

**Curriculum Vitae
of
Jamal Nimer Dawoud**



Birth Date 30 January, 1973 **Marital status:** Married with three children
Language Arabic and English **Email:** dawoud_14@yahoo.com
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Current Position

- 01/04/2013 - present: **Associate Professor** at the Chemistry Department of the Hashemite University (Jordan).
- 09/09/2007 - 30/03/2013: **Assistant Professor** at the Chemistry Department of the Hashemite University (Jordan).
- 09/01/2007 – 15/08/2007: **PDF in Nano Structure Technology Labs** at University of British Colombia – Okanagan Campus, BC, (Canada).

Education

- **Ph.D. in Physical Chemistry (Nano Structure Technology)**, Concordia University, Canada, (2006) Rating: excellent (3.84 out of 4.3).
- **M.Sc. in Physical Chemistry**, University of Jordan, (1997) Rating: very good (3.61 out of 4.0).
- **B.Sc. in Chemistry**, Yarmouk University, Jordan, (1994) Rating: very good (82%).

Ph.D. Title thesis

“Structure and Stability of H₂ layers on Ionic Crystal Surfaces”

Specific field of specialization: Nano-Structure Technology (Physical Chemistry).

Course Taught

1. General Chemistry I.
2. General Chemistry II.
3. General Chemistry for Engineers.
4. Physical Chemistry I. (Thermodynamics).
5. Physical Chemistry II. (Chemical Kinetics).
6. Physical Chemistry III. (Quantum mechanics).
7. Physical Chemistry Lab (Pchem. 345).
8. Advanced Quantum Chemistry. (M. Sc. Course)

Research Interests

1. Computer simulations of molecules at solid surfaces: currently examining the structures of multi-layers adsorbed on ionic crystal surfaces such as the $D_2/NaCl(001)$ system using a Monte Carlo Simulation method.
2. NMR spectroscopy by studying the effect of solvent and molecular geometry on the spin-spin coupling constants.
3. Transition states structures of small molecules adsorbed on zeolites: Currently examining the interaction of different small molecules such as N_2 , O_2 , CO and NO in complexation with different types of alkali and transition metals such as Na , K , Cu and Cr using different methods of **Density Functional Theory (DFT)**.

Publications

1. Ismail I. fASFfous, **Jamal N. Dawoud**, Abdulwahab K. Sallabi, Taghreed S. Hassouneh, "A Density Functional Theory Study of the $Cu^+ \cdot (CO)_n$ complexes ($n = 1-3$)", *Journal of Coordination Chemistry*, accepted (2015).
2. Samer M. Hamzeh, Ismail I. FASFfous, **Jamal N. Dawoud**, "Conductance and Thermodynamics Study of Interaction of Some Transition Metals with Mixed Oxygen-Nitrogen Donors Macrocycles in Acetonitrile solution", *Asian Journal of Chemistry*, **27**, 674 (2015).
3. **Jamal N. Dawoud**, "Sequential bond energies and structures of the $Cr^+ \cdot (N_2)_n$, $n = 1-4$ ", *Journal of Chemical Sciences*, **126**, 1743 (2014).
4. **Jamal N. Dawoud**, Ismail I. FASFfous, Tareq K. Harahesheh, "Structure and potential energy surface of $Na^{+0} \cdot (O_2)_n$ complexes ($n = 1-3$)" *Computational and Theoretical Chemistry*, **1027**, 62 (2014).
5. **Jamal N. Dawoud**, Taghreed S. Hassouneh, "A Density Functional Theory Study of the $Cu^+ \cdot (NO)_n$ complexes ($n = 1-2$)" *Monatshefte für Chemie*, **145**, 241 (2014).

6. Mahmoud Sunjuk, Bassam El-Eswed, **Jamal N. Dawoud**, Amenh Shtaiwi, Monther Khanfar, and Mohammad El-Khateeb “Evidences for chelating complexes of Lithium with PhenylPhosphinic and Phenylphosphonic acids: A Spectroscopic and DFT Study” *Phosphorus, Sulfur, Silicon and the Related Elements*, **189**, 558 (2014).
7. **Jamal N. Dawoud**, Ismail I. FASFous, and Amin F. Majdalawieh, “A Density Functional Theory Study of the $\text{Cu}^+\cdot\text{O}_2$ and $\text{Cu}^+\cdot\text{N}_2$ Adducts” *Zeitschrift Für Naturforschung B* **67b**, 118 (2012).
8. Ismail I. FASFous, **Jamal N. Dawoud**, “Uranium(VI) sorption by multiwalled carbon nanotubes from aqueous solution” *Applied Surface Science*, **259**, 433 (2012).
9. Mohammad M. Ibrahim, Mahmoud Al-Refai, **Jamal N. Dawoud**, Rajab Abu-El-Halawah, Mohannad H. Massad, Juher Judeh and Basem F. Ali, “ Crystal Structure and Density Functional Calculations of (E)-4-Hydroxy-3-methyl-N’-(thiophen-2-ylmethylene)-1,4-dihydroquinoxaline-2-carbohydrazide Radical” *Asian Journal of Chemistry*, **24**, 2926 (2012).
10. Ismail I. FASFous, Suha E. Rehan, **Jamal N. Dawoud**, “Simultaneous Preconcentration of Oxyfluorfen and Chlorpyrifos in Environmental Water Samples Using Spent Coffee Grounds as SPE Sorbents” *Jordan Journal of Chemistry*, **7**, 203 (2012).
11. Mahmoud Al-Refai, Mohannad H. Masad, Rajab Abu-El-Halawa, **Jamal N. Dawoud**, Mohammad M. Ibrahim, Zaher Judeh, Basem F. Ali, “6-Chlorothieno[2,3-e]-1,4,2-dithiazine-3(2H)-thione-1,1-dioxide, Ammonium Salt Sesquihydrate: Synthesis, Crystal Structure and Density Functional Calculations” *Journal of Chemical Crystallography* **41**, 1335 (2011).
12. **Jamal N. Dawoud**, A. K. Sallabi, M. I. Alomari, “Structures, Vibrations and Binding Energies of $\text{K}^+\cdot\text{CO}$ and $\text{K}^+\cdot\text{NO}$ Complexes” *Jordan Journal of Chemistry*, **6**, 187 (2011).
13. **J. N. Dawoud**, I. I. FASFous, S. M. Hamzeh, and D. B. Jack, “Structures of D_2 layers on $\text{LiF}(001)$ ” *Journal of Colloid and Interface Science*, **343**, 217 (2010).
14. Ismail I. FASFous, Enas S. Radwan, **Jamal N. Dawoud**, “Kinetics, equilibrium and thermodynamics of the sorption of tetrabromobisphenol A on multiwalled carbon nanotubes”, *Applied Surface Science*, **256**, 7246 (2010).
15. Salim F. Haddad, Basem F. Ali, Rawhi H. Al-Far, **Jamal N. Dawoud**, Mohammed I. Alomari, “Density functional theory calculations of pentabromidooxomolybdate(V) anion with 2,2'-bipyridinium cation: Comparison between the calculated geometry and the crystal structure determination at 293 and 90 K” *Polyhedron*, **29**, 1109 (2010).

16. A.K. Sallabi, **J. N. Dawoud**, D.B. Jack, "A Monte Carlo Simulation study of Nitrogen on LiF(001)" *Applied Surface Science*, **256**, 2974 (2010).
17. M. I. Alomari, **J. N. Dawoud**, "Structure and potential energy surface of $K^+ \cdot CX_2$ " *Journal of Molecular Structure: THEOCHEM*, **939**, 28 (2010).
18. **J. N. Dawoud**, D. B. Jack, " D_2 layers on MgO(001):Simulation Study" *Applied Surface Science*, **256**, 1443, (2009).
19. **J. N. Dawoud**, A. K. Sallabi, I. I. Fasfous, and D. B. Jack, "Structures of D_2 layers on MgO(001)" *e-Journal of Surface Science and Nano-Technology*, **7**, 207 (2009).
20. **J. N. Dawoud**, A. K. Sallabi, and D. B. Jack: "A Monte Carlo simulation study of H_2 adlayers adsorbed on NaCl(001)" *Applied Surface Science*, **254**, 7807 (2008).
21. **J. N. Dawoud**, A. K. Sallabi, I. I. Fasfous, and D. B. Jack," Structures of H_2 layers on LiF(001)" *Jordan Journal of Chemistry*, **3**, 269 (2008).
22. **J. N. Dawoud**, A. K. Sallabi, and D. B. Jack "A perturbation theory study of H_2 /LiF(001)" *Surface Science*, **601**, 3731 (2007).

Conference presentations

Oral¹

1. J. N. Dawoud, A. K. Sallabi, N-T. Vu, and D. B. Jack: "Simulations of Molecules at solid surfaces" at the 2nd annual CERMM Conference, Concordia University (01/2002) Montreal, Canada.
2. J. N. Dawoud, D. B. Jack, and A. K. Sallabi, "Structures of H_2 adlayer on MgO(001)" at the 39th IUPAC Congress and the 86th Conference of the Canadian Society for Chemistry, on August 10-15, (2003), Ottawa, Canada.
3. J. N. Dawoud, D. B. Jack, and A. K. Sallabi, "Structures of H_2 adlayer on MgO(001) and NaCl(001)" at the 4th annual CERMM Conference, Concordia University, (03/2004) Montreal, Canada.
4. J. N. Dawoud, D. B. Jack, and A. K. Sallabi, "Structures of H_2 adlayer on MgO(001) and LiF(001)" accepted for presentation in the Peter Hobson Prize Competition at the 19th Canadian Conference on Surfaces, University of British Columbia, 16-19 May (2004) Vancouver, Canada.

¹ Presenter underlined

5. *J. N. Dawoud, D. B. Jack, and A. K. Sallabi, "Structures of H₂ layers on LiF(001)" at the 8th International Conference on the Structure of Surfaces 18-22 July (2005) at the University of Munich, Munich, Germany.*
6. *J. N. Dawoud, A. K. Sallabi, and D. B. Jack, "A Monte Carlo simulation study of H₂ layers on NaCl (001)" at the 9th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures November 11 - 15, (2007) Komaba Research Campus of The University of Tokyo, Tokyo, Japan.*
7. *J. N. Dawoud, A. K. Sallabi, I. I. Fasfous, and D. B. Jack, "Structures of D₂ on MgO(001)" at the 14th International Conference on Solid Films and Surfaces (ICSFS-14), Trinity College Dublin, Ireland, 29 June – 4 July, 2008.*
8. *Jamal N. Dawoud "Structure of H₂ multilayer on MgO(001)" presented at First United Arab Emirates Conference on Pure and Applied Chemistry (ECPAC11), March 1-3, 2011 in American University of Sharjah (AUS), Sharjah, United Arab Emirates (UAE).*

Poster²

1. *J. N. Dawoud, D. B. Jack, and A. K. Sallabi "Structures of H₂ adlayer on NaCl(001)" at the 19th Canadian Conference on Surfaces, University of British Columbia, 16-19 May (2004) Vancouver, Canada.*

Thesis Supervision:

M. Sc. Degree

1. Thesis title: Adsorption Characteristics of Brominated Flame Retardant TBBPA on Multi-Walled Carbon Nanotubes as A New Adsorbent for Solid Phase Extraction from Aqueous Solution
Role: **Co-supervisor** v
Student Name: Enas Radwan (defended on 22 April, 2010).
2. Thesis title: Ion-Dipole interaction of Cu⁺·(CO)₁₋₄ and Cu⁺·(NO)₁₋₃ complexes: Theoretical Approach
Role: **Main supervisor**
Student Name: Taghreed Hassouneh (defended on 10 July, 2012).

² Presenter underlined

3. Thesis title: Structure and potential energy surface of $\text{Na}^n \cdot (\text{O}_2)_m$ and $\text{Na}^n \cdot (\text{N}_2)_m$ ($n = 0, 1$; $m = 1-3$)
Role: **Main Supervisor**
Student Name: Tareq Harahsheh (defended on 10 July 2013)

Work experience

1. From July 01, 1997 to March 01, 1998, I worked as Chemist in the Chemistry Laboratories at the Best Food Jordan Company (CPC).
2. From March 21, 1998 to October 13, 1998, I worked as Quality Control Chemist in the Quality Control Dept. at the Medmac Company for agro-chemicals.
3. From September 18, 1998 to September 17, 2000, I worked as a Teaching Assistant and Researcher in the Chemistry Dept. at the Hashemite University, Jordan.
4. From September 20, 2000 to April 10, 2004, I worked as a Demonstrator and Teaching Assistant in the Chemistry and Biochemistry Dept. at Concordia University, Montreal, Canada.

Training Session

- I had a training period on the processing and production of edible oils under the supervision of "Leather Head Food Research Association" (UK). My grating was good.

Honors and Awards

- 1990-1994** Full B.Sc. Scholarship from the Jordanian Ministry of Education.
- 2000-2001** Partial International Tuition Fee Remission from Concordia University (2 terms).
- 2001-2002** International Tuition Fee Remission from Concordia University (3 terms).
- 2002-2004**
1. Carolyn and Richard Renaud Teaching Assistantship, Concordia University (1 term).
 2. International Tuition Fee Remission from Concordia University (5 terms)
 3. New Millennium graduate scholarship, Concordia University.