Curriculum Vitae

Dr. Sami Ullah
S/o
Sana Ullah

Personal Biodata

Passport ID : BZ2744303

Date of Birth : April 02, 1984

Nationality : Pakistani

Domicile : District Peshawar (Khyber Pakhtunkhwa)

Gender : Male

Marital Status : Married

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E-mail addresses: sami@alum.imr.ac.cn, sami_electronik@yahoo.com

Permanent address: Village & P/O Dalazak, Tehsil & District Peshawar, KP, Pakistan.

Current Address: Same as above.

Objective

Seeking a challenging and progressive career with an esteemed organization offering good future prospects and a professional working environment. I have strong motivation to pursue a career especially in topological semimetals, topological phonon, Metals , magnetic materials and Semiconductors by using first-principles calculation.

Academic carrier

- **Ph.D. (**Materials Science & Engineering) **March 2015 – November 2019**

Research Title:

The computational design of new topological semimetals WC-type MX family

Computational Materials Design Division, Institute of Metal Research, Chinese Academy of Sciences, 72 Wenhua Road, Shenyang 110016, China.

Curriculum Vitae

- **M.Phil. (**Electronics Design) **September 2009 - June 2011**

Research Title:

Measurement of rise and fall time in 2-D lateral position sensitive detector

Mid Sweden University, Sundsvall, Sweden

- **M.Sc. (**Electronics) **November 2004 - August 2006**
- **Research Title:**

Simulation and Implementation of Orthogonal Frequency Division Multiplexing (OFDM) using MATLAB 7.0 for Simulation

Institute of Physics and Electronics, University of Peshawar, Pakistan.

- **B.Sc. (**Electronic, Physics, Math-A**)** **October 2002 - October 2004**

Govt. Degree College Peshawar, Peshawar (University of Peshawar)

- **F.Sc** (Pre-Engineering) **September 2000 - September 2002**

Govt. Science superior Degree College, Peshawar (BISE Peshawar)

- **S.Sc (**Science**)** **March 1998 - March 2000**

Govt. High School, Main Gujar (BISE, Peshawar)

Courses studied during Ph.D. Coursework

1. Chinese course for international students
2. Chinese panorama
3. Materials Science and Engineering
4. Atomic and Electronic structure of solids
5. Optical Properties of Solids
6. Simulation Tools

Curriculum Vitae

Courses studied during M.Phil. Coursework

1. Measurement Systems
2. Sensor Devices
3. Applied Sensor Systems
4. Design of Wireless Sensor Networks
5. Project in Electronics Systems
6. Project in Sensor Systems

Title of M. Phil Dissertation

Measurement of rise and fall time in 2-D lateral position sensitive detector

Courses studied during master's Coursework

1. Digital Logic Design
2. Applied Mathematics
3. Solid State Electronic
4. Industrial Electronics
5. Analog Electronics
6. Laser and Fibre Optics
7. Electronics Communication
8. Control system and Information Theory
9. Data Communications, Computer network

Title of M.Sc Dissertation

Simulation and Implementation of Orthogonal Frequency Division Multiplexing (OFDM) using MATLAB 7.0 for Simulation

Research Publications

1. **S. Ullah,** L. Wang, J. Li, R. Li, X.-Q.Chen*. Structural , elastic , and electronic properties of topological semimetal WC-type MX family by first-principles calculation.***Chin. Phys.B.*** 28, 077105 (2019). ***(IF = 1.469)***

2. **(**J. Li, **S. Ullah) (Co-first author)**, R. Li, M. Liu, H. Cao, D. Li, Y. Li, X.-Q.Chen*. Topological massive Dirac fermions in β –tungsten. ***Phys. Rev. B***. 99, 165110 (2019). ***(IF = 3.737)***
3. (J. Li, Q. Xie, **S. Ullah**) **(Co-first author)**, R. Li, H. Ma, D. Li, Y. Li, X.-Q. Chen*. Coexistent three-component and two-component Weyl phonons in TiS, ZrSe, and HfTe. ***Phys. Rev. B***. 97,054305 (2018). ***(IF = 3.737)***
4. B. Hinterleitner, I. Knapp, M. Poneder, Y. Shi, Y. Kakefuda, N. Kawamoto, Q. Guo, T. Baba, T. Mori, **S. Ullah**, X.-Q.Chen, E. Bauer.Thermoelectric performance of a metastable thin film Heusler alloy. ***Nature*****,** 576, 85-90 (2019). ***IF = 43.07)***
5. Q. Xie, J. Li, **S. Ullah,** R. Li, L. Wang, D. Li, Y. Li, S. Yunoki, X.-Q.Chen*. Phononic Weyl points and one-way topologically protected nontrivial phononic surface arc states in noncentrosymmetric WC-type materials. ***Phys. Rev. B***. 99, 174306 (2019). ***(IF = 3.737)***
6. Z. Yu, X.-Q.Chen, X. Kang, Y. Xie, H. Zhu, S. Wang, **S. Ullah**, H. Ma, L. Wang, G. Liu*, X. Ma, H.M. Cheng. Noninvasively Modifying Band Structures of Wide-Bandgap Metal Oxides to Boost Photocatalytic Activity. ***Adv. Mater***. 30, 1706259 (2018). ***(IF = 25.809)***
7. J. Li, H. Ma, Q. Xie, S. Feng, **S. Ullah**, R. Li, J. Dong, D. Li, Y. Li, X.-Q.Chen*. Topological quantum catalyst: Dirac nodal line states and a potential electrocatalyst of hydrogen evolution in the TiSi family. ***Sci. China Mater***. 61, 23–29 (2018). ***(IF = 5.636)***
8. R. H. Li, Y. F. Xu, J. G. He, J. F. Zhao, **S. Ullah**, H. Zhao, T. T. Shang, J. X. Li, Y. P. Shi, J.-M. Liu, D. Z. Li, Y. Y. Li, Q. Z. Huang, L. Gu, J. M. Zhao, H. M. Weng, C. Q. Jin, C. Franchini and X.-Q. Chen*. Spontaneous ferroelectric distortion driven Weyl semimetal state in $HgPbO_3$. ***Nat. Commun. Under review***.
9. Z. Muhammad, Y. Li , **S. Ullah,** C. Wu, S. Chen, Z. Sun, and L. Song. Emergence of conduction band-induced semiconductor-to-metal transition in ZrSe2 through Hf substitution. ***ArXiv preprint arXiv****: 1812.00157* (2018).

10. Zahir Muhammad, Muhammad Usman **S. Ullah ,** Bo Zhang, Qixiao Lu, Rui Hu. Phononic, Optical and Thermal Properties of Quasi-Two Dimensional Layered Semimetal ZrTe2. ***Applied Surface Science Under review***.

11. Sajjad Ali and **S. Ullah** et al .The stability and catalytic performance of single-atom Au catalysts supported defected boron nitride towards acetylene hydrochlorination. ***Applied Surface Science Under review*.**

Fields of Interest

- Topological Semimetals
- Topological Phonons
- Electronic Properties
- Mechanical Properties
- Thermoelectric Properties
- Ferroelectric Polarization
- Magnetic Materials
- Computational Materials Science
- Unfolding Electronic Band Structure

Languages

1. English 2. Urdu 3. Pashto 4. Chinese

Conference, Seminar Attended

- 1st International Conference on Computational Design and Simulation of Materials, August 17-19, 2015, Shenyang, China.

- Chinese Materials Conference (Symposium Z Materials Simulation, Computation, and Design) July 6-12, 2017, Yinchuan, China.

- 1st International Conference on Modeling and Simulation of Emerging Materials, July 02-04, 2018, Abbottabad, KP, Pakistan.

- Speech on the topic, New Topological Semimetals Family by First-Principles Study, March 01, 2018, Abdul Wali Khan University Mardan, KP, Pakistan.

Research Skills

Professionally skilled to operate the **VASP, Gaussian, USPEX, Matlab, Origin, Grace, and Mindi** software proficiently.

Experience Profile

- Worked in Electronics Department lab Peshawar University KP, Pakistan (2004 to 2006).

- Working experience as **Lecturer** in Government Degree College Peshawar, KP, Pakistan. (2nd April 2007 to 27th August 2009).

- Working experience with ***Permobil AB Timrå*** company Communication for an Electric Wheel Chair CAN Bus Interface in Sweden (January 2010 to July 2010).

- Working experience with ***SiTek Electro Optics AB*** company on 1-D and 2-D duo lateral position-sensitive detectors (PSDs) in Sweden. (September 2010 to October 2011).
- Seven months experience as **Lecturer** in Government Degree College Peshawar, KP, Pakistan. (1st September 2012 to 30th March 2013).

- Six months' experience as **Lecturer** in Fast National University of Science & Technology, Peshawar, KP, Pakistan. (18th September 2013 to 18th February 2014).

- Worked as a **researcher** at Institute of Metal Research, Chinese Academy of Sciences, 72 Wenhua Road, Shenyang 110016, China. (March 2015-November 2019).

- Working as an **Assistant Professor** at New Neelab Institute of Science & Technology Pabbi, KPK, Pakistan. (2nd December 2019 to February 2021).

- Working as an **Assistant Professor** at Abasyn University Peshawar, KPK, Pakistan. (5th March 2021 to till date).

Extra Curricular Activities

1. Traveling 2. Games 3. Reading

References

Division Head Prof. Xing-Qiu.Chen

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Associate Professor at Mid Sweden University, Sundsvall, Sweden

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Dr. Rahat Ullah

Associate Professor at Institute of Optoelectronics, Nanjing University of Information science and Technology, China.

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