ELECTRICAL PROPERTIES OF MG49 AMMONIUM TRIFLATE BASED GEL ELECTROLYTE

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TABLE OF CONTENTS

ABSTRACT

This project were conducted in order to understand and observed the electrical properties of MG-49. This present research aims to use poly (methyl-methacrylate)-grafted natural rubber (MG49) as the polymer host. This polymer host will provide medium for ion transport. This present research aims to replace lithium ion salt and uses ammonium triflate ($NH_4CF_3SO_3$) as the dopant salt. After investigation has been carried out, the conductivity was found to increase with addition of certain weight percentage of MG-49. The highest ionic conductivity of the electrolyte was 3.28×10^{-2} S cm^{-1} with addition of 11% of weight percentage of MG-49. Other than that, with the used of zinc and polypyrrole in the battery, the highest specific capacity obtained at the first cycle was 7.0 $mAhg^{-1}$.