

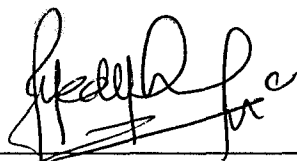
**THE PREPARATION AND CHARACTERIZATION OF POLYMER/CNTs OF
NANOCOMPOSITES**

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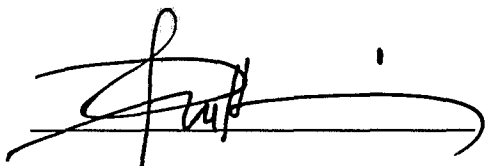
**FINAL YEAR PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR DEGREE OF BACHELOR OF SCIENCE
(HONS.) PHYSICS IN THE FACULTY OF APPLIED SCIENCES UNIVERSITI
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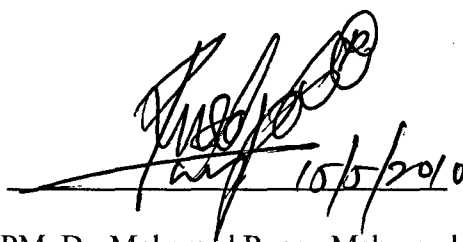
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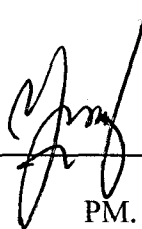
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ABSTRACT

Carbon nanotubes were promising additives to polymeric material to the potential for their enhancement of the electrical, optical and thermal properties of the resulting nanocomposites. The improvement in the properties were by no means guaranteed and the results are often sensitive to the particular polymer chosen, also to the quantity and quality of CNTs used in nanocomposites. Poly [2-methoxy, 5ethyl (2'hexyloxy) paraphenylenevinylene]/Carbon nanotubes (MEH-PPV/CNTs) nanocomposites with different contents have been prepared successfully by Spray Pyrolysis System by using Chemical Vapor Deposition (CVD) induced by ferrocene, $\text{Fe}(\text{C}_5\text{H}_5)_2$ catalyst precursor. In this paper, palm oil were used as a carbon source and MEH-PPV solution as a conjugated polymer source. MEH-PPV/CNTs were characterized by Thermogravimetric Analysis (TGA), Ultraviolet-Visible Spectroscopy (UV-Vis) and I-V characterizer and Field Emission Scanning Electron Microscopy (FESEM).

Keyword: MEH-PPV; palm oil; TGA; UV-Vis; FESEM; I-V characterizer; spray pyrolysis system

TABLE OF CONTENTS

DEDECATION	Page i
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	xii
LIST OF ABBREVIATIONS	xiii

CHAPTER 1 INTRODUCTION

1.1 Background	1
1.2 Problem statement	3
1.3 Objective of study	4
1.4 Significance of study	4

CHAPTER 2 LITERATURE REVIEW

2.1 Preparation and modification of CNTs	5
2.2 The electrical and mechanical properties	8
2.3 Multi-walled CNT structures	12
2.4 Purification process for single-walled CNTs	13
2.5 Effect of temperature on CNTs formation or growth of CNTs	15
2.6 The effect of quartz tube length	16
2.7 Effect of catalyst concentration on the growth of aligned CNTs	17
2.8 Effect of the time on stream	18
2.9 Energy band	19