CONDUCTIVITY STUDIES OF PEMA-PVC-$LiBF_4$-SiO_2 (80nm) COMPOSITE POLYMER ELECTROLYTES.

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This Final Year Project Report entitled **"CONDUCTIVITY STUDIES OF PEMA-PVC-$LiBF_4$-SiO_2 (80nm) COMPOSITE POLYMER ELECTROLYTES.."** was submitted by NOOR ZARINA BINTI BADERISHAM, in partial fulfillment of requirement for Degree of Bachelor of Science (Hons) Physics, in the Faculty of Applied Science, and was approved by

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ABSTRACT

In this work, Poly (ethyl methacrylate) (PEMA) and Poly(vinylchloride) (PVC) are used as polymer host with Lithium Tetrafluoroborate ($LiBF_4$) as doping salt to prepare composite polymer electrolyte system PEMA – PVC - $LiBF_4$. Silicon Dioxide (SiO_2) is used as filler that will enhance the conductivity of this system. The main intention of this study is to determine the ionic conductivity of each thin film that is formed by solution cast technique. Impedance spectroscopy is used to determine the value of ionic conductivity of all samples.

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