C.V

Dr. Waheed Mohmmed Salem

Personal data:

Name: Waheed Mohammed Salem Mohammed

Date of birth: ٥/١/١٩٧٩

Egyptian nationality

Marital status: Married and dependable

Address: Quesnia- Menoufia

Current Position: Lecturer of Analytical Chemistry, Faculty of Science, Damanhour University-

assistant professor in Analytical Chemistry, Faculty of applied health sciences technology, Menoufia University

Qualifications:

* Bachelor of Science - Chemistry ١٩٩٩ - University of Menoufia with a very good grade

* Master of Inorganic Chemistry ٢٠٠٦ - University of Menoufia

(Studies on Electrochemical Behavior of some Pharmaceutical Compounds)

* PhD in Philosophy of Science - Analytical Chemistry ٢٠١٢ - Benha University

(Physicochemical and analytical studies on determination of some drugs)

Lecturer in Analytical Chemistry, Department of Chemistry, University of Damanhour

Current degree: assistant professor in Analytical Chemistry, Faculty of applied health sciences technology, Menoufia University

Career:

• Vice-President of the Division of the analysis of elements in the Pharmaceutical Control and Research Authority ٢٠١٣

• Researcher of the Division of Analytical and Pharmaceutical Research

• Lecturer of Analytical Chemistry, Faculty of Science, Damanhour University, ٢٠١٦

-assistant professor in Analytical Chemistry, Faculty of applied health sciences technology, Menoufia University

-Vice dean for environmental affairs and community development, Faculty of applied health sciences technology, Menoufia University

Universities he taught:

١ - Teaching at the Faculty of Science - University of Menoufia ٢٠١٦

٢ - Teaching in the faculties of science and education - Damanhour University - ٢٠١٦-٢٠١٩

٣ - Teaching at the Faculty of Pharmacy - University of Damanhour -٢٠١٧

٤ - Higher Institute of Engineering and Technology in Menoufia ٢٠١٩

٥- Teaching in medical laboratory department -Faculty of applied health sciences technology, Menoufia University

Courses he taught:

Inorganic Chemistry (١) and (٢), Industrial Chemistry - Chemistry of Catalysts - Instrumental Chemistry – Analytical Chemistry - Chemistry (S-P) elemental - General Chemistry (١ and ٢) - Chemistry Engineering

Training Courses:

A) Training course in the field of occupational safety and health and securing the working environment in the period from ٢١-٢٥ / ٥/٢٠٠٦

B) DAAD course from Teambuilding and Team leaders on ٣٠/١١/٢٠١٤

C) Local TOEFL Test in the Public Service Center for Foreign Languages at Benha University from ٢٩/٥/٢٠١٠ to ١٤/٦/٢٠١٠

D) DAAD course from the German Team for Teambuilding and Team leaders on ٣٠/١١/٢٠١٦

C) The Scientific Publishing Course for Scientific Research in the Unit of Developing the Capacity of the Faculty Members and Leaders at Damanhour University from ١٧-١٨ / ٨/٢٠١٦

H) Course of Ethics of Scientific Research Development of the capacity of faculty members and leaders at the University of Damanhour ٤-٥ / ٢/٢٠١٩

Conferences:

A) Fifth Scientific Conference of the Faculty of Pharmacy, Cairo University, ٢٣-٢٥ / ٤/٢٠١٤

B) Fifth International Conference on Applied and Advanced Chemistry in the National Research Center from ٢١-٢٣ / ١٠/٢٠١٤

C) The Fifth International Conference in the Industrial Research Sector in the Field of Medicine and Pharmacy at the National Research Center from ٢٨-٣٠ March ٢٠١٥

D) Scientific Conference on the recent developments in the field of photovoltaic cells and the future side of the National Research Center on ٢-٥ / ٢/٢٠١٦

F) The first scientific conference in the field of water and energy at the Union of scientists in the lake on ٢/٣/٢٠١٧

Master under my supervision:

Subject Name	Registration Date	Name
Coordination Chemistry of Lidocaine hydrochloride and Amprolium hydrochloride drugs	١٩/٧/٢٠١٦	**Mohmmed zakaria mohmmed**
Analytical studies for determination of some anti-infection drugs	١٥/٢/٢٠١٧	**Fawzi Fawzi Yahya Masoud**
Determination of different vitamin B types extracted from some seeds and its biological applications	١٨/٩/٢٠١٨	**Mohamed Mohamed Ibrahim El Banna**
Maturation Oxidation Ponds after secondary Sewage treatment impact on some Physicochemical Parameters, Microbiological Significances and heavy metals	٢٥/١١/٢٠١٨	**Mohamed Mohamed Gomaa Kayed**
Spectrophotometric Analysis of some transition metal ions with Erdosteine, Nitroxynil and Cephalexin.	١٨/١/٢٠١٩	**Mohammed Jaber Ghazi Abu Ahmed**

Second: the degree of Ph.D. in the Faculty of Science - University of Damanhour

Subject Name	Registration Date	Name
Determination of some metal ions concentrations by spectroanalytical methods in natural water and human biological fluids.	١٨/٩/٢٠١٨	**Ragab Youssef El Sayed Sharaf**

Summary of Master's Thesis:

Abstract

Most of the pharmaceutical drugs are electroactive species producing reduction and oxidation signals in various Polarography and voltammetry modes. Thus the work in this thesis was focused on investigation of the electrochemical behavior of a series of pharmaceutical compounds namely : bromocriptine , carvidilol , ioperamide , domperidone and diosmin in an attempt to critically address the nature and mechanism of electrode couples observed at the glassy carbon electrode

Such investigation will help in developing differential pulse voltammetric and stripping analysis procedure for the determination of the drugs under investigation , Hence , the overall work in this thesis can be summarized as follows :

i- In Chapter one: we present a brief literature survey on the application of glassy carbon electrode and the various reported methods for the determination of the drugs under study. A brief survey on the theory of cyclic voltammetry, differential pulse and stripping analysis is also given.

ii- Chapter two includes the experimental part of the work involving the preparation of the stock solutions of the compounds under study and the Britton – Robinson (B-R) buffer . The equipments used in the present study and the recommended of the proposed methods for the analysis of the tested drugs in pharmaceutical preparations is also given.

iii- Chapter three includes the electrochemical behavior of the tested drugs . Oxidation of the bromocriptine in B-R buffer in the pH range ٢.٠-١٠.٠ at a glassy carbon electrode employing cyclic and differential pulse (DPV) voltammetry was critically investigated. A well defined irreversible and diffusion controlled anodic peak accompanied by a smaller one was observed at pH ٥.٠. A linear response was obtained in concentration range of ٥.٠× ١٠$^{-٨}$ M - ٦.٥ × ١٠$^{-٦}$ M with a detection limit of ١.٠ × ١٠$^{-٨}$ M. Application of the the developed method for the analysis of bromocriptine in pharmaceutical preparation has been easily assessed.

The voltammetric behavior of the antihypertensive drug carvidilol has been studied in a wide range of pH (٢.٠-١٠.٠) at GCE revealed two irreversible and diffusion – controlled oxidation processes. The first oxidation process was selected for the analytical purposes of carvidilol at pH ٨.٠ employing DPV. A linear response of carvidilol was obtained in the concentration range of ٦.٠×١٠$^{-٧}$ M to ٢.٥×١٠$^{-٥}$ M.

The detection limit of carvidilol by developed DPV was found to be ٢.٥× ١٠$^{-٧}$ M. The developed method was applied successfully for the determination of carvidilol either in pure or dosage forms.

The oxidation of Ioperamide drug at GCE showed a well – defined anodic peak in B-R buffer in the pH range of ٥.٠-١٠.٠ Maximum current of the observed oxidation wave was obtained at pH ٨.٠. The oxidation process of Ioperamide was found irreversible and diffusion – controlled process Based on the observed electrochemical date of Ioperamide, a simple , rapid and sensitive DPV method was developed for Ioperamide in capsule forms without interference from the excipients .

The electrochemical oxidation of domperidone at GCE has been studied in pH range ٢.٠-١٠.٠ by cyclic and differential pulse voltammetry A well – defined oxidation wave was developed at pH ٨.٠ the oxidation process was found to be irreversible and diffusion controlled process . At this peak , DPV showed a linear response in the concentration range of ٧.٠×١٠$^{-٦}$ M -٣.٠×١٠$^{-٥}$ M with a detection limit of ٤.٥× ١٠$^{-٦}$M for the drug the developed DPV method was successfully used for the analysis of domperidone in different dosage forms of pharmaceutical preparation .

The adsorptive and electrochemical behavior of diosmin in B-R buffer over the pH range ٢.٠-١٠.٠ were studied at glassy carbon electrode the oxidation process of the drug was found to be quasi – reversible with adsorption – controlled step the current of observed anodic peak at + ٠.٧٣ V vs Ag/AgCl reference electrode was found to increase linearly over two orders of magnitude from ٥.٠×١٠$^{-٨}$ M to ٩.٠$^{-١٠}$ M with a detection limit of ٣.٠ ×١٠-٨ M Based on the electrochemical date

obtained an open circuit accumulation step in stirred sample solution of B-R at pH ٣.٠ was developed for the drug determination .

٢ - Summary of his doctoral thesis:

Abstract

The work in thesis was focus on investigated drug Aripiprazole (AEZ), Olanzapine (OEZ). And Tenoxicam (TEZ) for its behavior through oxidation reaction at carbon paste and glassy carbon electrode in universal buffer to develop differential plus voltammetric processed for the limited of detection .the study discus the effect of surfactant as SDS ,TOMP, and Triton –X- ٤٥٠ was successful applied for the determination of drugs under investigation in their pharmaceutical preparations and dosage forms .

The study in solid state of investigated drug through thermal analysis technique TG, Dr TGA, DTA and was carried out .The kinetic and thermodynamic parameters were calculated using Arrhenius, Ozaw, Coats –Redfern and Horowitz –Metzger methods for interpretation of thermal degradation.

Key word: AEZ, OEZ. TEZ, thermal analysis, differential pluse voltammetry. raw material.

Published research:

١-thermal analysis study of tenoxicam, M, Elries, I. S. Ahmed, W. M. Salem, J. Drug, Res. Egypt.Vol.٣١, No.١ (٢٠١٠)

٢- Thermal Analysis Study of Antihypertensive Drugs Telmisartan and Cilazapril, Refaat Ahmed Saber, Ali Kamal Attia, Waheed Mohamed Salem, Advanced Pharmaceutical Bulletin, ٢٠١٤, ٤(٣), ٢٨٣-٢٨٧.

٣- New voltammetric analysis of olanzapine in tablets and human urine samples using a modified carbon paste sensor electrode incorporating gold nanoparticles and glutamine in a micellar medium, Hytham M. Ahmed,* Mona A. Mohamed and Waheed M. Salem, Anal. Methods, ٢٠١٥,٧, ٥٨١.

٤- Voltammetric Assay of Metformin Hydrochloride Using Pyrogallol Modified Carbon Paste Electrode, Ali K. Attia,* Waheed M. Salem and Mona A. Mohamed, Acta Chim. Slov. ٢٠١٥, ٦٢, ٥٨٨–٥٩٤.

٥- Thermal and structural properties of irradiated silver/ poly (vinyl alcohol) (Ag/PVA) nanocomposites using Argon ion beam, Mahmmoud S. Abd-Elmonem * Waheed M. Salem, IJPSR, ٢٠١٧; Vol. ٨(٣): ١٠٠٠-٠٧.

٦- Study of kinetic parameters of thermal decomposition of Cilostazol under isothermal and non-isothermal conditions, Mahmmoud S. Abd-Elmonem*١, and Waheed M. Salem, IAJPS ٢٠١٦, ٣ (١٠), ١١٢٨-١١٣٨.

٧- Fabrication of Silica Microspheres (HB/A@SI-MNS) for Hafnium and Zirconium Recovery from Zirconyl Leach Liquor, Mahmoud O. Abd El-Magied, Waheed M. Salem, Ahmad A. Daher and Emad A. Elshehy, Colloids Interfaces ٢٠١٨, ٢, ١٤.

٨- Sensitive determination of Paracetamol using Ferrocene Nanoparticles by Chitosan-Functionalized - Modified Carbon Past Electrode, Waheed M. Salem, Egypt. J. Chem. Vol. ٦٣, No.٣ pp. ١١٩ - ١٣٠ (٢٠١٩)

٩- Effect of Ion beam irradiation on the Physical and Chemical Properties of plasticized poly ethylene terephthalate (PET) polymer used in Medical Device, Mahmmoud S. Abd-Elmonem, Waheed M. Salem , Manal A. Elshall, International Journal of Scientific & Engineering Research, Volume ٦, Issue ٩, September-٢٠١٥

١٠- Conductimetric determination of Dosulepin HCl and Azelastine HCl in their pharmaceutical formulations, Mahmmoud S. Abd-Elmonem, Waheed M. Salem, Hassan A. M. hendawy, Indo American Journal of Pharmaceutical Research, Vol. ٦, ٠٨, ٢٠١٦

١١- Removal of methylene blue dye from scientific aqueous solutions using novel phosphonate cellouse acetate membranes: adsorption kinetic, equilibrium, and thermodynamic studies, Randa E. Khalifa, Ahmed M. Omer, Waheed M. Salem ,Tamer M. Tamer, Mohammed E. Mohy Eldien, Desalination and water treatment, vol.١٤٤, ,٢٠١٩

- ١٢Improvement of adsorptive voltammetric methods for determination of Midodrine by carbon paste electrode modified with gold nano particles in presence of β-cyclodextrin, Waheed M. Salem, Egypt. J. Chem. Vol. ٦٢, No. ٢, pp. ٦٧٩ - ٦٩٠ (٢٠١٩)

١٣-Sensitive determination of Paracetamol using Ferrocene Nanoparticles by Chitosan-Functionalized - Modified Carbon Past Electrod,Waheed M. Salem ,J. Chem. Vol. ٦٢, No. ٣. ١١٩ - ١٣٠ (٢٠١٩)

١٤-Voltammetric Behavior of Midodrine HCl at Disposable Pencil Electrode Comparing With Glassy Carbon Electrode and Its Determination in Bulk, Pharmaceutical Forms and Human Urine,Waheed M. Salem ,International Journal of Pharmaceutical Sciences and Research,٢٠٢٠, ١١(٩) ٤٥٠-٤٥٦.

١٥- Using the oxidation pond as biological system for wastewater treatment and studying the factors affecting it, Waheed M. Salem, Eurasian J Biosci ١٤, (٢٠٢٠)

١٦- Nanomaterial-Based Carbon Paste Electrodes for Voltammetric Determination of Naproxen in Presence of Its Degradation Products, Hassan A. M. Hendawy ,

Waheed M. Salem, Mahmmoud S. Abd-Elmonem, Elmorsy Khaled , Journal of Analytical Methods in Chemistry Vol. ٢٠١٩

١٧- Effect of Tween ٢٠ as Plasticizer on Cinnamyl Chitosan Membranes: Preparation, Characterization and Antimicrobial Evaluation, Maysa M. Sabet١ , Tamer M. Tamer١*, Ahmed M. Omer١, Waheed M. Salem,Mohamed A. Hassan٣ , Marwa H. Gouda١, Mohamed S. Mohy Eldin, Egypt.J.Chem. Vol. ٦٣, No. ٦. pp. ١٩٨٩ - ١٩٩٨ (٢٠٢٠) ١٥١

١٨- Immobilization of anthocyanin extract from red-cabbage into electrospun polyvinyl alcohol nanofibers for colorimetric selective detection of ferric ions,Mehrez E. El-Naggar , Mohamed H. El-Newehy , Ali Aldalbahi b , Waheed M. Salem ,Tawfik A. Khattab , Journal of Environmental Chemical Engineering,٩(٢٠٢١)-١٠٥٠٧٢

١٩- Solution Blowing Spinning Technology towards Green Development of Urea Sensor Nanofibers Immobilized with Hydrazone Probe, Mohamed H. El-Newehy , Hany El-Hamshary ,Waheed M. Salem , Polymers ٢٠٢١, ١٣, ٥٣١

٢٠- Utilization of Aluminon for Determination of Ultra-trace Levels of Copper in Environmental, Biological, and Water Samples via Cloud Point Extraction Coupled with Spectrophotometry, Ragab Y Sharaf, Waheed M Salem١, Alaa E Ali, Alaa S Amin, International Journal of Analytical and Bioanalytical Methods, ٢٠٢٠,