

Omar M Al-Dossary

List of Publications by Year in descending order

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104
papers

2,734
citations

257450

24
h-index

197818

49
g-index

105
all docs

105
docs citations

105
times ranked

2955
citing authors

#	ARTICLE	IF	CITATIONS
1	Zinc Oxide Nanostructures for NO ₂ Gas Sensor Applications: A Review. Nano-Micro Letters, 2015, 7, 97-120.	27.0	649
2	Bright and dark solitons for the resonant nonlinear Schrödinger's equation with time-dependent coefficients. Optics and Laser Technology, 2012, 44, 2223-2231.	4.6	104
3	Development of highly sensitive and selective ethanol sensor based on lance-shaped CuO nanostructures. Materials and Design, 2016, 105, 16-24.	7.0	100
4	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, 342, 117475.	4.9	89
5	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, 33, 101334.	3.5	86
6	Non covalent interactions and molecular docking studies on morphine compound. Journal of King Saud University - Science, 2021, 33, 101606.	3.5	82
7	ZnO nanostructured thin films: Depositions, properties and applications A review. Materials Express, 2015, 5, 3-23.	0.5	75
8	Tuning of Structural, Dielectric, and Electronic Properties of Cu Doped Co-Zn Ferrite Nanoparticles for Multilayer Inductor Chip Applications. Magnetochemistry, 2021, 7, 53.	2.4	75
9	DFT and molecular docking study of chloroquine derivatives as antiviral to coronavirus COVID-19. Journal of King Saud University - Science, 2021, 33, 101248.	3.5	70
10	Improved room temperature dielectric properties of Gd ³⁺ and Nb ⁵⁺ co-doped Barium Titanate ceramics. Journal of Alloys and Compounds, 2021, 883, 160836.	5.5	68
11	Enhanced BTEX gas-sensing performance of CuO/SnO ₂ composite. Sensors and Actuators B: Chemical, 2016, 223, 914-920.	7.8	64
12	Quantum Hall physics with cold atoms in cylindrical optical lattices. Physical Review A, 2016, 93, .	2.5	61
13	Improved microwave absorption and EMI shielding properties of Ba-doped Co-Zn ferrite. Ceramics International, 2022, 48, 3328-3343.	4.8	55
14	Quantum chemical calculations, spectroscopic properties and molecular docking studies of a novel piperazine derivative. Journal of King Saud University - Science, 2021, 33, 101283.	3.5	53
15	Molecular modeling and biological activity analysis of new organic-inorganic hybrid: 2-(3,4-dihydroxyphenyl) ethanaminium nitrate. Journal of King Saud University - Science, 2021, 33, 101616.	3.5	53
16	Atom vortex beams. Physical Review A, 2014, 89, .	2.5	48
17	Finite Element Study for Magnetohydrodynamic (MHD) Tangent Hyperbolic Nanofluid Flow over a Faster/Slower Stretching Wedge with Activation Energy. Mathematics, 2021, 9, 25.	2.2	40
18	Advanced Variable Step Size Incremental Conductance MPPT for a Standalone PV System Utilizing a GA-Tuned PID Controller. Energies, 2020, 13, 4153.	3.1	38

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19	Sulfamic acid/water complexes (SAA-H ₂ O(1-8)) intermolecular hydrogen bond interactions: FTIR,X-ray, DFT and AIM analysis. Journal of Molecular Structure, 2022, 1265, 133394.	3.6	38
20	1-Soliton Solution of the Generalized Resonant Nonlinear Dispersive Schrödinger's Equation with Time-Dependent Coefficients. Advanced Science Letters, 2012, 16, 309-312.	0.2	34
21	Dispersion of superlattice optical phonons. Solid State Communications, 1993, 86, 191-194.	1.9	29
22	MHD flow of upper-convected Maxwell fluid over porous stretching sheet using successive Taylor series linearization method. Applied Mathematics and Mechanics (English Edition), 2012, 33, 975-990.	3.6	29
23	Entanglement in a time-dependent coupled XY spin chain in an external magnetic field. Physical Review A, 2010, 82, .	2.5	28
24	Angular Momentum Sensitive Two-Center Interference. Physical Review Letters, 2014, 112, 023001.	7.8	28
25	Magnetic Rotating Flow of a Hybrid Nano-Materials Ag-MoS ₂ and Go-MoS ₂ in C ₂ H ₆ O ₂ -H ₂ O Hybrid Base Fluid over an Extending Surface Involving Activation Energy: FE Simulation. Mathematics, 2020, 8, 1730.	2.2	27
26	High-frequency applications of bismuth-doped Co-Zn ferrite nanoparticles for electromagnetic interference filter and multilayer inductor chip fabrication. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	2.3	26
27	Synthesis and Characterization of CuO Nanodisks for High-Sensitive and Selective Ethanol Gas Sensor Applications. Journal of Nanoscience and Nanotechnology, 2017, 17, 1455-1459.	0.9	23
28	EFFECT OF WALL PROPERTIES ON THE PERISTALTIC FLOW OF A THIRD GRADE FLUID IN A CURVED CHANNEL. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250067.	0.7	22
29	Investigation of dielectric, electrical and optical properties of copper substituted Mn-Zn nanoferrites. Journal of Materials Science: Materials in Electronics, 2021, 32, 313-322.	2.2	22
30	Structural, morphological, optical and enhanced photodetection activities of CdO films: An effect of Mn doping. Sensors and Actuators A: Physical, 2021, 319, 112531.	4.1	22
31	Fuchs-Kliewer interface polaritons and their interactions with electrons in GaAs/AlAs double heterostructures. Semiconductor Science and Technology, 1992, 7, B91-B93.	2.0	21
32	NO _x Gas Sensing Properties of Fe-Doped ZnO Nanoparticles. Science of Advanced Materials, 2020, 12, 908-914.	0.7	21
33	Electron angular distributions of noble gases in sequential two-photon double ionization. Journal of Modern Optics, 2016, 63, 324-333.	1.3	20
34	Strain mediated enhancement in magnetoelectric properties of sonochemically synthesized piezoelectric and piezomagnetic composites. Ceramics International, 2021, 47, 6496-6504.	4.8	19
35	On Solution of Natural Convection and Radiation Heat Transfer Problem in a Moving Porous Fin. Arabian Journal for Science and Engineering, 2014, 39, 1303-1312.	1.1	18
36	Impact of non-covalent interactions on FT-IR spectrum and properties of 4-methylbenzylammonium nitrate. A DFT and molecular docking study. Heliyon, 2021, 7, e08204.	3.2	17

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37	Quantum optics of plasmon polaritons and velocity sum rules. <i>Physical Review A</i> , 1996, 54, 2419-2425.	2.5	16
38	Exact solutions for vibrational levels of the Morse potential via the asymptotic iteration method. <i>European Physical Journal D</i> , 2006, 56, 583-590.	0.4	16
39	Shock wave solutions of the variants of the Kadomtsevâ€“Petviashvili equation. <i>Canadian Journal of Physics</i> , 2011, 89, 979-984.	1.1	15
40	Electron scattering and capture rates in quantum wells by emission of hybrid optical phonons. <i>Physical Review B</i> , 2001, 63, .	3.2	14
41	The asymptotic iteration method for the angular spheroidal eigenvalues with arbitrary complex size parameter c . <i>Canadian Journal of Physics</i> , 2006, 84, 121-129.	1.1	14
42	Influence of Y^{3+} , Yb^{3+} , Gd^{3+} cations on structural and electromagnetic properties of $CuFe_2O_4$ nanoferrites prepared via one step sol-gel method. <i>Journal of Rare Earths</i> , 2021, 39, 1224-1231.	4.8	14
43	Pseudo n-type behaviour of nickel oxide thin film at room temperature towards ammonia sensing. <i>Ceramics International</i> , 2021, 47, 13693-13703.	4.8	14
44	Molecular structure, spectroscopy, quantum chemical and antibacterial activity investigations of 2-methylbenzylammonium perchlorate. <i>Journal of Molecular Structure</i> , 2022, 1247, 131311.	3.6	14
45	The Size and Shape Effects on the Melting Point of Nanoparticles Based on the Lennard-Jones Potential Function. <i>Nanomaterials</i> , 2021, 11, 2916.	4.1	14
46	Theoretical study of the electronic structure of $LiNa$ and $LiNa^+$ molecules. <i>Journal of Russian Laser Research</i> , 2009, 30, 172-186.	0.6	13
47	Partial photoionization cross sections of C_{60} and C_{70} : A gas versus adsorbed phase comparison. <i>Surface Science</i> , 2010, 604, 1940-1944.	1.9	13
48	1-Soliton solution of the generalized Burgers equation with generalized evolution. <i>Applied Mathematics and Computation</i> , 2011, 217, 10289-10294.	2.2	13
49	Solitary wave solutions of the Vakhnenkoâ€“Parkes equation. <i>Nonlinear Analysis: Modelling and Control</i> , 2012, 17, 60-66.	1.6	13
50	Deciphering non-covalent interactions of 1,3-Benzenedimethanaminium bis(trioxonitrate): Synthesis, empirical and computational study. <i>Journal of Molecular Structure</i> , 2022, 1250, 131720.	3.6	13
51	Sulfation of arabinogalactan with ammonium sulfamate. <i>Biomass Conversion and Biorefinery</i> , 2024, 14, 719-731.	4.6	13
52	Rotating optical tubes for vertical transport of atoms. <i>Physical Review A</i> , 2016, 94, .	2.5	12
53	Catalytic Sulfation of Betulin with Sulfamic Acid: Experiment and DFT Calculation. <i>International Journal of Molecular Sciences</i> , 2022, 23, 1602.	4.1	12
54	Morse potential eigen-energies through the asymptotic iteration method. <i>International Journal of Quantum Chemistry</i> , 2007, 107, 2040-2046.	2.0	10

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55	Electronic states of CsLi and CsLi+ molecules. Journal of Applied Spectroscopy, 2011, 78, 11-24.	0.7	10
56	Two-atom system as a nanoantenna for mode switching and light routing. Physical Review A, 2013, 88, .	2.5	10
57	Artificial gauge magnetic and electric fields for free two-level atoms interacting with optical Ferris wheel light fields. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1122.	2.1	10
58	Highly Sensitive Ethanol Gas Sensors Based on Ag-Doped ZnO Nanocones. Nanoscience and Nanotechnology Letters, 2016, 8, 241-246.	0.4	10
59	Continuum model of the optical modes of vibration of an ionic crystal slab. Physical Review B, 1994, 50, 11701-11709.	3.2	9
60	THE EFFECT OF MIE-TYPE POTENTIAL RANGE ON THE COHESIVE ENERGY OF METALLIC NANOPARTICLES. International Journal of Nanoscience, 2007, 06, 461-466.	0.7	9
61	Heat Transfer in a Couple Stress Fluid over a Continuous Moving Surface with Internal Heat Generation and Convective Boundary Conditions. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2012, 67, 217-224.	1.5	9
62	Development of Ethanol Gas Sensor Using $\hat{\pm}$ -Fe ₂ O ₃ Nanocubes Synthesized by Hydrothermal Process. Journal of Nanoelectronics and Optoelectronics, 2020, 15, 59-64.	0.5	9
63	Guiding of atoms in helical optical potential structures. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 125002.	1.5	8
64	A density functional theory calculations of infrared spectra of galactomannan butyl ether. Journal of Molecular Structure, 2022, 1251, 131998.	3.6	8
65	Self-assembly of a new cobalt complex, (C ₆ H ₁₄ N ₂) ₃ [CoCl ₄]Cl: Synthesis, empirical and DFT calculations. Journal of King Saud University - Science, 2022, 34, 101807.	3.5	8
66	Topological Soliton Solutions of .2 C 1/-dimensional KdV Equation with Power Law Nonlinearity and Time-dependent Coefficients. International Journal of Nonlinear Sciences and Numerical Simulation, 2011, 12, 35-43.	1.0	7
67	Noticeable improvement in the toxic gas-sensing activity of the Zn-doped TiO ₂ films for sensing devices. New Journal of Chemistry, 2021, 45, 10488-10495.	2.8	7
68	Optical Ferris wheels as a platform for collisional quantum gates. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 233.	2.1	7
69	THE ASYMPTOTIC ITERATION METHOD FOR THE EIGENERGIES OF THE ASYMMETRICAL QUANTUM ANHARMONIC OSCILLATOR POTENTIALS $V(x)=\sum_{j=2}^{\infty} A_j x^j$. International Journal of Modern Physics A, 2007, 22, 203-212.	1.5	6
70	Nuclear-induced time evolution of entanglement of two-electron spins in anisotropically coupled quantum dot. Molecular Physics, 2008, 106, 1777-1786.	1.7	6
71	Design, Development and Validation of a Portable Gas Sensor Module: A Facile Approach for Monitoring Greenhouse Gases. Coatings, 2020, 10, 1148.	2.6	6
72	Fabrication and characterization of p-Si/n-In ₂ O ₃ and p-Si/n-ITO junction diodes for optoelectronic device applications. Surfaces and Interfaces, 2021, 23, 100992.	3.0	6

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73	Interaction of electrons with polaritons. Journal of Physics Condensed Matter, 1993, 5, 5581-5590.	1.8	5
74	Ordering of Ground State Energy Levels of Two-Electron Quantum Dot in a Magnetic Field. International Journal of Theoretical Physics, 2010, 49, 1187-1194.	1.2	5
75	La _{0.7} Sr _{0.3} MnO ₃ Nanoparticles Based Ultra-High Sensitive Ammonia Chemical Sensor. Journal of Nanoscience and Nanotechnology, 2012, 12, 6368-6373.	0.9	5
76	Theoretical study of LiK and LiK ⁺ in adiabatic representation. Russian Journal of Physical Chemistry A, 2014, 88, 73-84.	0.6	5
77	Atomic mirrors for a \hat{b} -type three-level atom. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 185005.	1.5	5
78	Graphene-like optical light field and its interaction with two-level atoms. Physical Review A, 2015, 92, .	2.5	5
79	A Novel Power Scheduling Mechanism for Islanded DC Microgrid Cluster. Sustainability, 2020, 12, 6918.	3.2	5
80	A constant phase impedance sensor for measuring conducting liquid level. ISA Transactions, 2021, 115, 250-258.	5.7	5
81	Solitary wave and shock wave solutions to a second order wave equation of Kortewegâ€“de Vries type. Applied Mathematics and Computation, 2011, 217, 8852-8855.	2.2	4
82	Radiation pattern of two identical emitters driven by a Laguerre-Gaussian beam: An atom nanoantenna. Physical Review A, 2015, 92, .	2.5	4
83	The effect of the parameter $\hat{\pm}$ of Morse potential on cohesive energy. Journal of King Saud University - Science, 2020, 32, 1147-1151.	3.5	4
84	A New Generalized Morse Potential Function for Calculating Cohesive Energy of Nanoparticles. Energies, 2020, 13, 3323.	3.1	4
85	Non covalent interactions analysis and spectroscopic characterization combined with molecular docking study of Nâ€“(4-Methoxybenzylidene)-5-phenyl-1H-pyrazole-3-carbohydrazide. Journal of King Saud University - Science, 2022, 34, 101778.	3.5	4
86	An investigation of the size-dependent cohesive energy and the structural stability of spherical metallic nanoparticles. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 165104.	1.5	3
87	The Role of Oxygen Vacancies on Magnetic Properties of LSMO. AIP Conference Proceedings, 2011, , .	0.4	3
88	OSCILLATORY FLOW OF FOURTH-ORDER FLUID IN A POROUS HALF SPACE. Chemical Engineering Communications, 2012, 199, 1072-1084.	2.6	3
89	Deflection of a \hat{b} -type three-level atom by a light field: a mechanical demonstration of the coherent population trapping effect. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 115502.	1.5	3
90	Optimization of Antireflection Coating Design Using PC1D Simulation for cÂ“ÂSi Solar Cell Application. Electronics (Switzerland), 2021, 10, 3132.	3.1	3

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91	Photoinduced localization and decoherence in inversion symmetric molecules. Journal of Electron Spectroscopy and Related Phenomena, 2011, 184, 154-156.	1.7	2
92	Appearance of Plasmons in Fullerenes. Journal of Physics: Conference Series, 2012, 388, 022087.	0.4	2
93	Comprehensive Assimilation of Fire Suppression Modeling and Simulation of Radiant Fire by Water and Its Synergistic Effects with Carbon Dioxide. Energies, 2020, 13, 5850.	3.1	2
94	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, 33, 101316.	3.5	2
95	Soliton and shock wave solutions to the Degasperis-Procesi equation with power law nonlinearity. Waves in Random and Complex Media, 2011, 21, 543-553.	2.7	1
96	Many-Body Interaction and Computer Simulations for the Cohesive Energy of Spherical Metallic Nanocrystals. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1134-1138.	0.4	1
97	Bibliometric analysis, progress and prospects of Journal of King Saud University-Science at global level. Journal of King Saud University - Science, 2021, 33, 101440.	3.5	1
98	Growth of La _{0.7} Sr _{0.3} MnO ₃ Thin-Films on SrTiO ₃ (100) Substrate by Pulsed Laser Deposition: Structural, Optical and Electrical Properties. Advanced Science Letters, 2011, 4, 3475-3479.	0.2	1
99	Theoretical Calculations of the Lowest Electronic States of O ₂ Using Multireference Configuration Interaction (MRCI) Method. Journal of Advanced Physics, 2015, 4, 32-36.	0.4	1
100	Optical-phonon tunnelling and the electron scattering rate. Superlattices and Microstructures, 1998, 23, 201-203.	3.1	0
101	Coherent localization exhibited by unequal Auger Doppler components. Journal of Physics: Conference Series, 2012, 388, 022088.	0.4	0
102	Two-atom system as a directional frequency filter. , 2013, , .		0
103	Arrays of dark optical traps on a toroidal surface. Physical Review A, 2019, 99, .	2.5	0
104	Dark state atom mirrors based on artificial gauge fields created by surface optical vortices. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 971.	2.1	0