

**THE CRYSTAL GROWTH IN HOMOPOLYMER  
POLYVINYLIDENE FLUORIDE (PVDF) AND COPOLYMER  
POLYVINYLIDENE FLUORIDE-TRIFLUOROETHYLENE  
(PVDF-TrFE)**

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This Final Year Proposal Project Report entitle **“The crystal growth in homopolymer Polyvinyledene fluoride(PVDF) and copolymer Polyvinyledene fluoride-triflouroethylene(PVDF-TrFE)”** was submitted by Dzuraiezhar Bin Ismail, in partial fulfillment of the requirement for the Degree of Bachelor of Science (Hons.) Polymer Technology, in the Faculty of Applied Sciences, and was approved by



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## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENT</b>	<b>Page</b>
<b>TABLE OF CONTENTS</b>	<b>iv</b>
<b>LIST OF TABLES</b>	<b>v</b>
<b>LIST OF FIGURES</b>	<b>viii</b>
<b>LIST OF ABBREVIATIONS</b>	<b>x</b>
<b>ABSTRACT</b>	<b>xiii</b>
<b>ABSTRAK</b>	<b>xv</b>

## CHAPTER 1 INTRODUCTION

1.1	Overview	1
1.2	Temperature profile in Differential Scanning Calorimetry (DSC)	3
1.2.1	Melting temperature, $T_m$	3
1.2.2	Crystallization temperature, $T_c$	4
1.2.3	Additional transition temperature for ferroelectric Polymer	4
1.2.3.1	Curie temperature, $T_{curie}$	4
1.2.4	Isothermal Crystallization	5
1.2.4.1	Error for Avrami plots	6
1.3	Polarized light Optical microscopy	7
1.4	Objective	8

## CHAPTER 2 LITERATURE REVIEW

2.1	Ferroelectricity studies	9
2.2	Crystal behaviour of PVDF	11
2.3	Effect of Annealing on the Structure and Properties of Poly(vinylidene fluoride) $\beta$ -Form Films	13
2.4	Related methods overview	15
2.5	Preliminary study	16

### CHAPTER 3 METHODOLOGY

3.1	MATERIALS	19
3.1.1	PVDF	19
3.1.2	PVDF-TrFE	19
3.1.3	SOLVENT	20
3.1.3.1	<i>N,N</i> -dimethylformamide (DMF)	20
3.1.3.2	Dimethyl sulfoxide (DMSO)	21
3.1.3.3	Tetrahydrofuran (THF)	22
3.1.4	Instruments	23
3.1.5	Apparatus and glassware	24
3.2	EXPERIMENTAL APPROACH	
3.2.1	Determination of temperature profile PVDF, PVDF- TrFE(72-28), PVDF-TrFE(65-35) and PVDF-TrFE (51-49) using DSC measurement	26
3.2.1.1	Temperature profile of DSC	26
3.2.1.2	Using Avrami equation	28

## ABSTRACT

Homopolymer PVDF (Polyvinylidene fluoride) and copolymer PVDF-TrFE (Polyvinylidene fluoride -Trifluoroethylene) - exhibited ferroelectric properties due to the special arrangement of chain unit in crystalline phase. The samples were PVDF and different mol percentage of copolymer PVDF-TrFE (72-28), (65-35) and (51-49) dissolved in Dimethylformamide (DMF), Dimethyl sulfoxide (DMSO) and Tetrahydrofuran (THF) solvents. This work emphasize on crystal growth of PVDF and PVDF-TrFE. The crystalline structures were analyzed using Differential scanning calorimetry (DSC) and polarized light microscopy (PLOM). Samples were annealed to enhance crystal growth and observed using PLOM.