemical applications, especially for lithium polymer cells. In most polymer electrolytes electrolytes, the polymer host is doped with some inorganic salts and one or more plasticizers are often added for conductivity enhancement. Inorganic salts dissolve in many polymers to form mixtures which support ionic conductivity. Polymer electrolytes have many advantages like high ionic conductivity, high energy density, solvent-free condition, structural stability, low volatility, wide electrochemical stability windows, ease of processability and light in weight.

In this work, the effect of PEG/PEI blend on the electrochemical behavior based on PEO electrolytes is studied. The addition of PEG/PEI in PEO based electrolytes is expected to result in better ionic conductivity at room temperature. The ionic conductivity was evaluated by AC impedance method and relating structural changes by adding polymer blend will be presented.