

# CURRICULUM VITAE (C.V)

## PERSONAL DATA:

**Full Name:** Tayel AbdulGhani Al Hujran  
**Citizenship:** Jordanian

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## EDUCATION (dates, degree, university)

- 2014 **Post-Doctoral Fellow**, Department of Chemical Engineering & Chemistry, *Royal Military College of Canada (RMCC), Kingston, ON, Canada.* [January 2013- January 2014].  
**Research Project 1:** “*Synthesis and Characterization of Polymers containing Macrocyclic-based cross-linking agents*”.  
**Research Project 2:** “*Synthesis Glass-Materials which are used in thin films*”.  
**Supervisor:** *Prof. Olivier Lebel*
- 2012 **Doctoral Philosophy (Ph.D.)** in Organic Chemistry, Memorial University, Canada.  
**Thesis Title:** “*Synthesis and Characterization of Macrocyclic Naphthalene Ring-Based Calix[n]arenes, Lactones, and Amides*”.  
**Supervisor:** *Prof. Paris E. Georghiou.*
- 2002 **Master of Science (M.Sc.)** in Organic Chemistry, Mu'tah University, Jordan.  
**Thesis Title:** “*Preparation, and Characterization of 2-Amino-4-(3-thienyl)-1,3-thiazol, 2-amino-4-(2-thienyl)-1,3-thiazoles and their N-Substituted Derivatives*”  
**Supervisor:** *Prof. Samir A. Al Taweel.*
- 1996 Bachelor of Science (**B.Sc.**) in Chemistry, Mutah University, Jordan.
- 1992 High School Certificate, Jordan.

## **CAREER/ EMPLOYMENT** (dates, position, and employers)

- 2014- Pre. **Assistant Professor**, Department of Medicinal Chemistry, *Mu'tah University*, Karak, **Jordan**. [April 2014- present].
- 2016-2017 **Chair of Pharmaceutical Chemistry Department**, *Mu'tah University*, Karak, **Jordan**. [Sep. 2016- Sep. 2017].
- 2014 -2016 **Assistant Dean of Faculty Pharmacy**, *Mu'tah University*, Karak, **Jordan**. [Sep. 2014- sep. 2016].
- 2013-2014 **Post-Doctoral Fellow**, Department of Chemical Engineering & Chemistry, *Royal Military College of Canada (RMCC)*, Kingston, ON, **Canada**. [January 2013- January 2014].  
**Research Project 1:** "Synthesis and Characterization of Polymers containing Macrocyclic-based cross-linking agents".  
**Research Project 2:** "Synthesis Glass-Materials which are used in thin films".  
**Supervisor:** Prof. Olivier Lebel
- 2007- 2012 **Course Teaching Assistance**, Chemistry Department, Memorial University, St. John's, NL, **Canada**.
- 2007- 2012 **Teaching Assistant (T.A)**, Chemistry Department, Memorial University, St. John's, NL, **Canada**.
- 2003-2007 **Teaching Assistant (T.A )**, Chemistry Department, *Mu'tah University*, Karak, **Jordan**
- 1997 - 2003 **Chemistry Teacher** in High School, Ministry of Education, **Jordan**.

## **HONOURS, AWARDS, FELLOWSHIPS**

- 2013-2014 **Post-Doctoral Fellow**, Department of Chemical Engineering & Chemistry, *Royal Military College of Canada (RMCC)*, Kingston, ON, **Canada**.
- 2012 Awarded a Graduate Student Presentation Prize at the 9<sup>th</sup> Annual Summer Organic Chemistry Conference on Everybody's Research (SOCCER), Department of Chemistry, Memorial University. St. John's, **Canada**.  
(Please see the link:) <http://www.mun.ca/science/news.php?id=1024>
- 2012 **Based on our paper**, the Journal of Chemical Communications, a prestigious journal of the *Royal Society of Chemistry (Chem. Commun.)*, was invited by the authors to do the cover illustration. (please see the link below)  
[http://www.mun.ca/gazette/issues/vol45no3/Gazette\\_SEPT19\\_2012\\_WEB091812.pdf](http://www.mun.ca/gazette/issues/vol45no3/Gazette_SEPT19_2012_WEB091812.pdf)
- 2007 -2012 **School of Graduate Studies Fellowship (Ph.D.)**. Memorial University of Newfoundland, St. John's, NL, **Canada**.
- 1993-1997 **Undergraduate Fellowship (B.Sc.)**, Ministry of Higher Education, **Jordan**.

## SPECIALIZATION

### *Synthesis Organic Chemistry*

#### **A- Post-Doctoral Fellow:** (*Polymers ad Glass-Materials*)

**Research project 1:** “*Synthesis and Characterization of Polymers containing Macrocyclic-based cross-linking agents*”.

**Research Project 2:** “*Synthesize Glass-Materials, which are used in solar cells*)

#### **B- Doctor of Philosophy (Ph.D.) Research:** (*Supramolecular Chemistry and their Complexation*)

**Research project:** “*Synthesis and Characterization of Macrocyclic Naphthalene Ring-Based Calix[n]arenes, Lactones, and Amides*”.

My research primarily focused on the design and synthesis of a new type of cation, anion, and/or neutral receptors such as homooxacalix[4]naphthalene ring-based, homooxacalix[4] acenaphthene, lactones, and amides macrocycles. To synthesize those types of macrocycles new synthesis methodologies were developed, and complexation studies were done to evaluate the binding properties for some of those macrocycles.

#### **C- Master of Science (M.Sc) Research:** (*Synthesis Heterocyclic Compound*)

**Research project:** “*Preparation, and Characterization of 2-Amino-4-(3-thienyl)-1,3-thiazol, 2-amino-4-(2-thienyl)-1,3-thiazoles and their N-Substituted*”.

My research in M.Sc. focused on the synthesis and characterizations of different types of 2-amino-4-(3-thienyl) thiazoles, and their *N*-substituted analogs to evaluate their biological activities and pharmaceutical properties. Those types of compounds were synthesized using an extension of Hantzsch synthesis.

## PUBLICATIONS

1. **Al-Hujran, T. A.;** Dawe, L. N.; Collins, J.; Georghiou, P. E. "Synthesis and clathrates of oligomeric 2-O-naphthoide macrocycles", *J. Org. Chem.*, **2011**, 76, 971–973. (*impact factor 4.564*).
2. Dawe, L. N.; **Al-Hujran, T. A.;** Tran, H.-A.; Mercer, J. I.; Jackson, E. A.; Scott, L. T.; Georghiou, P. E. “*Corannulene and its Penta-tert-butyl derivative co-crystallize 1:1 with pristine C<sub>60</sub>-fullerene*”, *Chem. Commun.* **2012**, 48, 5563-5565. (*Impact factor 6.169*). (81 citations). (**Also see the article which was written about this paper via link number one**)

((Based on this paper, the journal **Chemical Communications**, a prestigious journal of the **Royal Society of Chemistry (Chem. Commun.)** was invited the authors to do the cover illustration.))

3. **Al-Hujran, T. A.**; Dawe, L. N.; Georghiou, P. E. "Synthesis of functionalized acenaphthene and a new class of homooxalixarenes" *Org. Lett.* **2012**, *14*, 3530-3533. (Impact factor 6.142). (16 citations).
4. **Al-Hujran, T. A.**; Rahman, S.; Dawe, N.; L.; Georghiou, E. P.; *Synthesis and complexation of a "mixed"-pyridine-naphthalene homooxalixarene. Supramolecular chemistry*, **2014**, *26*, 500-505. (Impact factor 1.546).
5. Bennani, O. R.; **Al-Hujran, T. A.**; J-M. Nunzi, J-M.; Sabat, R. G.; Lebel, O.; ((*surface-relief diffraction gratings' optimization for plasmonic enhancements in thin-film solar cells*)); *New J. Chem.*, **2015**, *39*, 9162-9170. (Impact factor 3.288) (32 citations).  
<https://doi.org/10.1039/C5NJ01299F>
6. Al-Taweel, S. A.; **Al-Hujran, T.A.**; Al-Dewani, L. J.; "Synthesis and antibacterial activity of some 2-(arylamino)-4-thienyl-1,3-thiazoles", *Mutah Lil-Buhuth wad-Dirasat*, **2016**, *31*, 55-70.
7. Magharbeh, M. K.; **Al-Hujran T. A.**; Al-Jaafreh, A. M.; Alfarrayeh I. I.; and Ebadi, S. S.; ((*Phytochemical Screening and in vitro antioxidant and antiurolithic activities of Coffea Arabica*)). *Res. J. Chem. Environ.* **2020**, *24*(12), 109-114.
8. Magharbeh, M. K.; **Al-Hujran, T. A.**; Al-Dalaen, S. M. I.; and Hamad, A. R.; ((*Assessment of Paronychia Argentea Extraction on Kidney Stone by Using Calcium Oxalate Method*)). *Biomed. & Pharmacol. J.* **2020**, *13*(4), 1745-1754.  
DOI : <https://dx.doi.org/10.13005/bpj/2049>
9. Al-Saraireh, Y. M.; Youssef, A. M. M.; Alsarayreh, A. Z.; **Al Hujran, T. A.**; Al-Sarayreh, S.; Al-Shuneigat, J. M.; Alrawashdeh, H. M.; ((*Phytochemical and anti-cancer properties of Euphorbia hierosolymitana Boiss. crude extracts*)); *J. Pharm. Pharmacogn Res*, **2021**, *9*(1), 13-23.
10. Magharbeh, M. K.; **Al-Hujran, T.A.**; and Ebada, S. S.; ((*Herbal Treatment for Urinary Stones Using Crude Aqueous Extract and Fractionated Methanol Extract of Prosopis Farcta Cultivated in Jordan*)). *Mutah Lil-Buhuth wad-Dirasat*, **2021**, *36*(1), 51-74.
11. Dalaen, S. M. I.; Hamad, A. R.; **Al-Hujran, T. A.**; Al-Btoush, H., A.; Halaseh, L.K.; Magharbeh, M. K.; Al-Al-Jawaberi, N. A.; Al Kasasbeh, A.; Abid, F. M.

((Bioavailability and Bioequivalence of Two Oral Single Dose of Ibuprofen 400mg to Healthy Volunteers)). *Biomed. Pharmacol. J.*; **2021**; *14*(1), 435-444.

12. **Al-Hujran, T. A.**; Magharbeh, M. K.; Al-Btoush, H. A.; Al-Ja'afreh, A. A.; Gaber, Y. ((GC-mass determination for the biodegradative products of 2,6-dimethylpyridine using Dead-Sea bacterial isolate)). *Res. J. Chem. Environ.*; 22 January **2021**, **25**(9),1. DOI:[10.25303/259rjce001008](https://doi.org/10.25303/259rjce001008)
13. **Al-Hujran, T. A.**; Magharbeh, K. M.; Al-Gharabli, S.; Haddadin, R. R.; Al Soub, N. M.; Tawfeek, M. H.; " *Studying the Complex Formation of Sulfonatocalix[4]naphthalene and Meloxicam towards Enhancing its Solubility and Dissolution Performance*". *Pharmaceutics*, **2021**, *13*(7), 994. (Impact factor 6.321). <https://doi.org/10.3390/pharmaceutics13070994>
14. Magharbeh, M.K., Khleifat, K.M., Al-kafaween, M.A., Saraireh, R., Alqaraleh, M., Qaralleh, H., Al-Tarawneh, A., Al-limoun, M.O., El-Hasan, T., **Hujran, T. A.**; Ajbour, S.H., Jarrah, N., Amonov, M., Al-Jamal, H.N.A., ((*Biodegradation of Phenol by Bacillus simplex: Characterization and Kinetics Study*)). *Applied. Environmental Biotechnology*, **2021**, *6*(2): 1-12. <http://doi.org/10.26789/AEB.2021.02.001>
15. Al-Saraireh, F.; Hamad, A. R.; Magharbeh, K. M.; **Al-Hujran, T. A.**; and Elfalah, M.; ((*Analysis of Metals in Cataract Fluid of Jordanian Patients by Using the Inductively Coupled Plasma Optical Emission Spectrometry*)). *Biomed. & Pharmacol. J.*, **2022**, *15*(1), 515-521. DOI: <https://dx.doi.org/10.13005/bpj/2392>
16. Abu Dayyih, W.; Hailat, M.; **Al Hujran, T.**; Magharbeh, M.; Zakaraya, Z.; Al Tamimi, L.; Aburumman, A. M.; Abumansour,H.; Awad, R. "Spectrophotometric analysis of empagliflozin tablets as SGLT2 inhibitors in pharmaceutical samples". *Journal of Applied Pharmaceutical Science*. **2022** ((accepted))
17. **Al-Hujran, T. A.**; Magharbeh, K.A.; habashneh, A. Y.; Al Dmour, R. S.; Aboelal, A. Tawfeek, M. H.; "Insight into the inclusion complexation of Fluconazole with Sulfonatocalix[4]naphthalene in aqueous solution, solid-state, and its antimycotic activity". *Molecules*, **2022**, *27*, 4425. (Impact factor 4.92). <https://doi.org/10.3390/molecules27144425>

## CONFERENCES

1. Tayel A. Al Hujran and Louise N. Dawe Paris E. Georghiou " *Amide-based Macrocycles derived from 4,4'-methylenebis(3-methoxy-2-naphthoyl chloride) and their derivatives*" **Poster Presentation at the 94<sup>th</sup> Canadian Society for Chemistry Conference and Exhibition (CSC), Montreal, Quebec, Canada, June 04-Jun 09, 2011.**
2. Tayel A. Al Hujran and Louise N. Dawe Paris E. Georghiou " *Synthesis and clathrates of unprecedented oligomeric 7-tert-butyl-2-naphthoide macrocycles*" **Poster Presentation at the 93<sup>rd</sup> Canadian Society for Chemistry Conference and Exhibition (CSC), Toronto, Ontario, Canada, May 29- Jun 3, 2010.**
3. Tayel A. Al Hujran; *Volunteer at the 22<sup>nd</sup> International Congress on Heterocyclic Chemistry (ICHC), St. John's, Newfoundland, Canada, August 2-7, 2009.*
4. Tayel A. Al Hujran and Paris E. Georghiou " *Synthetic approaches towards an acenaphthene-based calixanaphthalene*" **Oral Presentation, 4<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, NL, Canada, Aug.16-17, 2007.**
5. Tayel A. Al Hujran and Paris E. Georghiou " *Synthetic approaches towards an acenaphthene-based homooxalixacenaphthene*" **Oral Presentation, 5<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, NL, Canada, Aug.15-16, 2008.**
6. Tayel A. Al Hujran and Paris E. Georghiou " *Synthetic studies towards new naphthalene ring-containing molecular "baskets"* **Oral Presentation, 6<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, Canada, Aug.10-11, 2009.**
7. Tayel A. Al Hujran and Paris E. Georghiou " *Synthesis of Some New Naphthalene ring-based Macrocycles*" **Oral Presentation, 7<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, Canada, Aug.15-16, 2010.**
8. Tayel A. Al Hujran and Paris E. Georghiou " *Synthesis of Macrocylic Homooxalix[4]naphthalenes*" **Oral Presentation, 8<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, Canada, Aug.12-13, 2011**  
Tayel A. Al Hujran and Paris E. Georghiou " *Synthesis of Macrocylic Naphthalene Ring-Based Calix[n]arenes, Lactones and Amides*" **Oral Presentation, 9<sup>th</sup> Annual Summer Organic Chemistry Chemistry Conference on Everybody's Research (SOCCER), MUN, St. John's, Canada, Aug. 9-10, 2012.**
9. Rahman, S.; **Tayel, A. Al Hujran**, Dawe, N.; L.; and Paris E. Georghiou " *Synthesis and complexation of a "mixed"-pyridine-naphthalene homooxalixarene*" **Poster Presentation,**

**Calix2013 - 12th International Conference on Calixarenes St. John's, Newfoundland (Canada), July 14-17, 2013.**

10. **Tayel Al Hujran, Attended,** “The scientific Conference on the ethics of medical research and Strengthen the Role of Young Researcher”, **Jordan University, Jordan, April 29-30, 2014.**
11. **Tayel Al Hujran, Attended,** the 20<sup>th</sup> Congress of the Arab Association of the Faculties of Pharmacy & 5<sup>th</sup> International Conference of the Jordanian Faculties of Pharmacy & 2<sup>nd</sup> International Conference of the Faculty of Pharmacy at Isra University “The Cancer Epidemic: A Pharmacist's Perspective”, **Isra University, Jordan, On 7-9 November 2017.**
12. Active Pedagogical Techniques in Higher Education: Combining Multidisciplinary Learner-Centered Educational Experience from Egypt, Germany, Malaysia, and the United State”, **Mutah,- Jordan (2018).**
13. The First international conference of the Faculty of Pharmacy, Mutah University “Modern techniques in pharmaceutical sciences” in the **Dead Sea Hotel- Jordan, On 18-19 April 2018.**
14. The second international conference of the Faculty of Pharmacy, Mutah University “COVID-19 Pandemic Rearranges the Scientific Research priorities” **online, On 27 February 2021.**

**TEACHING ACTIVITIES**

- Courses Taught at Mutah University (Jordan) and Memorial University (Canada):
- General Chemistry Lab. I (CHEM 105) (CHEM 1050)
- General Chemistry Lab. For Pharm (CHEM 112)
- General Chemistry Lab. II (CHEM 106) (CHEM 1051)
- General Chemistry Lab. for Medicinal Students (CHEM 105) (CHEM 1050)
- Introductory Chemistry Lab. I (CHEM 1010)
- Introductory Chemistry Lab. I (CHEM 1011)
- Organic Chemistry Lab. for Biology (CHEM 424)
- Analytical chemistry lab for Pharma (Pharma)
- Medicinal Chemistry lab for Pharm (Pharm )
- Organic Chemistry Lab. I (CHEM 424) (CHEM)
- Organic Chemistry Lab.II (CHEM 424) (CHEM)
- Pharma Organic Chemistry lab. (Pharm)
- General chemistry for pharmacy students (CHEM)
- Organic Chemistry (CHEM 20424)
- Organic chemistry for medicinal students (CHEM)
- Systematic Identification of Organic Compounds (CHEM)
- Physicochemical Principles of Pharmacy (Pharma)
- Pharmaceutics Organic Chemistry I (Pharm)
- Pharmaceutics Organic Chemistry II (Pharm)
- Advanced Organic Chemistry (MS.Pharm)

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES**

<b>2008– Pres.</b>	Member of the Canadian Chemical Society.
<b>1997-Pres.</b>	Member of the Jordanian Chemical Society.
<b>2004-2007</b>	Member of the Jordanian Environmental Society.

## **Workshops**

### **Teaching Opportunities for Graduate Assistant (TOGA-2) April 2008-April 2010**

*Held by School of Graduate Studies, Memorial University, St. John's, NL, Canada*

*TOGA is an extensive course that introduces a series of professional workshops that develop the teaching communication, and scientific material delivery skills of the graduated student and extend the TA's knowledge regarding teaching and learning.*

### **Workplace Hazardous Material Information System October 2007**

*Held by Memorial University of Newfoundland, St. John's, NL, Canada*

*Occupational Health and Safety Training Program.*

### **Managing Projects April 2010**

*Held by MITACS skills Training and entrepreneurship at Memorial University of Newfoundland, St. John's, NL, Canada.*

*This course focuses on developing project management skills, which include time, resources, human, and financial management.*

### **Effective use of PowerPoint for teaching and Learning January 2008**

*Memorial University of Newfoundland, St. John's, NL, Canada. Instructional Development Office.*

### **Practice Your Presentation Skill (I) February 2010**

*Held by MITACS skills Training and entrepreneurship at Memorial University of Newfoundland, St. John's, NL, Canada. This course focuses on developing presentation skills.*

***Grip:** An introduction to Responsible Research Conduct.*

## **COMPUTATION AND RELATED KILLS**

<b>Computer skills:</b>	I have an international computer driving license (ICDL) (IT, Word, Excel, Powerpoint, Access, Internet)
<b>Data Analysis:</b>	Original & Spartan0.8
<b>Chemical drawing programs:</b>	ChemWindow & ChemDraw
<b>E-Learning Programs:</b>	Microsoft Teams & Zoom



## **CHEMICAL ANALYSIS AND LAB. SKILLS**

- Assisted in lab management duties such as ordering lab supplies, detailed record-keeping, report writing, presentation of results, preparation of reagents, lab maintenance, and troubleshooting basic research procedures.
- Successfully organized and performed laboratory experiments by establishing protocols to meet laboratory goals.
- I had training at the beginning of my Ph.D. program at Memorial University (Canada) in the Chemistry Department, in the following instruments, which were used to determine and confirm the chemical structures of any compounds.

### **Instruments that are used:**

1. Mass Spectroscopy: *GC-MS, LC-MS, and LC-MS trap*
2. Nuclear Magnetic Resonance (*NMR*) Spectroscopy  
*<sup>1</sup>H- and <sup>13</sup>C-NMR (300MHz and 500MHz)]*
3. Fourier-Transform Infrared Spectroscopy (*FT-IR*)
4. Ultraviolet /Visible (*UV/VIS*) Spectroscopy
5. Preparative HPLC [*Purification crud products*]
6. Differential Scanning Calorimetry (*DSC*)
7. Powder X-Ray Diffraction (*PXRD*)
8. Thermogravimetric Analysis (*TGA*), and Derivative Thermogravimetry (*DTG*).
9. Microwave [*To carry out chemical reactions and digestion microwave for analytical samples*]
10. Dissolution apparatuses for *In vitro* dissolution rate of the drug.
11. Spray Freeze-drying (lyophilization)

### **REFERENCES:**

1. Professor Paris Georghiou  
Department of Chemistry  
Memorial University of Newfoundland  
St. John`s, NL A1B 3X7, CANADA  
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2. Professor Graham Bodwell  
Department of Chemistry  
Memorial University of Newfoundland  
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3. Professor Yuming Zhao  
Department of Chemistry  
Memorial University of Newfoundland  
St. John`s, NL A1B 3X7, CANADA  
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4. Professor Samir Taweel  
Department of Chemistry  
Mut`ah University  
Al Karak –Jordan  
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5. Professor Oliver Lebel  
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