

**PERSONAL INFORMATION**

**Name** **Mohammad M. Ibrahim**

**Work Address** Department of Chemistry  
Al al-Bayt University  
Mafraq 25113, Jordan  
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**Nationality** Jordanian

**WORK EXPERIENCE**

2021 – Now Professor of Organic Chemistry, Department of Chemistry, Al al-Bayt University, Mafraq, Jordan.

2021 – Now Vice Dean, Faculty of Science, Al al-Bayt University, Mafraq 25113, Jordan.

2018 – 2020 Vice Dean, Deanship of Scientific Research, Al al-Bayt University, Mafraq 25113, Jordan.

2015 – 2020 Associate Professor of Organic Chemistry, Department of Chemistry, Al al-Bayt University, Mafraq, Jordan.

2015 – 2016 Head of the Department of Chemistry, Al al-Bayt University, Mafraq 25113, Jordan

2011 – 2015 Assistant Professor of Organic Chemistry, Department of Chemistry, Al al-Bayt University, Mafraq 25113, Jordan.

2009 – 2011 Lecturer Professor of Organic Chemistry, Department of Chemistry, Al al-Bayt University, Mafraq 25113, Jordan.

2005 – 2009 DAAD Fellowship for PhD degree in Organic Chemistry, AG Prof. Dr. V. Jäger, Institut für Organische Chemie der Universität Stuttgart, Stuttgart, Germany.

2006 – 2008 Teaching Assistant (Part time), Institut für Organische Chemie der Universität Stuttgart, Stuttgart, Germany.

2003 – 2005 Teaching Assistant, Department of Chemistry, Al al-Bayt University, Mafraq 25113, Jordan

1998 – 2003 Chemistry Teacher recruited by Jordanian Ministry of Education at different Schools in Mafraq Governorate, Mafraq, Jordan.

**EDUCATION AND TRAINING**

1993 – 1994 High School Certificate (Tawjihi Exam), Mafraq Secondary School, Mafraq, Jordan

1994 – 1998 B.Sc. in Chemistry, Department of Chemistry, Mu'tah University, Karak, Jordan

1999 – 2002 M.Sc. in Organic Chemistry, Department of Chemistry, Al al-Bayt University, Mafraq 25113, Jordan

2005 – 2009 PhD in Organic Chemistry, Institut für Organische Chemie der Universität Stuttgart, Stuttgart University, Stuttgart, Germany.

**CURRENT RESEARCH INTEREST**

- Synthesis, characterization and biological evaluation of new heterocyclic compounds.
- Natural product hybrids for medicinal chemistry.
- X-ray structural analysis of molecular compounds.

**TEACHING EXPERIENCE**

## COURSES TAUGHT

- General Chemistry I and II
- Practical General Chemistry I and II
- Organic chemistry I, II and III
- Practical Organic Chemistry I and II
- Systematic Identification of Organic compounds
- Applied Chemistry
- Heterocyclic Chemistry
- Special Topic in Organic Chemistry
- Scientific Research Methods in Chemistry (for master students)

GRADUATE STUDENTS  
(MSc) SUPERVISION

1. Fatheya B. Rabi, Synthesis of benzo[g]pteridine derivatives, MSc Thesis (**2012**), Department of Chemistry, Al al-Bayt University, Jordan.
2. Mohammad A. Alkenji, Synthesis of new fused pyrimidine derivatives, MSc Thesis (**2013**), Department of Chemistry, Al al-Bayt University, Jordan.
3. Mohammad Aladamat, Synthesis and biological activity of new 4,6-(diheteroaromatic)pyrimidine-2-amines, MSc Thesis (**2014**), Department of Chemistry, Al al-Bayt University, Jordan.
4. Hasan Abu Mahmoud, Synthesis, characterization, antioxidant activity and molecular docking study of 3-(2,5-dichlorothiophen-3-yl)-5-arylpyrazole-1-carbothioamides and their thiazole derivatives, MSc Thesis (**2021**), Department of Chemistry, Al al-Bayt University, Jordan.

**PUBLICATIONS**

## MONOGRAPH

“A new route for the synthesis of organic diamines via isoxazolinium salts-ligands for platinum complexes as potential anti-cancer agents”, **Ibrahim, M. M. 2009**, Berlin. Mensch und Buch verlag, ISBN: 9783866646179.

## PAPERS

1. "Synthesis and characterization of metal 2-pyridine carboxaldehyde-*N*-methyl-*N*-2-pyridyl hydrazone complexes and their microbiological activity", Abu-El-halawah, R.; Ali, B. F.; Kayed, S. F.; Baker, H.; Qandil, M.; Al-Refai, M.; **Ibrahim, M.**; Juddeh, Z.; Al-Obaidi, K. H. *J. Coord. Chem.* **2004**, 57(13), pp. 229-241.
2. "Interconversion of copper(II) to copper(I): synthesis, characterization of copper(II) and copper(I) 2,2'-biquinoline complexes and their microbiological activity", Ali, B. F.; Al-Sou'od, K.; Al-Ja'ar, N.; Nassar, A.; Zaghal, M. H.; Judeh, Z.; Al-Far, R.; Al-Refai, M.; **Ibrahim, M.**; Mansi, K.; Al-Obaidi, K. H. *J. Coord. Chem.* **2006**, 59, pp. 1139-1149.
3. "1,4-Dihydroxyquinoxaline-2,3(1*H*,4*H*)-dione" Abu-El-Halawah, R.; Ali, B. F.; **Ibrahim, M. M.**; Zahra, J.; Frey, W. *Acta Cryst.* **2008**, E64, o571–o572.
4. "Crystal structure of 3,4-(*R,R*)-bis-[2',2'-dicyclohexyl-1',3'-dioxolan-4'-yl]-1,2,5-oxadiazole-2-oxide, C<sub>18</sub>H<sub>26</sub>N<sub>2</sub>O<sub>6</sub>", Frey, W.; **Ibrahim, M.**; Jäger, V. *Z. Kristallogr. NCS* **2008**, 223, pp. 451-452.
5. "Crystal structure of (3*S*,1'*S*)-3-(1',2'-*O*-cyclohexylidenedioxyethyl)-2,5,5-trimethyltetrahydro-1,2-oxazole-3-carbonitrile, C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O<sub>3</sub>", Frey, W.; **Ibrahim, M.**; Jäger, V. *Z. Kristallogr. NCS* **2008**, 223, pp. 453-454.
6. "Crystal structure of (2*S*,3*S*)-3-(aminomethyl)-3-(methylamino)-pentan-1,2,5-triol bis(hydrochloride), C<sub>7</sub>H<sub>20</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub>", Frey, W.; **Ibrahim, M.**; Jäger, V. *Z. Kristallogr. NCS* **2009**, 224, pp. 585-586.
7. "Crystal structure of (3*R*,1'*S*)-3-(1',2'-*O*-cyclohexylidenedioxyethyl)-2,5,5-trimethyl-3-nitromethyltetrahydro-1,2-oxazole, C<sub>15</sub>H<sub>26</sub>N<sub>2</sub>O<sub>5</sub>", Frey, W.; **Ibrahim, M.**; Jäger, V. *Z. Kristallogr. NCS* **2009**, 224, pp. 587-588.
8. "2-Isoxazolinium salts and 3-isoxazolines: exploratory chemistry and uses for the synthesis of branched amino polyols and amino acids", Jäger, V.; Frey, W.; Bathich, Y.; Shiva, S.; **Ibrahim, M.**; Henneböhle, M.; LeRoy, P.-Y.; and Imerhasan, M. *Z. Naturforsch* **2010**, 65b, pp. 821-832.
9. "6-Chlorothieno[2,3-*e*]-1,4,2-dithiazine-3(2*H*)-thione-1,1-dioxide, ammonium salt sesquihydrate: synthesis, crystal structure and density functional calculations", Al-Refai, M.; Masad, M. H.; Abu-El-Halawa, R.; Dawoud, J. N.; **Ibrahim, M. M.**; Judeh, Z.; Ali, B. F. *J. Chem. Crystallogr.* **2011**, 41(9), pp. 1335-1341.
10. "Concise synthesis and displacement reactions of model 3-(alkylthio)-6-chloro- and 2,6-dichlorothieno[2,3-*e*]-1,4,2-dithiazine 1,1-dioxides", Abu-El-Halawa, R.; Masad, M.; Bathich, Y.; Al-Refai, M.; **Ibrahim, M. M.**; El-Abadelah, M. M.; Voelter, W. *Z. Naturforsch* **2011**, 66b, pp. 715-120.
11. "Crystal structure and density functional calculation of (*E*)-4-hydroxy-3-methyl-*N*'-

- (thiophen-2-ylmethylene)-1,4-dihydroquinoxaline-2-carbohydrazide Radical”, **Ibrahim, M. M.**; Al-Refai, M.; Abu-El-Halawa, R.; Massad, H. M.; Judeh, Z.; Ali, B. F. *Asian J. Chem.* **2012**, *24*, pp. 2926-2930.
12. “Synthesis of some new chalcone and 4,5-dihydro-1*H*-pyrazole derivatives as potential antimicrobial agents”, **Ibrahim, M. M.**; Al-Refai, M.; Abu-El-Halawa, R.; Tashtoush, H.; Al-Sohaili, S.; Massad, H. M. *Jordan J. Chem.* **2012**, *7(2)*, pp. 115-123.
13. “3-Methylamino-3-phenylpropan-1-ol”, Frey, W.; **Ibrahim, M. M.**; Ali, B.F.; Jäger, V. *Acta Cryst.* **2012**, *E68*, o2857.
14. “ $\alpha$ -Nitro epoxides in organic synthesis: development of a one-pot organocatalytic strategy for the synthesis of quinoxalines “, **Ibrahim, M. M.**; Grau, D.; Hampel, F.; Tsogoeva, S. B. *Eur. J. Org. Chem.* **2014**, *2014*, pp. 1401-1405.
15. “One-pot synthesis of 2-alkyl/arylamino-6-chlorothiopheno[3,2-*e*]-1,3-thiazin-4-one”, Abu-El-Halawa, R.; Elhussin, I. E. H.; Al-Refai, M.; **Ibrahim, M.** *Jordan J. Chem.* **2014**, *9(2)*, pp. 127-133.
16. “The reaction of cyanamidium salts with ylidene cyanamide derivatives”, Abu-El-Halawa, R.; Zabin, S. A.; Al-Refai, M.; **Ibrahim, M.**; Kaimari, T.; Müller, T. J. J. *Z. Naturforsch* **2014**, *69b*, pp. 829-834.
17. “Synthesis, characterization and antifungal activity of some metal complexes derived from quinoxaloylhydrazone”, Mahal, A.; Abu-El-Halawa, R.; Zabin, S.; **Ibrahim, M.**; Al-Refai, M.; Kaimari, T. *World Journal of Organic Chemistry* **2015**, *3(1)*, pp. 1-8.
18. “Synthesis and characterization of new 3,5-disubstituted-4,5-dihydro-1*H*-pyrazole and their carbothioamide derivatives”, **Ibrahim, M.M.** *Eur. J. Chem.*, **2015**, *6(1)*, pp. 78-83.
19. “One-pot synthesis, characterization and antimicrobial activity of new 3-cyano-4-alkyl-6-(2,5-dichlorothiophen-3-yl)-2(1*H*)-pyridones”, **Ibrahim, M. M.** *Jordan J. Chem.* **2015**, *10(2)*, pp. 98-107.
20. “Crystal, molecular structure and DFT study of 2,6,7-trimethyl-3-*p*-tolylquinoxaline and 2-(4-methoxyphenyl)-3,6,7-trimethylquinoxaline”, **Ibrahim, M. M.**; Ali, B. F.; El-Barghouthi, M. I.; Zaghal, M. H.; Frey, W. *J. Chem. Crystallogr.* **2015**, *45(7)*, pp. 319-329.
21. “Synthesis, spectral characterization and fluorescent assessment of 1,3,5-triaryl-2-pyrazoline derivatives: experimental and theoretical studies”, **Ibrahim, M. M.**; Al-Refai, M.; Ayub, K.; Ali, B. F. *J. Fluoresc.* **2016**, *26(4)*, pp. 1447–1455.
22. “Synthesis, spectroscopic characterization and X-ray structure analysis of 6-(2,5-dichlorothiophen-3-yl)-2-methoxy-4-(4-methoxyphenyl)pyridine-3-carbonitrile”, Al-

- Refai, M.; **Ibrahim, M. M.**; Geyer, A.; Ali, B. F. *J. Chem. Crystallogr.* **2016**, *46*(8), pp. 331–340.
23. "Synthesis, characterization and microbial activity of new chalcones and their 6-aryl-4-(2,5-dichlorothiophen-3-yl)-6*H*-1,3-thiazin-2-amine derivatives", Al-Refai, M.; **Ibrahim, M. M.**; Alshaili, S.; Geyer, A. *Phosphorus Sulfur Silicon Relat. Elem.* **2017**, *192*(5), pp. 560–564.
24. "One-pot synthesis and antimicrobial activity of new 4,6-disubstituted-3,4-dihydropyrimidine-2(1*H*)-thiones", Al-Refai, M.; **Ibrahim, M. M.**; Al-Fawwaz, A.; Geyer, A. *Eur. J. Chem.* **2017**, *8*(1), pp. 96–100.
25. "Synthesis of novel artemisinin-derived-quinazoline hybrids and evaluation of their cytotoxicity against Plasmodium falciparum and human cytomegalovirus.", Fröhlich, T.; Reiter, C.; **Ibrahim, M. M.**; Beutel, J.; Hutterer, C.; Zeitträger, I.; Bahsi, H.; Leidenberger, M.; Friedrich, O.; Kappes, B.; Marschall, M.; Tsogoeva, S.B. *ACS Omega* **2017**, *2*(6), pp. 2422–2431.
26. "Synthesis, characterization and biological activity of 4-imino-3-substituted-2-thioxo-1,2,3,4-tetrahydrobenzo[*g*]pteridine 5,10-dioxide", Abu-El-Halawa, **Ibrahim, M. M.**; Rabi, F.B.; Alkenji, M.A.; Al-Balas, Q.; Mansi, E.; Al-Refai, M. *Jordan J. Chem.* **2018**, *13*(1), pp. 1-14.
27. "Synthesis of fluorescent 1-(3-amino-4-(4-(*tert*-butyl)phenyl)-6-(*p*-tolyl) furo[2,3-*b*]pyridin-2-yl)ethan-1-one: Crystal structure, fluorescence behavior, antimicrobial and antioxidant studies", **Ibrahim, M. M.**; Al-Refai, M.; Al-Fawwaz, A.; Ali, B.F.; Geyer, A.; Harms, K.; Marsch, M.; Krüger, M.; Osman, H.; Azmi, M.N. *J. Fluoresc.* **2018**, *28*(2), pp. 655-662.
28. "Synthesis and characterization of new 4-aryl-2-(2-oxopropoxy)-6-(2,5-dichlorothiophene)nicotinonitrile and their furo[2,3-*b*]pyridine derivatives: Assessment of antioxidant and biological activity", Al-Refai, M.; **Ibrahim, M. M.**; Al-Fawwaz, A.; Geyer, A. *Eur. J. Chem.* **2018**, *9*(4), pp. 375-381.
29. "Synthesis, characterization and cytotoxicity of new nicotinonitriles and their furo[2,3-*b*]pyridine derivatives", **Ibrahim, M. M.**; Al-Refai, M.; Azmi, M. N.; Osman, H.; Abu Bakar, M. H.; Geyer, A. *J. Iran. Chem. Soc.* **2019**, *16* (4), pp. 715-722.
30. "3-(2,5-Dichlorothiophen-3-yl)-5-(2,4-dimethoxyphenyl)-1-methyl-4,5-dihydro-1*H*-pyrazole", **Ibrahim, M. M.**; Al-Refai, M.; Ali, B.F.; Geyer, A.; Harms, K.; Marsch, M. *IUCrData* **2019**, *4*, x191046.
31. "Synthesis, characterization, cytotoxic activity assessment and structure activity relationship of 4-Aryl-6-(2,5-dichlorothiophen-3-yl)-2-methoxypyridine-3-carbonitriles", Al-Refai, M.; **Ibrahim, M. M.**; Azmi, M. N.; Osman, H.; Abu Bakar, M. H.; Geyer, A. *Molecules* **2019**, *24*, 4072 (1-12).

## POSTERS

1. "A new approach to the synthesis of vicinal diamines – potential ligands for transition metal complexes", **Ibrahim, M.**; Frey, W.; Jäger, V. 8. IMINIUMSALZ-TAGUNG (ImSaT-8), September 11-13, **2007**, Bartholomä, Germany; Book of Abstracts, p. 137.
2. "Isoxazolinium salts: building blocks for the synthesis of unsymmetrical 1,2-diamine – ligands for platinum complexes as anti-cancer agents", **Ibrahim, M.**; Jäger, V. *The conference of Science meets industry - Catalysis in fundamental research and industrial application*, Nov. 16 - 19, **2008**, Heidelberg, Germany.
3. "A new route for the synthesis of unsymmetrical diamines – ligands for platinum complexes with potential anti-cancer activity", Ibrahim, M.; Frey, W.; Jäger, V. *11th Eurasia Conference on Chemical Sciences (EuAsC2S-11)*, the Dead Sea-Jordan, October 6 - 10, **2010**, Book of Abstracts, p. 171.
4. "New facile one-pot two-step synthesis of quinoxalines via organocatalyzed Epoxidation of Nitroolefins ", Grau, D.; **Ibrahim, M. M.**; Tsogoeva, S. B. *European Chemistry Congress - 5th (EuCheMS-5)*, August 31 - September 4, **2014**, Turkey; Book of Abstracts, p. 1134.

## CONFERENCES AND LECTURES

1. "Vicinal diamines as ligands for platinum complexes with potential anti-Cancer activity and as ligands for catalytic enantioselective reactions", **Ibrahim, M.**; Jäger, V. 2nd BBS, *Symposium on Organic Chemistry: N,O-Heterocycles and More*, April 12-15, **2007**, Stuttgart, Germany; Book of Abstracts, p.14.
2. "Synthesis of enantiomerically pure 1,2-diamine ligands for platinum complexes as anti-cancer agents", **Ibrahim, M.**; Jäger, V. 12. *Tag der Organischen Chemie der Universität Stuttgart (TOCUS 12)*, Oct.10, **2008**, Stuttgart, Germany.
3. "Synthesis of unsymmetrical 1,2-diamines and exploration of their potential for preparation of platinum complexes", **Ibrahim, M.**; Jäger, V. 3ed BBS *Symposium on Organic Chemistry: N,O-Heterocycles and More*, April 2-5, **2009**, Berlin, Germany; Book of Abstracts, p.10.
4. "A new route for the synthesis of unsymmetrical 1,2-diamines — ligands for platinum complexes with potential anti-cancer activity", **Ibrahim, M.**; Jäger, V. The 14th Jordanian Chemical Conference, April 8, **2015**, Al al-Bayt University, Mafraq, Jordan.

**LANGUAGE SKILLS**

MOTHER TONGUE

Arabic

OTHER LANGUAGES

	READING SKILLS	WRITING SKILLS	SPEAKING SKILLS
English	good	good	good
German	Very good	Very good	Very good

**COMPUTER SKILLS**

ICDL certificate (experience with MS Word, PowerPoint, Excel...), ISIS Draw, ACD/ChemSketch, ChemDraw, Scifinder and NMR processing software.