

Curriculum Vitae



1. Personal Information

Name: Mohamed Yahia Marei Abdelrahim

Nationality: Egyptian

Date of Birth: 28 Jan. 1984 **Age:** 32

Army service: Release (Not requested)

E-mail : (yahia_sci@yahoo.com) / (Mohamed.Yahia@science.helwan.edu.eg)

Mobile Telephone: +201003828399 (Egypt)

Career: Lecturer and Researcher of Chemistry at Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

Work/Current Postal Address: Department of Chemistry, Faculty of Science, Helwan University, Ain-Helwan, Cairo 11795, EGYPT.

2. Education / Academic Information

1. Bachelor degree of Chemistry, Chemistry Department, Faculty of Science, Helwan University, (July, 2006)- Rating: Excellent, cum laude (88.65 %) - Fourth year of B.Sc: Excellent, cum laude (93%) - The premium student of the chemistry program in (May, 2006).

2. Pre-master degree of chemistry and applied chemistry, Department of Chemistry, Faculty of Science, Helwan University - (May, 2007) - Rating: Very Good, cum laude (85 %).

3. Studies and research works towards the degree of M.Sc in chemistry field, From (July, 2007 - January, 2010), majoring in Nanotechnology and Nanocomposites and working especially in Nanopolymers and their industrial and engineering application.

4. European Master in Quality in Analytical Laboratories (EMQAL) one of the official Erasmus Mundus master programs. The main objective of the master work have been done at the University of Cadiz, Spain, focuses on the development of sensor devices based on carbon matrices modified with different types of nanomaterials. Institutions and universities involved in the master program: Gdansk University of Technical (GUT), Poland (01/02/2010 - 30/09/2010), University of Barcelona (UB), Spain (01/10/2010 - 31/01/2011), and University of Cadiz (01/02/2011 – 31/ 07/2011). Qualifications: the theoretical part of the Master: 8.8, 88%, B; The practical part (Master research Thesis): 10.0 / 100% / A.

5. European doctoral in membrane Engineering (EUDIME) one of the official Erasmus Mundus doctoral programs. The doctoral research studies operated in the following research institutions: [Institute Europeen des membranes, University of Montpellier (IEM-UM), France] and other two research institutions at Europe [Faculty of science and technology, University Nova de Lisbon (FCT-UNL), Portugal] and [ITM-UNICAL, Institute on membrane technology, University of Calabria (ITM-UNICAL), Italy] for awarding multiply doctorate degrees issued by the three research institutions with joint diploma supplement. The research thesis entitled “(Bio)Molecular control of selective ion transport, gas separation and catalytic enzyme-based reactions using functionalized membranes”. The doctoral research work included the preparation of polymeric and nanocomposite membranes for environmental application (water purification and gas separation), in additional too the biofunctionalization of polymeric membranes for biological application.

3. List of Publications

1. Chukwuemeka Ajaero, **M. Yahia M. Abdelrahim**, José M. Palacios-Santander, M.L. Almoraima Gil, Ignacio Naranjo Rodríguez, José Luis Hidalgo Hidalgo de Cisneros, Laura M. Cubillana-Aguilera, “Comparative study of the electrocatalytic activity of different types of gold nanoparticles using sonogel-carbon material as supporting electrode”, **Sensors and Actuators B**, 171–172 (2012), 1244–1256.

2. **M. Yahia M. Abdelrahim**, Stephen R. Benjamin, Laura M^a Cubillana-Aguilera, Ignacio Naranjo-Rodríguez , José L. Hidalgo-Hidalgo de Cisneros, Juan José Delgado, and José M^a Palacios-Santander, “Study of the Electrocatalytic Activity of Cerium Oxide and Gold-Studded Cerium Oxide Nanoparticles Using a Sonogel-Carbon Material as Supporting Electrode: Electroanalytical Study in Apple Juice for Babies”, **Sensors** 2013, 13, 4979–5007.

3. **M. Yahia M. Abdelrahim**, Muhammet Tanc, Jean-Yves Winum, Claudiu T. Supuran and Mihail Barboiu, “Dominant behaviours in the expression of human carbonic anhydrase hCA I activity”, **Chem. Commun.**, 2014, 50, 8043-8046.

4. **M. Yahia. M. Abdelrahim**, H. H. Osman, N. Masquelez, S. Cerneaux, M. Barboiu, "Extraction and membrane separation of lanthanides with dynameric constitutional framework carriers", **Journal of membrane science** **510 (2016) 50-57**.
5. **Mohamed Yahia Marei Abdelrahim**, Laura Cubillana Aguilera, José María Palacios Santander, Sensores Amperométricos Basados en Nanomateriales: Aplicación en Zumo de Manzana para Bebés (Spanish Edition), Editorial Académica Española (2012), (152 pages), **ISBN-10: 3659061662**, **ISBN-13: 978-3659061660**.
6. **M. Yahia M. Abdelrahim**, C. Martins, Luisa. A. Neves, C. Capasso, C.T. Supuran, M. Barboiu, Isabel.M. Coelho, Joao. G. Crespo, "Supported ionic liquid membranes immobilized with Carbonic Anhydrases enzymes for CO₂ transport at high temperatures, **Journal of membrane science (Accepted, November 2016, Ref: JMS-16-897)**.
7. **M. Yahia M. Abdelrahim**, K. A. Shaffei, G. M. El-Enany, M. A. Abd El-Gaffar, M. Barboiu, "Synthesis, Characterization and Electrical Properties of Some Binary Copolymers and Their Metal Complexes", **Journal of Polymer Science Part A: Polymer Chemistry, (Submitted, September 2016)**.
8. **M. Yahia M. Abdelrahim**, Luisa. A. Neves, Isabel.M. Coelho, Joao.G. Crespo, M. Barboiu, "Permeability and Selectivity of gases through dynameric polymeric membranes", **in preparation (2016)**.
9. **M. Yahia M. Abdelrahim**, C. Daniel, C. Portugal, Isabel. M. Coelho, Joao.G. Crespo, M. Barboiu," Proton and water transport through supported magnetic ionic liquid membranes (SMILMs)", **in preparation (2016)**.
10. **M. Yahia M. Abdelrahim**, A. Y. Gebreyohannes, R. Mazzei, L. Giorno, "Membrane functionalized with enzyme for selective conversion and separation.", **in preparation (2016)**.
11. D. R. El-Sayed, **M. Yahia M. Abdelrahim**, L. Giorno, A. S. Aly, "Synthesis, Characterization, and Application of Nano Finish for Antimicrobial Cotton Fabrics", **in preparation (2016)**.
12. D. R. El-Sayed, **M. Yahia M. Abdelrahim**, M. K. Zahran, A. S. Aly, L. Giorno, "Preparation, Characterization, and Application of Nano Silver Carboxymethyl Chitosan Derivatives", **in preparation (2016)**.

4. List of reviewing articles

I have reviewed some articles for international journals:

1. Abderahmane El idrissi, El barkany Soufian, Hassan Amhamdi, Abdel-Karim Maaroufi, "Synthesis and characterization of the new cellulose derivative films based on the Hydroxyethyl cellulose prepared from Esparto "Stipa tenacissima" cellulose of Eastern Morocco. II: Esterification with acyl chlorides in a homogeneous medium", *Journal of Applied Polymer Science* (2012) - Reviewing.
2. Lucia Innocentini-Mei ; Silvia Nista ; Marcos D Ávila ; Elizabeth Martinez; Almenara Silva, "Nanostructured membranes based on cellulose acetate obtained by electrospinning. Part II - Controlled release profile and microbiological behaviour" *Journal of Applied Polymer Science* (2013) - Reviewing.

5. Conference participations

1. 'Synthesis, characterization and electrical properties of some binary copolymers and their metal complexes', the 10th Arab international conference on polymer science and technology, The Egyptian society of polymer science and technology (ESPST), 14 – 17 December 2009, Ain EL-Sokhna, Egypt, Type of participation: Poster Presentation.
2. 'Electrochemical determination of ascorbic acid in baby juices by using metal oxide-based sonogel-carbon electrodes', The 16th European Conference on Analytical Chemistry, Euroanalysis, 11- 15 September 2011, Congress Center SAVA, Belgrade, Serbia, Type of participation: Poster Presentation.
3. 'Development and characterization of electrochemical sensors based on Nanomaterials and their application' the fourth scientific student conference 2012, Faculty of Science, Helwan University, Cairo, Egypt, 13-16 May 2012, Type of participation: Organizer and oral presentation.
4. 'Determination of Ascorbic Acid in Baby Juice by New Amperometric Sensors', International Congress of Chemical Engineering , ANQUEICCE2012, 24-27 June 2012, Seville, Spain, Type of participation: Poster Presentation, website (<http://www.anqueicce2012.org/en/index.htm>).

5. 'NEW SONOGEL-CARBON ELECTRODES MODIFIED WITH METAL AND METAL OXIDE NANOPARTICLES FOR DRUGS DETERMINATION', The XVII International Sol-Gel Conference, which hold on 25-30 August, 2013 in Madrid, Spain, Type of participation: Poster Presentation.

6. 'Membrane separation and extraction of lanthanides with constitutional dynamic networks.' The International Congress on Membranes and Membrane Processes 2014 (ICOM2014), July 20-25, 2014, Suzhou, China, Type of participation: Oral Presentation, website (<http://www.icom2014.org/>).

7. "ENSCM Doctoral School ED459 in chemistry" conferences, which hold on (19 -20 November, 2014) at UM2 University, Montpellier, France, under the frame of ENSCM (Ecole Nationale Supérieure de Chimie de Montpellier, France).

8. "Constitutional dynamic networks membranes towards water treatment and gas separation." The 8th COFRROCA meeting (Colloque Franco-Roumain de Chimie Appliquée), September 15-18, 2014, Montpellier, France, type of participation (Oral Presentation), website (<http://www.cofroca.org/>).

9. "Proton and water transport through supported magnetic ionic liquid membranes (SMILMs)" Euromembrane conference (EM-2015), 6-10 September, 2015, Aachen, Germany, Oral presentation, website (<http://www.avt.rwth-aachen.de/Euromembrane2015>).

10. "Comparison of supported ionic liquid membranes immobilized with two carbonic anhydrase enzymes for CO₂ capture" Euromembrane conference (EM-2015), 6-10 September, 2015, Aachen, Germany, Oral presentation, website (<http://www.avt.rwth-aachen.de/Euromembrane2015>).

6. Workshops and Seminars

I have attended and participated in some workshops and Seminars:

1. "The designing and preparation of university courses" workshop, which hold on (08-12, August 2007) at Helwan University, Cairo, Egypt.
2. "The using of technology in the teaching and educational systems" workshop, which hold on (19-21, August 2007) at Helwan University, Cairo, Egypt.
3. "The system of accredited hours in teaching and educational systems" workshop, which hold on (02- 04, September 2007) at Helwan University, Cairo, Egypt.
4. "The international publishing of scientific research" workshop, which hold on (28- 30, April 2012) at Helwan University, Cairo, Egypt.
5. "The systems of exams and the student evaluation" workshop, which hold on (19 - 21, May 2012) at Helwan University, Cairo, Egypt.
6. "How to compete for research fund" workshop, which hold on (28- 30, May 2012) at Helwan University, Cairo, Egypt.
7. "How to write a scientific proposal" workshop, which hold on (21, June 2012) at Helwan University, Cairo, Egypt, under the frame of DAAD program.
8. "Membrane Bioreactors for water &wastewater Treatment", which hold on (16, May 2013) at Institut Européen des Membranes (IEM), Montpellier, France, under the frame of European membrane House (EMH).
9. "Membrane applications for water treatment and gas separation" which hold on (17-20 September 2013) at KU Leuven University, Leuven, Belgium, under the frame of Indigo-BMG-Eudime consortium at KUL University.
10. "EUDIME- Erasmus Mundus Doctorate in Membrane Engineering" workshop, which hold on (2-4 September 2014) at IEM, UM2 University, Montpellier, France, under the frame of(CNRS-ENSCM-IEM-EUDIME) consortium at UM2 University (Second EUDIME workshop).
11. "XXXI EMS summer school 2014 on Innovative Membrane Systems" workshop, which hold on (September 28 – October 3, 2014) at Calabria, Italy, under the frame of ITM-CNR, Rende (CS) – Italy.

12. "EUDIME- Erasmus Mundus Doctorate in Membrane Engineering" workshop, which hold on (1-2 October 2015) at University of Calabria (UNICAL), Calabria, Italy, under the frame of (ITM-EUDIME) consortium (Third EUDIME workshop).

7. Research projects participations

I. First Project:

Title: Center of Services and Scientific studies.

Leaders: Prof. Abdel-Hakim Kandil and Prof. Gamal Ahmed El-Mahdy;

Position: Participant member.

Organizations: Faculty of Science, Helwan University, Cairo, Egypt;

Period: (06/2007) to (02/2010).

The main activities: Research and teaching duties dealing with studies and experimental applications in the area of water pollution, liquid and solid waste treatments related to some of the factories that exist in the Helwan area, Cairo, Egypt.

II. Second project

Title: Applications of Nanopolymeric materials in industrial applications.

Leaders: Prof. Mahmoud Ahmed Abd-Elgaffar,

Position: Participant member.

Organizations: 1. Department of Chemistry, Faculty of Science, Helwan University, Cairo, Egypt.

2. Department of pigment and polymer, National Research Center (NRC), Cairo, Egypt:

Period: (06/2007) to (02/2010).

The main activities: Studies and research works at chemistry field, majoring in Nanotechnology and Nanocomposites and working especially in Nanopolymers and their industrial and engineering application.

III. Third project

Title: Development and application of new amperometric sensors and biosensors based on nanomaterials;

Leader: Prof. Jose Maria Palacios Santander.

Organizations: Department of Analytical Chemistry, Faculty of Science, University of Cadiz (UCA), Spain.

Period: (10/2011 to 01/2011).

The main activates: 1. Development and characterization of electrochemical sensors based on nanomaterials and their application for the determination of substances of interest in food and environmental matrices.

2. Synthesis and characterization of metal nanoparticles.

IV. Fourth project

Title: Dynamic filtration nanosystems for membrane technology.

Leaders: Prof. Mihail Barboiu, Prof. Joao Crespo, Prof. Lidietta Giomo.

Organizations: the following organizations are contributing in this research project:

1. Institute European des Membranes (IEM), University of Montpellier II, Montpellier, France.
2. Faculdade de Ciencias e Tecnologia, Universidade Nova de Lisboa (FCT- UNL), Caparica, Lisbon, Portugal.
3. Institute of Membrane Technology (ITM), University of Calabria, Calabria, Italy.

Period: (02/2013) to (02/2016).

The main activates: preparation, modification and characterization of membranes for different application:

1. Metal organic frameworks (MOFs) and Rubbery organic frameworks (ROFs) membranes for gas separation.
2. Ionic liquid membranes for gas separation and proton transport.
3. Membrane emulsification for the production of micro-nano particles.
4. Ceramic membranes, hollow fiber, and nanocomposite membranes for Energy storage, water treatment and gas separation.
5. Membrane biofunctionalization by chemical grafting for pharmaceutical application.

8. Scholarships

1. Master scholarship from the Erasmus Mundus Project under the frame of European Master in Quality in Analytical laboratories (EMQAL) program. The Website of program is (<http://cursos.ualg.pt/emqal/>).

2. I have been selected as a reserve list student for one of Erasmus Mundus master programs called (EURHEO: European Masters in Engineering Rheology) for a batch students (September / October, 2009).

3. I have been selected as a preselected list student at one of the DAAD programs called (Germany Egyptian Research long team Scholarship (GERLS) for the call (October-April, 2011).

4. I have been accepted in the main list at PAROWN (Partnership & Ownership Initiative) scholarship, which covered by the Egyptian Ministry of Higher Education for 3 months training at Spain.
5. I have been selected as a reserve list student for one of Erasmus Mundus doctorate programs called (ETeCoS3 - Environmental Technologies for Contaminated Solids, Soils and Sediments) for batch students (September / October, 2012).
6. Doctorate scholarship from the Erasmus Mundus Project under the frame of The Erasmus Mundus Doctorate in Membrane Engineering (EUDIME) program, website (<http://eudime.unical.it/>), at three European institutions:
 - I. Institution European des Membranes, University of Montpellier, France.
 - II. Faculty of science and technology, Universidade Nova de Lisboa (UNL-FCT), Lisbon, Portugal.
 - III. Institute in Membrane Technology (ITM-CNR), University of Calabria – Italy.
7. Doctorate student at Supramolecular Adaptive Nanosystems (NSA Group), Institution European des Membranes, University of Montpellier II, France, website (<http://nsa-systems-chemistry.fr/>).

9. Awards Received

1. [May, 2006] a medal from Helwan University for being the premium of the chemistry department during the college study.
2. [May, 2006] a shield from Egyptian Syndicate of Scientific Professions for being the premium of the chemistry department during the college study.
3. [June, 2006] a medal from Faculty of Science, Helwan university for being A member in the Development of Certified Chemistry Education at Helwan University, Integration of Theory, Experiment and Learning Resources.
4. [July, 2011] Certificate and medal from University of Cadiz, Cadiz, Spain, for granted the master research thesis with maximum grade for the Spanish system.
5. [May, 2012] Medal from the Erasmus Mundus association in Egypt for the best Erasmus Mundus master thesis in Science and technology field.
6. [October, 2012] Medal and membership at the Africa Erasmus Mundus association for presenting Egypt as a student at one the Erasmus Mundus research programs.
7. [August, 2013] Medal and certificate for the best poster presentation in The XVII International Sol-Gel Conference, Madrid, Spain.
8. [February, 2014] Medal and certificate for the best oral presentation in the membrane scientific meeting at Montpellier, France.

10. Memberships and Organizations

1. Member at the Egyptian society of the polymer and industrial Chemistry.
2. Member at the European membrane society (EMS) for membrane Engineering.
3. Member at the European membrane house (EMH) for the membrane technology and processing.
2. Member and staff at the Egyptian ministry of Higher education.
5. Member at the Erasmus Mundus association and exchange mobility in Egypt and Africa.
6. Member and Organizer of Erasmus Mundus Events in some European countries like (Poland, Spain, and France).

11. Industrial Experiences

1. Training at the following institutions at Egypt: Petroleum Research Institute, summer (2002); National Cement co., summer (2003); Pachin Paints co., summer (2004); water treatment co., summer (2005), and polymer industry co., summer (2007).
2. Training at the following research institutions: polymer and pigment labs, national Research Center (NRC), Cairo, Egypt, summer (2007, 2008) - Faculty of Science, Helwan University, Egypt, from (June, 2006) until (June, 2007).
3. Training at a Grupa LOTOS S.A. company at Gdansk, Poland, it is a international petroleum company, which deals in oil exploitation, processing, the wholesale and retail trade of high quality petroleum products.

12. Activities and Working Experiences in field of Membrane Science and Engineering

1. Constitutional Dynamic Chemistry and Dynamic Combinatorial System membranes.
2. Dynamic constitutional materials for self-instructed membranes.
3. Constitutional dynamic networks (Dynameric membranes) as membrane materials.
4. Synthesis, characterization of nanoparticles, polymeric, and nanocomposite materials for different applications.
5. Polymeric and mixed matrix membranes for gas separation application.
6. Supported ionic liquid membranes (SILMs) for membrane separation application.
7. Biocatalytic membrane reactor (BMR) for membrane separation application (Gas separation and wastewater treatment).
8. (Bio)Molecular control of selective ion transport, gas separation and catalytic enzyme-based reactions using functionalized membranes.
9. Membrane for water purification and desalination.
10. Membrane preparation, Modification, and characterization for Environmental, Industrial and biological applications.
11. Metal ions removal, adsorption, extraction and recovery from different wastes using membrane materials.

13. Activities and Working Experiences in field of Polymer Science

1. Studying the factors affecting the Synthesis of some polymers and Nanopolymers by various polymerization techniques and determining the optimum conditions for the polymerization process.
2. Studying Surface Characteristics of the Coated Paper Improved by Plastic Pigments and Synthetic Thickeners and the effect of polymeric thickeners on pigment coatings: Adsorption, rheological behavior and surface structure.
3. Research Interests in some fields as polymers and pigments, Ink-paper interactions and paper coating, Chemical additives to control coating structure, Printability of water based ink, Food packaging and its related parameters.
4. Studying the Prolongation of shelf life of certain Egyptian food products.
5. Using of new synthesis methods for production of some specific Nanochemicals for enhanced drilling fluids.
6. Studying the Efficiency of polypropylene film as a packaging material - A comparative study between Egyptian and imported polypropylene.
7. Studying the mechanical and thermal properties for some polymers prepared at very low temperature by using new initiating system for polymerization.
8. Studying tacticity for some prepared polymers and Nanopolymers at different temperatures (high and low temperatures).
9. Studying the synthesis of some new synthetic binders (lattices) used in the field of coating and paints.
10. Studying the rheological effect of some prepared Nanocomposites and Nanomaterials in different industrial applications.
11. Studying the factors affecting the Synthesis of chelating polymers and their metal complexes by various polymerization techniques and determining the optimum conditions for the polymerization process.
12. Studying the preparation of Nanopolymers, Self-assembled and non Self-assembled Nanostructures.
13. Studying the preparation of membrane organic frameworks (MOFs) and Rubbery organic frameworks (ROFs) for gas separation.
14. Studying supramolecular chemistry towards constitutional dynamic chemistry and adaptive chemistry.

14. Activities and Working Experiences in the field of Electroanalytical Chemistry

1. Computational analysis using chemometrics and statistical techniques: programming in MATLAB, basic statistics, management of multivariate calibration techniques: partial least squares regression, principal component regression, artificial neural networks, among others, design of experiments analysis variance, use of tools for pre-data processing, Fourier transform infrared spectroscopy, etc.
2. Development of new sol-gel materials (Sonogel-carbon) for use as sensors and biosensors electrochemical, which selective for different analytes of interest food and / or environmental.
3. Synthesis and characterization of metal nanoparticles.
4. Development of new synthetic methods for metal nanoparticles in electrochemical sensors electrodes, materials Sonogel-Carbon, modified carbon paste electrode (CPE).
5. Electrochemical and structural characterization of materials and Sonogel-modified electrodes.
6. Management, advanced user level, the following instrumental techniques, including preparation of Sample: electrochemical techniques (differential pulse voltammetry (DPV), square wave voltammetry (SWV) Cyclic voltammetry (CV), etc ...), HPLC, ICP, NMR, spectroscopy, atomic emission and absorption; absorption spectrophotometry (UV / Vis), infrared spectroscopy, energy dispersive spectroscopy (X-ray); scanning electron microscopy, transmission, and microanalysis.
7. The ability to use of gas and liquid chromatography equipments for determination of analyte in the real samples.

15. Scientific Visits Abroad

I. Erasmus Mundus master in Quality in analytical laboratories:

1. Gdansk University of technology (GUT), Faculty of Chemistry, Gdansk, Poland: (01/02/2011 to 30/09/2011) (8 months).
2. University of Barcelona (UB), Faculty of Chemistry, Barcelona, Spain: (01/10/2010 to 31/01/2011) (4 months).
3. University of Cadiz (UCA), Faculty of Science, Department of Analytical Chemistry, Spain: (01/02/2011 to 31/07/2011) (6 months).

II. Short fellowship at the Spanish research group (FQM249-Instrumentation and Environmental Sciences):

University of Cadiz (UCA), Faculty of Science, Department of Chemistry, Spain: (01/10/2011 to 31/01/2012) (4 months).

III. PhD Erasmus Fellowship at the French research group (NSA: Supramolecular Adaptive Nanosystems):

Institution European des Membranes, University of Montpellier II, Montpellier, France: (01/02/2013 to 31/01/2016) (36 months = 2 Years France + 6 months Portugal +6 months Italy)

IV. PhD Erasmus Fellowship at the Portuguese research group (REQUIMTE/FCT-UNL):

Faculty of science and technology, Universidade Nova de Lisboa (UNL), Lisbon, Portugal: (01/02/2014 to 31/07/2014) (6 months).

V. PhD Erasmus Fellowship at the Italian research institution (ITM-CNR):

ITM-CNR, University of Calabria, Calabria, Rende, Cosenza, Italy: (01/02/2015 to 31/07/2015) (6 months).

16. Languages

| Languages: | | | | Proficiency (0=Poor - 10=Excellent) |
|------------|--------|------|---------|--|
| Language | Spoken | Read | Written | Certificates |
| Arabic | 10 | 10 | 10 | Mother tongue |
| English | 10 | 10 | 10 | 1. Certificate from AUC (American University), Cairo, Egypt. 2. Studying master program at European countries using English language. 3. Bachelor and master studies have been conducted in English. |
| Spanish | 5 | 5 | 5 | Certificate from UB (University of Barcelona), Barcelona, Spain. |
| French | 5 | 5 | 5 | Certificate from UM2 (University Montpellier 2), Montpellier, France. |
| German | 5 | 5 | 5 | High school certificate as a second foreign language during the high school studies. |
| Polish | 5 | 5 | 5 | Studying Polish language at GUT (Gdansk University of technology, Gdansk, Poland). |
| Italian | 5 | 5 | 5 | Studying Italian language at UNICAL (University of Calabria, Calabria, Italy). |

17. Personal and Research Skills

1. Have the ability to work under stress and in a team.
2. Familiar with electronic research and how to find out a specific paper related to the research field.
3. Hardworking person, ambitious, serious, responsible, persistent, patient with good human qualities.
4. Research and laboratory skills in the quality of analytical chemistry.
5. Background and experiences in different fields of chemistry especially materials sciences and analytical chemistry.
6. Mathematical modeling of the data.
7. Familiar with a number of scientific instruments such as pH meter, conductivity meter, UV-Vis spectrophotometer (single and double beam), FTIR, NMR, in addition to (TGA, XRD, DSC, TEM, SEM/EDS for studying of material). Also some analytical instruments as High power ultrasound generator, Potentiostat /Galvanostat, HPLC/MS, GC/ MS, UPLC, Microwave Assisted Extractor (MAE), and Pressurized Liquid Extractor (PLE).
8. Physical and chemical characterization of polymers.
9. Quality control and assurance.
10. I have learnt how to pick up a research point and how to put a proposal of the research.
11. I have learnt how to deal with B.Sc. students and encourage them to participate in the classroom as well as in the labs.

18. Teaching Duties

- I. I am working as Demonstrator of Chemistry at the Department of Chemistry, Faculty of Science, Helwan University, Cairo, Egypt. The teaching duties are dealing with experimental applications in the following fields:
1. Qualitative and quantitative analysis of many inorganic and organic compounds.
 2. Preparation, purification and elucidation of many organic compounds.
 3. Applied chemistry labs as (paint, ink, paper, polymer, cement, textiles and dyes).
 4. Separation of natural products using different analytical separation techniques (LC, GC, SPLC, etc.).
 5. Analytical labs as (Chromatography techniques, water treatment and environmental chemistry).
 6. Kinetics of chemical reactions and physical chemistry.
- II. I have taught some experimental labs of chemistry at the Department of Analytical Chemistry, Faculty of Science, University of Cadiz, Spain, as training part of the master research thesis.
- III. Teaching and training chemistry labs for the first year students in the program science around us at the Faculty of Science, University of Cadiz, Spain.

19. Computer Skills

- 1) ICDL Certificate: Program of International Computer Driving License.
- 2) Application Program: SAP Enterprise Software (QM - Module).
- 3) Operating System: Windows 9x/2000/Me/NT/XP and Linux Freespire.
- 3) Office Application: Microsoft Office, Open Office.
- 4) Design Application: Corel Draw, Macromedia Flash MX, Adobe Photoshop, etc.
- 5) Analysis Programming: SPSS, Minitab and Statistica.

20. Personal interesting

Reading, browsing Internet, sharing information with friends to get new ideas, knowledge issues especially in developmental technology and generally in human relationship, having some sport activity like playing football and traveling, and interesting for studying different languages.