IMPEDANCE SPECTROSCOPY STUDIES OF PLASTICISED PVC-BASED POLYMER ELECTROLYTES

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This Final Year Project Report entitled **"Impedance Spectroscopy Studies of Plasticised PVC-based Polymer Electrolytes"** was submitted by Nurin Farhana Binti Tomiran, in partial fulfillment of the requirements for the Degree of Bachelor of Sciences (Hons.) Physics,in the Faculty of Applied Sciences, and was approved by

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ABSTRACT

In this work, PVC was used as the polymer host with lithium triflate ($LiCF_3SO_3$) as the doping salt. Propylene carbonate (PC) was used as the plasticiser. Films that were produced in this work are pure PVC, PVC - $LiCF_3SO_3$, and PVC - $LiCF_3SO_3$ - PC. The focus of this work is to determine the conductivity of polymer electrolytes. By adding the plasticiser, the conductivity of the salted polymer electrolytes was enhanced. Impedance spectroscopy was used to determine the value of conductivity of each sample.