



Radiation Synthesis of Polyaniline Based Compounds and their Potential Applications

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**In the name of Allah, most gracious, most
merciful.**

**All praise and glory to Allah the almighty who
alone made this small objective to be accomplished.
I feel honored to glorify his name in the sincerest
way through this small accomplishment and ask
him to accept my efforts. Peace be upon the
prophet, his companions and all who followed him
until the day of judgment.**

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DEDICATION

To

Soul of my father,

My mother,

Brothers and sister

Thanks for being a part of my life

Contents

ABSTRACT

LIST OF FIGURES

LIST OF TABLES

LIST OF SCHEMES

CHAPTER I

INTRODUCTION & LITERATURE REVIEW

1.1. Inherently Conducting Polymers (ICP)	4
1.2. Mechanism of Conductivity of Conducting Polymers.....	8
1.3. Doping of Polymers.....	12
1.4. Applications of Conducting Polymers.....	15
□ Group I	15
- <i>Electrostatic materials</i>	15
- <i>Conducting adhesives</i>	17
- <i>Electromagnetic shielding</i>	19
- <i>Printed circuit boards</i>	22
- <i>Artificial nerves</i>	23

- Aircraft structures.....	24
❑ Group II	25
- Rechargeable batteries.....	25
- Sensors.....	28
- Electrochromic devices.....	33
- Electromechanical Actuators.....	36
- Drug release systems.....	39
- Catalysis.....	43
1.5. Polyaniline (PANI)	45
1.5.1. Structure of Polyaniline (PANI).....	47
1.5.2. Doping in Polyaniline: Acid Doping.....	49
1.5.3. Synthesis of Polyaniline.....	51
1.5.3.1. Chemical Synthesis.....	52
1.5.3.2. Electrochemical Synthesis.....	59
1.6. Conducting Polymer Nanocomposites.....	62
1.7. Applications of Polyaniline and Its Composites.....	68
1.7.1. Photocatalytic Degradation.....	74
1.7.1.1. Principle of Photocatalytic Oxidation Process.....	77
1.7.1.2. Photocatalytic Activity of PANI-TiO ₂ Nanocomposites.....	80

CHAPTER II

MATERIALS & EXPERIMENTAL TECHNIQUES

2.1. Materials.....	84
2.2. Apparatus.....	86
2.2.1. Gamma Radiation Source.....	86
2.2.2. Fourier-Transform Infrared Spectroscopic Analysis (FTIR).....	86
2.2.3. UV-Spectroscopic Analysis.....	86
2.2.4. Scanning Electron Microscopy (SEM).....	87
2.2.5. Thermal Gravimetric Analysis (TGA).....	87
2.2.6. Dynamic Light Scattering (DLS).....	87
2.2.7. X-Ray Diffraction (XRD).....	88
2.2.8. DC-Conductivity Measurements (Four-Probe Method).....	88
2.2.9. Electrochemical Impedance Spectroscopy (EIS).....	89
2.2.10. Cyclic Voltammetry Measurements.....	90
2.2.11. Photocatalytic Activity Measurements.....	91
2.3. Methods.....	94
2.3.1. In-situ Formation of Conductive Polyaniline Thin Skins onto Radiation Grafted	

Polypropylene Films (PP-g-PAA)/PANI	94
2.3.1.1. Preparation of radiation-grafted polyacrylic acid-polypropylene films (PP-g-PAA).....	94
2.3.1.2. Conversion of polyacrylic acid-polypropylene films into acyl chloride surface (PP-g-PAA)/Cl.....	95
2.3.1.3. Conversion of (PP-g-PAA)/Cl films into aminogroups surface functionalized derivatives (PP-g-PAA)/amine.....	95
2.3.1.4. In situ polymerization of polyaniline skins onto carboxyl and amino-functionalized PP-g-PAA films	97
2.3.1.5. Electrochemical Synthesis of Polyaniline (PANI).....	98
2.3.2. Gamma Radiation Enhancement of Photocatalytic Activity of Conducting Polyaniline–TiO₂ Nanocomposites (PANI-TiO₂) for Degradation of Methyl Orange Dye (MO) under Visible Light.....	99
2.3.2.1. Preparation of Nanosized TiO₂ Sol – Gel.....	99
2.3.2.2. Preparation of PANI-TiO₂ Nano-composite.....	99

CHAPTER III

RESULTS & DISSCUSION

3.1. In-situ Formation of Conductive Polyaniline Thin Skins onto Radiation Grafted Polypropylene Films (PP-g-PAA)/PANI.....	102
3.1.1. Formation Mechanism of poly(propylene)-g-poly(acrylicacid)/polyaniline functional hybrids (PP-g-PAA/PANI) and their precursors.....	106
3.1.2. Electronic absorption spectra of PP-g-PAA/PANI functional hybrids.....	114
3.1.3. Investigation of chemical modification of PP-g-PAA/PANI functional hybrids by FTIR spectroscopy.....	123
3.1.4. Surface topography and transverse section morphological analysis of skin-core functional hybrids.....	132
3.1.5. Cyclic volltammatry measurements.....	138
3.1.6. Impedance spectroscopy of skin-core functional hybrids	141
3.1.7. Electropolymerization of PANI onto PP-g-PAA/PANI functionalized films.....	151

3.2. Gamma Radiation Enhancement of Photocatalytic Activity of Conducting Polyaniline–TiO₂ Nanocomposites (PANI-TiO₂) for Degradation of Methyl Orange Dye (MO) under Visible Light.....	158
3.2.1. Sol-gel Synthesis of TiO₂	159
3.2.2. Fourier-Transform Infrared (FTIR) Studies.....	165
3.2.3. Ultraviolet–Visible (UV-vis) Absorption Studies.....	168
3.2.4. Thermogravimetric Analysis (TGA) Studies.....	175
3.2.5. X-Ray Diffraction (XRD) Studies.....	179
3.2.6. Formation Mechanism of PANI-TiO₂ Nanocomposite.....	183
3.2.7. Photocatalytic Activity of PANI/TiO₂ Nanocomposites.....	185

REFERENCES

SUMMARY

ARABIC SUMMARY

ABSTRACT

Polymers are widely used in all walks of human life and play a vital role in shaping modern man's activities to be as important and comfortable as they are today. The advances in science and technology made in recent decades owe much to development of polymer science. The synthesis and design of new polymeric materials to achieve specific physical properties and specialized applications, and attempt to find interesting applications involving advanced structures and architectures, are in continuous development in the period of the polymer science.

Electrically conducting polymers such as polyacetylene, polypyrrole, polythiophene and polyaniline have been the subject of intensive research due to their useful electronic properties and for their application. The factor that has motivated much of the work on the synthesis of conducting polymers is the need to find newer materials having a wide range of physical properties such as flexibility and processibility, and conductivity close to that of metals to suit many technological applications.

In the present work, an attempt has been made to review the most interesting and fascinating aspects of conducting