

ABSTRACT

NOVEL POLYMER ELECTROLYTE AND ELECTROCHEMICAL DEVICE

A polymer electrolyte; and an electrochemical device utilizing the polymer electrolyte. In accordance with the diffusion of cell-phone and other portable information devices and in accordance with the recent-year development of new use of power source for hybrid electric automobile, etc., enhanced reliability is increasingly demanded on electrochemical devices, such as battery, for use as the power source thereof. Although generally a liquid electrolyte is employed in electrochemical devices, the liquid electrolyte is likely to induce trouble, such as liquid leakage, presenting a major factor for reliability loss. Accordingly, use of a polymer electrolyte in place of the liquid electrolyte to attain an enhancement of reliability is being studied. However, conventional polymer electrolytes have had the problem that it is difficult to simultaneously satisfy ion conductivity and reliability. The problem has been solved by the use of polymer electrolyte (5) having a ketonic carbonyl group wherein the weight ratio of the ketonic carbonyl group is in the range of 15 to 50 wt% based on the weight of the polymer material.

Fig. 1