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Prof. Dr. Abdulkareem M. A. Alsammarraie

Personal Information

Contact Address:	Department of Chemistry, College of Science, University of Baghdad Baghdad, Iraq
Date of Birth:	17-04-1959
Nationality:	Iraqi

Education

1977 - 1981	BSc in Chemistry, Baghdad University (10/7/1981)
1983 – 1986	MSc in Chemistry, Baghdad University (UO#20923 in 14/10/1986)
	Thesis title: Mass-Spectrometric Studies of Metal-Catalized Decomposition of Methyl Chloride
1996-2002	PhD in Chemistry, Baghdad University (UO#11897 in 30/6/2002)
	Thesis title: Electrochemical Synthesis, characterization and Investigation of certain Reactions of Gamma-Manganese Dioxide

Research Interest

- Corrosion rate measurement and control
- Nanotechnology (materials and applications)
- Electrochemical processes (coating, anodizing, …etc)

Career

- 2020-current, Deputy President of Scientific Affairs, University of Baghdad
- 2018-2020, : Head of Department of Chemistry, College of Science, University of Baghdad
- 2010- current, Faculty Staff (Chemistry Department, college of Science, Baghdad University).
- 2003-2009, Chief Researcher (Ministry of Science Technology-Iraq).
- 1991-2002, Project manager, Researcher, Head of Directorate of Research and Development, (Iraqi Military Industrialization Corporation).
- 1987- 1990, Researcher (Iraqi Atomic Energy Commission-Iraq).

Academic Title

- 2010-2013 Instructor
- 2013-2019 Assistant Professor in Physical Chemistry (UO#16486 in 29-6-2014).
- 2019- now Professor in Chemistry (UO#

Teaching

UG: Nanochemistry

PG: PhD-Advanced nanochemistry, MSc-Nanomaterials Identification Techniques

Patents

4 patents, (corrosion[P#6040 in 16/12/2019], nanomaterials synthesis, nanosolar cell[P#4711 in 19/10/2016], nanobiosensors[P#5817 in 24/6/2019])

1 Industrial model (SN# 927 in 22/1/2017), Central Agency for Standardization and Quality Control.

Conferences & workshop

- Workshop – ASTF-Sandia National laboratories, Amman, Jordan June 21-24, 2009.
- World learning, ISFP, USA, June3-September8, 2012.
- Nanostructures for Solar cell, Georgia Tech, Atlanta-USA, June-August, 2012.

- SEM/XRD Workshop, sultan Qaboos University, Musqat, Sultanate of Oman, 18-22 Jan 2015.
- ICGTCS, SRM University, Delhi, December 8^{th} -9^{th}, 2017.
- ICCAR, Prague, Czech, Oct 29-30^{th} , 2018
- IConMEAS, Istanbul Aydin University, Turkey, 8-9/August/2018.
- 3^{rd} IBTC, Iran, Tehran, September 1-3, 2019.

Thesis Supervision

- 6 PhD's
  1. Physical investigation of corrosion protection of polymer coated steel in concrete, **Ahmed Qasim Abdullah,2010.**
  2. Synthesis and characterization of graphene and their applications as corrosion protection and sensitive solar cell, **Mazin Hassan Rehama, 2016.**
  3. Synthesis and characterization of some inorganic advanced nanomaterials for solar cell and anticorrosion applications, **Ghzi Hamdan Abed, 2017.**
  4. Pitting corrosion and protection of stainless steel alloys in halide salts solutions, **Shymaa Mahdi Saleh, 2018.**
  5. Studies on the preparation and characterization of MnO2 nanostructures for rechargeable batteries, **Zahraa Hassan Reheem, 2018.**
  6. Study the Corrosion and Corrosion Protection of Carbon Steel Reinforcing Bar (CSRB(in Artificial Concrete Media**, Noor Ali Khudhair, 2019.**

- 16 MSc's
  1. Anodic oxide template synthesis & characterization of nanostructure by electrodeposion, **Yosif Reheem, 2011.**
  2. Corrosion Protection Evolution by using Nanoparticles For Some Metals and its Alloys, **Assan Abdulamir, 2012.**
  3. Synthesis and identification of Ag, Au, Pt, and Cu nanoparticles using AAO nanotemplate, **Alyaa Jabbar, 2012**.
  4. Fabrication of TiO2 nanotubes in nonaqueous electrolyte, **Kareem Najem Abed, 2012.**
  5. Improving the protection efficiency of Ti implants in artificial body fluid, **Zaman Karam, 2012.**
  6. A Study in Protection of Corrosion by Using Nanoparticles (AL_2O_3,ZnO) for Some Metals and Alloys, **Raed Abed Ahmed, 2013.**
  7. Design and fabrication of honeycomb nanofilter, **Hassan Abd Alkadhum, 2014**.
  8. Preparation and Identification of TiO_2Nanotubes (TNT's)For Solar cell, **Hayder Hameed Hamdan, 2014.**
  9. Study the efficiencies and fabrication of dye sensitive solar cell using nanomaterials, **Noor Abdallah Alattar, 2014.**
  10. Corrosion Protection Enhancement of;Zn, Cu, Al, Carbon steel andStainless steel 316 in Artificial SeaWater by Coating with Nanomaterials, **Resha Abd Jassim, 2014.**
  11. An investigation into the Electropolymerization and Corrosion Protection Properties of Nanostructured Polypyrrole on some metals and alloys, **Rewaa Abbas, 2015.**
  12. Study corrosion resistance of polythiophene nanostructure, **Saeed Assad , 2016.**
  13. Functionlization and dopping of graphene for chemical sensing, **Mustafa Nabeel Elewi, 2018.**

  The chemistry and application of Fullerene, **Ali Hussain Ghanim, 2019.**

Publications

1. Effect of temperature and deposition time on the optical properties of chemically deposited nanostructure PbS thin films,
AKAS M.M. Abbas , A. Ab-M. Shehab , N-A. Hassan,
Thin Solid Films, 2011, 519, 4917–4922

2. Effect of Deposition Time on the Optical Characteristics of Chemically Deposited Nanostructure PbS Thin Films
NAH M.M.Abbas , A. Ab-M. Shehabb, A-K. Al-Samuraee,
Energy Procedia , 2011, 6, 241-250

3. Preparation, structure and adsorption properties of synthesized multiwall carbon nanotubes for highly effective removal of maxilon blue dye
Ayad Fadhil Alkaim, Zainab Sadik, Dunia Kamil Mahdi, Saif Mohammed, Abdulkareem Al-Sammarraie,
Korean J. Chem. Eng.,2015, 32: 2456-2462..

4. Synthesis and Growth Mechanism of Thin-Film TiO2 Nanotube Arrays on Focused-Ion-Beam Micropatterned 3D Isolated Regions of Titanium on Silicon
MAK Hoda Amani Hamedani, Simon W. Lee, Abdulkareem Al-Sammarraie, Zohreh R ...
ACS Appl. Mater. Interfaces 2013, 5, 9026−9033 5, 9026-9033

5. Electrochemical impedance spectroscopic evaluation of corrosion protection properties of polyurethane/polyvinyl chloride blend coatings on steel
AMA Alsamuraee, HI Jaafer,
AMERICAN JOURNAL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, 2011, 2 (5), 761-768

6. Adsorption, decomposition and surface reactions of methyl chloride on metal films of iron, nickel, palladium, lead, gold and copper
JMSNAH Abdul-Karim Mohammed Ali,
JOURNAL OF THE CHEMICAL SOCIETY FARADAY TRANSACTIONS,1987, 1 83 (8), 2391-2406

7. Electrodeposited Reduced Graphene Oxide Films on Stainless Steel, Copper, and Aluminum for Corrosion Protection Enhancement
AMAASMH Raheema,
International Journal of Corrosion 2017 (ID 6939354), 1-8

8. The role of anodizing potentials in making TiO2 nanotubes in (ethylene glycol / NH4F /water) electrolyte, HIJKNA Abdulkareem Mohammed Ali Alsammarraei
Archives of Applied Science Research,2014, 6 (2), 115-121

9. Evaluation of the pitting corrosion for aluminum alloys 7020 in 3.5% NaCl solution with range of temperature (100-500) C
AMA Alsamuraee, HA Ameen, SIJ Al-Rubaiey,
Am. J. Sci. Ind. Res., 2011, 2(2): 283-296

10. Cr Gd co-doped TiO2 nanoribbons as photoanode in making dye sensitized solar cell
GM Abed, AMA Alsammarraie, BI Al-Abdaly
Nanoscience and Nanometrology ,2017, 3 (1), 27-33

11. Titanium oxide nanotube arrays used in implant materials
SA Ajeel, AM Ali, Z Karm
UPB Scientific Bulletin Series B: Chemistry and Materials Science,2014, 76 (2), 95-104

12. The effect of Zinc, Tin, and Lead coating on corrosion protective effectiveness of steel reinforcement in concrete
AMA Alsamuraee, HA Ameen
American Journal of Scientific and Industrial Research,2011, 2 (1), 89-98

13. Corrosion Protection Study of Carbon Steel and 316 Stainless Steel Alloys Coated by Nanoparticles
AMA Rasha A. Jassim, Ahlam M. Farhan
J. Baghdad for Sci.2014, 11 (1), 116-122

14. Fabrication of PANI by Electropolymerization Method on SnO2 Conductive Glass as Counter Electrode for Dye sensitive Solar Cell
SMH Wasan R. Saleh, Abdulkareem M. Ali, Thamir A. A. Hassan , Ahmed A. Assi
International Journal of Current Engineering and Technology,2014, 4 (6), 4004-4008

15. STUDY OF THE EFFECT OF NH_4F CONCENTRATION ON THE STRUCTURE OF ELECTROCHEMICALLY PREPARED TiO_2 NANOTUBES
Haider hameed, Hareith I. Jaafar ,Abdulalkareem M. A. Alsammerraei
Iraqi Journal of Science.2012, Vol 53.No 2..Pp 827-831 53 .

16. Electrochemical formation of Titania Nanotubes in non-aqueous electrolyte
YAM Abdulkarim M.A.Alsamuraee, Qassim Mohammed Doss Al-Ittabi
AMERICAN JOURNAL OF SCIENTIFIC AND INDUSTRIAL RESEARCH,2011, 2 (6), 852-859

17. Specific NH_3 Gas Sensor Worked at Room Temperature Based on MWCNTs-OH Network
AH Al-Husseini, A Al-Sammarraie, WR Saleh
Nano Hybrids and Composites,2018, 23, 8-16

18. Synthesis and Characterization of Benzothiazol Derivative as a Corrosion Inhibitor for Carbon Steel in Seawater
Mohammed Alameri, Abdulkareem Mohammed Ali Al-Sammarraie, Khulood Abid Al-Saade
Materials Sciences and Applications ,2015, 6, 681-693

19. Enhancing of corrosion protection properties using electropolymerized polyaniline coating
Abdulkareem Mohammed Ali Al-Sammarraie, Raaed A. Shaker, Sariya A.Abdulrazak
Archives of Applied Science Research, 2014, 6 (4), 243-255

20. A Specific NH3 Gas Sensor of a Thick MWCNTs-OH Network for Detection at Room Temperature
AH Al-Husseini, WR Saleh, A Al-Sammarraie
Journal of Nano Research,2019, 56, 98-108

21. Efficiency enhancement of flexible dye sensitized solar cell using TiO2 nanotube/ZnS nanoparticles photoanode
GS Muhammed, AMA Alsammarraie, MM Abdullah
Asian J Chem.,2018, 30 (6), 1374-1382

22. Comparison of Aggressiveness Behavior of Chloride and Iodide Solutions on 304 and 304L Stainless Steel Alloys
IKS Abdulkareem M. A. Al-Sammarraie, Shaymaa Mahdi Salih
Materials Sciences and Applications, 2017, 8 (12), 889-898

23. Reduced graphene oxide coating for corrosion protection enhancement of carbon steel in sea water
AMA Al-Sammarraie, MH Raheema
Iraqi J Sci Spec Issue Part B,2016, 243-50

24. Fabrication of Polyaniline–Carbonnanofibers for Hydrochloric Acid and Ammonia Sensing at Room Temperature
TAA Abdul Kareem M. A. Alsammarraie, MHassan, IM Al-Essa, EA Al-Ajaj
Engineering and Technology Journal, 2014, 32 (4 Part (B) Scientific), 710-719

25. Preparation of Nanocrystalline PbS Thin Films by Chemical Bath Deposition
EAFAKAS M. Abass
Materials Science and Technology (MS&T) 2009 October 25-29, 2009, Pittsburgh

26. Role of Carbon Dioxide on the Corrosion of Carbon Steel Reinforcing Bar in Simulating Concrete Electrolyte, AMA AL-Sammarraie, Noor Ali,
Baghdad Science Journal,2020, 17 (1), 0093-0093

27. Enhancing of Corrosion Protection of Steel Rebar in Concrete Using TiO2 anoparticles as Additive, NA Khudhair, AMA Al-Sammarraie
Iraqi Journal of Science,2019, 1898-1903

28. Study the Effect of SiO_2 Nanoparticles as Additive on Corrosion Protection of Steel Rebar in Artificial Concrete Solution, Noor Ali Khudhair and Abdulkareem M.A. Al-Sammarraie, Journal of Engineering and Applied Sciences 14 (Special Issue 9): 10616-10621, 2019.

29. Effect of stress on SCC susceptibility of low carbon steel in 0.1 M of sulphuric acid solution using tension test
KH Gati, HI Ja'afer, AKMA Alsammarraie
Corrosion Engineering, Science and Technology,2018, 53 (7), 477-480

30. Investigate the Conductivity and Dielectric Properties of Polymer Electrolytes
MK Jawad
Indian Journal of Natural Sciences, 2018, 9 (50), 14891-14899

31. The Effect of Chemical Treatment of Reduced Graphene Oxide on NO_2 Gas Sensing
FAAS Abdulkareem M. Ali Al-Sammarraie, Mustafa N. Oleiwi
Journal of Engineering and Applied Sciences,2018 , 13 (18), 7721-7728

32. The Roles of Acidity on Sono-Electrodeposition of Silver Nanoparticles
KN Abed, AQ Abdullah, AMA Alsammarraie
Materials Sciences and Applications, 2018, 9 (08), 671

33. Corrosion Protection of Carbon Steel By Voltaren Drug in Acid Media and Theoretical Studies, AM Farhan, RA Jasim, AM Ali
Research Journal of Pharmaceutical, Biological and Chemical Sciences 2018, 9 (2) 705-715.

34. Hydrothermal synthesis of γ-MnO2 star shape nanostructures and the effect of doping with (Fe and Cu) on their electrochemical performance in zinc-MnO2 rechargeable batteries, Zahraa Hasan, Abdulkareem M. Ali Alsammarraie,
Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2018, 9 (6) 1451-1458

35. Pitting Corrosion Behavior of 304 SS and 316 SS Alloys in Aqueous Chloride and Bromide Solutions, IK Shakir, AKMA Alsamurraee, SM Saleh
Journal of Engineering, 2018, 24 (1), 53-69

36. Synthesized copper nanoparticles by sonoelectrodeposition for gas filter applications
KN Abed, AQ Abdullah, AMA Alsammarraie
Iraqi Journal of Physics, 2018, 16 (38), 132-138

37. Anticorrosion behavior of deposited nanostructured polythiophene on stainless steel, carbon steel, and aluminum in sea water
SA Adbulaziz, AMA Alsammarraie,2016,

38. Nano rods and flowerlike synthesis by hydrothermal growth method without catalysts
TAA Hassan, AM Ali, A Qassim
Engineering and Technology Journal , 2015, 33 (6 Part (B) Scientific), 1120-1126

39. Synthesis of Carbon Nano-structures by Low-Temperature Hydrothermal Technique
A Al-Sammarraie, F Al-amgir, P Singh, AF Alkaim
Journal of Applicable Chemistry,2014, 3 (4), 1552-1559

40.Comparison study on making dye sensitive solar cell using nanomaterials
AMA Alsammarraie, NA Al-Attar
Archives of Applied Science Research,2014, 6 (3), 78-88

41. Fabrication of carbon nanopowder by arc discharge technique
AKM Ali, EA Al-Ajaj, IM Al-Essa, TAA Hassan
Iraqi Journal of Physics,2012, 10 (19), 41-46

42. Evaluation of polyurethane and polyurethane/polyvinyl chloride blend coatings on steel as corrosion protection using EIS technique
AQ Abdullah, HI Jaafer, AKMA Alsamuraee
Iraqi Journal of Physics 8 (11), 59-66

43-Hydrogen peroxide biosensor based on hemoglobin-modified gold nanoparticles–screen printed carbon electrode, Ali S. Elewi, Shatha A. W. Al-Shammaree, Abdul Kareem M.A. AL Sammarraie,
Sensing and Bio-Sensing Research 28 (2020) 100340.