



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية
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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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***Ain Shams University
Faculty of Education
Physics Department***

**“Characterization of polymeric composites by
using positron annihilation spectroscopy”**

THESIS

*Submitted in partial fulfillment
of the requirement for the Master degree of
Teacher Preparation in Science (Physics)*

By

Magi Mohamed Ibrahim Mohamed

To

***Physics Department
Faculty of Education
Ain Shams University***

2020

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{قَالُوا سُبْحَانَكَ لَا عِلْمَ
لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ
أَنْتَ الْعَلِيمُ الْحَكِيمُ}

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Contents

| | |
|------------------------------|-----------|
| Acknowledgement | Page i |
| List of Abbreviations | ii |
| List of Tables | iii |
| List of Figures | iv |
| Abstract | viii |

Chapter 1

Theoretical Background and Literature Review

| | |
|---|-----------|
| 1.1 Theoretical Background: | 1 |
| 1.1.1. Solid Polymer Electrolyte (SPE) | 1 |
| 1.1.2. Positrons and Positronium Annihilation | 2 |
| (a) Self-Annihilation of Positrons and Positronium | 3 |
| (b) Pick-off annihilation of ortho-Positronium | 4 |
| (c) Free Volume Model | 5 |
| (d) Theoretical Aspects of Positron Annihilation in Condensed Matter | 6 |
| 1.1.3. Doppler Broadening Spectroscopy | 8 |
| 1.1.4. Electrical properties of polymer electrolytes | 11 |
| 1.1.5. Dielectric Properties of polymer electrolytes | 13 |
| (a) Electrical Polarization | 13 |
| (b) Types of Polarization | 13 |
| (c) Relative Permittivity | 14 |
| 1.1.6. Optical properties of polymer electrolytes | 15 |
| (a) Optical Constants | 15 |
| (i) Absorption Coefficient | 15 |
| (ii) Refractive Index and Extinction Coefficient | 16 |
| (b) Absorption Edges | 17 |

| | |
|------------------------------|-------|
| (c) Optical Transition | 18 |
| 1.2. Literature Review | 20-23 |
| 1.3. Aim of the Present Work | 23 |

Chapter 2 *Experimental Work*

| | |
|--|----|
| 2.1. Materials | 24 |
| 2.1.1. poly(vinyl chloride- vinyl acetate) copolymer | 24 |
| 2.1.2. Lithium perchlorate (LiClO ₄) | 25 |
| 2.1.3. Tetrahydrofuran THF | 26 |
| 2.2. Preparation of the Samples | 28 |
| 2.3. Measurements | 29 |
| 2.3.1. Positron Annihilation Lifetime (PAL) spectroscopy | 29 |
| (a) Positron source. | 29 |
| (b) Positron Annihilation Techniques (PATs) | 31 |
| (c) PAL Instrumental Set up | 32 |
| (i) Scintillator-Photomultiplier Detectors | 34 |
| (ii) Constant Fraction Discriminators (CFDs) | 35 |
| (iii) Time to Amplitude Converter (TAC) | 35 |
| (iv) Multi-Channel Analyzer (MCA) | 36 |
| 2.3.2. Doppler Broadening Spectroscopy | 37 |
| 2.3.3. X-ray diffraction studies | 40 |
| 2.3.4. FTIR studies | 40 |
| 2.3.5. Differential scanning calorimetry (DSC) measurements. | 40 |
| 2.3.6. Electrical measurements | |
| a) D.C. Electrical Conductivity | 41 |
| (i) The sample shape | 41 |
| (ii) Set up | 41 |

| | |
|---|----|
| b)AC conductivity and dielectric measurements | 42 |
| 2.3.7. Optical measurements | 43 |
| <i>Chapter 3</i> Results and Discussions | |
| 3.1. Positron annihilation spectroscopy | 44 |
| 3.1.1. Positron annihilation lifetime (PAL) | 44 |
| 3.1.2. Doppler broadening of annihilation radiation | 52 |
| 3.2. X-Ray Diffraction (XRD) | 56 |
| 3.3. Fourier Transform Infrared (FTIR) Spectroscopy | 58 |
| 3.4. Differential Scanning Calorimetry (DSC) | 62 |
| 3.5. Ionic Conductivity | 65 |
| 3.5.1. Effect of LiClO ₄ content | 65 |
| 3.5.2. Temperature Dependence of Ionic Conductivity | 67 |
| 3.5.3 Interrelation between ionic conductivity and free volume | 70 |
| 3.6. Dielectric properties and Ac Conductivity | 73 |
| 3.6.1. Dielectric constant ϵ' and dielectric loss ϵ'' | 73 |
| 3.6.2. Electric modulus formalism | 76 |
| 3.6.3. Complex impedance spectroscopy | 79 |
| 3.6.4. AC conductivity | 80 |
| 3.6.5. Correlation between dielectric parameters and free volume holes size | 81 |
| 3.7. Optical properties | 83 |

Contents

| | |
|-----------------------|------------|
| Conclusions | 92 |
| References | 94 |
| Summary | 104 |
| Arabic Summary | |

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List of abbreviations

| | |
|--------------------------|---|
| A | Absorptance |
| DSC | Differential scanning calorimetry |
| E_{gd} | Direct energy band gap |
| E_{gi} | Indirect energy band gap |
| E_{opt} | Optical energy gap |
| E_u | Width of band tails |
| FTIF | Fourier Transform Infrared |
| I | Intensity emerging from sample |
| I₀ | Intensity of light incident on sample |
| LiClO₄ | Lithium perchlorate |
| M' | Real part of dielectric modulus |
| M'' | Imaginary part of dielectric modulus |
| n | Refractive index |
| o-Ps | Ortho-positronium |
| p-Ps | Para-positronium |
| Ps | positronium |
| PVC-co-PVAc | Poly(vinyl chloride-vinyl acetate)copolymer |
| R | Reflectance |
| SPE | Solid polymer electrolyte |
| t | Sample thickness |
| T | Transmittance |
| tanδ | Dielectric loss tangent |
| THF | tetrahydrofuran |
| XRD | X-ray diffraction |
| Z' | Real impedance |
| Z'' | Imaginary impedance |
| α | Absorption coefficient |
| ε' | Real dielectric constant |
| ε'' | Imaginary dielectric constant |
| ε₀ | Permittivity of free space |
| σ_{ac} | A.c .conductivity |
| σ_{dc} | D.c .conductivity |

List of abbreviations

List of Tables

| | Page |
|---|------|
| Table (1.1): Characteristics of the basic states of positronium. | 3 |
| Table (2.1): Physical Properties of Poly(vinyl chloride-vinyl acetate)copolymer(PVC-co-PVAc). | 25 |
| Table (2.2): Some Physical Properties of Lithium Perchlorate (LiClO_4), and Tetrahydrofuran (THF). | 27 |
| Table (3.1): The positron annihilation lifetime parameters derived from PALS spectrum of (PVC-co-PVAc)/ LiClO_4 samples. | 46 |
| Table (3.2): The calculated values of ΔW as a function of LiClO_4 concentrations. | 57 |
| Table (3.3): Assignments for FTIR absorption bands for (PVC-co-PVAc)/ LiClO_4 samples. | 61 |
| Table (3.4): Values of the activation energy E_a for (PVC-co-PVAc) / LiClO_4 samples. | 69 |
| Table (3.5): Values of optical constants (E_{gi}), (E_{gd}),(E_u) and (n) for (PVC-co-PVAc)/ LiClO_4 SPE samples. | 88 |