CONTENTS

DECLARATION	(i
ACKNOWLEDGEMENT	(ii
ABSTRACT	(iii
CONTENTS	(iv
CHAPTER 1: INTRODUCTION	
1.1 Introduction	1
1.2 Principle and techniques of Electrodeposition	2
1.3 Semiconductors and semiconductors thin films	12
1.4 Photovoltaic cells or Solar cells	27
1.5 Aims and Objectives of the present study	35
CHAPTER 2: EXPERIMENTAL TECHNIC	<u>DUE</u>
2.1 Introduction	36
2.2 Preparation of the films by Electrodeposition	38
2.3 Material characterization of the deposited films	44
2.4 X-ray diffractometry	45
2.5 Scanning electron microscopy	50
2.6 Energy dispersive x-ray analysis	54
2.7 UV- VIS Spectrophotometry	57
2.8 Resistivity/Conductivity measurements	60

CHAPTER 3: PREPARATION AND CHARACTERISATON OF CADMIUM SULPHIDE THIN FILMS

3.1 General aspects	63
3.2 Thin film preparation	64
3.3 X-ray diffraction results	68
3.4 Result and analysis of Scanning electron microscopy data for CdS films	75
3.5 EDAX results for the CdS Thin Films	78
3.6 Optical characterization of CdS thin film	80
3.7 Resistivity/Conductivity Measurements -	85
3.8 I-V Characterization of CdS thin film	88
CHAPTER 4: PREPARATION AND CHARACTERISA CADMIUM SEELNO SULPHIDE THIN FILMS	
4.1 General aspects	90
4.2 Preparation of thin films of CdSSe	91
4.3 X-ray diffraction results	94
4.4 Scanning electron microscopy results of CdSSe	101
4.5 EDAX results of CdSSe thin films	104
4.6 Optical characterisation of CdSSe thin films	106
4.7 Resistivity/Conductivity Measurements - Four probe method	110
CHAPTER 5 Summary	113
References	114