Dr. Qusay Jaafar Rasheed Al-Obaidi

Ministry of Higher Education and Scientific Research
University of Technology

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https://scholar.google.at/citations?hl=en&user=9k1vj2EAAAAJ

Profile

Accomplished and ambitious Chemical Engineering / Water & Industrial Wastewater Treatment Professional with eighteen years of research in the Extractive/Removal Pollutants from Water & Industrial Wastewater Treatment and teaching experience in Chemical Engineering at the University of Technology, Iraq, Chemical and Biochemical Engineering at the Missouri Science & Technology University, USA. Adept with a vast background in engineering principles, project leadership, effective application of research on development processes along with offering solutions and adjustments to better improve safety and effectiveness. A capable partner that effectively maintains working relationships with co-workers and supervisors.

Employment History

Director of the Transcript Division at Chemical Engineering Dept., University of Technology by Professor Dr. Talib M Albayati, Baghdad, Iraq.

2023-Present

Provide transcripts (with or without degrees) for all graduates of the Chemical Engineering Department, University of Technology, Iraq from 1975-Present.

Lecturer Dr. In Chemical and Petroleum Refining Eng. at Chemical Engineering Dept., University of Technology by Professor Dr. Khalid A. Sukkar, Baghdad, Iraq.

2023-Present

1. 1st year lecturer of Physics and Strength of Materials in the Chemical Engineering Department, University of Technology, Iraq. 2023–present.
2. 1st year lecturer of Petroleum Chemicals in the Chemical and Petroleum Refining Engineering, Chemical Engineering Department, University of Technology, Iraq. 2023–present.
3. 3rd year lecturer of Chemicals from Petroleum in the Chemical and Petroleum Refining Engineering, Chemical Engineering

Lecturer Dr. In Chemical Engineering and Petroleum Pollution at Chemical Engineering Dept., University of Technology by Professor Dr. Zainab Yousif Shnain, Baghdad, Iraq.

2022-2023

1. 1st year lecturer of Mechanics Engineering and Strength of Materials in the Chemical Engineering Department, University of Technology, Iraq. 2022-2023.
2. 1st year lecturer of Engineering Physics in the Chemical Engineering Department, University of Technology, Iraq. 2022-2023.

Advisor of Undergraduate Students Research in Chemical and Biochemical Engineering at Missouri S&T University by Curators' Distinguished Professor Dr. Muthana AlDahhan, Rolla, USA.

2017-2022

Advised graduation project credit requirements of undergraduate students.

GA in Chemical and Biochemical Engineering at Missouri S&T University by Curators' Distinguished Professor Dr. Muthana AlDahhan, Rolla, USA.

2018-2022

Teaching assistant in the Chemical and Biochemical Engineering department at Missouri S&T University.

PhD Scholar at Missouri S&T University by Curators' Distinguished Professor Dr. Muthana AlDahhan, Rolla, USA.

2017-2022

Master Scholar at Missouri S&T University by Curators' Distinguished Professor Dr. Muthana AlDahhan, Rolla, USA.

2016-2017

Lecturer in Chemical and Environment Eng. at Chemical Engineering Dept., University of Technology by Professor Dr. Thamer J. Mohammed, Baghdad, Iraq.

2016

Lab supervisor of Chemical and Environment Engineering of the Chemical Engineering Department.

Lecturer in Mining & Metal Extractive Eng. at Production Engineering & Metallurgy Dept., University of Technology by Assistant Professor Dr. Ahmed Aki Akbar, Baghdad, Iraq.

2015-2016

Lab supervisor of corrosion at the Production Engineering &Metallurgy Department.

Assistant Lecturer in Mining & Metal Extractive Eng. at Production Engineering & Metallurgy Dept., University of Technology by Assistant Professor Dr. Ahmed Ali Akbar, Baghdad, Iraq.

2014-2015

Lab supervisor of the Extractive Metallurgy Engineering at the Production Engineering & Metallurgy Department.

Education

Ph.D. in Chemical Engineering, Missouri University S&T. Rolla, USA.

Extracting Metallurgy Contaminants and Hydrocarbons Removing from Water and Industrial Wastewater using Enhanced Emulsion Liquid Membrane with Nanoparticles and Ionic Liquid **by Advisor Prof. Dr. Muthanna Al Dahhan.**

December 2021

M.Sc. in Chemical Engineering, Missouri University S&T. Rolla, USA.

December 2017

M. Tech. in Petroleum Refinery and Petrochemicals, Anna University. Chennai, India.

Studies on Treatment of Petroleum Refinery Wastewater **by Advisor Asst. Prof. Dr.K.MUTHUKUMAR.**

November 2010

B.Sc. in Chemical Engineering, University of Technology. Baghdad, Iraq.

November 2004

Research Interests

- Extractive Metallurgy.
- Water and Industrial Wastewater Treatment.
- Nanotechnology.
- Petroleum Refinery & Petrochemicals.
- Antimicrobial Activity.

Scholarships

1. Ph.D. Scholar in Chemical and Biochemical Engineering Dept. Missouri University S&T. Rolla, USA. 2017-2021.
2. Master. Scholar in Chemical and Biochemical Engineering Dept. Missouri University S&T. Rolla, USA. 2016-2017.
3. Master. Scholarship in Chemical Engineering Dept. Anna University. Chennai, India. 2007-2010.

Publications

Project Papers

1. Emulsion Liquid Membrane (ELM) Enhanced by Nanoparticles and Ionic Liquid for Extracting Vanadium ions from Wastewater. 2024. Environmental Science and Pollution Research. Springer Berlin Heidelberg. Volume 31, pages 48576–48589.
2. Performance Investigation of Surface Modified Ceramic Microfiltration Membranes of Ionic Water Treatment. 2024. Environmental Research, Engineering and Management. Vol. 80 No. 2.
3. A Critical Review of the Photocatalytic Degradation of Pharmaceutical Residues by a TiO_2-Based Photocatalyst. 2023. Hungarian Journal of Industry and Chemistry. Vol. 51 No. 2.
4. Removal of Hydrocarbons of 4-Nitrophenol by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 Nanoparticles and Ionic Liquid. 2021. Elsevier journal. Journal of Water Process Engineering. JWPE-D-20-01412R2.
5. Assessing the Removal of Heavy Metals using Emerging and Intensifying Technology of Emulsion Liquid Membrane with Ionic Liquid. 2020. Elsevier journal. Available at SSRN 3601713.
6. Advanced Removal of 4-Nitrophenol by Emerging and Intensifying Technology of Emulsion Liquid Membrane with Magnetic Nanoparticles. 2020. Elsevier journal, Available at SSRN 3601736.
7. Wastewater Treatment by Electro-oxidation Process with TiO2. 2016. Journal of Advanced Manufacturing Technology. ISSN: 1985-3157 Vol. 10 No. 1.
8. Synthesis and Optimization of Nisin-Silver Nanoparticles at Different Conditions.2015. Journal Since & Engineering in the University of Technology. Eng. & Tech. Journal, Vol.33, Part (A), No.2.
9. Effect of Ferric Oxide on Electricity Generation and Waste Water Treatment Using Microbial Fuel Cell Technology. 2014. Journal of Engineering in the University of Baghdad.
10. Antimicrobial Activity of zero-valent Iron Nanoparticles.2012. International Journal of Modern Engineering Research. Vol.2, pp-578-581.
11. Purification and Characterization of nisin produced by lactococcus lactis isolated from Indian curd. 2012. International Journal of Applied Biology and Pharmaceutical Technology. ID: sea-163698.
12. Treatment of petroleum refinery wastewater by ultrasound-dispersed nanoscale zero-valent iron particles. 2011. Science Direct Ultrasonics Sonochemistry. Volume 18, Issue 5, Pages 1138-1142.

13. Effect of Additive Agents on Sono-Degradation Petroleum Refinery Wastewater. 2011. Hydrol Current Res. Vol. 2, No. 1, 109 ref. 18.

Books

1. Studies on Treatment of Petroleum Refinery Wastewater Published book in 16. September 2012. (lumpert). Wastewater/dp/3659247138.

Patents

1. Enhanced Emulsion Liquid Membranes for Extraction of Pollutants from Water. 2023. US11648512B2. United States.

Under Review Publications

1. A Comprehensive Analysis of the Hydrogen Generation Technology through Electrochemical Water and Industrial Wastewater Electrolysis.
2. Method of Wood Sawdust for Heavy Metal Extraction/Recovery from Industrial Wastewater.
3. Emulsion Liquid Membrane (Elm) Enhanced by Nanoparticles and Ionic Liquid for Hydrocarbons.
4. Extraction/Recovery of Heavy Metals Intensifying Technology of Emulsion Liquid Membrane with Vary Nanoparticles and Ionic Liquid.
5. Oily Wastewater Treatment by Electro-Coagulation Method and Produced Sludge Analysis.
6. Iron Oxide Magnetic Nanoparticles (IONPs) in Wastewater Treatment: From Direct Methods to Enhanced Support Strategies.
7. Inhibition and Corrosion Behavior of Carbon Steel in a Simulated Oil Well Water Multiphase Environment with H_2S by an Aqueous Extract of Pomegranate with Glycerin.

Conferences

1. Enhanced Emulsion Liquid Membranes for Extraction of Pollutants From Industrial Wastewater and Water. 2022. AIChE Annual Meeting. The USA.
2. A New Emulsion Liquid Membrane (ELM) Enhanced By Nanoparticles and Ionic Liquid for Recovering Heavy Metals from Wastewater Using a Vanadium Compound As Example. 2021. AIChE Annual Meeting. The USA.
3. Heavy Metals Extraction by Intensifying Method of Emulsion Liquid Membrane with Nanoparticles in W1 Phase & Ionic Liquid in O Phase. 2021. AIChE Annual Meeting. The USA.
4. Extractive Metallurgy & Industrial Waste. 2019. Engineering poster session, First place.15th Annual Missouri S&T undergraduates Research Conference. The USA.
5. Advanced Removal/Extraction of the Hydrocarbons by Emulsion Liquid Membrane Enhanced by Nanoparticles. 2019.

6. Study the Effect of Added 4wt% of Nickel Oxide, Ammonium Oxide, and Cobalt Oxide over HZSM-5 Catalyst for the Catalytic reaction of Bio-Ethanol into Hydrocarbons.2015. International Conference on Chemical, Agricultural and Biological Sciences (CABS). Turkey.
7. Treatment of Petrochemical Wastewater using Sequencing Batch Reactor. 2010. Proceedings of the "Recent Trends in Engineering & Education" (RTEE), NITTTR, Kolkata, India.

Tokens of Acknowledgement

Recognitions

1. AIChE Fellow, July 2019-2021.
2. Production Engineering. University of Technology.
3. Chemical Engineering. University of Technology.
4. Minister of Higher Education and Scientific Research. Iraq.
5. Iraqi engineer's association.

Awards

1. Distinguished Dissertation Award from Missouri S&T University 2021.
2. Participant's Groundwater Treatment by Molecular Filtration and Emulsion Liquid Membrane process. It was funded by the International Research & Exchanges Board (IREX) 2019.
3. First Place Award–Engineering Extraction of Heavy Metal of Vanadium by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 nanoparticles, MgO nanoparticles, and Al2O3 nanoparticles with ionic liquid [OMIM][PF6], Poster session, 15th Annual Missouri S&T undergraduate research conference. 2019.

Honors

1. Honors from the Minister of Higher Education and Scientific Research (MOHESR). Iraq.
2. Honor from the Deputy Minister of Iraq Ministry of Higher Education and Scientific Research (MOHESR). Iraq.
3. Honor from the Director of Culture Office of the Ministry of Higher Education and Scientific Research (MOHESR). Iraq.
4. Many honors from the President of the University of Technology. Iraq.
5. Many honors from Asst. President of the University of Technology. Iraq.
6. Many honors from the HOD of Chemical Engineering Dept. University of Technology. Iraq.
7. Honor from the Head of the Nanotechnology Center at the University of Technology. Iraq.
8. Honor from the Director of General Directions of Scientifics Welfare of the Ministry of Youth and Sport. Iraq.

University of Technology Undergraduate Students Advisor

1. Rana Raad, 2024-Till now. Recycling and Converting Plastic into Fuel. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
2. Hussein Jasim, 2024-Till now. Recycling and Converting Plastic into Fuel. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
3. Maraim Haidar, 2024-Till now. Recycling and Converting Plastic into Fuel. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.
4. Umm Al-Banian Ahmed, 2023-2024. Refinery wastewater Treatment Plant. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
5. Abdullah Adel, 2023-2024. Refinery wastewater Treatment Plant. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
6. Saif Saad, 2023-2024. Production of Diammonium Phosphate (DAP) Fertilizer. Chemical Process Engineering. Chemical Engineering Dept.
7. Mortada Abdel Wahab, 2023-2024. Production of Diammonium Phosphate (DAP) Fertilizer. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.
8. Abdullah Shakir Al- Khafaji. 2024. Optimizing Biodiesel Procedure from Waste Cooking Oil. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.
9. Fatten Read. 2024. Optimizing Biodiesel procedure from Waste Cooking Oil. Chemical Process Engineering. Chemical Engineering Dept University of Technology. Iraq.
10. Sarah Tariq. 2024. Optimizing Biodiesel procedure from Waste Cooking Oil. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.
11. Omar Taha. 2024. Optimizing Biodiesel procedure from Waste Cooking Oil. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
12. Zainab Abdul Hussein. 2024. Extraction of a Hydrophilic concentrate from Pomegranate peel for Metal Cleaning. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.
13. Tabarak Jassim. 2024. Extraction of a Hydrophilic concentrate from Pomegranate peel for Metal Cleaning. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

14. Shaima Hashem. 2024. Extract the White Production Eliet Chemical Substance from Kerosene using a Distillation Device. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

15. Zainab Abdul Reda. 2024. Extract the White Production Eliet Chemical Substance from Kerosene using a Distillation Device. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

16. Zainab Abdul Hussein. 2024. Extract the White Production Eliet Chemical Substance from Kerosene using a Distillation Device. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

17.Tabarrok Jassim. 2024. Extract the White Production Eliet Chemical Substance from Kerosene using a Distillation Device. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

18. Fatten Read. CO_2 Capture and Injection into the Ground. 2023. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.

19. Sarah Tariq. CO_2 Capture and Injection into the Ground. 2023. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.

20. Abdullah Shakir Al- Khafaji. CO_2 Capture and Injection into the Ground. 2023. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.

21. Mohammed Abbas. CO_2 Capture and Injection into the Ground. 2023. Chemical Process Engineering. Chemical Engineering Dept. University of Technology. Iraq.

22. Mohammed Ali. CO_2 Capture and Injection into the Ground. 2023. Chemical and Environment Engineering. Chemical Engineering Dept. University of Technology. Iraq.

23. Ahmed Frias. CO_2 Capture and Injection into the Ground. 2023. Chemical and Environment Engineering. Chemical Engineering Dept. University of Technology. Iraq.

24. Mustafa Mortada. CO_2 Capture and Injection into the Ground. 2023. Chemical and Environment Engineering. Chemical Engineering Dept. University of Technology. Iraq.

25. Omar Taha. CO2 Capture and Injection into the Ground. 2023. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

26. Ali Ghalib. CO2 Capture and Injection into the Ground. 2023. Chemical and Petroleum Refining Engineering. Chemical Engineering Dept. University of Technology. Iraq.

Missouri S&T Undergraduate Students Advisor

1. Naser Aldafairi, Fall 2021- Spring 2022. Project title. Extraction/Recovery of Heavy Metals Intensifying Technology of Emulsion Liquid Membrane with Vary Nanoparticles and Ionic Liquid. Chemical and Biochemical Engineering Department, USA.
2. Malak Alabdulmuhsin, Spring 2019- Spring 2020. Project title. Extraction of Heavy Metal of Vanadium by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 nanoparticles, MgO nanoparticles, and Al2O3 nanoparticles with ionic liquid [OMIM][PF6], Chemical and Biochemical Engineering Department, USA.
3. Fahad Majrashi, May 2019-Spring 2020. Project title. Extraction of Heavy Metal of Vanadium by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 nanoparticles, MgO nanoparticles, and Al2O3 nanoparticles with ionic liquid [OMIM][PF6], Chemical and Biochemical Engineering Department, USA.
4. Jasmine R. Monroe, Fall 2018-Spring 2020. Project title. We are assessing the Removal of Heavy Metals using Emerging and Intensifying Technology of Emulsion Liquid Membrane with Ionic Liquid, Chemical and Biochemical Engineering Department, USA.
5. Zaid Haha, Spring 2019. Project title. We are assessing the Removal of Heavy Metals using Emerging and Intensifying Technology of Emulsion Liquid Membrane with Ionic Liquid, Chemical and Biochemical Engineering Department, USA.
6. Alex Daues, Spring 2019. Project title. It enhanced Emulsion Liquid Membranes for Extraction of Pollutants from Water, Chemical and Biochemical Engineering Department, USA.
7. Steven Gibbons, Spring 2019. Project title. It enhanced Emulsion Liquid Membranes for Extraction of Pollutants from Water, Chemical and Biochemical Engineering Department, USA.
8. Mara Veasey, Spring 2019. Project title. It enhanced Emulsion Liquid Membranes for Extraction of Pollutants from Water, Chemical and Biochemical Engineering Department, USA.
9. Hannah Smith, Fall 2018. Project title. We are assessing the Removal of Heavy Metals using Emerging and Intensifying Technology of Emulsion Liquid Membrane with Ionic Liquid, Chemical and Biochemical Engineering Department, USA.

10. Alic Tolstik, Fall 2017, Removal of Hydrocarbons of 4-Nitrophenol by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 Nanoparticles and Ionic Liquid, Chemical and Biochemical Engineering Department, USA.
11. Jacob G. Trautman, Fall 2017. Project title. Removal of Hydrocarbons of 4-Nitrophenol by Emulsion Liquid Membrane (ELM) using Magnetic Fe2O3 Nanoparticles and Ionic Liquid, Chemical and Biochemical Engineering Department, USA.
12. Andrew Holloway, Fall 2017. Project title. Advanced Emulsion Liquid Membrane Enhanced by Magnetic Fe2O3 Nanoparticles and Ionic Liquid for Removal of Benzoic acid, Chemical and Biochemical Engineering Department, USA.
13. Jordan Trigg, Fall 2017. Project title. Advanced Emulsion Liquid Membrane Enhanced by Magnetic Fe2O3 Nanoparticles and Ionic Liquid for Removal of Benzoic acid, Chemical and Biochemical Engineering Department, USA.
14. William Schriewer, Fall 2017. Project title. Advanced Emulsion Liquid Membrane Enhanced by Magnetic Fe2O3 Nanoparticles and Ionic Liquid for Removal of Benzoic acid, Chemical and Biochemical Engineering Department, USA.
15. Krupaben Patel, Fall 2017. Project title. Reviewer of the Emulsion Liquid Membrane for Heavy Metal Removal, Chemical and Biochemical Engineering Department, USA.