Prof. Dr. Ammar S. Abbas

Name: Ammar Salih Abbas Al-Taie

Address: University of Baghdad, College of Engineering, Chemical Engineering

Department

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Place and Date of Birth: Baghdad, January, 19th 1975

Languages: Arabic (Mother Tongue), English (Good)

Nationality: Iraqi

Educational Qualification

1. B. Sc. Chemical Engineering (Unit Operation), University of Baghdad, 1996. Project Title "*Production of 1, 3 Butadiene by Dehydrogenation of Butane*"

2. M. Sc. Chemical Engineering (Petrochemical Process and Reactor Design), University of Baghdad, 1999.

Thesis Title "Low Sulfur Feedstock from Basrah Reduced Crude Oil for Coke Production"

3. Ph. D. Chemical Engineering (Petrochemical Process and Reactor Design), University of Baghdad, 2002.

Thesis Title "Preparation of Special Kind of Wax for Medicinal Uses"

Previous and Current Jobs:

- 1. Lecturer (1998-1999), Petroleum Institute-Baghdad, Ministry of Oil (Iraq).
- 2. Lecturer (1999-2001), Chemical Engineering Department, College of Engineering, University of Baghdad (Iraq).
- 3. Consultant (1999-2002), Daura Refinery-heavy oil production section and Environmental Control Unit, Ministry of Oil (Iraq).
- 4. Faculty member (June, 28th 2001-Present), Chemical Engineering Department, College of Engineering, University of Baghdad (Iraq).
- 5. Lecturer (2001- 2004), Continuous Teaching Center, College of Engineering, University of Baghdad (Iraq).
- 6. Get Assistant Professor rank in 19/4/2009.
- 7. Academic visitor, University of Manchester Metropolitan, Manchester, UK, 9/4/2014 to 9/5/2014.
- 8. Get Professor rank in 31/8/2015.
- 9. Academic visitor, University of Bradford, Bradford, UK, July and August 2018.

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Academic Experience

Teaching Activities and Skills

- 1. Professor in Chemical Engineering.
- 2. Researcher in Psychology (cross-culture).
- 3. Excellent practical experiences in much Arduino circuits and computer software (All applications of Microsoft office, Polymath, gPROMS, Python). Also, I do have very good experience in computer hardware maintenance.

Training Courses (1996-present)

Several training courses dealing with the following practices:

- 1. Industrial projects planning and management.
- 2. Air pollution control systems.
- 3. Water treatment and water quality control (Arabic course)
- 4. Numerical and computational methods in chemical engineering.
- 5. Catalytic reactor, modelling and design.
- 6. Reactor and high-pressure equipment design.

Certificates, Qualifications and Union

- 1. Member in the Iraqi Engineers Union/Baghdad (1999-present).
- 2. Educational qualifying course in method of teaching and university staff training, Center of Developing Method of Teaching and University Staff Training-Baghdad University (Iraq), 2001.
- 3. Educational qualifying course in Arabic language, Center of Developing Method of Teaching and University Staff Training-Baghdad University (Iraq), 2001.
- 4. English skills developing course, Psychological Consultation Center, Ministry of Higher Education and Scientific Research (Iraq), 2002.
- 5. Chemical safety and security officer training, Sandia National Laboratories and University of Baghdad-Iraq (workshop sponsored by the United States-Department of State), February 2011.
- 6. Chemical safety and security officer training, Sandia National Laboratories, Kuala Lumpur-Malaysia, October 2014.
- 7. McGraw Hill Education workshop, Baghdad (online), June 2021.

Research Interests

- 1. Advance in petrochemical processes design and development.
- 2. Re-use and recycling of plastic waste and explorer new ways to optimum uses for oil heavy residuals.
- 3. Chemical reaction engineering, applied catalysis and mass transfer and modelling of multi-phase reactors.
- 4. Catalyst and renewable energy.

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- 5. Powder technology and adsorption.
- 6. Electrochemical oxidation reactions and reactor design.
- 7. Cross-culture psychology.

Conferences, Meetings and Visiting

- 1. The Fifth Engineering Conference of College of Engineering, University of Baghdad, February 2003 (Iraq).
- 2. The Fifth Jordan International of Chemical Engineering Conference (JICEC 05), September 2005 (Jordan).
- 3. The 56th Canadian Chemical Engineering Conference in Sherbrooke Quebec, October 15-18th, 2006 (Canada).
- 4. The 2nd Regional Conference for Engineering Sciences, College of Engineering, University of Nahreen, 2010 (Iraq).
- 5. Academic visitor, Manchester Metropolitan University, Division of Chemistry and Environmental Sciences, April and May, 2014.
- 6. British Zeolite Association Spring Meeting, Promotion the Science of Nanoporous Materials, University of Glasgow, April 9-11th, 2014.
- 7. Scientific Researchers Meeting, Manchester Metropolitan University, June, 2014.
- 8. International Conference of Applied Mineralogy and Advanced Materials (AMAM), Castellaneta Marina (Taranto), Italy, June 1-12, 2015.
- 9. Second Engineering Scientific Conference College of Engineering University of Diyala 16-17 December. 2015.
- 10. Conference: Xth International Statistics Days Conference, 7-9 October 2016, Giresun, At Giresun, Turkey.
- 11. Honorary Seiner Academic visitor, University of Bradford, Faculty of Engineering and Informatics, July and August, 2018.
- 12. Energy Security and Chemical Engineering Congress, Empowering Growth in Sustainable Energy, 17-19 July, 2019, Penang, Malaysia.
- 13. Second series of the International Conference on Materials Engineering & Science, September 25-26, 2019 at University of Technology Baghdad-Iraq.
- 14. The Fifth Scientific Conference for Engineering Research and Postgraduate Studies, Middle Technical University, 23-24 December 2020, Baghdad (Iraq).
- 15. The 3rd Conference of Post Graduate Researches & Graduation Projects, Al-Nahrain University, Baghdad, Iraq, May 19-20, 2021.
- 16. The 3rd International Scientific Conference of Engineering Sciences and Advances Technologies (IICESAT), College of Material Engineering, University of Babylon, 4-5 June, 2021, Iraq.
- 17. The 4th International Conference on Materials Engineering & Science, University of Duhok (October 06-07, 2021), Kurdistan Region, Iraq.

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Selected Publications

- 1. Abdul-Halim A-K Mohammed and Ammar S. Abbas, "The Effect of Asphaltenes Removal on the Kinetics of Iraqi Reduced Crude Oil Hydrotreating", Iraqi Journal of Chemical and Petroleum Engineering (IJCPE), Vol. 2, No.1, March 2001.
- 2. Abdul-Halim A-K Mohammed and Ammar S. Abbas, "Acid Treatment of Paraffin Wax", Iraqi Journal of Chemical and Petroleum Engineering (IJCPE), Vol. 5, No.3, March 2004.
- 3. Abdul-Halim A-K Mohammed and Ammar S. Abbas, "Solvent Deasphaltening of Basrah Reduced Crude Oil", accepted to publish in Iraqi Journal of Chemical and Petroleum Engineering (IJCPE), 2005.
- 4. Ammar S. Abbas and Suondos K. A. Barno, "Preparation of Food Grade Wax", PDP-3-32, Fifth Jordan International of Chemical Engineering Conference (JICEC 05), 12 to 15 September 2005.
- 5. Ammar S. Abbas and Suondos K A. Barno, "Hydro-de-aromatization of Paraffin Wax", Journal of Engineering, Vol. 11, No. 4, 2005.
- 6. Ammar S. Abbas and Sawsan Dh. A. Shubbar, "Pyrolysis of High Density Polyethylene to Produce Fuel like Liquid", Iraqi Journal of Chemical and Petroleum Engineering (IJCPE), Vol. 9, No.1, March 2008.
- 7. Ammar S. Abbas, "Empirical Hydrodynamic Model for De-metallization of Kirkuk Reduced Crude Oil in Trickle-bed Reactor", Al-Taqani, Vol. 22, No. 3, (pp 1-10), 2009.
- 8. Abbas H. Sulaymon, Ammar S. Abbas and Rasha H. Salman, "Prediction of Equilibrium Mixing Index and Optimum Mixing Time for Three solid materials in Fluidized Column", Al-Khwarizmi Engineering Journal, Vol. 6, No. 4, PP 21 30 (2010).
- 9. Ammar S. Abbas, "Kinetic Study of Direct Oxidation Reaction of Hydrogen Sulfide on Alumina Catalyst", The 2nd Regional Conference for Engineering Sciences, College of Engineering/ Al-Nahreen University, (part 4: Chemical and Petroleum Engineering), Baghdad 1-2 December 2010.
- 10. Ammar S. Abbas and Toleen Salah Othman, "Production and Evaluation of Biodiesel from Sheep Fats Waste", Iraqi Journal of Chemical and Petroleum Engineering, Vol.13, No. 1 (pp 11-18), March 2012.
- 11. Ammar S. Abbas and Sura M. Abbas, "Kinetic Study and Simulation of Oleic Acid Esterification in Different Type of Reactors", ", Iraqi Journal of Chemical and Petroleum Engineering, Vol.14, No. 2 (pp 13-20), June 2013.
- 12. Ammar S. Abbas and Rowaida N. Abbas, "Kinetic Study and Simulation of Oleic Acid Esterification over Prepared NaY Zeolite Catalyst", Iraqi Journal of Chemical and Petroleum Engineering, Vol.14, No. 4 (pp 35-43), December 2013.
- 13. Ziad T. Ahmed, Ammar S. Abbas, Talib M. Albayati and Aidan M. Doyle, "Biodiesel Production Using Zeolite Prepared from Shale Rock and

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- Domestically sourced Ash", BZA Spring Meeting, University of Glasgow, UK, April 2014.
- 14. Ammar S. Abbas and Fahmi Abuelgasim Mohamed, "Production and Evaluation of Liquid Hydrocarbon Fuel from Thermal Pyrolysis of Virgin Polyethylene Plastics", Iraqi Journal of Chemical and Petroleum Engineering, Vol.16, No. 1 (pp 21-33), March 2015.
- 15. Ammar S. Abbas, "Alkaline Depolymerization of Polyethylene Terephthalate Plastic Waste", Tikrit Journal of Engineering Science, Vol.22, No. 1 (pp 1-8), April 2015.
- 16. Ammar S. Abbas and Rowaida N. Abbas, "Preparation and Characterization of NaY Zeolite for Biodiesel Production", Iraqi Journal of Chemical and Petroleum Engineering, Vol.16, No. 2, June 2015.
- 17. Ziad T. Ahmed, Ammar S. Abbas, Talib M. Albayati and Aidan M. Doyle, "Fuajasite Zeolite Prepared from Shale Rock as a Catalyst for Biodiesel Production", International Conference of Applied Mineralogy and Advanced Materials (AMAM), Castellaneta Marina (Taranto), Italy, Vol. 4, p. 143, June 1-12, 2015.
- 18. Ammar S. Abbas and Fahmi Abuelgasim Mohamed, "Production and Evaluation of Liquid Hydrocarbon Fuel from Thermal Pyrolysis of Virgin Polyethylene Plastics', Iraqi Journal of Chemical and Petroleum Engineering, 16 (1), 21–33, (2015).
- 19. Ammar S. Abbas and Fahmi Abuelgasim Mohamed, "Kinetic Study of Hydrocarbon Liquid Production via Thermal and Catalytic Pyrolysis for Low-Density Polyethylene", Diyala Journal of Engineering Sciences, 819–834, December (2015).
- 20. Ammar S. Abbas, Talib M. Albayati, Ziad T. Alismaeel and Aidan M. Doyle, "Kinetics and Mass Transfer Study of Oleic Acid Esterification over Prepared Nanoporous HY Zeolite", Iraqi Journal of Chemical and Petroleum Engineering, 17 (1), 47-60, (March 2016).
- 21. Ammar S. Abbas, Muthana J. Ahmed and Teeba M. Darweesh, "Adsorption of Fluoroquinolones Antibiotics on Activated Carbon by K₂CO₃with

Microwave Assisted Activation", Iraqi Journal of Chemical and Petroleum Engineering, 17 (2), 15-23, (June 2016).

- 22. Ammar S. Abbas and Teeba M. Darweesh, "Preparation and Characterization of Activated Carbon for Adsorption of Fluoroquinolones Antibiotics", Journal of Engineering, 22 (8), 140-157, (August 2016).
- 23. Ammar S. Abbas and Marwa G. Saber, "Thermal and Catalytic Degradation Kinetics of High-density Polyethylene over NaX Nano-Zeolite", Iraqi Journal of Chemical and Petroleum Engineering, 17 (3), 33-43, (September 2016).
- 24. Ali H. Abbar, Rasha H. Salman and Ammar S. Abbas, "Electrochemical Incineration of Oxalic Acid at Manganese Dioxide Rotating Cylinder Anode:

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- Role of Operative Parameters in the Presence of NaCl", Journal of The Electrochemical Society 163(13):E333-E340, (September 2016).
- 25. Ammar S. Abbas, Mohammad H. Hafiz and Rasha H. Salman, "Electrochemical Degradation of Phenol in Aqueous Solution: A Taguchi Approach", Xth International Statistics Days Conference, Giresun, Turkey, pp. 673-684, (7-9 October 2016).
- 26. Ammar S. Abbas and Sura M. Abbas, "Taguchi Experimental Design, Optimization and Kinetic Study of Biodiesel Production from Oleic Acid", Xth International Statistics Days Conference, Giresun, Turkey, pp. 743-754, (7-9 October 2016).
- 27. Aidan M. Doyle, Talib M. Albayati, Ammar S. Abbas and Ziad T. Alismaeel, "Biodiesel Production by Esterification of Oleic Acid over Zeolite Y Prepared from Kaolin", Renewable Energy 97:19-23, (November 2016).
- 28. Ammar S. Abbas, Mohammad H. Hafiz and Rasha H. Salman, "Electrochemical Degradation of Phenol in Aqueous Solution: A Taguchi Approach Indirect Electrochemical Oxidation of Phenol Using Rotating Cylinder Reactor", Iraqi Journal of Chemical and Petroleum Engineering, 17 (4), 43-55, (December 2016).
- 29. Ammar S. Abbas and Sally A. Hussien, "Equilibrium, Kinetic and Thermodynamic Study of Aniline Adsorption over Prepared ZSM-5 Zeolite", Iraqi Journal of Chemical and Petroleum Engineering, 18 (1), 47-56, (March 2017).
- 30. Aidan M. Doyle, Ziad T. Alismaeel, Talib M. Albayati, Ammar S. Abbas, "High purity FAU-type zeolite catalysts from shale rock for biodiesel production", Fuel 199, pp. 394–402, (July 2017).
- 31. Ammar S Abbas, Marwa G Saber, "Kinetics of Thermal Pyrolysis of High-Density Polyethylene", Iraqi Journal of Chemical and Petroleum Engineering 19 (1), 13-19 (January 2018).
- 32. AH Abbar, RH Salman, AS Abbas, "Studies of mass transfer at a spiral-wound woven wire mesh rotating cylinder electrode", Chemical Engineering and Processing-Process Intensification 127, 10-16, (2018).
- 33. RK Abid, AS Abbas, "Adsorption of organic pollutants from real refinery wastewater on prepared cross-linked starch by epichlorohydrin", Data in brief 19, 1318-132, (2018).
- 34. AH Abbar, AS Abbas, "A Kinetic Study of Oxalic Acid Electrochemical Oxidation on a Manganese Dioxide Rotating Cylinder Anode", Portugaliae Electrochimica Acta 36 (5), 325-337, (2018).
- 35. RH Salman, MH Hafiz, AS Abbas, "The performance of MnO2/graphite electrode for TOC removal from wastewater by indirect electrochemical oxidation process", IOP Conference Series: Materials Science and Engineering 454 (1), 012148, (2018).

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- 36. ZI Abbas, AS Abbas, "Organics deterioration from aqueous solutions by electro-Fenton process", IOP Conference Series: Materials Science and Engineering 454 (1), 012147, (2018).
- 37. ZT Alismaeel, AS Abbas, TM Albayati, AM Doyle, "Biodiesel from batch and continuous oleic acid esterification using zeolite catalysts", Fuel 234, 170-176, (2018).
- 38. AH Alfattal, AS Abbas, "Synthesized 2nd Generation Zeolite as an Acid-Catalyst for Esterification Reaction", Iraqi Journal of Chemical and Petroleum Engineering 20 (3), 67-73, (2019).
- 39. 42. AS Abbas, MY Hussein, HJ Mohammed, "preparation of Solid Catalyst for Biodiesel Production", Plant Archives 19 (2), 3853-3861, (2019).
- 40. AH Abbar, RH Salman, AS Abbas, "Cadmium removal using a spiral-wound woven wire meshes packed bed ro-tating cylinder electrode", Environmental Technology & Innovation 13, 233-243, (2019).
- 41. RH Salman, MH Hafiz, AS Abbas, "Preparation and Characterization of Graphite Substrate Manganese Dioxide Electrode for Indirect Electrochemical Removal of Phenol", Russian Journal of Electrochemistry 55 (5), 407-418, (2019).
- 42. ZI Abbas, AS Abbas, "Oxidative Degradation of Phenolic Wastewater by Electro-Fenton Process Using MnO2-graphite Electrode", Journal of Environmental Chemical Engineering 7 (3), 103-108, (2019).
- 43. Suondos KA Barno, Ammar S Abbas, "Reduction of Organics in Dairy Wastewater by Adsorption on a Prepared Charcoal from Iraqi Sugarcane", IOP Conf. Series: Materials Science and Engineering (Engineering Science and Technology), 736, Energy Security and Chemical Engineering, 022096, (2020).
- 44. BA Alshahidy, AS Abbas, "Preparation and modification of 13X zeolite as a heterogeneous catalyst for esterification of oleic acid", AIP Conference Proceedings 2213 (1), 020167, (2020).
- 45. FK Al-Jubory, IM Mujtaba, AS Abbas, "Preparation and characterization of biodegradable crosslinked starch ester as adsorbent", AIP Conference Proceedings 2213 (1), 020165, (2020).
- 46. Smith et al., "Sex Differences in Self-Construal and in Depressive Symptoms: Predictors of Cross-National Variation", Journal of Cross-Cultural Psychology, Volume: 51, 7-8, page(s): 616-635, (2020).
- 47. ZI Abbas, AS Abbas, "Optimization of the electro-Fenton process for COD reduction from refinery wastewater", Environmental Engineering and Management Journal 19 (11), 2029-2037, (2020).
- 48. SKA Barno, SA Rashid, AS Abbas, "Modeling and simulation of an ideal plug flow reactor for synthesis of ethyl oleate using homogeneous acid catalyst", Chemical and Process Engineering 42 (1), 53–68, (2021).

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- 49. BA Alshahidy, AS Abbas, "Comparative Study on the Catalytic Performance of a 13X Zeolite and its Dealuminated Derivative for Biodiesel Production", Bulletin of Chemical Reaction Engineering & Catalysis 16 (4), 763-772, (2021).
- 50. FK Al-Jubory, IM Mujtaba, AS Abbas, "Removal of Ciprofloxacin from Aqueous Solution Using Prepared Biodegradable Potato Cross-linked Starch Ester", IOP Conf. Ser.: Mater. Sci. Eng. 1076 (012031), (2021).
- 51. S Barno, H Mohamed, S Saeed, M Al-Ani, A Abbas, "Prepared 13X Zeolite as a Promising Adsorbent for the Removal of Brilliant Blue Dye from Wastewater", Iraqi Journal of Chemical and Petroleum Engineering 22 (2), 1-6, (2021).
- 52. PB Smith et al., "Is an emphasis on dignity, honor and face more an attribute of individuals or of cultural groups?", Cross-Cultural Research 55 (2-3), 95-126, (2021).
- 53. RS Mahmood, AS Abbas, "Validation of a Three-parameters Hydrodynamic Model to Describe the non-ideal Flow in a Continuous Stirred Tank Reactor of the Electro-Fenton Oxidation of Organic Pollutants in Wastewater", Journal of Physics: Conference Series 1973 (1), 012092, (2021).
- 54. DY Aqar, AS Abbas, R Patel, IM Mujtaba, "Optimisation of semi-batch reactive distillation column for the synthesis of methyl palmitate", Separation and Purification Technology 270, 118776, (2021).

Patent

Sawsan D. A. Shubar, Adel M. Kamel, and Ammar S. Abbas, "RECYCLING OF POLYETHYLENE WASTE BY PYROLYSIS", 3326-2008/207.

Other publications listed in: Ammar S. Abbas - Google Scholar



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Reactors Design Electrochemical Adsorption Catalyst Renewable Energy

Selected Practical Experience: Solved Problems and Projects

- 1. Dr. Abdul-Halim A-K Mohammed and Dr. Ammar S. Abbas, "Deposit and Proposed Uses of Phospho-gypsum", Ministry of Industry and Minerals (Iraq), 2000.
- 2. Dr. Abdul-Halim A-K Mohammed and Dr. Ammar S. Abbas, "*Production of SLES and SLS in Solfonnation Units*", General Company of Vegetable Oils Industry, Ministry of Industry and Minerals (Iraq), 2002.

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- 3. Dr. Abdul-Halim A-K Mohammed and Dr. Ammar S. Abbas, "*Neutralization of Oleum Activity Leaving Solfunation Units*", General Company of Vegetable Oils Industry, Ministry of Industry and Minerals (Iraq), 2005.
- 4. Present a high-level course of UV-visible Spectrophotometric tests of pollutant in wastewater to Quality Control Department, Chemical and Petrochemical Research Center, Ministry of Industry and Minerals (Iraq), July to October 2008.

Selected Articles

- 1. Dr. Ammar S. Abbas, "Glass as an Alternative for Petroleum in Energy Generation", Sadaa Jamea'at Baghdad, No. 8, 2006. (Arabic article)
- 2. Dr. Ammar S. Abbas, "Teeth Filling, may be Kill You and You Don't Know", AlJameai Al-Um, No. 3, January, 2008. (Arabic article)
- 3. Dr. Ammar S. Abbas, "*Nanotechnology*", Al-Jameai Al-Um, No. 6 (last page), April, 2008. (Arabic article)
- 4. Dr. Ammar S. Abbas, "The Future fuel Hydrogen may make the Earth More Coolness and Damage Ozone Layer", Al-Jameai Al-Um, No. 6 (6th page), April, 2008. (Arabic article)

October, 2021