

Prof. Omar Marzouq Mohammed AL-Dossary

Nationality: Saudi

Department of: **Department of Physics & Astronomy**

College of: **Science**

University: **King Saud University**

Current Academic Rank: **Professor**

B.Sc.

University: **King Saud University**

College: **Science**

University Location: **Riyadh-KSA**

Date of Obtaining Degree: **9 / 5 / 1406** Hijra, **19 / 1 / 1986** Gregorian

Ph.D.:

University: **University of Essex** College: **Science**

University Location: **UK**

Date of Obtaining Degree **3/ 2 /1994** Gregorian

Title of Ph.D. Dissertation: **Macroscopic Polar Optical Lattice Vibrations and Electron-Phonon Interaction in Layered Semiconductor structures**

Advisor's Name: **Prof. M. Babiker**

Major: Theoretical Physics

Employment and Administrative History

Professor	Department of physics and Astronomy, College of Science, King Saud University (KSU), Riyadh, Saudi Arabia (1/9/2014G – Present).
Associate Prof	Department of physics and Astronomy, College of Science, King Saud University (KSU), Riyadh, Saudi Arabia (2 /3/2008 G – 1/9/2014 G).
Assistant. Prof.	Department of physics and Astronomy, College of Science, King Saud University (KSU), Riyadh, Saudi Arabia (23/2/1994 G – 2/3/2008 G).
Teach Tutorial	Given responsibilities of Tutorials Tutorials in Essex university (1993-1994G, First and Second Semester)
Demonstrator	Demonstrator Department of physics and Astronomy, College of Science, King Saud University (KSU), Riyadh, Saudi Arabia (3/3/1986 until 19/7/1987 G)

2) Administrative Assignments (in Descending Order):

- 1- Editor-in-Chief of the Journal of King Saud University – Science (8/4/2018)**
- 2- Consultant at the National Center of Applied Physics, National Center for Mathematics and Physics, King Abdulaziz City for Science and Technology (25-1-2012 – 2018)**
- 3- Dean of Faculty of Science/Dwadmi shaqra university (24/8/2009 25/1/2012)**
- 4- Dean of Faculty of Science/Dwadmi king Saud university (27/5/2009 23/8/2009)**

5- Chairman of the Department of physics and Astronomy, College of Science (KSU), (19/12/2005 – 9/10/2009 G).

6- Physics departmental board secretary, (17/12/2003 until 25/11/2005 G), KSU.

7- Physics departmental board secretary, (13/3/1996 until 3/3/1997 G), KSU.

Committees:

- Member in the Journal of King Saud University - Science - Editorial Board 2015-2018
- I have been instrumental in setting up the Quantum Technology group at the Physics and Astronomy Dept. and have served as its head since then, coordinating the research activities.
- Member of the “ Academic Advisory” Committee at Department of Physics & Astronomy council- College of Science- King Saud University
- Member of the courses developmental committee.

Councils:

- Member of the University council- King Saud University 2009-2010
- Member of the University council- Shaqra University 2011-2013
- Member of the College of Science council- King Saud University, (2005 -2008).
- Member of the Department of Physics & Astronomy council- College of Science- King Saud University, (1994 G - Present). .

University and Community Service:

- Work as a panel member for Physics Program review, The National Commission for Academic Accreditation & Assessment (NCAAA) 2016
- Support and work for National center for assessment
- Member of the higher scientific committee for developing the science and mathematics curriculum at the ministry of Education 2003-2006G
- Wrote and refereed high school physics books for scope and sequence.
- Head of the committee to modify the first year physics book for 1st class secondary school (is being taught at schools for five years).
- Wrote Practical book for 1st year of higher school for both students and teachers.
- Review various physics books for higher secondary school, written for the credit hours system. Physics 1,2 and 3
- Supporting students in the preparation period for the physics Olympiad
- Member of the Saudi science center’s program council 2013

- General lectures to school students.
- Lectures to explain the modified first year physics book to teachers.

Research activity:

- This initiative streamlines research on a state-of-the-art topic that holds great promise for important applications. This initiative places the Dept. of Physics and Astronomy at the forefront of research and technology developments.
- Work within a team of researchers from KSU in the field of mathematical method using asymptotic iteration method –few projects had been funded by research center of College of Science at KSU.
- Work within a team of researchers from KSU, KACST, Najran University, Korea University and Cambridge University in the field of Nano science and technology (spintronics and sensors devises) – few projects had been funded by KACST, King Abdullah institute for Nanotechnology at KSU and NPST programs.
- Work within a team of researchers from Fritz-Haber-Institute der Max-Planck-Gesellschaft The team led by Prof. Uwe Becker a highly cited scientist in the field of photoionization and associated quantum Phenomena where we running a series of experiment using synchrotron light source (Bessy) in Berlin and free electron laser Flash II (Desy) in Hamburg. Few project had been funded by KSU.
- Work within a team of researchers from KSU, KACST, York University (UK), and Glasgow University (UK) in the field of quantum optics.
- Referee for Research Grants program at King Abdulaziz for Science and Technology.

Scholarships and Awards (if any):

- ❖ Post doctoral summer research scheme. By British Aerospace, 1998 G. For a project under the title: Electron Capture in Quantum Well Laser II-VI Semiconductor.
- ❖ Almarai Award, 2009, for Scientific Research Prize in the field of Nanotechnology, Kingdom of Saudi Arabia
- ❖ Almarai Award, 2013, for Creative Scientific Work Prize in the field of Nanotechnology, Kingdom of Saudi Arabia

Supervisor of Ph.D. and MSc. Dissertations

1. Electron Energy States in Nano Structures of Semiconductors. M.Sc.

2. Electron Transport properties In Coupled Quantum Dots In The Kondo Regime" M.Sc.
 3. Design and development of polymeric laser doped by Nano-Particles (Hayat Saeed Al-Thobaiti) M.Sc.
 4. Effect of band gap variations on solar cell efficiency (Reem Alsakran)
 5. Electron relaxation via Plasmon frequency in several quantum well systems (Lila Altamimi) M.Sc.
 6. Dipole relaxation by Plasmon frequency in dispersive photonic band gap structure (Hanan Alenazi) M.Sc.
 7. Experimental measurements for optical, magnetic and electrical properties of manganite (Masfer Hassan Al Kahtani) M.Sc.
 8. Similarity Transformations for Dirac equation via the Asymptotic Iteration Method (Khalid Saeed Mohameed Alsadi) PhD
 9. The use of evanescent mode atomic mirrors for three-level atoms (Noha Filimban) PhD
 10. OPTICAL FERRIS WHEELS: trapping and manipulation of atoms with applications in atomic physics and quantum optics (Anwar Al Rsheed) PhD
- Assistant supervisor
11. Structural stability and cohesive energy of spherical metallic nanocrystals (Esam Abdul-Hafidh) PhD

Participation in Conferences, Symposia and Other Activities:

Conferences:

- International physics conference Japan, July 1991 (invited speaker).
- IOP (institute physics) conference in physics with poster for discussion Birmingham, UK.,1992 .
- Third Meeting for the Saudi Physical Society, KSA, 27-29/11/1427 H (1820/12/2006 G).
- Third Saudi Science Conference, KSA, 20-23/2/1428 H (1013/3/2006 G)
- The International Conference For Nanotechnology Industries Rabea II 9-11 1430H- April 5-7- 2009 G Riyadh-Saudi Arabia.
- 75. Annual Meeting of the German Physical Society in Dresden 2011 13th - 18th of March 2011.

- The Fifth International Symposium "Atomic Cluster Collisions Berlin, Germany July 20-25, 2011
- International Conference on many particle spectroscopy of atoms, clusters and surfaces Berlin, Germany August 27 - September 1, 2012

Membership of Scientific Associations:

- Member of the Saudi Physical Society.
- Member of the European Physical Society

RESEARCH WORK

A) Papers Published or Accepted for Publication in Academic, Specialized, and Refereed Journals:

- 1- O Al-Dossary, M Babiker and N. C. Constantinou " Fuchs-Kliewer interface polaritons and their interactions with electron in GaAs/AIAs double heterostructures" Sci. Technol. 7:B91, (1992)(UK).
- 2- N. C. Constantinou, O Al-Dossary and M Babiker "Interaction of electrons with polaritons" J. Phys. C5: 5581, (1993)(UK).
- 3- N. C. Constantinou, O Al-Dossary and B K Ridley " Dispersion of superlattice optical phonons" Solid St Common. 86: 191, (1993)(UK).
- 4- B K Ridley, O Al-Dossary, N. C. Constantinou and M Babiker " Continuum model of the optical modes of vibration of an ionic crystal slab" *Phys. Rev. B50*,11701, (1994)(USA).
- 5- O Al-Dossary, M Babiker and N Enfati, "Quantum optics of plasmon polaritons and velocity sum-rules", Phys. Rev. Vol. A54, pp 2419, (1996), (USA).
- 6- M Babiker, N Enfati, O Al-Dossary and A Kamli, "Polariton quantisation and cavity QED in low-dimensional systems", invited Talk, Quantum Optics Conference, Palm Cove, Cairns, July 1996 (AUSTRALIA).
- 7- B K Ridley, O Al-Dossary, M Babiker, N A Zakhleniuk and C R Bennett, "Optical phonon tunnelling and the electron scattering rate", Superlatt. Microstruct., vol. 23, pp 201 (1998), (NETHERLAND).

- 8-** V. N. Stavrou, C. R. Bennett, O. Al-Dossary and M. Babiker, "Electron scattering and capture rates in quantum wells", Phys. Rev. Vol. B63, pp 5304 (2001), (USA).
- 9-** T. Barakat, K. Abodayeh, and O. M. Al-Dossary "Exact solutions for vibrational levels of the Morse potential via the asymptotic iteration method " Czechoslovak Journal of Physics, Vol. 56, pp 583, (2006), (CZECH REPUBLIC).
- 10-** T. Barakat, K. Abodayeh, B. Abdallah, and O. M. Al-Dossary "The asymptotic iteration method for the angular spheroidal eigenvalues with arbitrary complex size parameter c " Canadian Journal physics. Vol. 84, pp 291 , (2006), (CANADA).
- 11-** T. Barakat, O. Al-Dossary "Rare $B \rightarrow K^* \nu \bar{\nu}$ decay with polarized K^* in the fourth generation model" Journal of King Saud University (Science), Vol. 19(2), p 1427 (2007) (KSA).
- 12-** T. Barakat, and O. M. Al-Dossary "The asymptotic iteration method for the eigenenergies of the asymmetrical quantum anharmonic oscillator potentials $V(x) = \sum_{j=2}^{2\alpha} A_j x^j$ " International Journal of Modern Physics, Vol. A22, pp 203, (2007), (USA).
- 13-** O.M. Al-Dossary "Morse Potential eigen-energies through the asymptotic iteration method" International Journal of Quantum Chemistry. Vol.16(3), p2040-2046, (2007), (USA).
- 14-** O.M. Al-Dossary " The asymptotic iteration method for the eigenenergies of quartic-sextic anharmonic oscillator potential, Journal of King Saud University (Science), Vol. 21(1), (KSA).
- 15-** T. Barakat, O. M. Al-Dossary and A. A. Alharbi "The Effect of Mie-Type Potential Range on the cohesive Energy of Metallic nanoparticles" international journal of Nanoscience v6 n6 2007
- 16-** Sadiq, Gehad, Huang, Zhen, O M Aldossary, Kais, Sabre" Nuclear-induced time evolution of entanglement of two-electron spins in anisotropically coupled quantum dot " Molecular Physics, Vol. 106, No. 14. (July 2008), pp. 1777-1786.
- 17-** T. Barakat, O. M. Al-Dossary, Isam Hafeeza, "An investigation of the size-dependent cohesive energy and the structural stability of spherical metallic nanoparticles" J. Phys. B: At. Mol. Opt. Phys. **42** No 16 (28 August 2009) 165104 (5pp)

18-Neji Khelifi , Riadh Dardouri, O. M. Al-Dossary and Brahim Oujja "Theoretical study of the electronic structure of LiNa and LiNa+ molecules" Journal of Russian Laser Research Vol. 30, No. 2 2010

19- O. M. Al-dossary " Ordering of Ground State Energy Levels of Two Electron Quantum Dot in a Magnetic Field".Int. J. Theor phys.49 (2010) 1187-1194

20-- A. Hindi, S. Albashir , O. M. Al-dossary, "*Preparation of Crystalline Gold Nanoparticles and their Prospects in Enhancement of Solar Energy Conversion Efficiency*" from "Journal of Materials Science and Engineering.,USA,2010.

21 - Gehad Sadiq, Bedoor Alkurtass, and Omar Aldossary "Entanglement in a time-dependent coupled XY spin chain in an external magnetic field" Physical Review A 82, 052337 2010

22- S.Korica, A. Reinkoster, M.Braune, J. Viehhaus,D.Rolles,B. Langer, G. Fronzoni, D.Toffoli, M. Stener, P. Decleva, O. M. Al-Dossary, U. Becker "Partial Photoionization cross sections of C₆₀ and C₇₀: A gas versus adsorbed phase comparison" Surface Science V604 Issues 21-22 P1940-1944, 2010

23-Houria Triki, T. Hayat, Omar M. Aldossary, Anjan Biswas: Solitary wave and shock wave solutions to a second order wave equation of Korteweg-de Vries type. Applied Mathematics and Computation 217(21): 8852-8855 (2011)

24-Langer, B., Ueda, K., Al-Dossary, O. M., and Becker, U., Photoinduced localization and decoherence in inversion symmetric molecules. Journal of Electron Spectroscopy and Related Phenomena, Volume 184, Issues 3-6, April 2011, Pages 154-156

25- N. Khelifi, R. Dardouri and O. M. Al-Dossary " Electronic states of csl_i and csl_i+ olecules" Journal of Applied Spectroscopy, 2011, Volume 78, Number 1, Pages 11-24

26- Abdul-Hafidh, Esam H.; Barakat, T.; Al-Dossary, O.M." Many-Body Interaction and Computer Simulations for the Cohesive Energy of Spherical Metallic Nanocrystals" Journal of Computational and Theoretical Nanoscience, Volume 8, Number 7, July 2011 , pp. 1134-1138(5)

27-Anjan Biswas , Houria Triki , T. Hayat , O. M. Aldossary "Soliton solution of the generalized Burgers equation with generalized evolution" Applied Mathematics and Computation 217 (2011) 10289–10294

28- Houria Triki, B.J.M. Sturdevant, T. Hayat, O.M. Aldossary, and A. Biswas

- "Shock wave solutions of the variants of the Kadomtsev–Petviashvili equation"
Can. J. Phys. 89: 979–984 (2011)
- 29- Houria Triki , T. Hayat , O. M. Aldossary, Anjan Biswas" soliton and shock wave solutions to degasperis-procesi equation with power law nonlinearity" Waves in Random and Complex Media Volume 21, Issue 4, 2011
- 30- Houria Triki, Daniela Milovic, T. Hayat, Omar. M. Aldossary & Anjan Biswas. "topological soliton solutions of (2+1)-dimensional kdv equation with power law nonlinearity and time dependent coefficients" International Journal of Nonlinear Sciences and Numerical Simulation Vol 12 (2011) pp35-43.
- 31- Alharbi, A. A.; Alkahtani, M.; Al-Dossary, O." The Role of Oxygen Vacancies on Magnetic Properties of LSMO" AIP Conference Proceedings;2011, Vol. 1370 Issue 1, p116
- 32- Alharbi, A. A.; Alkahtani, M.; Umar, Ahmad; Al-Dossary, O.; Abdullah, M. M. " Growth of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Thin-Films on SrTiO_3 (100) Substrate by Pulsed Laser Deposition: Structural, Optical and Electrical Properties" Advanced Science Letters, Volume 4, Numbers 11-12, November 2011 , pp. 3475-3479(5)
- 33-Houria Triki , T.Hayat , Omar M. Aldossary , AnjanBiswas" Bright and dark solitons for the resonant nonlinear Schrödinger's equation with time-dependent coefficients" Optics & Laser Technology 44 (2012) PP2223–2231
- 34-Fayequa Majida, Houria Triki, Tasawar Hayat, Omar M. Aldossary, Anjan Biswas" Solitary wave solutions of the Vakhnenko–Parkes Equation" Nonlinear Analysis: Modelling and Control, Vol. 17, No. 1, (60–66),2012
- 35- O. M. Aldossary and V E Lembessis" Deflection of a Λ -type three-level atom by a light field: a mechanical demonstration of the coherent population trapping effect" J. Phys. B: At. Mol. Opt. Phys,V45,N11, 2012
- 36- O. Al-Dossary, Ahmad Umar, A. A. Al-Harbi, Shabi Abbas Zaidi, and G. N. Dar " $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ Nanoparticles Based Ultra-High Sensitive Ammonia Chemical Sensor" J. Nanosci. Nanotechnol. 12, 6368-6373 (2012)
37. Houria Triki, Ahmet Yildirim, T. Hayat, Omar M. ALDossary , Anjan Biswas "Topological and non-topological solitons of a generalized derivative nonlinear

schrödinger's equation with perturbation terms " Romanian Reports in Physics, Vol. 64, No. 3, (2012)P. 672–684

38. Houria Triki , Ahmet Yildirim , T. Hayat , Omar M. Aldossary , Anjan Biswas "Topological and non-topological soliton solutions of the bretherton equation " Proceedings of the romanian academy, Series A, Vol 13, N 2 (2012), pp. 103–108

39. Tasawar Hayat · Zahid Iqbal · Muhammad Qasim · Omar M. Aldossary "Heat Transfer in a Couple Stress Fluid over a Continuous Moving Surface with Internal Heat Generation and Convective Boundary Conditions"Zeitschrift für Naturforschung A Volume 67, Issue 5 (May 2012)

40. Houria Triki, T. Hayat, Omar M. Aldossary and Anjan Biswas" Soliton solution of the three component system of wu-zhang equations " Hacettepe Journal of Mathematics and Statistics, Vol 41 (4) (2012), 537 – 543

41. Anjan Biswas, Ahmet Yildirim, T. Hayat, Omar M. Aldossary, Ryan Sassaman" Soliton perturbation theory for the generalized klein-gordon equation with full nonlinearity" Proceedings of the romanian academy, Series A, Vol 13, N 1 (2012), pp. 32–41

42. Houria Triki, Sihon Crutcher, Ahmet Yildirim, T. Hayat, Omar M. Aldossary, Anjan Biswas" Bright and dark solitons of the modified complex ginzburg landau equation with parabolic and dual-power law nonlinearity " Romanian Reports in Physics, Vol. 64, N 2 (2012), P. 367–380,

43. A. Biswas · K.R. Khan · A. Rahman · A. Yildirim · T. Hayat · O. Aldossary "Bright and dark optical solitons in birefringent fibers with Hamiltonian perturbations and Kerr law nonlinearity" OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS 07/2012; 14(7):571-576

44. Laila Girgis, Daniela Milovic, Tasawar Hayat, Omar M. Aldossary, Anjan Biswas "Optical soliton perturbation with log law nonlinearity" Optica Applicata, Vol. XLII, No. 3, (2012)

45. F. Shahzad · T. Hayat · Omar M. Aldossary "Oscillatory flow of fourth-order fluid in a porous half space" Chemical Engineering Communications 08/2012; 199(8):1072-1084.DOI:10.1080/00986445.2011.617799

46. S S Motsa · T Hayat · O M Aldossary " MHD flow of upper-convected Maxwell fluid over porous stretching sheet using successive Taylor series linearization method " Applied Mathematics and Mechanics 08/2012; 33(8):975-990. DOI:10.1007/s10483-012-1599-x

47. Houria Triki · Ahmet Yildirim · T. Hayat · Omar M. Aldossary · Anjan Biswas "Soliton Solution of the Generalized Resonant Nonlinear Dispersive Schrödinger's

Equation with Time-Dependent Coefficients " Journal of Computational and Theoretical Nanoscience 09/2012; 16(1):309-312. DOI:10.1166/asl.2012.3255

48. Sanja Korica · Axel Reinköster · Markus Braune · Jens Viefhaus · Daniel Rolles · Giovanna Fronzoni · Daniele Toffoli · Mauro Stener · Piero Decleva · Omar M. Al-Dossary · Burkhard Langer · Uwe Becker "Appearance of Plasmons in Fullerenes" Journal of Physics Conference Series 11/2012; 388(2):2087-. DOI:10.1088/1742-6596/388/2/022087

49. Houria Triki, Ahmet Yildirim, T. Hayat, Omar M. Aldossary, Anjan Biswas, "Shock wave solution of benney-luke equation " Rom. Journ. Phys., Vol. 57, N 7–8, (2012)P. 1029–1034,

50. S.hina · T.hayat · M.mustafa · Omar M.aldossary · S.asghar "EFFECT OF WALL PROPERTIES ON THE PERISTALTIC FLOW OF A THIRD GRADE FLUID IN A CURVED CHANNEL" Journal of Mechanics in Medicine and Biology 10/2012; 12(04). DOI:10.1142/S0219519412500674

51. Vassilis E. Lembessis · Anwar Al Rsheed · Omar M. Aldossary · Zbigniew Ficek "Two-atom system as a directional frequency filter " Proceedings of SPIE - The International Society for Optical Engineering 05/2013; DOI:10.1117/12.2017188

52- Vassilis E. Lembessis, Anwar Al Rsheed, Omar M. Aldossary, and Zbigniew Ficek "Two-atom system as a nanoantenna for mode switching and light routing"Phys. Rev. A 88, 053814 (2013)

53- O.M. Al-Dossary "Bottle atom trapping configuration by optical dipole forces" Journal of King Saud University – Science (2014) 26, 29–35

54- Omar M. Al_dossary and Neji Khelifi "Theoretical Study of LiK and LiK+ in Adiabatic Representation" Russian Journal of Physical Chemistry A, Vol. 88, No. 1, 2014, pp. 73–84

55- M. Ilchen, L. Glaser, F. Scholz, P. Walter, S. Deinert, A. Rothkirch, J. Seltmann, J. Viefhaus, P. Decleva, B. Langer, A. Knie, A. Ehresmann, O. M. Al-Dossary, M. Braune, G. Hartmann, L. C. Tribedi, A. Meissner, M. AlKhalidi, and U. Becker " Angular momentum sensitive two-center interference " Phys. Rev. Lett. 112, 023001 (2014)

56 - V. E. Lembessis, D. Ellinas, M. Babiker, and O. Al-Dossary " Atom vortex beams" PHYSICAL REVIEW A 89, 053616 (2014)

57- Nuha Felemban, Omar M Aldossary, and Vassilis E Lembessis " Atomic mirrors for a Λ -type three-level atom" J. Phys. B: At. Mol. Opt. Phys. 47 (2014) 185005 (12pp)

58- Rajesh Kumar, O. Al-Dossary, Girish Kumar and Ahmad Umar " Zinc Oxide Nanostructures for NO₂ Gas–Sensor Applications:A Review" Nano-Micro Lett.(2014)

59- Omar Al-Dossary, Neji Khelifi, Marwa Slama, and Mounir Ben El Hadj Rhouma " Theoretical Calculations of the Lowest Electronic States of O₂ Using Multireference Configuration Interaction (MRCI) Method" Journal of Advanced Physics Vol. 3, pp. 1–5, 2014

60- Rajesh Kumar, Girish Kumar, O. Al-Dossary, and Ahmad Umar "ZnO nanostructured thin films: Depositions, properties and applications—A review" Mater. Express, Vol. 5, No. 1, 2015

61. Leda Bousiakou · Omar Aldossary · Wedad Almarhoon "Investigation of the role of the Roentgen interaction in angular momentum transfer within an electric Bose Einstein condensate" European Journal of Scientific Research Volume 129 No 2, February, 2015, PP 187-194

62. M. Braune · G. Hartmann · M. Ilchen · A. Knie · T. Lischke · A. Reinköster · A. Meissner · S. Deinert · L. Glaser · O. Al-Dossary · A. Ehresmann · A.S. Kheifets · J. Viefhaus "Electron angular distributions of noble gases in sequential two-photon double ionization" Journal of Modern Optics 06/2015; DOI:10.1080/09500340.2015.1047422

63. Vassilis E. Lembessis, Andreas Lyras, Anwar Al Rsheed, Omar M. Aldossary, and Zbigniew Ficek "Radiation pattern of two identical emitters driven by a Laguerre-Gaussian beam: An atom nanoantenna" Phys. Rev. A 92, 023850 (2015)

64. V. E. Lembessis, Johannes Courtial, N. Radwell, A. Selyem, S. Franke-Arnold, O. M. Aldossary, and M. Babiker "Graphene-like optical light field and its interaction with two-level atoms" Phys. Rev. A 92, 063833 – 2015

65. Mateusz Łącki · Hannes Pichler · Antoine Sterdyniak · Andreas Lyras · Vassilis E. Lembessis · Omar Al-Dossary · Jan Carl Budich · Peter Zoller "Quantum Hall Physics with Cold Atoms in Cylindrical Optical Lattices" Phys. Rev. A **93**, 013604, 7 January 2016

66. Fumin Ren, Liping Gao, Yongwei Yuan, Yuan Zhang, Ahmed Alqrni, Omar M. Al-Dossary, Jiaqiang Xu, "Enhanced BTEX gas-sensing performance of CuO/SnO₂ composite" Sensors and Actuators B 223 (2016) 914–920

67. Anwar Al Rsheed, Andreas Lyras, Vassilis E Lembessis and Omar M Aldossary " Guiding of atoms in helical optical potential structures "Journal of Physics B: Atomic, Molecular and Optical Physics, Volume 49, Number 12, 25 May 2016

68. [Umar, Ahmad; Lee, Jong-Heun; Kumar, Rajesh; O. Al-Dossary](#) "Highly Sensitive Ethanol Gas Sensors Based on Ag-Doped ZnO Nanocones" *Nanoscience and Nanotechnology Letters*, Vol. 8, No. 3, 2016, pp. 241-246(6)
69. [Ahmad Umar , Jong-Heun Lee, Rajesh Kumar, O. Al-Dossary, Ahmed A. Ibrahim, S. Baskoutas](#) " Development of highly sensitive and selective ethanol sensor based on lance-shaped CuO nanostructures " *Materials & Design*, Volume 105, Pages 16–24, 5 September 2016
70. [TH. Ganetsos, J. Kováč, J. Kováč JR., Leda G. Bousiakou, R. Qindeel, W. A. Farooq, Omar M. AlDossary](#) "Micro-Raman and micro-PL investigation of ZnO: Cu nanowires for optoelectronic applications" *Optoelectronics and Advanced materials – Rapid communications* vol. 10, no. 9-10, September-October 2016.
71. [A Al Rsheed, A Lyras, OM Aldossary, VE Lembessis](#) "Rotating optical tubes for vertical transport of atoms" *Physical Review A* 94 (6), 2016 063423
72. [Ahmad Umar , Jong-Heun Lee, Rajesh Kumar, O. Al-Dossary](#) "Synthesis and Characterization of CuO Nanodisks for High-Sensitive and Selective Ethanol Gas Sensor Applications" *Journal of Nanoscience and Nanotechnology*, Volume 17, Number 2, February 2017, pp. 1455-1459(5)
73. [VE Lembessis, A Alqarni, S Alshamari, A Siddig, OM Aldossary](#) "Artificial gauge magnetic and electric fields for free two-level atoms interacting with optical Ferris wheel light fields" *Journal of Optical Society of America (JOSA) B* 34 (6), 2017 1122-1129
74. [J. Běln, V. E. Lembessis, A. Lyras, O. Aldossary, and J. Courtial](#), "Arrays of dark optical traps on a toroidal surface," in *Frontiers in Optics / Laser Science*, OSA Technical Digest (Optical Society of America, 2018), paper FM3C.7.
75. [J Běln, VE Lembessis, A Lyras, O Aldossary, J Courtial](#) "Arrays of dark optical traps on a toroidal surface" *Physical Review A* 99 (1), 2019 013841
76. [Vassilis E Lembessis, Anwar Al Rsheed, Andreas Lyras, Omar M Aldossary](#) "Dark state atom mirrors based on artificial gauge fields created by surface optical vortices" *Journal of Optical Society of America JOSA B* 36 (4),2019 971-977
- 77- [Omar M Aldossary, A Al Rsheed](#) "The effect of the parameter α of Morse potential on cohesive energy" *Journal of King Saud University-Science* V 32, Issue 1, 2020 1147-1151

78- Ahmad Umar, M Alduraibi, Omar Al-Dossary "Development of Ethanol Gas Sensor Using α -Fe₂O₃ Nanocubes Synthesized by Hydrothermal Process" Journal of Nanoelectronics and Optoelectronics V 15 Issue 1, 2020 59-64

79- Ahmad Umar, M Alduraibi, Omar Al-Dossary "NO_x Gas Sensing Properties of Fe-Doped ZnO Nanoparticles" Science of Advanced Materials V 12 Issue 6, 2020 908-914

80- Omar M Aldossary, A Al Rsheed" A New Generalized Morse Potential Function for Calculating Cohesive Energy of Nanoparticles" Energies V 13 Issue 13, 2020 3323

81- A Feroz Mirza, M Mansoor, Q Ling, MI Khan and OM Aldossary" Advanced Variable Step Size Incremental Conductance MPPT for a Standalone PV System Utilizing a GA-Tuned PID Controller" Energies v 13 (Issue 16),2020, 4153

82- A Wahid, J Iqbal, A Qamar, S Ahmed, A Basit, H Ali and OM Aldossary" A Novel Power Scheduling Mechanism for Islanded DC Microgrid Cluster" Sustainability V12 (Issue17),2020 6918

83 - Hassan Raza Shah, Kun Wang, Xu Qing Lang, Jing Wu Wang, Jing Jun Wang, Jun Fang, Yong Ming Zhang, Omar M Aldossary" Comprehensive Assimilation of Fire Suppression Modeling and Simulation of Radiant Fire by Water and Its Synergistic Effects with Carbon Dioxide" Energies V13 (Issue 21),2020 5850

84 - B Ali, RA Naqvi, D Hussain, OM Aldossary and S Hussain" Magnetic Rotating Flow of a Hybrid Nano-Materials Ag-MoS₂ and Go-MoS₂ in C₂H₆O₂-H₂O Hybrid Base Fluid over an Extending Surface Involving Activation Energy: FE Simulation" Mathematics V 8 (Issue 10),2020 1730

85 - Supriya A Mane, Digambar Y Nadargi, Jyoti D Nadargi, Omar M Aldossary, Mohaseen S Tamboli, Vinayak P Dhulap" Design, Development and Validation of a Portable Gas Sensor Module: A Facile Approach for Monitoring Greenhouse Gases" Coatings V 10 (Issue 12),2020 1148

86 - A Sharma, KM Bato, OM Aldossary, S Jindal, N Aggarwal, G Kumar" Investigation of dielectric, electrical and optical properties of copper substituted Mn-Zn nanoferrites" Journal of Materials Science: Materials in Electronics, 2021 v32 n 1 page 313 -322

87 - SS Choudhari, SR Wadgane, Bharatratna P Gaikwad, SS Satpute, Khalid Mujasam Bato, Omar M Aldossary, Sagar E Shirsath, RH Kadam" Strain mediated enhancement in magnetoelectric properties of sonochemically synthesized piezoelectric and piezomagnetic composites" Ceramics International,2021 v47 N5 Page 6496 -6504

88 - A Kiran, MN Akhtar, M Yousaf, KM Batoor, OM Aldossary, SN Khan "Influence of Y³⁺, Yb³⁺, Gd³⁺ cations on the structural and electromagnetic properties of CuFe₂O₄ nanoferrites prepared via one step sol gel method" Journal of Rare Earths 2021, v 39 n 10 page 1224 -1231

89 - Lembessis, VE and Lyras, Andreas and Aldossary, OM "Optical Ferris wheels as a platform for collisional quantum gates" JOSA B 2021 V38, N1, Page 233 – 240

90- Nouredine, Olfa and Issaoui, Nouredine and Al-Dossary, Omar "DFT and molecular docking study of chloroquine derivatives as antiviral to coronavirus COVID-19" Journal of King Saud University-Science 2021 V33, n 1, Page 101248

91 - Nouredine, Olfa and Issaoui, Nouredine and Gatfaoui, Sofian and Al-Dossary, Omar and Marouani, Houda "Quantum chemical calculations, spectroscopic properties and molecular docking studies of a novel piperazine derivative" Journal of King Saud University-Science 2021 V33, n 2, Page 101283

92 - Aldossary, Omar M "Generalized non-integer Lennard-Jones potential function vs. generalized Morse potential function for calculating cohesive energy and melting point of nanoparticles" Journal of King Saud University-Science 2021 V33, n 2, 101316

93 - Ali, Bagh and Naqvi, Rizwan Ali and Mariam, Amna and Ali, Liaqat and Aldossary, Omar M "Finite element study for magnetohydrodynamic (MHD) tangent hyperbolic nanofluid flow over a faster/slower stretching wedge with activation energy" Mathematics 2021 V9, n1, Page 25

94 - Kasirajan, K and Anasthasiya, A Nancy Anna and Aldossary, Omar M and Ubaidullah, Mohd and Karunakaran, M "Structural, morphological, optical and enhanced photodetection activities of CdO films: An effect of Mn doping" Sensors and Actuators A: Physical 2021 V319, Page 112531

95 - Nouredine, Olfa and Issaoui, Nouredine and Medimagh, Mouna and Al-Dossary, Omar and Marouani, Houda "Quantum chemical studies on molecular structure, AIM, ELF, RDG and antiviral activities of hybrid hydroxychloroquine in the treatment of COVID-19: Molecular docking and DFT calculations" Journal of King Saud University-Science 2021 V 33 n 2 , Page 101334

96 - Haunsbhavi, Kumar and Kumar, Karuppiah Deva Arun and Mele, Paolo and Aldossary, Omar M and Ubaidullah, Mohd and Mahesh, HM and Murahari, Prashantha and Angadi, Basavaraj "Pseudo n-type behaviour of nickel oxide thin film at room temperature towards ammonia sensing" Ceramics International 2021 V47, N10, Page 13693 -13703

97 - Bhuvaneswari, S and Seetha, M and Chandrasekaran, J and Marnadu, R and Masuda, Yoshitake and Aldossary, Omar M and Ubaidullah, Mohd "Fabrication and characterization of p-Si/n-In₂O₃ and p-Si/n-ITO junction diodes for optoelectronic device applications" Surfaces and Interfaces 2021, V23 Page 100992

98 - Meo, Sultan Ayoub and Al-Dossary, Omar and Samdani, Mohammad Shahzad and Sami, Waqas "Bibliometric analysis, progress and prospects of Journal of King Saud University-Science at global level" Journal of King Saud University-Science 2021 V33 n4 Page 101440

99 - Hadi, Muhammad and Batoo, Khalid Mijasam and Chauhan, Ankush and Aldossary, Omar M and Verma, Ritesh and Yang, Yujie "Tuning of Structural, Dielectric, and Electronic Properties of Cu Doped Co--Zn Ferrite Nanoparticles for Multilayer Inductor Chip Applications " Magnetochemistry 2021 V7, n4 Page 53

100 - Krishnan, V Gopala and Elango, P and Ravikumar, K and Marnadu, R and Aldossary, Omar M and Ubaidullah, Mohd "Noticeable improvement in the toxic gas-sensing activity of the Zn-doped TiO₂ films for sensing devices" New Journal of Chemistry 2021

101 - Batoo, Khalid Mijasam and Verma, Ritesh and Chauhan, Ankush and Kumar, Rajesh and Hadi, Muhammad and Aldossary, Omar M and Al Douri, Yurab "Improved room temperature dielectric properties of Gd³⁺ and Nb⁵⁺ co-doped Barium Titanate ceramics" Journal of Alloys and Compounds 2021 Page 160836

102 - Bagh, Ali and Naqvi, Rizwan Ali and Hussain, Dildar and Aldossary, Omar M and Hussain, Sajjad "Magnetic Rotating Flow of a Hybrid Nano-Materials Ag-MoS₂ and Go-MoS₂ in C₂H₆O₂-H₂O Hybrid Base Fluid over an Extending Surface Involving Activation Energy: FE Simulation" Mathematics 2021, V8 n10 Page 1730

103 - Daghar, Chaima and Issaoui, Nouredine and Marouani, Houda and Roisnel, Thierry and Al-Dossary, Omar "Molecular structure, spectroscopy, quantum chemical and antibacterial activity investigations of 2-methylbenzylammonium perchlorate" Journal of Molecular Structure 2022 Page 131311

104 - Kazachenko, Aleksandr and Akman, Feride and Medimagh, Mouna and Issaoui, Nouredine and Vasilieva, Natalya and Malyar, Yuriy N and Sudakova, Irina G and Karacharov, Anton and Miroshnikova, Angelina and Al-Dossary, Omar Marzook "Sulfation of Diethylaminoethyl-Cellulose: QTAIM Topological Analysis and Experimental and DFT Studies of the Properties" ACS omega 2021 V6 N35 Page 22603 -22615

105 - Kazachenko, Aleksandr S and Akman, Feride and Abdelmoulaoui, Hafedh and Issaoui, Nouredine and Malyar, Yuriy N and Al-Dossary, Omar and Wojcik, Marek J "Intermolecular hydrogen bonds interactions in water clusters of ammonium sulfamate: FTIR, X-ray diffraction, AIM, DFT, RDG, ELF, NBO analysis" Journal of Molecular Liquids 2021, V342 Page 117475

106 - Ravichandran, K and Santhosam, A Jansi and Aldossary, Omar M and Ubaidullah, Mohd "Enhanced ammonia sensing of ZnO thin films through Yttrium doping by cost-effective nebulizer spray pyrolysis method" Physica Scripta 2021, V96 n12 Page 125825

107 - Sagaama, Abir and Issaoui, Nouredine and Al-Dossary, Omar and Kazachenko, Aleksandr S and Wojcik, Marek J "Non covalent interactions and molecular docking studies on morphine compound" Journal of King Saud University-Science 2021 Page 101606

108 - Medimagh, Mouna and Issaoui, Nouredine and Gatfaoui, Sofian and Al-Dossary, Omar and Kazachenko, Aleksandr S and Marouani, Houda and Wojcik, Marek J "Molecular modeling and biological activity analysis of new organic-inorganic hybrid: 2-(3, 4-dihydroxyphenyl) ethanaminium nitrate" Journal of King Saud University-Science 2021 Page 101616

109 - Ramalingam, Arulraj and Sambandam, Sivakumar and Medimagh, Mouna and Al-Dossary, Omar and Issaoui, Nouredine and Wojcik, Marek J "Study of a new piperidone as an anti-Alzheimer agent: Molecular docking, electronic and intermolecular interaction investigations by DFT method" Journal of King Saud University-Science 2021 Page 101632

110 - Gatfaoui, Sofian and Issaoui, Nouredine and Brand'an, Silvia Antonia and Medimagh, Mouna and Al-Dossary, Omar and Roisnel, Thierry and Marouani, Houda and Kazachenko, Aleksandr S "Deciphering non-covalent interactions of 1, 3-Benzenedimethanaminium bis (trioxonitrate): Synthesis, empirical and computational study" Journal of Molecular Structure 2021 Page 131720

111- Medimagh, Mouna and Issaoui, Nouredine and Gatfaoui, Sofian and Brand'an, Silvia Antonia and Al-Dossary, Omar and Marouani, Houda and Wojcik, Marek J "Impact of non-covalent interactions on FT-IR spectrum and properties of 4-methylbenzylammonium nitrate. A DFT and Molecular docking study" Heliyon 2021 Page e08204

112 - Rahman, Mohammad Zia Ur; Aldossary, Omar M; Islam, Tarikul; "A constant phase impedance sensor for measuring conducting liquid level" ISA transactions 2021 V 115 page 250 – 258

113 - Al Rsheed, Anwar; Aldawood, Saad; Aldossary, Omar M; "The Size and Shape Effects on the Melting Point of Nanoparticles Based on the Lennard-Jones Potential Function" Nanomaterials 2021 V 11 N11 Page 2916

114 - Lembessis, VE; Lyras, A; Aldossary, OM; "Lamb–Dicke localization of cold atoms in Ferris wheel optical dipole potential" JOSA B 2021 V38 N 12 page 3794-3801

115 - Subramanian, Maruthamuthu; Aldossary, Omar M; Alam, Manawwer; Ubaidullah, Mohd; Gedi, Sreedevi; Vaduganathan, Lakshminarayanan; Thirunavukkarasu, Gokul Sidarth; Jamei, Elmira; Seyedmahmoudian, Mehdi; Stojcevski, Alex; "Optimization of Antireflection Coating Design Using PC 1 D Simulation for c- Si Solar Cell Application" Electronics v10 N 24 Page 3132

116- Kazachenko, Aleksandr S; Malyar, Yuriy N; Ghatfaoui, Sofian; Issaoui, Nouredine; Al-Dossary, Omar; Wojcik, Marek J; Kazachenko, Anna S; Miroshnikova, Angelina V; Berezhnaya, Yaroslava D; "A density functional theory calculations of infrared spectra of galactomannan butyl ether" Journal of Molecular Structure 2022 V1251 Page 131998

117- Bato, Khalid Muajsam; Hadi, Muhammad; Verma, Ritesh; Chauhan, Ankush; Kumar, Rajesh; Singh, Mahavir; Aldossary, Omar M; "Improved microwave absorption and EMI shielding properties of Ba-doped Co–Zn ferrite" Ceramics International 2022 V48 N 3 Page 3328 - 3343

118- Sagaama, Abir; Issaoui, Nouredine; Bardak, Fehmi; Al-Dossary, Omar; Kazachenko, Aleksandr S; Karrouchi, Khalid; Atac, Ahmet; Wojcik, Marek J; "Non covalent interactions analysis and spectroscopic characterization combined with molecular docking study of N'-(4-Methoxybenzylidene)-5-phenyl-1H-pyrazole-3-carbohydrazide" Journal of King Saud University-Science 2022 V34 Page101778

119- Tahenti, Mariem; Issaoui, Nouredine; Roisnel, Thierry; Marouani, Houda; Al-Dossary, Omar; Kazachenko, Aleksandr S; "Self-assembly of a new cobalt complex,(C₆H₁₄N₂)₃[CoCl₄]Cl: Synthesis, empirical and DFT calculations" Journal of King Saud University-Science 2022 V34 Page101807

120 - Bousiakou, Leda G; Dobson, Peter J; Jurkin, Tanja; Marić, Ivan; Aldossary, Omar; Ivanda, Mile; "Optical, structural and semiconducting properties of Mn doped TiO₂ nanoparticles for cosmetic applications" Journal of King Saud University-Science 2022 V34 Page101818

121 - Kazachenko, Aleksandr S; Akman, Feride; Vasilieva, Natalya Yu; Issaoui, Nouredine; Malyar, Yuriy N; Kondrasenko, Aleksandr A; Borovkova, Valentina S; Miroshnikova, Angelina V; Kazachenko, Anna S; Al-Dossary, Omar; "Catalytic sulfation of betulin with sulfamic acid: Experiment and DFT calculation" International Journal of Molecular Sciences 2022 V 23 Page 1602

122 - Kazachenko, Aleksandr S; Vasilieva, Natalya Yu; Malyar, Yuriy N; Karacharov, Anton A; Kondrasenko, Aleksandr A; Levdanskiy, Aleksandr V;

Borovkova, Valentina S; Miroshnikova, Angelina V; Issaoui, Nouredine; Kazachenko, Anna S; "Sulfation of arabinogalactan with ammonium sulfamate" Biomass Conversion and Biorefinery 2022

123 - Lembessis, VE; Lyras, A; Aldossary, OM; " Quantum States of a Two-Level Atom trapped in a Helical Optical Tube" Journal of the Optical Society of America B 2022 Vol. 39 [Issue 9](#) pp. 2319-2328

124 - Bato, Khalid Mijasam; Hadi, Muhammad; Chauhan, Ankush; Verma, Ritesh; Singh, Mahavir; Aldossary, Omar M; Bhargava, Gagan Kumar; "High-frequency applications of bismuth-doped Co–Zn ferrite nanoparticles for electromagnetic interference filter and multilayer inductor chip fabrication" Applied Physics A 2022 V128

125 - Bousiakou, Leda G; Qindeel, Rabia; Al-Dossary, Omar M; Kalkani, Helen; "Synthesis and characterization of graphene oxide (GO) sheets for pathogen inhibition: Escherichia coli, Staphylococcus aureus and Pseudomonas aeruginosa" Journal of King Saud University-Science 2022 V34 102002

126 - Kazachenko, Aleksandr S; Medimagh, Mouna; Issaoui, Nouredine; Al-Dossary, Omar; Wojcik, Marek J; Kazachenko, Anna S; Miroshnokova, Angelina V; Malyar, Yuriy N; "Sulfamic acid/water complexes (SAA-H₂O (1-8)) intermolecular hydrogen bond interactions: FTIR, X-ray, DFT and AIM analysis" Journal of Molecular Structure 2022 page 133394

127 - Kazachenko, Aleksandr S; Issaoui, Nouredine; Medimagh, Mouna; Fetisova, Olga Yu; Berezhnaya, Yaroslava D; Elsuf'ev, Evgeniy V; Al-Dossary, Omar M; Wojcik, Marek J; Xiang, Zhouyang; Bousiakou, Leda G; "Experimental and theoretical study of the sulfamic acid-urea deep eutectic solvent" Journal of Molecular Liquids 2022 V363 page 119859

128 - Al-Khateeb, Ayman; Lyras, Andreas; Lembessis, VE; Aldossary, Omar M; "Two-photon bound-bound atomic transitions induced by LG beams" Results in Physics 2022 V43 page 106107

129 - Kazachenko, Aleksandr S; Issaoui, Nouredine; Sagaama, Abir; Malyar, Yuriy N; Al-Dossary, Omar; Bousiakou, Leda G; Kazachenko, Anna S; Miroshnokova, Angelina V; Xiang, Zhouyang; "Hydrogen bonds interactions in biuret-water clusters: FTIR, X-ray diffraction, AIM, DFT, RDG, ELF, NLO analysis" Journal of King Saud University-Science 2022 V34 102350

130 - Kazachenko, Aleksandr S; Tanış, Emine; Akman, Feride; Medimagh, Mouna; Issaoui, Nouredine; Al-Dossary, Omar; Bousiakou, Leda G; Kazachenko, Anna S; Zimonin, Dmitry; Skripnikov, Andrey M; "A Comprehensive Study of N-Butyl-1H-Benzimidazole" Molecules 2022 V27 Page 7864

131 – Khodiev, M Kh; Holikulov, UA; ISSAOUI, N; Al-Dossary, Omar M; Bousiakoug, Leda G; Lavrik, NL; “Estimation of electrostatic and covalent contributions to the enthalpy of H-bond formation in H-complexes of 1, 2, 3-benzotriazole with proton-acceptor molecules by IR spectroscopy and DFT calculations” Journal of King Saud University-Science 2022 Page 102530

132 - Ramarajan, Rajalakshmi; Ramalingam, Arulraj; Duraisamy, Chinnaraja; Sambandam, Sivakumar; ISSAOUI, Nouredine; Al-Dossary, Omar M; Bousiakoug, Leda G; ” Catalytic multicomponent synthesis, biological evaluation, molecular docking and in silico ADMET studies of some novel 3-alkyl indoles” Journal of King Saud University-Science 2023 V35 Page 102475

133 - Medimagh, Mouna; Mleh, Cherifa Ben; Issaoui, Nouredine; Kazachenko, Aleksandr S; Roisnel, Thierry; Al-DOSSARY, Omar M; Marouani, Houda; Bousiakoug, Leda G; “DFT and molecular docking study of the effect of a green solvent (water and DMSO) on the structure, MEP, and FMOs of the 1-ethylpiperazine-1, 4-dium bis (hydrogenoxalate) compound” Journal of Molecular Liquids 2023 V369 Page 120851

134 - Kazachenko, Aleksandr S; Issaoui, Nouredine; Fetisova, Olga Yu; Berezhnaya, Yaroslava D; Al-Dossary, Omar M; Akman, Feride; Kumar, Naveen; Bousiakou, Leda G; Kazachenko, Anna S; Ionin, Vladislav A; “Comprehensive Study of the Ammonium Sulfamate–Urea Binary System” Molecules 2023 V 28 N 2 page 470

135 - Abdullah F Alharbi, A Lyras, Vassilis E Lembessis, Omar Al-Dossary “Photoexcitation of atoms near the center of vortex light” Results in Physics 2023 V 46 Page 106311

136 - VE Lembessis, A Lyras, OM Aldossary “Two-level atom dynamics induced by a spin-orbit coupled optical vortex: dressed states formulation” Optics Continuum 2023 2 (5), 1256-1266

137 – L Bousiakou, O Al-Dosary, A Economou, V Subjakova, T Hianik “Current Trends in the Use of Semiconducting Materials for Electrochemical Aptasensing” Chemosensors 2023 11 (8), 438

138 - M Alquraishi, VE Lembessis, A Lyras, OM Aldossary “Optical dipole potential energy of a two-level atom interacting with a tightly focused truncated optical Bessel beam” Laser Physics 2023, 33 (12), 125501

139 - Aloufi, Khalid; Lembessis, Vasileios E; Aldossary, Omar M; “Revision of the forces exerted in the Rayleigh regime by a tightly focused optical vortex tweezer” Physical Review A, V 109, N2, P 23530 2024

140 - Bousiakou, Leda G; Dobson, Peter J; Aldossary, Omar M; "Enzymatic Activity of Glucose Oxidase on Mesoporous TiO₂: Mn Surfaces" Current Nanoscience V 20, N2 P 272-278 2024

141- Holikulov, Utkirjon; Kazachenko, Aleksandr S; Issaoui, Noureddine; Kazachenko, Anna S; Raja, Murugesan; Al-Dossary, Omar M; Xiang, Zhouyang; "The molecular structure, vibrational spectra, solvation effect, non-covalent interactions investigations of psilocin" Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, V 320, p 124600 2024

142- Vennila, M; Senthil, A; Bharanidharan, T; Shahidha, R; Wezhli, M Malar; Manikandan, A; Al-Dossary, Omar M; Issaoui, Noureddine; "Structural characterization, electronic properties in solvents, Hirshfeld, topological and biological investigation on Imiquimod—An immunomodulator agent" Journal of Photochemistry and Photobiology A: Chemistry, V 457, p 115917 2024

143- Khodiev, Masrur; ISSAOUI, Noureddine; Al-Dossary, Omar M; Lavrik, Nikolai L; "Effect of the electronic properties of the side charges of neutral solvent molecules on the charges of the N and H atoms of the carbazole molecule: IR experiment and DFT calculations" Journal of Molecular Liquids, V 414, p126193 2024

145- Thangamani, Arumugam; Ramalingam, Arulraj; Sambandam, Sivakumar; Al-Dossary, Omar M; ISSAOUI, Noureddine; "Synthesis, exploring the structural, non covalent interaction effects, biological assessment, molecular docking and quantum chemical properties of functionalized new N-nitrosopiperidin-4-one: An experimental and theoretical study" Journal of Molecular Liquids, V 417, p 126625 2025

146- Jumabaev, Abduvakhid; Khudaykulov, Bekzod; Holikulov, Utkirjon; Norkulov, Asliddin; Subbiah, Jeyavijayan; Al-Dossary, Omar M; Hushvaktov, Hakim; Absanov, Ahmad; Issaoui, Noureddine; Optical Materials "Molecular structure, vibrational spectral assignments, MEP, HOMO-LUMO, AIM, NCI, RDG, ELF, LOL properties of acetophenone and for its solutions based on DFT calculations" Optical Materials, V 159, p116683 2025