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**Academic Curriculum Vitae**



**Personal Information:**

Full Name: Botan Jawdat Abdullah

Academic Title: Asst Professor

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**Education:**

Assistant Professor in Nanoscience, Salahaddin University-Erbil in Iraq, 2021. PhD. in Nanoscience, Salahaddin University-Erbil with Jilin University in Chian, 2017. MSc. in Nanotechnology, Salahaddin University-Erbil, 2007. BSc. Physics, Salahaddin University-Erbil, 2001.

**Employment:**

Assistant Professor (Full time: Apr 2021- present)

Lecturer (Full time: Jun 2017- 2021)

Assistant Lecturer (Full time: Mar 2007-2017)

Teaching Assistant (Full time: Nov 2002- 2007)

**Qualifications**

* 1- IT Tech
* 2- Super and server Computer.
* 3- Operating System: MS DOS, Linux (Red Hat) and MS Windows.
* 4- Microsoft Office:
* a) Word Processing: MS Word.
* b) Presentation: MS Power Point.
* c) Spread Sheet: MS Excel.
* d) Quantum Expresso
* 5- Computer Hardware.
* 6- Material Studio Program (Abinit & CASTEP Codes).
* 7- MathCAD Software Programming.
* 8- MatLab Software Programming.
* 9- Python Software Programming.
* 10- Packet Tracer of Computer Networking.
* 9- OptiSystem 7 Program for Optical communication Lab.
* 11- Computer Hardware (IT Essential & A+).
* 12- Qbasic Code.
* 11- Internet.
* 12- Computer Networking (CCNA).
* 13- VMware and Others.
* 14- Communication: GSM, PBX & Call Center.
* Teaching qualifications
* IT qualifications
* IELTS
* I worked for about 5 years in the computer filed as a technician (IT tech) at (RAM
* for Computer).
* I worked in the communication field for about 4 years at (Safentel for
* communication solution company- Sister company of KOREK Telecom) as a
* (Direct Manager).

**Teaching experience:**

* A- Lecturing in several subjects in Physics Department-College of Science- University of
* Salahaddin:
* 1- Computer and Programming – First stage Physics (10 Years).
* Curriculum Vitae 2021-2022
* 2- Computer Lab – First stage Physics (10 Years).
* 3- Property of matter Lab First stage Physics (5 Years).
* 4- General Physics Lab – First stage Physics (8 Years).
* 5- General Physics Lab – First stage Chemistry (2 Years).
* 6- General Physics Lab – First stage Biology (2 Years).
* 7- Heat Lab – Second stage Physics (4 year).
* 8- Electronic Lab – Third stage Physics (1 Year).
* 9- Solid State Lab – Fourth stage Physics (4 Years).
* 10- Networking and data communication – fourth stage/ Communication Brunch
* – Physics (1 Year).
* 11- Optical Communication Lab – fourth stage/ Communication Brunch – Physics
* (1 Year).
* 12- Mobile Communication Lab – fourth stage/ Communication Brunch – Physics
* (1 Year).
* 13- Classical Mechanics - First Stage Physics (6 Years).
* 14- Properties of Matter - First Stage Physics (4 Years).
* B- Lecturing in Network and Data Communication for third stage in Computer
* Department-College of Science- University of Soran (2 Years).
* C- Assistant head of the examination committee in 2007.
* D- Head of the examination committee in 2019, 2020, 2021 and 2022
* Courses, trainings, lab supervision, etc.,

**Research and publications**

1-Abdullah, B.J., Omar, M.S. and Jiang, Q., 2018. Size dependence of the bulk modulus of Si nanocrystals. Sādhanā, 43, pp.1-5.

2- Abdullah, N.R., Abdullah, B.J., Tang, C.S. and Gudmundsson, V., 2021. Properties of BC6N monolayer derived by first-principle computation: Influences of interactions between dopant atoms on thermoelectric and optical properties. Materials Science in Semiconductor Processing, 135, p.106073.

3- Abdullah, B.J., Jiang, Q. and Omar, M.S., 2016. Effects of size on mass density and its influence on mechanical and thermal properties of ZrO 2 nanoparticles in different structures. Bulletin of Materials Science, 39, pp.1295-1302.

4- Abdullah, B.J., 2022. Size effect of band gap in semiconductor nanocrystals and nanostructures from density functional theory within HSE06. Materials Science in Semiconductor Processing, 137, p.106214.

5- Abdullah, N.R., Abdullah, B.J. and Gudmundsson, V., 2022. High thermoelectric and optical conductivity driven by the interaction of Boron and Nitrogen dopant atoms with a 2D monolayer Beryllium Oxide. Materials Science in Semiconductor Processing, 141, p.106409.

6- Qader, I.N., Abdullah, B.J., Hassan, M.A. and Mahmood, P.H., 2019. Influence of the size reduction on the thermal conductivity of bismuth nanowires. Eurasian Journal of Science & Engineering, 4(3), pp.55-65.

7- Abdullah, B.J., Omar, M.S. and Jiang, Q., 2018. Size effects on cohesive energy, Debye temperature and lattice heat capacity from first-principles calculations of Sn nanoparticles. Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, 88, pp.629-632.

8- Qader, I.N., Abdullah, B.J. and Karim, H.H., 2017. Lattice thermal conductivity of wurtzite bulk and zinc blende Cdse nanowires and nanoplayer. Eurasian Journal of Science & Engineering, 3(1), pp.9-26.

9- Abdullah, B.J., Omar, M.S., Saadi, N.S. and Jiang, Q., 2015. First-principles calculations on cohesive energy of bulk and nano Si. International Journal of Scientific & Engineering Research, 6(9), p.842.

10-Abdullah, N.R., Abdullah, B.J. and Gudmundsson, V., 2022. DFT study of tunable electronic, magnetic, thermal, and optical properties of a Ga2Si6 monolayer. Solid State Sciences, 125, p.106835.

11- Abdullah, B.J., Omar, M.S. and Jiang, Q.J., 2016. Grüneisen Parameter and Its Related Thermodynamic Parameters Dependence on Size of Si Nanoparticles. ZANCO Journal of Pure and Applied Sciences, 28(4), pp.126-132.

12 Abdullah, N.R., Abdullah, B.J. and Gudmundsson, V., 2022. Electronic and optical properties of metallic nitride: A comparative study between the MN (M= Al, Ga, In, Tl) monolayers. Solid State Communications, 346, p.114705.

13- Abdullah, N.R., Abdullah, B.J., Rashid, H.O., Tang, C.S. and Gudmundsson, V., 2022. Modulation of electronic and thermal proprieties of TaMoS2 by controlling the repulsive interaction between Ta dopant atoms. Solid State Communications, 342, p.114590.

14- Qader, I.N., Abdullah, B.J. and Omar, M.S., 2020. Range determination of the influence of carrier concentration on lattice thermal conductivity for bulk Si and nanowires.

15- Abdullah, N.R., Abdullah, B.J., Tang, C.S. and Gudmundsson, V., 2023. Enhanced ultraviolet absorption in BN monolayers caused by tunable buckling. Materials Science and Engineering: B, 288, p.116147.

16- Abdullah, N.R., Azeez, Y.H., Abdullah, B.J., Rashid, H.O., Manolescu, A. and Gudmundsson, V., 2023. Role of planar buckling on the electronic, thermal, and optical properties of Germagraphene nanosheets. Materials Science in Semiconductor Processing, 153, p.107163.

17- Abdullah, N.R., Abdullah, B.J., Rashid, H.O., Tang, C.S. and Gudmundsson, V., 2022. Study of the buckling effects on the electrical and optical properties of the group III-Nitride monolayers. Materials Science in Semiconductor Processing, 150, p.106943.

18- Abdullah, N.R., Abdullah, B.J., Rshid, H.O., Tang, C.S., Manolescu, A. and Gudmundsson, V., 2022. Enhanced electronic and optical responses of nitrogen-or boron-doped BeO monolayer: First principle computation. Superlattices and Microstructures, 162, p.107102.

19- Abdullah, N.R., Abdullah, B.J., Rashid, H.O. and Gudmundsson, V., 2023. Buckling effects in AlN monolayers: Shifting and enhancing optical characteristics from the UV to the near visible light range. Chemical Physics Letters, 811, p.140235.

20- Abdullah, N.R., Abdullah, B.J., Azeez, Y.H., Tang, C.S. and Gudmundsson, V., 2023. Optical conductivity enhancement and thermal reduction of BN-codoped MgO nanosheet: Significant effects of BN atomic interaction. Solid State Communications, p.115218.

21- Abdullah, N.R., Abdullah, B.J., Azeez, Y.H. and Gudmundsson, V., 2023. Exploring electronic, optical, and phononic properties of MgX (X= C, N, and O) monolayers using first principle calculations. Functional Materials Letters.

22- Abdullah, B.J., 2023. First-Principles investigation of the thermal properties of the XO (X= Be, Mg and Sr) nanosheet.

23- Omar, M.S., Abdullah, B.J., Karim, A.S. and Jalal, S.K., 2023. Specific Heat and its Related Parameters in Si Nanoparticles. Silicon, pp.1-8.

24- Abdullah, B.J., Azeez, Y.H. and Abdullah, N.R., 2023. A first-principles study on electronic structure, optical and thermal properties of BeX (X= C, N and O) monolayers. Solid State Communications, p.115080.

25- Abdullah, N.R., Rashid, H.O., Abdullah, B.J., Tang, C.S. and Gudmundsson, V., 2023. Planar buckling controlled optical conductivity of SiC monolayer from Deep-UV to visible light region: A first-principles study. Materials Chemistry and Physics, p.127395.

26- Qader, I.N., Mamand, D.M., Rasul, H.H., Abdullah, B.J. and Omar, M.S., 2022. The Effects of Pressure and Size Parameter on the Lattice Thermal Conductivity in Multilayer Hexagonal Boron Nitride. Iranian Journal of Science and Technology, Transactions A: Science, pp.1-14.

27- Abdullah, B.J., 2021. Diameter dependence of band gap of single-walled boron nitride nanotubes. Physics of the Solid State, pp.1-5.

28- Abdullah, B.J. and Omar, M.S., Calculation of the Band Structure for GaAs and ZnTe Nanoparticles from the Density Functional Theory Based on LDA, GGA and HSE06.

29- Qader, I.N., Abdullah, B.J., Hassan, M.A. and Mahmood, P.H., 2019. Influence of the size reduction on the thermal conductivity of bismuth nanowires. Eurasian Journal of Science & Engineering, 4(3), pp.55-65.

30- Abdullah, B.J. and Omar, M.S., ICNS Conference Proceeding ICNS Conference Proceeding.

31- Abdullah, B.J. and Omar, M.S., Calculation of the Band Structure for GaAs and ZnTe Nanoparticles from the Density Functional Theory Based on LDA, GGA and HSE06.

32- Botan Jawdat Abdullah, Musafa Saeed Omar and Qing Jiang Density-Functional Calculations on Structural Properties of Sn Bulk andNanocrystals, ICNS Conference Proceeding.

33- Abdullah, B.J., 2010 Effect of Size on Lattice Thermal Conductivity in Si and Ge Nanowires from 2K to room temperatures, Физика аэродисперсных систем.

**Conferences and courses attended**

* Dozen of Conference, Symposium, Workshop, etc.

**Funding and academic awards**

* Salahaddin University-Erbil

**Professional Social Network Accounts:**

* List of profile links exist at: ReserchGate, LinkedIn, Google scholar, ORCID, etc.

**Hobbies:** Traveling, Shopping, Learning, …