

Engr. M Qasim Shah



Nationality: Pakistani

Date of Birth: 1st Dec 1997

Phone: +923100042895

Email address: qasimshah1997@gmail.com

Permanent Address: C-19-5 Eden Value Homes, Lahore

STUDIED APPLIED FOR OBJECTIVE

I am looking for a position in the field of Electrical Engineering.

WORK EXPERIENCE

Etimaad Engineering

Assistant Engineer, Etimaad Engineering from [05/01/2022-05/07/2022]

Government College University

Visiting Lecturer, Government College University, Lahore [05/10/2023-To date]

Research Student

Materials Synthesis and Simulation Laboratory (MSSL)

Centre for Advanced Studies in Physics (CASP), GC University [15/07/2022– 30/09/2023]

- Research work of Articles
- Synthesis of Double perovskites by Solution processing method, Solid State method
- Theoretical calculation of condensed matter physics (DFT)

EDUCATION AND TRAINING

MS Electrical Engineering

Institution: University of the Punjab Lahore [2021-2023]

Address: Lahore Pakistan [University of the Punjab](http://www.uop.edu.pk)

CGPA: 3.45/4.00

Grade: A+

Research work Thesis title: Investigation of Electrical, Optical and Thermoelectric properties of double perovskites Cs₂AgXF₆ (X=P, As, Sb) for photovoltaic cell

Supervisor: **Dr. Azhar Naeem** (Director Institute of Electrical, Electronic and Computer Engineering)

BS Electrical Engineering

Institution: Government College University, Lahore [2017 – 2021]

Address: Lahore, Pakistan [GC University Lahore](http://www.gcu.edu.pk)

CGPA: 3.00/4.00

Grade: A

Research work Thesis title: Hybrid Energy Operated Ventilator

Supervisor: Dr. Haider Aejaz (HOD, Department of Electrical Engineering, GCU)

Project Link 1: https://youtu.be/eigDf_0EYT_w?t=1

Project Link 2: [\(10\) Video | Facebook](#)

Intermediate (F.Sc. Pre-Engineering)

Institution: Kips College [2012-2014]

Matriculation (Science Group)

Institution: Lahore Grammar School [2012-2014]

International Publications (Personal I.F: 40.601)

- **(1) Title:** Investigation optoelectronic and thermoelectric features of $ZnCrX_2$ ($x=S, Se, Te$) chalcopyrite semiconductor using mBJ potential
Authors: M. Qasim Shah, G. Murtaza, Maleeha Shafiq, Sadia Shreef, Nicola A Morlay
Published from: Chinese Journal of Physics
Impact Factor: 3.957
DOI: <https://doi.org/10.1016/j.cjph.2023.05.016>

- **(2) Title:** Effect of position occupancy of different elements on the structural stability, electronic, optical and thermoelectric properties of Cs_2CuAsX_6 (X: Cl, Br, I) halide double perovskite: DFT analysis
Authors: M. Qasim Shah, Maleeha Shafiq, Azhar Naeem, Ghulam Murtaza Ahmad Ayyaz, Ahmad Usman, Shabana Maher Deen, Mohamed A. El-Sheikh
Impact Factor: 4.1

- **(3) Title:** Innovative Design of Lead-Free Halide Double Perovskites Cs_2AgXF_6 (X=P, As, Sb) for Sustainable Energy Applications.
Authors: M. Qasim Shah, Azhar Naeem, Maleeha Shafiq, Azhar Naeem, Ghulam Murtaza
Journal: "International Journal of Energy Research "
Impact Factor: 4.6

(4) **Title:** Ab initio study of lead free double halide perovskite $X_2GeSnCl_6$ ($X= Na, K$) compounds for energy conversion system.

Authors: Maleeha Shafiq, Ghulam Murtaza, **M. Qasim Shah**, Hamid, Ahmad Ayyaz\

Journal: Arabian Journal of Science and Engineering

Impact Factor: 2.9

- (5) **Title:** Exploring Structural, thermodynamic, elastic, electro-optic, and thermoelectric characteristics of double perovskites Rb_2XInBr_6 ($X=Na, K$) for Photovoltaic applications: A DFT Approach.

Authors: Ahmad Ayyaz, Ghulam Murtaza, Ahmad Usman, Maleeha Shafiq, **M. Qasim Shah**

Published from: Solar Energy

Impact Factor: 7.2

DOI: <https://doi.org/10.1016/j.solener.2023.112131>

- (6) **Title:** First principles insight on mechanical stability, optical and thermoelectric response of novel lead-free $Rb_2ScCuBr_6$ and $Cs_2ScCuBr_6$ double perovskite.

Authors: Ahmad Ayyaz, Ghulam Murtaza, Ahmad Usman, **M. Qasim Shah**, Samia, Abid Mahmood

Published from: Material Science in Semiconductor Processing

Impact Factor: 4.644

DOI: <https://doi.org/10.1016/j.mssp.2023.107910>

- (7) **Title:** Structural, elastic, electronic, optical and thermoelectric properties of $XCrS_2$ ($X= Zn, Cd, Hg$) chalcopyrite semiconductor for photovoltaic application: First principles studies

Authors: Maleeha Shafiq, Ghulam Murtaza, **M. Qasim Shah**, Hamid, Ahmad Ayyaz

Published from: Optik

Impact Factor: 3.1

DOI: <https://doi.org/10.1016/j.ijleo.2023.171502>

- (8) **Title:** Pressure induced variations in the band structure, optical and mechanical properties of lead free double halides perovskites K_2CuAsX_6 ($X= Cl, Br$) A first principles calculations

Authors: Maleeha Shafiq, **M. Qasim Shah**, Ghulam Murtaza,

Published from: Inorganic Chem Communications

Impact Factor: 3.5

DOI: <https://doi.org/10.1016/j.inoche.2023.111262>

- **(9) Title:** Structural, morphological, elastic, optoelectronic and thermoelectric properties of lead-free double perovskite Na₂AgBiBr₆ for photovoltaic applications: Experimental and DFT insight
Authors: Ahmad Ayyaz, G. Murtaza, Ahmad Usman, **M.Qasim Shah**, Sarfraz Ali, N. Sfina^e, Muhammad Younas
Published from: Ceramics International
Impact Factor: 5.2
DOI: <https://doi.org/10.1016/j.ceramint.2024.02.002>

National Publication

- **(10) Title:** Artificial Intelligence based Approach to Analyze the Lie Detection using Skin and Facial Expression.
Authors: Hafiz Abdul Rahman, **M. Qasim Shah**, Faheem Qasim
Published from: Pakistan journal of Emerging sciences and Technologies PJEST
Impact Factor: 1.1 HEC Y-Category
DOI: [10.58619/pjest.v4i4.159](https://doi.org/10.58619/pjest.v4i4.159)

ACHIEVEMENTS AND AWARDS:

- Bs Project Hybrid Energy Operated Ventilator was appreciated by many Tv channels and media teams
- 2nd Position in MS Electrical Engineering PU Lahore
- 2nd Position in Photography NCA Lahore

DIGITAL SKILLS LANGUAGE SKILLS

- Command on WIEN2K software based on the DFT method
- Matlab, Simulink
- Microsoft office (Word, Excel, Powerpoint),
- XM Grace plotting software graphs.
- Origin plotting software graphs

COMPUTATIONAL LABORATORY SKILLS

- Materials simulation and synthesis DFT method.
- Study of structural, electronic, thermoelectric, optical, mechanical and ferromagnetic properties of Materials science within DFT by using WIEN2k code.

EXPERIMENTAL LABORATORY SKILLS

- Synthesis of the nanomaterials by solid-state method.

- Synthesis of the nanocrystal by solution processing method.

KEYSTRAIGHTS

- Good communication skills
- Enjoys problem-solving and approaches them analytically and methodically
- High motivation to learn new technologies/skills
- Spirit of innovation and creativity
- Good at the time and priority management
- Ability to work in a challenging and international environment with confident
- Ability to work independently and collaboratively in a highly interdisciplinary
- Good sense humor friendly
- Ability to manage multiple tasks

CONFERENCES AND SEMINARS

- “17th National Symposium on Frontiers in Physics” Dec 01-03, 2022 jointly organized by GC University Lahore and Pakistan Physical Society.
- “3rd annual international conference Advances in Material Sciences” Dec 15-16, 2022 jointly organized by the University of Education Lahore Pakistan.
- “International Biophysics Workshops Nanoscale Material and Biological Physics” March 20-21, 2023 jointly Organized by Syed Baber Ali School of Sciences and Engineering (SBASSE) Lahore University of Management Sciences Lahore Pakistan.

RECOMMENDATIONS

(1) Name: Dr Haider Aejaz (Chairmen)

Institution: Department of Electrical Engineering, GC University Lahore, Pakistan.

E-mail: haideraejaz@gcu.edu.pk

(2) Name: Dr Ghulam Murtaza (Associate Professor)

Institution: Centre for Advanced Studies in Physics (CASP), GC University, Lahore, Pakistan.

Email: gmrai@gcu.edu.pk