



# Khalid Hamid Rashid Abdul-Khalik

خالد حامد رشيد عبد الخالق

Professor

## PROFILE

Prof. Dr. Khalid Hamid Rashid Abdul-Khalik have many academic and research activities in the fields of chemical and corrosion engineering. The current research interests are corrosion and corrosion control, green corrosion inhibitors, green technologies, thermal engineering, and many other researches in the fields of chemical engineering. He have a B.Sc., M. Sc. and Ph.D. in chemical engineering from University of Baghdad and published more than 40 research papers in respected journals.

## ACADEMIC TITLES

2021-12-09 Professor

## GRADUATE SUPERVISION

Corrosion Inhibition of Mild Steel in CO<sub>2</sub> Saturated Saline Solution Using Hexamethylenetetraamine  
Wasan Farhan Hameed (2021)

Synthesis and Investigations of Organic Corrosion Inhibitors for Mild Steel in Hydrochloric acid Solution  
Ali Shareef Jasim (2022)

Synthesis and Characterization of New Heterocyclic Compounds Containing Oxazolidine Ring as  
Corrosion Inhibitors for Mild Steel in Acidic Solution  
Zinah Ibrahim Jasim (2023)

Synthesis and characterization of some new heterocyclic compounds  
Hussein Sami Hassan (2024)

## ADMINISTRATIVE POSITIONS

2021-12-09 - Present Professor of Corrosion Engineering at the Chemical Engineering Faculty,  
University of Technology, Iraq

## PUBLICATIONS ( 6 9 )

- Optimization of process parameters for 4643 Al alloy anodization in mixed oxalic/phosphoric electrolytes: Doehlert experimental design**  
*International Journal of Electrochemical Science* 20, 100945, 2025 | 2025 | Cited: 19
- A Review On Corrosion Inhibition Performance of Chalcones: A Multi-Technique Study Using Weight Loss, EIS, Polarization, and Quantum Chemical Calculations**  
*Moroccan Journal of Chemistry* 13 (3), *J. Chem.* 13 (3)-1167, 2025 | 2025 | Cited: 10
- Improving the Convective Heat Transfer Coefficient of a New Design Helical Coiled Tube Heat Exchanger via Air Injection Technique**  
*Arabian Journal for Science and Engineering*, 1-21, 2025 | 2025 | Cited: 7
- Boiler Corrosion in Thermal Power Plant: Kinetics and Mathematical Studies**  
*Heat Transfer*, 2025 | 2025 | Cited: 2

## CONTACT

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## EDUCATION

دكتوراه (09-04-2014)

Corrosion Engineering

University of Baghdad

## RESEARCH METRICS

h-index (Scopus)	21
h-index (GS)	23
Citations (Scopus)	851
Citations (GS)	1081
Documents (Scopus)	34
Documents (GS)	64

## AWARDS

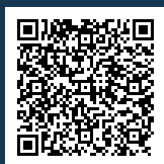
- The international scientific award in gold medal

## PATENTS

- Synthesis of a novel pyrazole heterocyclic derivative as corrosion inhibitor for low-carbon steel in 1M HCl

## RESEARCH INTERESTS

- corrosion and corrosion control
- green corrosion inhibitors
- green technologies
- chemical and corrosion engineering



5. **Influence of chloride ions, temperature, and pressure on boiler tubes corrosion: experimental, mathematical, and kinetics perspective**  
*Reaction Kinetics, Mechanisms and Catalysis 138 (6), 3705-3724, 2025 | 2025 | Cited: 3*
6. **Novel Chalcone-Derived Bases as Efficient Corrosion Inhibitor for Carbon Steel in 1M HCl: Synthesis, Diagnosis, Gravimetric, Electrochemical, Morphological, and Computational&nbsp;...**  
*ChemistrySelect 10 (34), e03378, 2025 | 2025 | Cited: 3*
7. **A review on corrosion inhibition performance of chalcones: a multi-technique study using weight loss, EIS, polarization, and quantum chemical calculations**  
*Moroccan Journal of Chemistry 13 (3), J. Chem. 13 (3)-1167, 2025 | 2025 | Cited: 13*
8. **Improving the convective heat transfer coefficient of a new design helical coiled tube heat exchanger via air injection technique**  
*Arabian Journal for Science and Engineering 50 (13), 10127-10147, 2025 | 2025 | Cited: 8*
9. **Boiler corrosion in thermal power plant: kinetics and mathematical studies**  
*Heat Transfer 54 (7), 4299-4307, 2025 | 2025 | Cited: 3*
10. **Synthesis and diagnosis of new heterocyclic compound as corrosion inhibitor for mild steel in acidic solution**  
*Diyala Journal of Engineering Sciences 17 (4), 180-196, 2024 | 2024 | Cited: 21*
11. **A combined experimental and theoretical study into the effect of new heterocyclic compound containing  $\beta$ -lactam ring as corrosion inhibitor for mild steel in hydrochloric acid&nbsp;...**  
*2024*
12. **Synthesis and Characterization Heterocyclic Derivative as Corrosion Inhibitor 3- ((dicyclohexyl aminon) methyl)-5-(4-((2-hydroxybenzylidene) amino phenyl)-1,3,4-oxadiazole-2(3H&nbsp;...**  
*ID Patent 8,329, 2024 | 2024*
13. **Synthesis of a novel 3, 5-dimethyl-1H-pyrazol-1-yl m (4-((4-hydroxybenzylidene) amino) phenyl) methanone to prevent corrosion low-carbon steel in 1M hydrochloric acid**  
*ID Patent 8,220, 2024 | 2024*
14. **Synthesis and Diagnosis of New Heterocyclic Compound as Corrosion Inhibitor for Mild Steel in Acidic Solution**  
*Diyala Journal of Engineering Sciences, 180-196, 2024 | 2024 | Cited: 19*
15. **Optimization for Corrosion Inhibition of Steel in Hydrochloric Acid by DHOT as a Novel Corrosion Inhibitor**  
*Petroleum Chemistry, 1-6, 2024 | 2024 | Cited: 19*
16. **Mass transfer influence on the corrosion inhibition of N80 steel in 1 M H<sub>2</sub>SO<sub>4</sub> by green corrosion inhibitor using MATLAB**  
*International Journal of Electrochemical Science 19 (10), 100764, 2024 | 2024 | Cited: 24*
17. **Corrosion and Corrosion Control of the Steel in Acidizing Oil Wells Processes: An Overview of Organic Inhibitors**  
*RUSSIAN JOURNAL OF APPLIED CHEMISTRY 97 (1), 2024 | 2024 | Cited: 44*
18. **The inhibition effect of 1, 3-diazole glyoxaline on corrosion of API 5L X52 pipeline steel in oilfield produced water under sweet corrosive conditions**  
*Results in Chemistry, 101528, 2024 | 2024 | Cited: 36*
19. **A combined experimental and theoretical study into the effect of new heterocyclic compound containing  $\beta$ -lactam ring as corrosion inhibitor for mild steel in hydrochloric acid**  
*Results in Surfaces and Interfaces 17, 100319, 2024 | 2024 | Cited: 44*
20. **Optimization of the corrosion inhibition performance of novel oxadiazole thione-based Schiff base for mild steel in HCl media using Doehlert experimental design**  
*Inorganic Chemistry Communications 160, 111911, 2024 | 2024 | Cited: 27*
21. **Synthesis of schiff-based derivative as a novel corrosion inhibitor for mild steel in 1 M HCl solution: optimization, experimental, and theoretical investigations**  
*Journal of Bio-and Tribo-Corrosion 9 (3), 54, 2023 | 2023 | Cited: 25*
22. **Synthesis and characterization of (E)-4-(((4-(5-mercapto-1, 3, 4-oxadiazol-2-yl) phenyl) amino) methyl)-2-methoxyphenol as a novel corrosion inhibitor for mild-steel in&nbsp;...**  
*Results in Chemistry 5, 100975, 2023 | 2023 | Cited: 31*

23. **Optimization studies of expired mouthwash drugs on the corrosion of aluminum 7475 in 1 M hydrochloric acid: Gravimetric, electrochemical, morphological and theoretical&nbsp;...**  
*Results in Surfaces and Interfaces* 13, 100165, 2023 | 2023 | Cited: 35
24. **New pyrazole derivative as effective corrosion inhibitor for carbon steel in 1 M HCl: Experimental and theoretical analysis**  
*Journal of Molecular Structure* 1287 (135661), 1-24, 2023 | 2023 | Cited: 60
25. **Biosorption of Congo red dye removal from aqueous solution using fennel seed spent and garlic peel**  
*International Journal of Environmental Science and Technology* 20 (12), 13845&nbsp;..., 2023 | 2023 | Cited: 22
26. **Synthesis and Characterization of New Heterocyclic Compounds Containing Oxazolidine Ring as Corrosion Inhibitors for Mild Steel in Acidic Solution**  
*M.Sc. thesis, Chemical Engineering Department, University of Technology, 2023 | 2023*
27. **Results in Surfaces and Interfaces**  
2023 | Cited: 1
28. **New Developments in Inhibition of the Sweet Environment in a Variety of Corrosive Media: A Review**  
*Engineering and Technology Journal* 40 (09), 1-14, 2022 | 2022
29. **Synthesis and Investigations of Organic Corrosion Inhibitors for Mild Steel in Hydrochloric acid Solution**  
*M.Sc. thesis, Chemical Engineering Department, University of Technology, 2022 | 2022*
30. **Optimization of inhibition performance of hexa methylene tetra amine for corrosion of mild steel in CO**  
2022
31. **(3,5 - dimethyl-1H-pyrazol-1-y1)(4-((3,4-dimethoxybenzylidene) amino) phenyl) methanone as a novel corrosion inhibitor for low-carbon steel in hydrochloric acid: Synthesis&nbsp;...**  
*Results in Chemistry* 4 (100569), 1-10, 2022 | 2022 | Cited: 20
32. **Optimization of inhibition performance of hexa methylene tetra amine for corrosion of mild steel in CO<sub>2</sub>-saturated brine produced water**  
*AIP Conference Proceedings* 2443 (030047), 1-12, 2022 | 2022 | Cited: 19
33. **Removal of methyl orange dye from simulated wastewater by electrocoagulation technique using Taguchi method: kinetics and optimization approaches**  
*Reaction Kinetics, Mechanisms and Catalysis*, 2022 | 2022 | Cited: 32
34. **Investigation of tetraazaadamantane as corrosion inhibitor for mild steel in oilfield produced water under sweet corrosive environment**  
*Journal of Bio- and Tribo-Corrosion* 8 (1), 27, 2022 | 2022 | Cited: 28
35. **New Developments in Inhibition of the Sweet Environment in a Variety of Corrosive Media: A Review**  
*Engineering and Technology Journal* 40 (09), 1117-1130, 2022 | 2022 | Cited: 4
36. **amino) phenyl) methanone as a novel corrosion inhibitor for low-carbon steel in hydrochloric acid: Synthesis, diagnosis, and application**  
*Results Chem* 4, 100569, 2022 | 2022 | Cited: 11
37. **Synthesis of a novel pyrazole heterocyclic derivative as corrosion inhibitor for low-carbon steel in 1M HCl: Characterization, gravimetric, electrochemical, mathematical&nbsp;...**  
*Results in Engineering* 15 (100573), 1-12, 2022 | 2022 | Cited: 84
38. **Optimization, kinetics, and electrochemical investigations for green corrosion inhibition of low-carbon steel in 1 M HCl by a blend of onion-garlic leaves wastes**  
*Bioresource Technology Reports* 19, 101194, 2022 | 2022 | Cited: 33
39. **Sulfosalicylic/oxalic acid anodizing process of 5854 aluminum-magnesium alloy: influence of sealing time and corrosion tendency**  
*Results in Chemistry* 4, 100289, 2022 | 2022 | Cited: 29
40. **Corrosion Inhibition of Mild Steel in CO<sub>2</sub> Saturated Saline Solution Using Hexamethylenetetramine**  
*M.Sc. thesis, Chemical Engineering Department, University of Technology, 2021 | 2021*



60. **Comparative Study for Anodizing Aluminum Alloy 1060 by Different Types of Electrolytes Solutions**  
*Engineering and Technology Journal, 1-21, 2011 | 2011 | Cited: 12*
61. **Electrochemical Behavior of Chemical Conversion of Coated Aluminum 1100Al in a Neutral Tartrate Solution**  
*Eng. & Tech. Journal 28 (18), 5640-5650, 2010 | 2010*
62. **Electrochemical Behavior of Chemical Conversion Coated Aluminum ASA6061 in Chromic Acid**  
*Iraqi Journal of Chemical and Petroleum Engineering 8 (3), 49-52, 2007 | 2007 | Cited: 3*
63. **Anodizing of Aluminum ASA 6061 Using Chromic Acid**  
*M.Sc. Thesis, 1-89, 2004 | 2004*
64. **Results in Surfaces and Interfaces**  
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65. **Optimization studies of expired mouthwash drugs on the corrosion of aluminum 7475 in 1 M hydrochloric acid**  
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66. **Results in Chemistry**  
*0*
67. **Khalid H. Rashid & Anees A. Khadom**  
*0*
68. **Surface engineering with CROMVIC coating by PVD functioning at LARC Technology**  
*0*
69. **Bioresource Technology Reports**  
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