



Republic of Iraq
Ministry of Higher Education and Scientific Research
University of Technology / Department of Chemical Engineering

Scientific Bibliography And Publications (Curriculum Vitae)

A. Personal Data :

Full Name: AbdulMonem Abbas Karim .

Scientific Degree: Professor.

Specialization: B.Sc. in Chemical Engineering / **1988**.

M.Sc. in Chemical Engineering / Petroleum & Petrochemicals / **1992**.

Ph.D. in Chemical Engineering / Thermodynamics – Phase Equilibrium at Supercritical Fluid Conditions / **1999**.

Degrees Award body: Dept. of Chem. Eng. / University of Technology / Baghdad / Iraq.

Sex: Male.

Date And Place of Birth: 21/ 6 /1966 – Baquba – Diyala – Iraq.

Marital Status: Married with two children, girl and boy.

Religion: Moslem.

Nationality: Iraqi.

Languages Spoken: Arabic & English.

Unions : Member of Iraqi engineers union and teachers union.

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Postal Address: University of Technology / Department of Chemical Engineering / Baghdad – Iraq.

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Employment Years : (31) thirty one years in Ministry of Higher Education and Scientific Research / Iraq.

First Appointment : Assistant lecturer in Dept. of Chemical Engineering / College of Engineering / Tikrit University in **17 / 5 / 1992**.

- He graduated to lecturer status in **29 / 7 / 1997**.
- He graduated to assistant professor status in **16 / 7 / 2001**.



- He traveled from College of Engineering / Tikrit University to College of Engineering / Diyala University in **2006**.
- He graduated to professor status in **25 / 8 / 2008**.
- He traveled to work from the University of Diyala to the Department of Chemical Engineering / University of Technology in **28 /12 / 2023**. **B. Administrative Positions :**
 1. Responsible of scientific laboratories in the Dept. of Chem. Eng. / College of Engineering / University of Tikrit / Iraq, during the interval **2003 – 2006**.
 2. Member and reporter of the scientific graduation committee in the College of Engineering / University of Tikrit / Iraq, during the interval **2003 – 2006**.
 3. Member of the Engineering Consulting Bureau in the College of Engineering / University of Tikrit / Iraq, during the interval **2003 – 2006**.
 4. Member and reporter of the scientific graduation committee in the College of Engineering / University of Diyala / Iraq, **2007 – 2010**.
 5. Member of the scientific committee in the College of Engineering / University of Diyala / Iraq, from **2008** up to now.
 6. Member of the executive editorial board and editor manager of Diyala Journal of Engineering Sciences, College of Eng., University of Diyala, Iraq from **2008** up to **2011**.
 7. Deputy Dean of Scientific Affairs / College of Engineering / University of Diyala / Iraq in 7 / 2 / **2011** up to 14 / 4 / **2012**.
 8. Member of the central scientific graduation committee in the University of Diyala / Iraq in 9 / 2 / **2011** up to 15 / 4 / **2012**.
 9. Dean of College of Engineering / College of Engineering / University of Diyala / Iraq in 15 / 4 / **2012** up to 25 / 6 / **2019**.
 10. Chairman of the Board Engineering Consulting Bureau / College of Engineering / University of Diyala / Iraq in 15 / 4 / **2012** up to **2019**.
 11. Chairman of the Board of Directors of the Office of Scientific and Consultative Services / College of Engineering / University of Diyala / Iraq in 15 / 4 / **2012** up to **2019**.
 12. President of University of Diyala / Iraq in **25 / 6 / 2019** up to **8 / 11 / 2023**.

C. Teaching Experience :

1. Teaching the subjects reactors design (5 years), thermodynamics (5 years), engineering analyses (5 years), unit operation (1 year), petroleum refinery (1 year) and supervised of projects graduation

- yearly for undergraduate students in the Dept. of Chem. Eng. / College of Engineering / University of Tikrit / Iraq during the interval **1993 – 2001**.
2. Teaching the subjects fluid flow, analytical chemistry, and industrial management and supervised of project graduation for undergraduate students in the Dept. of Chem. Eng. / Faculty of Engineering and Petroleum / Hadramout University of Science & Technology / Yemen during the interval **2001-2002**.
 3. Teaching the subjects reactors design (2 years) and thermodynamics (2 years) for M.Sc. students in the Dept. of Chem. Eng. / College of Engineering / University of Tikrit / Iraq during the interval **2003 – 2006**.
 4. Teaching the subjects mathematics (3 years) as external lecturer for undergraduate students (2nd year) in the College of Engineering / University of Diyala / Iraq during the interval **1998 – 2001**.
 5. Teaching the subjects mathematics (4 years) as external lecturer for undergraduate students (2nd year) in the College of Engineering / University of Diyala / Iraq during the interval **2002 - 2006**.
 6. Teaching the graduate in the College of Engineering / University of Diyala / Diyala/ Iraq from **2006** up to **2023**.
 7. Teaching the postgraduate in the College of Engineering / University of Diyala / Diyala/ Iraq from **2016** up to **2023**.

D. The Participation in Scientific Conferences:

1. The 1st Technology Conference / University of Technology / Baghdad – Iraq / **28-30 March 1995**.
2. The 2nd Scientific Conference / College of Engineering / University of Tikrit / Tikrit – Iraq / **1 – 2 October 1996**.
3. The 2nd Conference for Environment Researches / Center of Environment Researches and College of Engineering / University of Al Mustansiriya / Baghdad – Iraq / **6 – 7 April 1999**.
4. The 1st Scientific Conference for Chemical and Petroleum Engineering / College of Engineering / University of Tikrit / Tikrit – Iraq / **28 – 29 November 2000**.
5. The 2nd Scientific Conference for Chemical and Petroleum Engineering / College of Engineering / University of Tikrit / Tikrit – Iraq / **24 – 25 December 2002**.
6. The 6th engineering Conference / College of Engineering / University of Baghdad / Baghdad – Iraq / **5-7 April 2009**.
7. The 1st Information Technology Conference / Computer Engineering & Information Technology Department / University of Technology / Baghdad – Iraq / **21-23 April 2009**.

8. The 2nd Scientific Conference of the College of Engineering / College of Engineering / University of Al-Qadisiya / Ad-Diwania – Iraq / **19-20 October 2009**.
9. The 2nd Regional Conference for Engineering Sciences / College of Engineering / Al-Nahrain University / Baghdad – Iraq / **1-2 December 2010**.
10. The 1st Conference for Engineering Sciences / College of Engineering / University of Diyala / Baquba – Diyala - Iraq / **22-23 December 2010**.
11. The 2nd Conference for Engineering Sciences / College of Engineering / University of Diyala / Baquba – Diyala - Iraq / **16-17 December 2015**.
12. The 1st international for Engineering Sciences - 3rd Conference for Engineering Sciences (ISCES) / College of Engineering / University of Diyala / Baquba – Diyala - Iraq / **10-11 December 2018**.

- Participation in many committees of discussion for M.Sc. & Ph.D. students.
- Evaluation many researches of scientific Iraqi journals and that for scientific graduations.
- **Courses and workshops:**
 1. Obtained the certificate of passing the course of development of teaching methods for the period 314 April 1993 and issued by the Center for the development of teaching methods and university training / University of Tikrit.
 2. Passing the training course for the use of computers according to the Administrative Order No. 7/47/621 dated 25/3/2001 issued by the Faculty of Engineering / University of Tikrit.
 3. Delivered to the University of Malaya-Kuala Lumpur-Malaysia by the Ministry of Higher Education and Scientific Research / R & D Department within its program of training and development of teaching staff outside of Iraq according to Ministerial Order No. 21/23094 dated 24/11/2009 issued by the Ministry Higher Education and Scientific Research / Department of Scholarships and Cultural Relations / Division of Deposits and Circulars and University Order No. 14924 on 7/12/2009 issued by the Presidency of the University of Diyala / Directorate of Missions and Cultural Relations and has completed the courses listed in **Table (1)**.

Table (1). Training courses at the University of Malaya - Kuala Lumpur - Malaysia.

No.	Training	Interval	Place
1	1. The Drive Adoption of Personalized Learning Environment and Students Engagement, PLEaSE Tools. 2. The Platform Personalizing Teaching and Learning with Moodle.	3 days	Academic Development Centre, AdeC.
	3. The Sandbox Building Contents with Web 2.0 Tools.		
2	1. X-Ray Powder Diffraction. 2. Scanning Electron Microscope (SEM). 3. THERMOGRAVIMETRIC ANALYZER (MS-TG). 4. DIFFERENTIAL SCANNING CALORIMETRY (DSC).	3 days	Combinatorial Technology & Catalysis Research Center

3	<ol style="list-style-type: none"> 1. GC-MS training (2 days). 2. HPLC training (1 day). 3. Supercritical Fluid Extraction (1 day). 4. Thermal Gravimetric Analysis, TG (1 day). 5. Inductively Coupled Plasma Optical Emission Spectroscopy, ICP-OES (1 day). 6. CHNS Analyzer (1 day). 7. Particle Size Distribution, PSD (1 day). 8. Zeta Potential Measurement (1 day). 9. CO₂ Capture and Corrosivity using Ionic Liquid Green Solvents (2 days). 		Chemical Engineering Department- college of Engineering.
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4. Participate in the workshop held in Amman / Jordan for the period 25-26 / 10/2013 as part of the launch of the second phase of the UNESCO Quality Assurance Project in Higher Education Institutions on "Maintaining Quality Assurance Procedures in All Iraqi Engineering Faculties" The United Nations Educational, Scientific and Cultural Organization (UNESCO), in cooperation with the network of expatriate Iraqi scientists abroad, and with the participation of deans and representatives of engineering faculties in several Iraqi universities.
5. Participation in the workshop held in Erbil / Iraq for the period 2-6 / 2014-2014 as part of the launch of the second phase of the UNESCO Quality Assurance Project in Higher Education Institutions on "Maintaining quality assurance procedures in all faculties of Iraqi Engineering" The United Nations Educational, Scientific and Cultural Organization (UNESCO) has organized the Office of Iraq in collaboration with the network of Iraqi expatriate scientists abroad and with the participation of deans and representatives of engineering faculties at several Iraqi universities.
6. Participation in the workshop held in Amman / Jordan for the period 22-25 / 11/2015. Of the UNESCO Quality Assurance Project in Higher Education Institutions on "Reviewing plans to improve the quality of performance in engineering and planning for sustainable development outcomes", by the University Order No. 16265 of 17/11/2015 under the auspices of the United Nations Educational, Scientific and Cultural Organization) Iraq Office in cooperation with the network of expatriate Iraqi scientists abroad and with the participation of deans and representatives of the faculties of engineering in several Iraqi universities.
7. Participated in the course of modern management principles on 17/4/2016 for five days in the presidency of the University of Diyala and obtain the certificate of participation from the horizons of innovation for training, human development and administrative development.

E. Supervised Theses : Eleven M.Sc. students and one Ph.D. student.

F. The Important Publications:

1. **Heat Transfer During Film Evaporation of Hydrocarbon Mixtures in Turbulent Flow**, Eng. and Technology Journal, Technology University, Iraq, Vol.14 , No.9, **1995**, pp.7. (**in Arabic Language**).
2. **Simple Model of Vapour - Liquid Equilibrium for Carbon Dioxide and n-Paraffins Mixture**, Scientific Journal , Tikrit Univ. Eng. Science , College of Eng., Tikrit Univ., Iraq, Vol.4 , No.1 , **1997** , pp.169 - 184

3. **Carbon Dioxide Solubilities in Aromatic Compounds at High Pressures and Their Temperature Dependence**, Eng. and Technology Journal, Technology University, Iraq, Vol.18 , No.5, **1999**, pp.475 - 489
4. **New Correlation For Predicting The Interaction Constant between CO₂ and n-Paraffins From C₅ up to C₂₀ in Soave – Redlich – Kwong Equation of State**, Scientific Journal , Tikrit Univ. Eng. Science , College of Eng., Tikrit Univ., Iraq, Vol.7 , No.3 , **2000** , pp.57 – 72.
5. **Phase Equilibrium Study for The Separation Of Liquid Components Using Supercritical Carbon Dioxide**, Scientific Journal , Tikrit Univ. Eng. Science , College of Eng., Tikrit Univ., Iraq, Vol.8 , No.2 , **2001** , pp.87-104.
6. **Phase Equilibrium Study for The Separation of Solid component Using Supercritical Carbon Dioxide Entrained with Liquid Solvent**, Al-Muhandis Journal, The Iraqi Society of Engineers, Iraq, Serial-146 – No.2/ June, **2001**, pp.52 – 73.
7. **Reduction of Sulphur Dioxide Emission With Flue Gas Produced From Combustion of Fuel Oil Using Packed Bed Reactor**, Al-Muhandis Journal, The Iraqi Society of Engineers, Iraq, Serial-147 – No.3/ Sept., **2001**, pp.68 – 84.
8. **Thermodynamic Model for High Pressure Phase Behavior of Carbon Dioxide in Several Physical Solvents at Different Temperatures**, Tikrit Journal of Eng. Sciences, College of Eng., Tikrit Univ., Iraq ,Vol.15, No.2, June **2008**,. pp: 32-50.
9. **Phase Equilibria Modeling for Separation of Solid Mixtures by Supercritical Carbon Dioxide on Excel**, Diyala Journal for Applied Researches ,Diyala Univ., Iraq, Vol.4, No.1, **2008**. pp: 119-150
10. **Influence of Property Estimation Techniques on Thermodynamic Modeling of Solubility of C.I. Disperse Orange 30 Dye in Supercritical CO₂**, AL-Fatih Journal, No.36, October **2008**, College of Basic Education, Diyala Univ., pp.70-88.
11. **Effect of Operating Conditions on Hydrodesulfurization of Vacuum Gas Oil**, Diyala Journal of Engineering Sciences, College of Eng., Diyala Univ., Iraq, Vol.1, No.1, December **2008**. pp.19-31.
12. **Kinetic Models Study of Hydrodesulphurization Vacuum Distillate Reaction**, Tikrit Journal of Eng. Sciences, College of Eng., Tikrit Univ., Iraq ,Vol.16, No.1, March **2009**, pp: 1-13.
13. **Study of Pitting Corrosion Behavior For 1100 Aluminum Alloy in 3% NaCl Solution**, Diyala Journal of Engineering Sciences, College of Eng., Diyala Univ., Iraq, Vol.2, No.1, **2009**. pp.1-27, (in Arabic Language).
14. **Artificial Neural Networks Modeling of Phase Equilibrium for The Separation of**

- Phenanthrene Using Supercritical CO₂** , The First Information Technology Conference / Computer Engineering & Information Technology Department/ University of Technology / Baghdad – Iraq / 21-23 April, **2009**, **Sciences Fields**, Paper No.1, ID 504.
15. **Phase Equilibrium Study for the Separation of Solid Components Using Supercritical Carbon Dioxide**, *The Open Thermodynamics Journal*, **2010**, **4**, 201-211, Bentham Open.
<http://www.benthamscience.com/open/totherj/openaccess2.htm>
16. **Correlation of Experimental Vapor-Liquid Equilibrium Data of CO₂ - Triethylene Glycol Monomethyl Ether System With Different Equations of State**, Proceeding of the 2nd Regional Conference for Engineering Sciences / College of Engineering / Al-Nahrain University / Baghdad – Iraq / 1-2 December, **2010**, Part 4, pp.187-201.
17. **Solubility Prediction of CO₂ In Several Physical Liquid Solvents Using CHEMCAD and HYSYS Simulators**, Diyala Journal of Engineering Sciences (Special Issue) / College of Engineering / Diyala University / Baquba – Diyala - Iraq , **2010**, pp.356-373.
18. **Comparison Study for the Solubility Prediction of Phenanthrene in Supercritical CO₂ Entrained with n-Pentane When Using Equation of State and Artificial Neural Networks**, Emirates Journal for Engineering Research, Vol.16, No.1, **2011**, pp.81-90.
19. **Vapor-Liquid Equilibrium Prediction by PE and ANN for the Extraction of Unsaturated Fatty Acid Esters by Supercritical CO₂**, ARPN Journal of Engineering and Applied Sciences, Vol.6, No.9, September, **2011**, pp.122-134.
20. **Effect of Hot Corrosion on Boilers Pipes in North Baghdad Electric Power Plant Station**, Diyala Journal of Engineering Sciences (Special Issue) / College of Engineering / Diyala University / Baquba – Diyala - Iraq , Vol.8, No.4, December, **2015**, pp.776-784.
21. **Hydrogen Purification Using a Microporous Hydrotalcite-Silica Composite Membrane**, Diyala Journal of Engineering Sciences (Special Issue) / College of Engineering / Diyala University / Baquba – Diyala - Iraq , Vol.8, No.4, December , **2015**, pp.846-854.
22. **Retardation of High-Temperature Fuel Ash Corrosion of Fireside Boiler Tubes via Nanoparticles**, Oxidation of Metals, Springer Science+Business Media New York, Vol.86, No.56, September **2016**, pp.553-565.
23. **Mathematical and Artificial Neural Network Models for Corrosion of High Temperature – High Pressure Boiler Pipes in Presence of Oxygen Scavengers**, 1st International Scientific Conference of Engineering Sciences - 3rd Scientific Conference of Engineering Science (ISCES),

10-11 Jan. 2018, ISBN:978-1-5386-1498-3/18/31.00\$©2018 IEEE, College of Engineering / Diyala University, Baquba, Diyala, Iraq.

24. **Copper and Lead Ions Removal From Aqueous Solution Using MgO, Nanostructured MgO**, Applied Chemical Engineering, Vol.1, No.4, 2018, doi:10.24294/ace.v1i4.655
25. **Numerical study and experimental validation of the effects of orientation and configuration on melting in a latent heat thermal storage unit**, Journal of Energy Storage, Vol.23, June 2019, 456–468. Netherlands. Contents lists available at Science Direct. Journal homepage: www.elsevier.com/locate/est
26. **Ceramics coating materials for corrosion control of crude oil distillation column: Experimental and theoretical studies**, Journal of Corrosion Science, Vol.162, January 2020, <https://doi.org/10.1016/J.CORSCI.2019.108220>
27. **Miniaturized Traveling-Wave Thermoacoustic Refrigerator Driven by Loudspeaker: Numerical Design**, International Journal of Air-Conditioning and Refrigeration, Vol. 28, No. 04, December 2020. <https://doi.org/10.1142/S2010132520500352>
28. **Kinetics and Thermodynamics of Zinc (II) Ion Adsorption on Flint and Attapulgitic Iraqi Clays**, International Journal of Drug Delivery Technology, Vol.11, No.3, January 2021, 1-8.
29. **Ionic Liquid Solvents as Advanced Treatment Method for CO₂ Control: A Review Research**, IOP Conference Series Earth and Environmental Science, 779(1), June 2021. DOI: 10.1088/1755-1315/779/1/012115 <http://dx.doi.org/10.1088/1755-1315/779/1/012115>
30. **Biosorption of Copper and Lead Ions Using Chara Algae**, Pak. J. Engg. Appl. Sci., Vol. 29, July 2021, (p. 1–6).
31. **Thermal Performance Analysis of Modified Single Coil Heat Exchanger**, International Journal of Mechanical Sciences, Vol.7, No.2, February 2022, 585-595.
32. **Effect of Using A Double Coil Tube with Modified Pitch on The Overall Heat Transfer Rate**, Diyala Journal of Engineering Sciences, College of Eng., Diyala Univ., Iraq, Vol.15, No.1, March 2022, pp.40-53.
33. **Carbon Dioxide Absorption By 1-Butyl-3-Methyl-Imidazolium Tetrafluoroborate [Bmim][BF₄]**, Iraqi Journal of Oil & Gas Research, Department of Petroleum Technology, University of Technology-Iraq, Vol. 2, No. 2 (2022), pp.1-12.

34. **The use of Eutectic Solvents for the enhanced treatment carbon dioxide gas during the absorption of gases related to the oil industries: a review**, Iraqi Journal of Oil & Gas Research, Department of Petroleum Technology, University of Technology-Iraq, Vol. 2, No. 2 (2022), pp.60-78.
35. **Study of the structural and magnetic properties of $(\text{Ni}_{1-x}\text{Co}_x\text{Fe}_2\text{O}_4)$ prepared by the chemical co- precipitation thermal method**, Academic Science Journal, College of Science, Diyala Univ., Iraq, Vol.1, No.3, September 2023, pp.43-56.
36. **Experimental Investigation of CO_2 Solubility in New Amine-Based Deep Eutectic Solvents**, Tikrit Journal of Engineering Sciences, College of Eng., Tikrit Univ., Iraq, Volume 31, No.1, 2024, pp.262-277.

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