

**IONIC CONDUCTIVITY STUDIES OF PEO BASED POLYMER ELCTROLYTE**

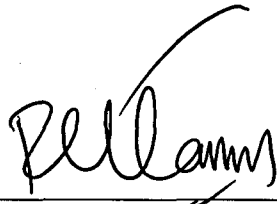
**PEO + LiBF<sub>4</sub> + SiO<sub>2</sub>**

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**Final Year Project Reported Submitted in  
Partial fulfillment of the Requirement for the  
Degree of Bachelor (Hons.) Physics  
In the Faculty Applied Sciences  
University Teknologi MARA**

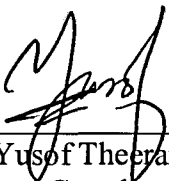
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This Final Year Project Report entitled “**Ionic Conductivity Studies of PEO based Polymer Electrolyte : PEO + LiBF<sub>4</sub> + SiO<sub>2</sub>**” was submitted by Lili Widarti Zainuddin, in partial fulfillment of the requirement for the Degree of Bachelor of Science (Hons.) Physics, Faculty of Applied Sciences, and was approved by



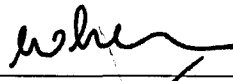
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## ABSTRACT

### IONIC CONDUCTIVITY OF PEO BASED POLYMER ELECTROLYTE PEO + LiBF<sub>4</sub> + SiO<sub>2</sub>

In this study, PEO will be used as polymer host while lithium tetrafluoroborate (LiBF<sub>4</sub>) as the inorganic salt and silicon oxide (SiO<sub>2</sub>) as the nanofiller. Films that will be prepared in this study are pure PEO and complexes of PEO + LiBF<sub>4</sub> system and PEO + LiBF<sub>4</sub> + SiO<sub>2</sub> system. These studies will be carried out to determine the ionic conductivity of the polymer electrolyte by added salt and nanosize filler. The various percentages of filler that could enhance the conductivity values of the salted samples were determined. Impedance spectroscopy will be used to measure each sample prepared.