

**IONIC CONDUCTIVITY OF Al_2O_3 (10 μM) DOPED PVC- NH_4HSO_4
POLYMER ELECTROLYTES**

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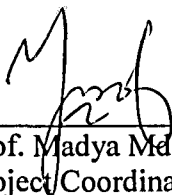
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The Final Year Project Report entitled “**IONIC CONDUCTIVITY OF Al_2O_3 (10 μM) DOPED PVC- NH_4HSO_4 POLYMER ELECTROLYTES**” was submitted by Nurul Asmida Binti Ibrahim in partial fulfillment of the requirement for the Degree of Bachelor of Science (Hons.) Industrial Physics, in the Faculty of Applied Science and approved by

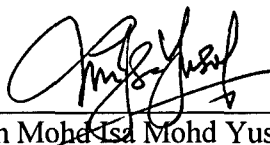


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TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENT	iii
TABLE OF CONTENT	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
ABSTRAK	x
CHAPTER	
1. INTRODUCTION	
1.0 INTRODUCTION	1
1.1 PROBLEM STATEMENT	3
1.2 OBJECTIVE	3
1.3 SCOPE OF WORK	4
1.4 AIM OF WORK	4
2. LITERATURE REVIEW	
2.0 INTRODUCTION	5
2.1 POLYMER ELECTROLYTES	5
2.1.1 CLASSIFICATION OF POLYMER ELECTROLYTES	6
2.2 PVC AS POLYMER HOST	9
2.2.1 PROPERTIES OF PVC	11

ABSTRACT

IONIC CONDUCTIVITY OF Al_2O_3 (10 μM) DOPED PVC- NH_4HSO_4 POLYMER ELECTROLYTES

In this study of composite polymer electrolyte, Poly vinyl chloride (PVC), was used as the host polymer and ammonium bisulfate (NH_4HSO_4) as the doping salt with Aluminium oxide (Al_2O_3) as the filler. PVC and salt in different weight % concentrations was dissolved in Tetrahydrofuran (THF). The influence of different concentration of salt in PVC gave rise to different values of ionic conductivity. The best conductivity concentration of PVC- NH_4HSO_4 was mixed with various weight % of Aluminium Oxide in microsize to form PVC- NH_4HSO_4 - Al_2O_3 composite polymer electrolytes. The ionic conductivity of composite polymer electrolytes was determined by impedance spectroscopy.