

# Curriculum Vitae

Name: Ghazwan Faisal Fadhil

Qualification: Ph.D.

email: [ghazwan.fadhil@uod.ac](mailto:ghazwan.fadhil@uod.ac)

**Address:** Department of Chemistry, College of Science, University of Duhok, Duhok, Kurdistan Region, IRAQ.

## Academic Qualifications:

PhD Chemistry 1983 (University of Southampton, UK)

Thesis Title: New Theoretical Models in Correlation Analysis.

BSc. (Honor) Chemistry 1977 (University of Basrah, Iraq)

## Professional Experiences:

1- Since 2010 Professor of Organic Chemistry at University of Duhok, Faculty of Science, Department of Chemistry.

2- 2006-2009 Assistant Professor in Organic Chemistry at University of Duhok, Faculty of Science, Department of Chemistry.

3- 1992-2006 Assistant Professor in Organic Chemistry at University of Basrah, College of Science, Department of Chemistry.

4- 1984-1992 Lecturer in Organic Chemistry at University of Basrah, College of Science, Department of Chemistry.

## Society Membership:

1- American Chemical Society (Member).

2- Royal Society of Chemistry (Fellow of the Royal Society of Chemistry FRSC)

## Consultations and Advisory

1- Consultant to the drugs project of the Iraqi ministry of higher education and research (July 2002)

2-Advisor of Mendeley free reference manager.

## ORCID Unique Author Identifier

[iDorcid.org/0000-0001-7817-5124](https://orcid.org/0000-0001-7817-5124)

## Thomson Reuters ID

ResearcherID: A-3235-2014

## Scopus Author ID

Author ID :6507104357

### 3- **Lectured Subjects:**

#### I- Undergraduate:

- 1- General Organic Chemistry (Aliphatic and Aromatic Organic Compounds) For Agricultural College Students.
- 2- Organic Stereochemistry and Reaction Mechanisms.
- 3- Carbanion and Alicyclic Organic Chemistry.
- 4- Spectrometric Identification of Organic Compounds.
- 5- Natural Product Chemistry.
- 6- Organic Medicinal Chemistry for third and fourth year Pharmacy Students.
- 7- Nanochemistry.
- 8- Molecular Modeling using ChemDraw.

#### II- Postgraduate MSc:

- 1-Chemistry of Pericyclic Reactions.
- 2- Advanced Spectrometric Identification of Organic Compounds.
- 3- Functional Group Transformations and the Use of Carbanion in Organic Synthesis.
- 4- Correlation Analysis as a Tool in Organic Reactivity.
- 5- Organic Syntheses Part (1).
- 6-Advance NMR spectroscopy.
- 7- Computational Chemistry (1)

#### III- Postgraduate PhD:

- 1- Advanced Correlation analysis and Its Application in Organic Chemistry.
- 2- Organic Syntheses Part (2).
- 3- Advanced Physical Organic Chemistry.
- 4- Computational Chemistry of Molecular Orbital Theory and Molecular Mechanics.
- 5- Organic Photochemistry.

## Publications:

1- *Substituent effect study for  $^{13}\text{C}_\beta$  SCS in a Meta-Styrene series. Reynolds dual substituent parameter model investigation.*

Basil A. Saleh, Sabih A. Al-Shawi, and Ghazwan F. Fadhil  
*J. Phys. Chem. A* 2021, 125, 7759-7768. <https://doi.org/10.1021/acs.jpca.1c02645>.

2- *Theoretical investigation of para amino-dichloro chalcone isomers, part I: A DFT structure—stability study.*

Haval A. Hussein and Ghazwan F. Fadhil  
*J Phys. Org. Chem.* 2020 ; e4073.(2020). <https://doi.org/10.1002/poc.4073>.

3- *DFT of para methoxy dichlorochalcone isomers. Investigation of structure, conformation, FMO, charge, and NLO properties.*

Abdulla A. Yousif and Ghazwan F. Fadhil  
*Chemical Data Collections* 31 (2021) 100618. <https://doi.org/10.1016/j.cdc.2020.100618>.

4- *Novel photosynthesis of 5,8a-dichloro-2-(4-methoxyphenyl)-8aH- chromene from its chalcone isomers and FT-IR and  $^{13}\text{C}$  NMR spectroscopic investigation.*

Abdulla A. Yousif and Ghazwan F. Fadhil  
*Journal of University of Duhok, Vol. 32, No.2 (Pure and Eng. Sciences),*  
Pp 118-134, 3232(2021)  
<https://doi.org/10.26682/sjuod.2020.23.2.14>.

5- *Novel photosynthesis and characterization of 4-(5,7- dichloro-8aH- chromene-2-yl)-N, N-dimethylaniline from its chalcone isomer.*

Nirozh A. Chalabi and Ghazwan F. Fadhil  
*Journal of University of Duhok, Vol. 32, No.2 (Pure and Eng. Sciences), Pp 135-149,*  
3232(2021).  
<https://doi.org/10.26682/sjuod.2020.23.2.14>

6- *Bioremediation of Polycyclic Aromatic Hydrocarbon by Acinetobacter Species Isolated from Ecological Sources.*

H.T. Al-Hadithi , E.A.Al-Razzaq and G. F. Fadhil.  
*Journal of Environmental Biology* , Vol 38, No (5) , p785-789, 2017

7- *Green Chemistry Reactions in Duhok City : Part I . Rose Bengal Solar Photosensitized Synthesis of Juglone.*

Ibtehaj T. Subhey and Ghazwan F. Fadhil  
*ZANCO Journal of Pure and Applied Sciences (ZJPAS)*  
Vol 28, No 6, PP 44-53, (2016)

8- *Structure Antimicrobial Activity Relationship Investigation of some Butadiene and Chalcone Derivatives.*

Hanoy AL-Amood, Hadeel AL-Hadithi and Ghazwan F. Fadhil  
Journal of Life Sciences. David Publishing, (USA)  
Vol 7, No 7 , PP 705-711,2013

9- *Pine oil extraction from Pinus brutia Ten Needles of Zawita- Duhok City- and  $\beta$ -pinene content determination by Gas Chromatography.*

Ibtehaj T. Subhey , Raed M Goran and Ghazwan F. Fadhil  
Proceedings of The 4<sup>th</sup> Kurdistan Conference on Biological Sciences. University of Duhok, 8-10 May, pages 400-404 (2012) (IRAQ).

10- *Substituent effect investigation of 3-(2, 4-dichlorophenyl)-1-(4'-X-phenyl)-2-propen-1-one. Part I. Correlation analysis of  $^{13}\text{C}$  -NMR chemical shifts.*

Alexander Perjessy , Hanoy K. Al-Amood, Ghazwan F. Fadhil and Nada Pronayova.  
Journal of Physical Organic Chemistry Vol.24 (140-146) **2011** DOI 10.1002/poc.1718 .

11- *Factor Analysis, Target Factor Testing and Model Designing of Aromatic Solvent Effect of the Formyl Proton Nuclear Magnetic Resonance Chemical Shift in Para Substituted Benzaldehydes.*

Ghazwan F. Fadhil  
American Journal of Applied Sciences 7(1), (24-32) 2010.

12- *Substituent Effects in the  $^{13}\text{C}$  NMR Chemical Shifts of para-( para- substituted benzylidene amino) benzonitrile and Para-( para-substituted benzylidene amino) benzonitrile .*

G.F.Fadhil and A.H.Essa  
Journal of The Iranian Chemical Society Vol\_ 6, No.4,( 808-811) 2009 .

13- *Substituent effect study on  $^{13}\text{C}_\beta$  SCS of styrene series. A Yukawa-Tsuno and Reynolds dual substituent parameter model investigation.*

Basil A. Saleh, Sabih A. Al-Shawi and Ghazwan F. Fadhil.  
J.Phys.Org.Chem. Vol. 21 (96-101) 2008 DOI 10.1002/poc.1272.

14- *Substituent effect study on  $^{13}\text{C}$ -NMR and IR spectral data of 3-(4-X-phenacyclidine) oxindoles.*

H.R.Radhy , G.F.Fadhil, A.Perjessy, M.Samalikova and N. Pronayova.  
University of Sharjah Journal of Pure and Applied Sciences Vol. 4 No.1 (19-24), 2007.

15- *The role of side-chain on the transmission of substituent effect in p-disubstituted benzenes. Part I. Monosubstituent parameter modeling of para <sup>13</sup>C substituent chemical shifts.*

Sabih A. O. Al-Shawi and Ghazwan F. Fadhil  
Abhath Al-Yarmouk Journal " Basic Science and Engineering", Vol. 12, No. 2A 2003.  
( Yarmouk University , Irbid, Jordan).

16- *Dual Substituent Parameter Modeling of Theoretical , NMR and IR Spectral Data of 5-Substituted Indole-2,3-diones.*

Ghazwan F. Fadhil, H.A.Radhy, A.Perjessy, M.Samalikova, E.Kolehmainen,W.M.F.Fabian,  
K.Laihia and Z.Sustekova.  
Molecules 7, (833-839), 2002.

17- *On The Transmission of Substituent Effect Through Bicyclo[2.2.2]octane and Triptycene. A <sup>19</sup>F and <sup>13</sup>C Substituent Chemical Shift Investigation.*

Nezar.L.Shibaldain, Hanan A.R.Al-Hazam, Ghazwan F. Fadhil  
Iraqi National Journal of Chemistry 7, (422-437) 2002.

18-*Substituent Effects and Vibrational Coupling in Indole-2,3-diones: An IR, NMR and Theoretical Study.*

Ghazwan F.Fadhil, H.A. Radhy, A.Perjessy, E.Kolehmainen, .M.F.Fabian  
M.Samalikova, K.Laihia, Z.Sustekova  
Heterocyclic Communications 7, ( 387-392) **2001**.

19- *Principal component analysis and target testing of substituent effect using carbonyl stretching frequency and C-13 NMR chemical shift data matrices.*

G. F. Fadhil  
Collect. Czech. Chem. Commun. Vol. 58, ( 385-394) **1993** .

20- *Factor analysis of long range substituent effects on C-13 NMR chemical shift and target factor testing of different types of substituent parameters.*

G.F. Fadhil  
Z. Naturforsch. A 47 , ( 775-780), 1992.

21- *Synthesis and substituent effect study on the frequency of 1- Benzoyl-2-(p- substituted phenyl ) cyclopropane.*

G.F. Fadhil and W. G. Yousif.  
Iraqi Journal of Chemistry Vol. 15 No (30) 1990.

22- *On the analysis of substituent effects. Part I. Hammett and related plots.*

G.F.Fadhil and M.Godfrey .  
J. Chem. Soc. Perkin Transactions II. (133-137), 1988.

23- *The interpretation of quantitative linear correlations. Studies on the substituent shell concept.*

G. F. Fadhil and M. Godfrey.  
J. Chem. Soc. Perkin Trans. II (933), 1982.

**Patent :**

1- *Synthesis and characterization of UV- photostabilizers to protect polymers from UV-sunlight and the use of low density polyethylene wax in increasing the compatibility with polyethylene.*

Ghazwan F. Fadhil , Moyeed N. Khalef and Mustafa K. Joda .

Patent pending: 3066 in 15<sup>th</sup> July **2002** (The Iraqi central system for quality control – Baghdad)

2- *New Iraqi technology in flame retardation by using chlorinated low density polyethylene wax of petrochemical general company waste material.*

Moyeed N. Khalef, Ghazwan F. Fadhil , Mustafa K. Joda, Mohammad A. Taher, Amjad T. Batoor, Methak K. Ali, Afaf S. Maatook, Mustafa N. Khalef

Patent pending: 3255 in 15<sup>th</sup> Feb 2009 (The Iraqi central system for quality control – Baghdad)

## Postgraduate Theses Supervision:

### A- PhD Theses

1-Models performance assessment and the role of side-chain on the transmission of substituent effect to para, alpha and beta-carbon atoms in p-disubstituted benzenes. A  $^{13}\text{C}$  SCS correlation analysis study.

Student : Mr. Sabih A. O. Al-Shawi (University of Basrah 1998)

2-Preparation and substituent effect study on aryl cyclopropanes, thiophene chalcones and triptycenes.

Student: Mr. Nezar.L.Shihabaldain (University of Basrah 1998)

3-  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  NMR study for 5-x and 6-x-Isatins and substituted [2.2.2]bicyclooctane.

Student : Mrs. Hanan A.R.Al-Hazam (University of Basrah 2001)

4-Substituent and side-chain effects investigation on para carbon atom Mulliken charges in disubstituted benzenes. A correlation analysis study.

Student: Mr. Mohammad A. Naser Almagmoy (University of Basrah 2005)

5- Synthesis and QSAR study of 1-phenyl-2-(4'-X-phenyl)-4-(2,4-dichlorophenyl)-1,3-butadiene and 3-(3,4-dichlorophenyl)-1-(4'-X-phenyl)-2-propen-1-one.

Student: Miss. Hanoy K. Al-Amood (University of Basrah 2006)

6- Photosynthesis, Photochromism, kinetics and structure-stability investigation of new dichlorochalcone isomers: Experimental and theoretical based study.

Student: Mr. Haval Ali Hussein (University of Duhok 2020)

### B- MSc Theses

1- Substituent effect study on p[[p-(substituted) benzylid]amino]benzotrile and o-[[p-(substituted) benzylid]amino]benzotrile.

Student: Mr. Ali H. Essa (University of Basrah 1998)

2- Synthesis and substituent effect study of new series of chalcones.

Student: Mr.Hanoy K. Al-Amood ( University of Basrah 1999)

3-Substituent effect study of some phenylmethylene oxazolones and the assessment of new electronic substituent scale  $\sigma_q$ .

Student: Mr. Basil A. Salah (University of Basrah 1999)

4- *Synthesis and Identification of new UV-stabilizers.*

Student : Mr. Mustafa K. Joda (University of Basrah 2001)

5- *Synthesis of new photostabilizers derived from benzotriazole and phenylbenzoate and their impregnated derivatives on LDPE-wax and the study of their photostabilization efficiency.*

Student: Mr. Zeyad T. Al-Maleki (University of Basrah 2004)

6- *Laboratory preparation of ethylene oxide and its application in the synthesis of some new polymeric resins containing lignin and study of their thermal properties.*

Student : Mr. Amjed A. Ahmed (University of Basrah 2004)

7- *Neurofuzzy networks based system for aromatic  $^{13}\text{C}$  SCS approximation.*  
(With collaboration of advisor from computer science department.)

Student : Miss. Zyneb B. Dahoos (University of Basrah 2004)

8- *Efficiency and comparative study of Lignin as thermal and photo antioxidant for low density polyethylene.*

Student: Mr. Ali T. Y. Al-Sarayfee ( University of Basrah 2005)

9- *Extraction and physical study of white mineral oils produced by Iraqi refinery.*

Student: Mr. Hekmat Abdel- Raheem ( University of Basrah 2005)

10- *Green Chemistry Reactions: Rose Bengal Solarphotosensitized synthesis of Benzopinacol, Myrtenol and Juglone.*

Student: Mrs. Ibtehaj T. Subhi ( University of Duhok 2010)

11- *Investigation of Phytonutrients and Antioxidants in Milk, Syrian and Cotton Thistle Seeds in Duhok Region Using HPLC.*

Student : Mr. Myasar Khaleel Ibrahim (University of Zakho, 2015)

12- *Solar-Photosynthesis, Structure-Molecular Modeling and Kinetics of Photochromic 4-(5,7-dichloro-8aH-chromen-2-yl)aniline and Its Chalcone Precursor .*

Student: Mrs. Raghad Mowfak Bahjat Al\_Mukhtar (University of Duhok 2016)

13- *Experimental investigation and simulation of kinetics and molecular structure of the photosynthesized 4-(5,8a-dichloro-8a H-chromen-2-yl)aniline and its chalcone isomer.*

Student : Mr. Hazhi Hasan Hussein . (University of Duhok 2016)

14- *Experimental and Computational Structure Stability Study of Dichloromethoxy Chalcone Isomers: Photosynthesis, Photochromism and Kinetics of 5,8a-dichloro-2-(4-methoxyphenyl)-8aH-chromene.*

Student: Abdulla Ahmed Yousif (University of Duhok 2021)

15- *Photochromism and Photosynthesis of New Chromenes from Newly Synthesized Dichloro-Chalcones.*

Student: Nirozh Azad Chalabi (University of Duhok 2021)

### **C-Diploma Dissertation:**

*Preliminary GC investigation of phenolic compounds in Almonds ( prunus agentea and Prunus amygdalus) of Bamarny.*

Student : Moyeser K. Ibraheem (University of Dohuk 2007)

### **Papers presented in conferences:**

1-The 15<sup>th</sup> Iraqi chemical conference ( Basrah University)3-7 February 1990.

*Synthesis and substituent effect study on the carbonyl stretching frequency of 1-Benzoyl -2(p-substituted phenyl) cyclopropane.*

Ghazwan F. Fadhil and Wael Yousif.

2-The 2<sup>nd</sup> Czechoslovak chemo metrics conference , Brno 1990.

*Principal component analysis and target testing of substituent effect using carbonyl stretching frequency and <sup>13</sup>C NMR chemical shift data matrices.*

Ghazwan F. Fadhil.

3- The first Iraqi national conference on chemistry science- University of Basrah College of Science Basrah 22-23 February 2000.

i- *Corrlation analysis study on the biological activity of some new chalcones.*

Ghazwan F. Fadhil, Hanoy K.K.Al-Amood and Kuther H. Mehdi.

ii- *Substitute effect study on the i.r stretching frequency of the carbonyl group in new series of chaconne.*

Ghazwan F. Fadhil and Hanoy .K.K. Al-Amood.

iii- *Substitute effect study of some phenylmethylen oxazolone.*

Ghazwan F. Fadhil and Basil A. Saleh.

iv- *Substituent effect study on p[[p-(substituted) benzylid]amino]benzotrile and o-[[p-(substituted) benzylid]amino]benzotrile.*

Ghazwan F. Fadhil and Ali H. Essa.

v- *The role of side-chain on the transmission of substituent effect to para-carbon atom in 1,4-disubstituted benzene. A <sup>13</sup>C SCS correlation analysis of Charton's model.*

Ghazwan F. Fadhil and Sabih A.O.al-Shawi.

vi- *<sup>13</sup>C SCS correlation analysis study on 1-benzoyl-2-(4-X-phenyl) cyclopropane.*

Ghazwan F. Fadhil and Nazar L.Shihabaldain.

4-The Second Jordanian Conference of Chemistry, Yarmouk University, Irbid- Jordan 16- 22 April 2000.

*The role of side-chain on the transmission of substituent effect in p-disubstituted benzenes. Part I. Monosubstituent parameter modeling of para <sup>13</sup>C substituent chemical shifts.*

Ghazwan F. Fadhil and Sabih A.O. Al-Shawi.

5- The Fifth International Polymer Conference , University of Basrah, Basrah, 11-12 November 2001.

*Synthesis of photostabilizers derived from 2,4-dihydroxybenzophenone and the use of low density polyethylene wax in increasing the compatability with polyethylene films.*

Ghazwan F. Fadhil, Moyeed N. Khalif and Mustafa K. Joda .

6-The Second National Iraqi Conference on Chemistry , University of Babylon, Babel, 25-27 Dec 2001.

i- *On the transmission of sbubstituent effect through bicyclo[2.2.2]octane and triptycene. A <sup>19</sup>F and <sup>13</sup>C substituent chemical shift investigation*

Ghazwan F. Fadhil, Nezar.L.Shihabaldain and Hanan A.R.Al-Hazam.

ii- Synthesis and evaluation of some new UV-stabilizers.

Ghazwan F. Fadhil, Moyeed N. Khalif and Mustafa K. Joda .

iii- *Aromatic extract study of Southern refinery company of Iraq.*

Ghazwan F. Fadhil, Abdel Jabar Abdel Rutha, Afaak A. Turkey, Amena A. Al-Temarri, Abdel Wahab Ahmed and Abdel Razak Mutrood.

7-The Third International Jordanian Conference on Chemistry, Yarmouk University, Irbid-Jordan 22- 26 April 2002

i- *The role of side-chain on the transmission of substituent effect in p-disubstituted benzenes. Part (2) Dual substituent parameter modeling of para <sup>13</sup>C substituent chemical shifts.*

Ghazwan F. Fadhil and Sabih A. Al- Shawi

ii- *Substituent effect investigation on <sup>1</sup>H and <sup>13</sup>C chemical shifts, Mullikan charges and HOMO and LUMO energies in 3-[2,4-dichlorophenyl]-1-[4'-X-phenyl]- 2-propene-1-one. A correlation analysis study.*

Ghazwan F. Fadhil, Hanoy K. Al-Amood, Alexander Perjessy and Nada Pronayova.

8- Conference of International Chemistry- University of Basrah, Basrah 2-3 Nov 2011.  
*Green Chemistry Reaction: A Reinvestigation of Benzopinacol Solar Photosynthesis.*

*Ghazwan F. Fadhil and Ibtehaj T. Subhey.*

9-The 4th Kurdistan Conference on Biological Sciences. University of Duhok 8-10 May, 2012.

*Pine oil extraction from Pinus brutia ten needles of Zawita –Duhok city and beta-pinene content determination by gas chromatography.*

Ghazwan Faisal Fadhil I, btehaj Tarik Subhey and Raed Majeed Goran

10-21<sup>st</sup> IUPAC International Conference on Physical Organic Chemistry. University of Durham 9-13 Sept. 2012

*"The role of side-chain on the transmission of substituent effect to para carbon atom in " A correlation analysis of <sup>13</sup>C SCS and Mulliken charge " disubstituted benzene.*

Ghazwan Faisal Fadhil, Sabih A. Al Shawi and Mohammad A. N. Al-Magmoy .

11-247th American Chemical Society National Meeting Dallas, TX, March 16-20 2014

*Wastewater model of Cr(VI) removal by sulfonated lignin pine cone*

Ghazwan Faisal Fadhil and Suhad Abdulrahman Yasin

12- 3<sup>rd</sup> International Conference on Energy, Environment and Applied Science.  
Ishik University and Salahaddin University , 10-11 April 2016Erbil, Kurdistan, Iraq..

*Green chemistry reactions in Duhok city : Part I. Rose bengal solar photosensitized synthesis of Juglone.*

Ghazwan F. Fadhil and Ibtehaj T. Subhey.

13- The 1<sup>st</sup>. International Conference on Science and Arts (ICMSA 2017), Organized by AMERICAN RESEARCH FOUNDATION and University of Salahaddin . 3-4 May 2017 Erbil, Kurdistan, Iraq.

<http://sriweb.org/erbil/>

*Green Chemistry Reactions in Duhok City : Part II . Rose Bengal Solar Photosensitized Synthesis of Myrtenol.*

Ibtehaj Tarik Subhey and Ghazwan Faisal Fadhil.

14- The 5<sup>th</sup> Kurdistan International Conference on Science and Technology-KCST-2019  
University of Duhok April 24<sup>th</sup>- 25<sup>th</sup> 2019.

*Structure, conformation , HOMO-LUMO and NLO properties of para amino-dichloro derivatives of chalcone isomers: A DFT study.*

Haval A. Hussein and Ghazwan F. Fadhil

15- The 5<sup>th</sup> Kurdistan International Conference on Science and Technology-KCST-2019  
University of Duhok April 24<sup>th</sup>- 25<sup>th</sup> 2019.

*Investigation of phytonutrients and antioxidants in milk, syrian and cotton thistles seeds in Duhok region.*

Myasar K. Ibrahim , Maher Khalid Ali and Ghazwan F. Fadhil

16- The 5<sup>th</sup> Kurdistan International Conference on Science and Technology-KCST-2019  
University of Duhok April 24<sup>th</sup>- 25<sup>th</sup> 2019.

*DFT study on the structure, conformation and FMO properties of trans dichloromethoxy chalcone isomers.*

Abdullah A. Yousif\* and Ghazwan F. Fadhil

17- University of Duhok and Women in science without borders initiative (WISWB) (8-10 March 2021)

*Green Chemistry Reactions in Duhok City: Part III. Optimization of Rose Bengal Dye Concentration as Oxygen Quencher in The Photosynthesis of Benzopinacol.*

Ibtehaj Tarik Subhey and Ghazwan Faisal Fadhil.

### **Consultations:**

i- Principal components of aromatic extract. A study submitted to the Iraqi southern company, Basrah 2001.

ii-Preparation of pharmaceutical active ingredients (Edrophonium Chloride, Clotrimazol, Ethambutol Hydrochlorid, Bisacodyl, Ethosuximide, Busulfan, Dimercaprol) to the drugs project of the Iraqi ministry of higher education and research. July 2002 .

## Organized Workshops:

- 1- Structure Elucidation of Natural Products by  $^1\text{H}$ ,  $^{13}\text{C}$  -NMR , DEPT  $90^\circ$  , DEPT  $135^\circ$ , COSY, HMQC, HMBC, NOESY utilizing delta Jeol programme.  
25-29 Feb 2012.  
University of Duhok-Faculty of Science-Research Center.
- 2- Correlation Analysis in Chemistry (16-17 May 2012)  
University of Duhok-Faculty of Science-Department of Chemistry
- 3- ChemDraw (22,26,27,28 May 2013)  
University of Duhok-Faculty of Science-Department of Chemistry
- 4- Mendeleev File Organizer (10 March 2015)  
University of Duhok-Faculty of Science-Department of Chemistry
- 5- The second chemistry department Fair (11<sup>th</sup> May 2017) in part.

## Seminar Presentations:

- 1- Correlation Analysis in Chemistry.  
Date (21-12-2011)  
  
Organizer :University of Duhok, College of Science, Department of Chemistry
- 2- Photochemical Molecular Devices.  
Date(24-1-2012)  
Organizer : University of Zakho, College of Science, Department of Chemistry
- 3-Carbon Nanotubes  
Date: (2-5-2012)  
Organizer : University of Duhok, College of Science, Department of Chemistry
- 4-Charge and C-13 SCS Modeling of *para* Disubstituted Benzenes.  
Date: (28-11-2012)  
Organizer : University of Duhok, College of Science, Department of Chemistry
- 5- Molecular Modeling.  
Date: (4-12-2014)  
Organizer: University of Duhok, College of Science, Department of Chemistry
- 6- Molecular Modeling of Antioxidants.  
Date:(27-11-2013)  
Organizer : University of Duhok, College of Science, Department of Chemistry
- 7- Sulfonated Lignin removal of Cr(VI).  
Date:(29-01-2014)  
Organizer: University of Duhok, College of Science, Department of Chemistry

8-Mendeley File Organizer .

Date:( 26-11-2014)

Organizer: University of Duhok, College of Science, Department of Chemistry

9- Green Chemistry Reactions in Duhok City : Part I . Rose Bengal Solar Photosensitized Synthesis of Juglone.

Date : (5-04-2017)

Organizer : University of Duhok, College of Science, Department of Chemistry.

10- Bioremediation of Polycyclic Aromatic Hydrocarbon by *Acinetobacter calocoacetus* by A.Iwoffi Isolated from Ecological Sources.

Date: (18-05-2017)

Organizer : University of Duhok, College of Science, Department of Chemistry.

11- Spectroscopy without spectrometer. Part I and II.

Date: (5-04-2018)

12- Structure, conformation , HOMO-LUMO and NLO properties of *para* amino-dichloro derivatives of chalcone isomers: A DFT study.

Organizer College of Science: 5<sup>th</sup> Kurdistan International Conference on Science and Technology (24<sup>th</sup> April 2019)

13- DFT study on the structure, conformation and FMO properties of *trans* dichloromethoxy chalcone isomers.

Organizer College of Science: 5<sup>th</sup> Kurdistan International Conference on Science and Technology (25<sup>th</sup> April 2019).

14- Investigation of phytonutrients and antioxidants in milk, syrian and cotton thistles seeds in Duhok region.

Organizer College of Science: 5<sup>th</sup> Kurdistan International Conference on Science and Technology (25<sup>th</sup> April 2019).

15- Theoretical investigation of *para* amino-dichloro chalcone isomers, part I. A DFT structure—stability study.

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 14<sup>th</sup> June 2020.

16- DFT of *para* methoxy dichlorochalcone isomers. Investigation of structure, conformation, FMO, charge, and NLO properties.

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 31 May 2021

17- Novel photosynthesis and characterization of 4-(5,7-dichloro)-8 $\alpha$ H-chromene-2-yl)-N,N-dimethylaniline from its chalcone isomer.

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 30 May 2021.

18- Correlation analysis for  $^{13}\text{C}$   $\beta$  SCS in a meta-styrene series.

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 23 May 2022

19- Substituent effect study for  $^{13}\text{C}$   $\beta$  SCS in a meta-styrene series. Analysis of the field effect ( $\rho_F$ ).

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 9 March 2022.

20- Substituent effect study for  $^{13}\text{C}$   $\beta$  SCS in a meta-styrene series. Analysis of the resonance effect ( $\rho_R$ ).

Organizer: University of Duhok, College of Science, Department of Chemistry.

Date: 18 May 2022.