

# CURRICULUM VITA

## MOHAMMED A. GHARAIBEH

DEPARTMENT OF CHEMISTRY/SCHOOL OF SCIENCE  
THE UNIVERSITY OF JORDAN  
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### Education

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| <b>Ph.D. in Physical Chemistry / Molecular Spectroscopy</b><br>University of Kentucky, Lexington, Kentucky.<br>Dissertation: <b>Spectroscopic Detection and Characterization of Jet-Cooled Transient Molecules.</b><br>Supervisor: Prof. Dennis J. Clouthier | 2012 |
| <b>M.S. in Chemistry</b><br>The University of Jordan, Amman<br>Thesis: <b>Chemical Modification of Jordanian Kaolinite Using Crown-Ethers</b><br>Supervisors: Prof. Ghazi Derwish and Prof. Mohammed Al-Zughul   | 1999 |
| <b>B.S. in Chemistry</b><br>Yarmouk University, Irbid  | 1996 |

### Professional / Academic Experiences

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| • <b>Associate Professor.</b><br>The University of Jordan                       | 2020-Now  |
| • <b>Visiting scholar/ post-doctoral researcher</b><br>University of Kentucky   | 2017      |
| • <b>Assistant Professor.</b><br>The University of Jordan                       | 2013-2020 |
| • <b>Teaching and Research Assistant</b><br>University of Kentucky              | 2006-2012 |
| • <b>Teaching and research assistant</b><br>The University of Jordan            | 2002-2006 |
| • <b>Research and development chemist</b><br>Advanced Pharmaceutical Industries | 2001-2002 |

## Awards & Grants

- **Fulbright** visiting scholar (post-doctoral ) award **2017**
- Scientific leave from the University of Jordan during Fall-2017 semester **2017**
- Full tuition and stipend fellowship from The University of Jordan **2010 – 2012**
- Research and teaching assistantship from University of Kentucky **2006 – 2012**

## Research Interests:

- Spectroscopy of intermediate molecules
- Theoretical and Computational chemistry
- Renner-Teller effect in triatomic molecules

## Research Relevant Skills

- High power pulsed lasers
- Moderate and high resolution tunable dye lasers
- High vacuum systems

## Peer – Reviewed Publications

Inhibitory effects of Ephedra alata on IL-6, hybrid TLR4, TNF- $\alpha$ , IL-1 $\beta$ , and extracted TLR4 receptors: in silico molecular docking  
HA Salman, AS Yaakop, S Aladaileh, M Mustafa, M Gharaibeh, UM Kahar  
Heliyon 9 (1),6,2023

Tuning the photophysical properties of BODIPY dyes used in DSSCs as predicted by double-hybrid TD-DFT: The role of the methyl substituents

W Helal, A Marashdeh, Q Alkhatib, H Qashmar, M Gharaibeh, AT Afaneh  
International Journal of Quantum Chemistry 122 (24), e27000,4,2022

Spectroscopic detection of the stannylidene (H<sub>2</sub>C= Sn and D<sub>2</sub>C= Sn) molecule in the gas phase

TC Smith, M Gharaibeh, DJ Clouthier  
The Journal of Chemical Physics 157 (20),1,2022

Impact of Arg175His mutation on the dynamical patterns of full-length human p53 protein

M Mustafa, M Gharaibeh  
Authorea Preprints,2022

Most probable druggable pockets in mutant p53-Arg175His clusters extracted from Gaussian accelerated molecular dynamics simulations

M Mustafa, M Gharaibeh  
The Protein Journal 41 (1), 27-43,3,2022

Can time-dependent double hybrid density functionals accurately predict electronic excitation energies of BODIPY compounds?

W Helal, Q Alkhatib, M Gharaibeh  
Computational and Theoretical Chemistry 1207, 113531,12,2022

The efficiency of some active ingredients of Arum Palaestinum as inhibitors to 3CLPRO and NSP15 proteins

Morad Mustafa, Fadel Wedian, HAMDAD K Aldal'in, Ghassab M Al-Mazaideh, Sabry Younis Mahmoud, Eman Saleh Farrag, Mohammed Gharaibeh, Thameen Hijawi, Fuad Al-Rimawi, Jihad Abbadi, Mohammed Helmy Faris Shalayel, Nadeem A Siddique, HAYA AYYAL Salman, Mohammed Ayed Huneif  
Acta Pol. Pharm. Drug Res 78, 657-665,4,2021

Electronic spectrum of boron dichloride. theoretical study of vibronic levels of the ground and first excited states

M Gharaibeh, B Al-Shami, W Helal  
Journal of Molecular Structure 1224, 129206,2021

Ti ( $\eta^5$ -1-SiMe<sub>3</sub>-C<sub>9</sub>H<sub>6</sub>)(Cl)<sub>2</sub> (OR): Structure and bonding

D Taher, S Klaib, FF Awwadi, W Helal, M Gharaibeh, G Rheinwald, ...  
Inorganica Chimica Acta 477, 270-276,5,2018

An experimental and theoretical study of the  $\tilde{A}^2A'$   $\Pi-\tilde{X}^2A'$  band system of the jet-cooled HBr/DBr free radical  
M Gharaibeh, DJ Clouthier, R Tarroni  
The Journal of Chemical Physics 144 (23),2,2016

BH2 revisited: New, extensive measurements of laser-induced fluorescence transitions and ab initio calculations of near-spectroscopic accuracy  
FX Sunahori, M Gharaibeh, DJ Clouthier, R Tarroni  
The Journal of Chemical Physics 142 (17),16,2015

An experimental and theoretical study of the electronic spectrum of the HBr free radical  
MA Gharaibeh, R Nagarajan, DJ Clouthier, R Tarroni  
The Journal of Chemical Physics 142 (1),9,2015

## Conferences

Mohammed Gharaibeh, *The 16th Jordanian Chemistry Conference-Five Decades In Chemistry*, The University of Jordan, Amman, **2019**.

Tony Smith; Mohammed Gharaibeh; Dennis Clouthier, *International Symposium on Molecular Spectroscopy*, Urbana-Champaign, Illinois, **2018**.

Mohammed Gharaibeh, *The 1st International Conference on Natural Products and Drug Discovery*, The University of Jordan, Amman, **2015**.

Mohammed Gharaibeh; Fumie X Sunahori; Dennis Clouthier, *69th International Symposium on Molecular Spectroscopy*, Columbus, Ohio, **2014**.

## Activities within the University of Jordan:

- Dean's assistant for quality, development and alumni affairs (2020-2023)
- Chemistry department representative in the School of science board members (2017-2018)
- Member and coordinator of the chemistry branch of the "STUDENT'S UNION" election committee (2017 , 2018 and 2019)
- Member of the "curriculum committee" in the chemistry department (2014-2015, 2015-2016,2019-2020)
- Member of the "communication with students committee" in the chemistry department (2018-2019, 2023-2024)
- Member of the "quality affairs" in the chemistry department (2020-2021,2023-2024)
- Member of the "Qualification equivalency" in the chemistry department (2018-2019, 2023-2024)

## References:

**Prof. Fuad A. kittaneh**

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**Prof. Nidal Ershaidat**

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**Prof. Mahmoud Jaghoub**

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**Prof. Deeb Taher**

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