

## **Dr. Robina Ashraf (HEC Approved Supervisor)**

M.Sc. (Pb), M.Phil. (Pb), Ph.D. (Pb)

Assistant Professor (December 09<sup>th</sup>, 2021-To date)

Department of Physics,

GC Women University Sialkot, Pakistan.

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### **Objectives**

I am dedicated to advancing my skills and knowledge in both theoretical and experimental physics for driving innovation and advancing knowledge to positively impact society.

### **Qualification**

#### ▪ **Ph.D. (2018)**

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

#### ▪ **M.Phil. (2010)**

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

#### ▪ **M.Sc. (2008)**

Department of Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

### **Teaching and Research Experience**

#### ▪ **Assistant Professor** [December 09<sup>th</sup>, 2021-To date]

Department of Physics, Government College Women University, Sialkot, Pakistan.

#### ▪ **Lecturer** [February 08<sup>th</sup>, 2019- December 08<sup>th</sup>, 2021]

Department of Physics, Government College Women University, Sialkot, Pakistan.

#### ▪ **Lecturer** [March 20<sup>th</sup>, 2018-February 07<sup>th</sup>, 2019]

Department of Physics, Government College Women University, Sialkot, Pakistan.

#### ▪ **Lecturer/Research Associate** [February 06<sup>th</sup>, 2013 – March 19<sup>th</sup>, 2018]

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

#### ▪ **Sr. Research Assistant** [November 01<sup>st</sup>, 2011-February 05<sup>th</sup>, 2013]

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

#### ▪ **College Teacher Internee** [November 01<sup>st</sup>, 2010-April 30<sup>th</sup>, 2011]

Govt. Post Graduate College for Women, Sialkot, Pakistan.

#### ▪ **Research Assistant** [October 2009-August 2010]

Centre of Excellence in Solid State Physics, University of the Punjab, Quaid-i-Azam Campus, Lahore 54590, Pakistan.

## Administrative Experience

### 1. Assistant Superintendent [2011 - 2014]

Girls Hostel No.7, University of the Punjab, Lahore, Pakistan.

Active involvement as Assistant Superintendent (Mess and Member Purchase Committee of the hostel).

### 2. Coordinator Intermediate Section [June 28<sup>th</sup>, 2021- November 24<sup>th</sup>, 2022]

Intermediate Section, Govt. College Women University Sialkot.

### 3. Incharge Fatima Tul Zahra Hostel, GCWUS [October 15<sup>th</sup>, 2024- November 23<sup>th</sup>, 2024]

## Areas of Expertise/Skills

- Chemical lab handling
- Synthesis and Characterization of Nanostructures
- Theoretical investigations by DFT based softwares

## Research Fields

- Nanotechnology
- Sol-Gel
- Magnetic Nanostructures
- Density Functional Theory

## Awards and Distinctions

- Scholarship holder in B.Sc.
- Debater at school and college level.
- Received Travel Grant (~PKR 139,361/-) from Pakistan Science Society to Participate in 3rd International symposium on advanced Magnetic Materials and Applications (ISAMMA 2013) Taichung, Taiwan 21<sup>st</sup>-25<sup>th</sup> July 2013.
- First prize holder in poster session at “International Conference on Solid State Physics (ICSSP’13)”, <http://www.icssp13.org.pk/>, Lahore, Pakistan, December 1<sup>st</sup>-6<sup>th</sup>, 2013.
- First prize holder in poster session of Condensed Matter at “International Conference on Solid State Physics (ICSSP’19)”, <http://www.icssp19.org.pk/>, Lahore, Pakistan, December 08<sup>th</sup>-12<sup>th</sup>, 2019.
- Certified Microsoft Office Specialist
- 2<sup>nd</sup> position holder by attaining 94.7% marks in Online Teaching Level 1 course offered by National Academy of Higher education, Islamabad from 20<sup>th</sup> March 2021 to 10<sup>th</sup> April 2021.
- HEC Approved Supervisor
- Best Researcher Award as Young Researcher for the Year 2023, Department of Physics, Govt. College Women University Sialkot.

## Publications

Total Impact factor	[32.41]
Papers published in Impact Factor Journals	[14]
Papers published in HEC Recognized Non-Impact Factor Journals (Proceeding)	[03]

## **Publications with Impact Factor**

- 1. Structural and Magnetic Properties of Mn/Fe co-doped ZnO Thin Films Prepared by Sol-Gel Technique**, IEEE Transaction on Magnetism, 50, 2401204, (2014).  
**Authors:** R. Ashraf, U. Khan, M. Bashir, S. Riaz and S. Naseem I.F. 1.42
- 2. Microwave Assisted Iron Oxide Nanoparticles–Structural and Magnetic Properties**, IEEE Transaction on Magnetism, 50, 2201504 (2014).  
**Authors:** S. Riaz, R. Ashraf, A. Akbar and S. Naseem I.F. 1.42
- 3. Free Growth of Iron Oxide Nanostructures by Sol-Gel Spin Coating Technique – Structural and Magnetic Properties**, IEEE Transactions on Magnetism; 50, 2301805, (2014).  
**Authors:** S. Riaz, R. Ashraf, A. Akbar and S. Naseem I.F. 1.42
- 4. Magnetic and Magnetization Properties of Co-doped Fe<sub>2</sub>O<sub>3</sub> Thin Films**, IEEE Transactions on Magnetism, 50, 2201204, (2014).  
**Authors:** A. Akbar, S. Riaz, R. Ashraf and S. Naseem I.F. 1.42
- 5. Magnetic and Magnetization Properties of Iron Aluminum Oxide Thin Films Prepared by Sol-Gel**, IEEE Transactions on Magnetism, 50, 2201404, (2014).  
**Authors:** S. Riaz, M. Azam, R. Ashraf and S. Naseem I.F. 1.42
- 6. Magnetic and Magnetization Properties of Iron Oxide Thin Films by Microwave Assisted Sol-Gel Route**. Journal of Sol-Gel Science and Technology, 74 (2), 320-328, (2015).  
**Authors:** A. Akbar, S. Riaz, R. Ashraf, S. Naseem I.F. 1.66
- 7. Study of the structural and electronic properties of FeO at the LDA and GGA level**. Chinese Journal of Physics, 55(4) 1135-1141, (2017).  
**Authors:** R. Ashraf, T. Mahmood, S. Riaz and S. Naseem I.F. 0.514
- 8. DFT based investigations of BAWO<sub>4</sub>: Electronic and optical properties**. Physica B: Condensed Matter, 621, 413309 (2021).  
**Authors:** R. Ashraf, Z. Shehzadi, T. Mahmood, S. Naeem, N. Shehzadi, S. Iftikhar, Z. Parveen I.F. 2.436
- 9. A computational study of alkali (Na, K, Cs) incorporated methylammonium lead iodide perovskite**. Physica B: Condensed Matter, 672, 415469 (2023).  
**Authors:** R. Batool, T. Mahmood, R. Ashraf, S. Mahmood, A. A. Bhatti I.F. 2.8 (X)
- 10. Physical properties of different polymorphs of sulfur doped ZnO studied in the framework of first-principles approaches**. Materials Science and Engineering: B, 299, 116974 (2023).  
**Authors:** S. Shabbir, A. Shaari, R. Ahmed, B. Ul Haq, Se-Hun Kim, S. AlFaify, M. A. Javed, R. Ashraf. I.F. 3.6
- 11. DFT based study of copper calcium halide perovskite nanomaterials for optoelectronic and energy applications**. Results in Physics, 58, 107485 (2024).  
**Author:** S. Naseem, N. A. Noor, R. Ashraf, F. Alresheedi, M. Laraib, A. ur Rehman, S. Riaz. I.F. 5.3

**12. Magnetization response and magnetoelectric coupling of Mn-doped BiFeO<sub>3</sub> thin films–microwave-assisted sol–gel approach.** Journal of Materials Science: Materials in Electronics, 35(32), 2072 (2024)

**Author:** Waqar Azeem, Robina Ashraf, KM Batoo, Naveed Ahmad, Zohra N Kayani, Shahid Atiq, YB Xu, Shahzad Naseem, Saira Riaz I.F. 2.8

**13. Designing of new halide perovskite based on Rb & Be for advanced applications: DFT-calculations.** Ceramics International, 58, 107485 (2025).

**Author:** Shahzad Naseem, Robina Ashraf, Nidhal Drissi, Nadia Anwar, Muqarrab Ahmed, Dilbar Khan, Syed Ahmad Raza Zaidi, Naveed A. Noor, Muhammad Imran, Saira Riaz, Phuong V. Pham. I.F. 5.1

**14. First principles studies on structural, elastic, acoustic, and optoelectronic properties of hexagonal calcium oxide (CaO).** Canadian Journal of Physics, 00, 1-11 (2025)

**Author:** Maryam Tariq, Tariq Mahmood, Robina Ashraf, Imran Aslam, Muhammad Rizwan, Arbab Arif, Ch. Omer Javed, and Afshan Urooj I.F. 1.1

### **Papers Published in HEC Recognized Non-Impact Factor Journals**

1. **Effect of Calcination on properties of ZnO nanoparticles.** Materials Today: Proceedings, 2(10), 5468-5472, (2015) 2214-7853

**Authors:** R. Ashraf, S. Riaz, Z. N. Kayani and S. Naseem

2. **Structural and magnetic properties of iron doped ZnO nanoparticles.** Materials Today: Proceedings, 2(10), 5384–5389, (2015).

**Authors:** R. Ashraf, S. Riaz, Z. N. Kayani and S. Naseem

3. **Effect of pH on properties of ZnO nanoparticle.** Materials Today: Proceedings, 2(10), 5754–5759, (2015).

**Authors:** R. Ashraf, S. Riaz, S. S. Hussain and S. Naseem

### **Abstract Published in International Conference**

1. **Effect of calcination on structural and magnetic properties of Co doped ZnO nanostructure.** 2015 IEEE International Magnetism Conference (INTERMAG), Beijing, China, 2015, pp. 1-1, doi: 10.1109/INTMAG.2015.7157365.

**Authors:** M. Bashir, R. Ashraf, A. Akbar, S. Riaz and S. Naseem

### **International Conference Publications**

1. **Synthesis and Characterization of ZnO Nanoparticles,** World Congress on Advanced Nano, Biomechanics and Energy Research” held on 25th-28th August 2013, in Seoul, Korea, available online at [http://www.i-asem.org/publication\\_conf/anbre13/M5A.1.MS541\\_976F.pdf](http://www.i-asem.org/publication_conf/anbre13/M5A.1.MS541_976F.pdf).

**Authors:** R. Ashraf, S. Riaz, M. K. Rehman and S. Naseem

2. **Synthesis and Characterization of ZrO<sub>2</sub>-ZnO nanoparticles** “World Congress on Advanced Nano, Biomechanics and Energy Research” held on 25-28th august 2013, Seoul, Korea available online at [http://www.i-asem.org/publication\\_conf/anbre13/M5A.4.MS541\\_1028F.pdf](http://www.i-asem.org/publication_conf/anbre13/M5A.4.MS541_1028F.pdf).  
**Authors:** M. Bashir, S. Riaz, **R. Ashraf**, M. Imtiaz and S. Naseem.
4. **Structural, Electronic and Optical Properties of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup> 2014, BEXCO, Busan, Korea.  
**Authors:** **R. Ashraf**, S. Riaz and S. Naseem
5. **Study of Structural and Electronic Properties of Iron Oxide by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup>, 2014, BEXCO, Busan, Korea.  
**Authors:** **R. Ashraf**, S. Riaz, M. Akhtar, S. Naseem
6. **Theoretical Investigation of Effect of Cobalt doping on Properties of Iron Oxide by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup>, 2014, BEXCO, Busan, Korea.  
**Authors:** **R. Ashraf**, S. Riaz and S. Naseem

### **Papers Presented Nationally and Internationally**

1. **Synthesis and Characterization of ZnO Nanoparticles through Sol-Gel Route**, National Meeting on Nanotechnology Research in Pakistan, August 03<sup>rd</sup>, 2010, Lahore, Pakistan.  
**R. Ashraf**, S. Riaz and S. Naseem
2. **Structural and Magnetic Properties of Sol-Gel Synthesized Mn/Fe co-doped ZnO Thin Films**, International Symposium on Advanced Magnetic Materials and Applications, ISAMMA 2013, held on 21<sup>st</sup> -25<sup>th</sup> July 2013, Taichung, Taiwan.  
**R. Ashraf**, S. Riaz, U. Khan and S. Naseem
3. **Structural and Magnetic properties of Co doped ZnO nanoparticles**. World Congress on Advanced Nano, Biomechanics and Energy Research held on 25<sup>th</sup>-28<sup>th</sup> August 2013, Seoul Korea.  
**R. Ashraf**, S. Riaz, M. Bashir and S. Naseem
4. **Synthesis and characterization of ZrO<sub>2</sub>-ZnO Nanoparticles**, World Congress on Advanced Nano, Biomechanics and Energy Research held on 25<sup>th</sup>-28<sup>th</sup> August 2013, Seoul, Korea.  
M. Bashir, S. Riaz, **R. Ashraf**, M. Imtiaz and S. Naseem
5. **Synthesis and characterization of SnO<sub>2</sub> Nanoparticles for PV Applications**, World Congress on Advanced Nano, Biomechanics and Energy Research held on 25<sup>th</sup>-28<sup>th</sup> August 2013, Seoul, Korea.  
S. Riaz, A. Nairan, M. Bashir, **R. Ashraf** and S. Naseem
6. **Effect of pH on Structural and Magnetic Properties of ZnO nanoparticles**. World Congress on Advanced Nano, Biomechanics and Energy Research” held on 25<sup>th</sup>-28<sup>th</sup> august 2013, Seoul Korea.  
**R. Ashraf**, S. Riaz and S. Naseem

7. **Magnetic and Magnetization properties of Spin-deposited un-doped ZnO Nanowire Arrays**, Second International Conference on Advanced Complex Inorganic Nanomaterials 15<sup>th</sup>-19<sup>th</sup> July 2013 Namur, Belgium.  
S. Riaz, **R. Ashraf**, R. Noor and S. Naseem
8. **Fabrication and Characterization of Carbon Nanotube Based Back-Gated Field Effect Transistor (CNTFET)**. International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
M. Azam, **R. Ashraf**, M. Sulaiman, S. Riaz and S. Naseem
9. **Growth and Characterization of Carbon Nanofibers by PECVD**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf**, S. Riaz and S. Naseem
10. **Effect of Nanocatalyst on the Growth and Characterization of Carbon Nanostructures**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
M. Iqbal, **R. Ashraf**, M. A. Naseer, S. Riaz and S. Naseem
11. **DLC Formation and Characterization Using Plasma Enhanced CVD**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
M. Azam, A. Yar, **R. Ashraf**, S. Riaz and S. Naseem
12. **Hydrogenation Effect on Carbon Nanostructures for Electronic Device Applications**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf**, M. Tahir, N. Iqbal, S. Riaz and S. Naseem
13. **Fabrication and Characterization of Carbon Nanotubes Based Photosensor**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
S. Zaman, W. Azeem, **R. Ashraf**, S. Riaz and S. Naseem
14. **Structural and Magnetic Properties of Iron doped ZnO Nanoparticles**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf**, S. Riaz, Z. N. Kayani and S. Naseem
15. **Structural, Optical and Magnetic Properties of Al doped ZnO Thin Films by Sol-Gel Method**. International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf**, N. Ali, S. Riaz, Z. N. Kayani and S. Naseem
16. **Effect of Calcination on Structural and Magnetic Properties of Co doped ZnO Nanoparticles**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf**, S. Riaz, N. Ali and S. Naseem
17. **Effect of Calcination on Structural, Optical and Magnetic properties of ZnO Nanoparticles**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.



- R. Ashraf, S. Riaz, Z. N. Kayani, S. S. Hussain and S. Naseem**
18. **Structural and Magnetic Properties of Iron oxide Nanoparticles Coated Carbon Nanotubes**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**M. Azam, A. Habiba, R. Ashraf, S. Riaz and S. Naseem**
  19. **Effect of Transition Metal Doping on ZnO Thin Films**, International Conference on Solid State Physics (ICSSP'13), December 01<sup>st</sup>-06<sup>th</sup>, 2013, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, M. Bashir, U. Khan and S. Naseem**
  20. **Structural, Electronic and Optical Properties of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup> 2014, BEXCO, Busan, Korea.  
**R. Ashraf, S. Riaz and S. Naseem**
  21. **Theoretical Investigation of Effect of Cobalt doping on Properties of Iron Oxide by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup>, 2014, BEXCO, Busan, Korea.  
**R. Ashraf, S. Riaz and S. Naseem**
  22. **Study of Structural and Electronic Properties of Iron Oxide by ADF**, The 2014 World Congress on Advances in Civil, Environmental, and Materials Research, August 24<sup>th</sup>-28<sup>th</sup>, 2014, BEXCO, Busan, Korea.  
**R. Ashraf, S. Riaz, M. Akhtar, S. Naseem**
  23. **Effect of Calcination on Structural and Magnetic Properties of Co-doped ZnO nanostructures**, IEEE Magnetics Conference (INTERMAG), 11<sup>th</sup>-15<sup>th</sup> May 2015, Beijing, China.  
**M. Bashir, R. Ashraf, A. Akbar, S. Riaz, S. Naseem,**
  24. **DFT Analysis of Iron Oxide by using GGA and GGA+U Approach in ADF**, International Conférence on Solid State Physics (ICSSP'15) University of the Punjab, December 13<sup>th</sup>-17<sup>th</sup>, 2015, Lahore, Pakistan.  
**R. Ashraf, T. Mahmood, S. Riaz, S. Naseem**
  25. **Effect of Hubbard Potential on Electronic, Structural, Optical and Magnetic Properties of Hematite**, International Conférence on Solid State Physics (ICSSP'15) University of the Punjab, December 13<sup>th</sup>-17<sup>th</sup>, 2015, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, T. Mahmood, S. Naseem**
  26. **Investigation of Electronic, Optical and Magnetic Properties of Magnetite by using DFT+U Approach**, International Conférence on Solid State Physics (ICSSP'15) University of the Punjab, December 13<sup>th</sup>-17<sup>th</sup>, 2015, Lahore, Pakistan.  
**R. Ashraf, T. Mahmood, M. Azam, S. Riaz, S. Naseem**
  27. **Study of Electronic, Optical and Magnetic Properties of Maghemite by Density Functional Theory**, International Conférence on Solid State Physics (ICSSP'15) University of the Punjab, December 13<sup>th</sup>-17<sup>th</sup>, 2015, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, T. Mahmood, S. Naseem**
  28. **Comparison of Structural, Optical and Magnetic Properties of Iron Oxide by using GGA+U and LDA+U**, International Conférence on Solid State Physics (ICSSP'15), University of the Punjab, December 13<sup>th</sup>-17<sup>th</sup>, 2015, Lahore, Pakistan.

- R. Ashraf, M. Azam, T. Mahmood, S. Riaz, S. Naseem**
29. **Study of Structural and Electronic Properties of FeO at LDA and GGA Level**, One Day National Symposium on Modern Trends in Physics Research, Government College Women University Sialkot, May 11<sup>th</sup>, 2017, Sialkot, Pakistan.  
**R. Ashraf, T. Mahmood, S. Riaz and S. Naseem**
30. **Effect of Calcination on Structural, Optical, Dielectric and Magnetic Properties of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Nanoparticles**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, S. Atiq and S. Naseem**
31. **DFT Study of Structural and Electronic Properties of Maghemite at GGA level**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, T. Mahmood, S. Riaz and S. Naseem**
32. **Study of Structural and Electronic Properties of Magnetite by GGA+U**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**M. Nadeem, R. Ashraf, T. Mahmood, S. Riaz and S. Naseem**
33. **Optimization of Calcination Temperature for the Synthesis of Hematite Nanoparticles**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz and S. Naseem**
34. **Transformation of Maghemite to Hematite as an Effect of Calcination Temperature**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz and S. Naseem**
35. **Study of Structural and Electronic Properties of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> at GGA Level**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**M. Nadeem, R. Ashraf, T. Mahmood, S. Riaz and S. Naseem**
36. **Effect of Calcination Temperature on Structural, Optical and Magnetic Properties of Magnetite Nanoparticles**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, M. A. Raza and S. Naseem**
37. **Effect of Calcination Temperature on Structural, Magnetic, Dielectric and Optical Properties of stable Magnetite Nanoparticles**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, S. S. Hussain, S. Atiq and S. Naseem**
38. **Calcination Effect on Properties of stable Hematite Nanoparticles Synthesized by Sol-gel Method**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf, S. Riaz, M. A. Raza and S. Naseem**



39. **Synthesis of Fe<sub>3</sub>O<sub>4</sub> Nanoparticles by Sol-gel Method and Effect of Calcination Temperature on Their Properties**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf**, A. Raza, S. Riaz, M. A. Raza and S. Naseem
40. **Improved Magnetic Properties of Sol-Gel Synthesized Fe<sub>3</sub>O<sub>4</sub> Nanoparticles for BioMedical Applications**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf**, Z. H. Shah, Saira Riaz, S. S. Hussain and S. Naseem
41. **Synthesis of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> Nanoparticles by Sol-gel Technique and Effect of Calcination Temperature on Their Properties**, International Conference on Solid State Physics (ICSSP'17), University of the Punjab, December 10<sup>th</sup>-14<sup>th</sup>, 2017, Lahore, Pakistan.  
**R. Ashraf**, Saira Riaz and S. Naseem
42. **Effect of Surfactants and Calcination Temperature on the Magnetic Properties of Sol-Gel Synthesized Biocompatible Fe<sub>3</sub>O<sub>4</sub> Nanoparticles**, A Conference on Microbiology & Molecular Genetics (MMG), University of the Punjab, February 7<sup>th</sup>-9<sup>th</sup> 2018, Lahore, Pakistan  
**R Ashraf**, S. Riaz, Z Hussain Shah and S. Naseem
43. **DFT Investigation of Structural and Electronic Properties of Cadmium Dichalcogenide**, International Conference on Solid State Physics (ICSSP'19), University of the Punjab, December 08<sup>th</sup>-12<sup>th</sup>, 2019, Lahore, Pakistan.  
**R. Ashraf**, Saira Riaz and S. Naseem
44. **First Principle Calculations of Hematite, Magnetite and Maghemite Nanostructures**, International Conference on Solid State Physics (ICSSP'19), University of the Punjab, December 08<sup>th</sup>-12<sup>th</sup>, 2019, Lahore, Pakistan.  
**R. Ashraf**, Saira Riaz, Tariq Mahmood and S. Naseem
45. **DFT based Investigations of ZnWO<sub>4</sub>: Electronic and optical properties**, International Conference on Solid State Physics (ICSSP'21), University of the Punjab, February 21<sup>th</sup>-24<sup>th</sup>, 2022, Lahore, Pakistan.  
**R. Ashraf**, T. Mahmood, Saira Riaz and S. Naseem

#### **Workshops/Seminars/Conference Organized**

##### **Conferences Organized (National Level)**

- Member organizing committee of “One Day National Meeting on Nanotechnology Research in Pakistan” August 03<sup>rd</sup>, 2010.

##### **Conferences Organized (International Level)**

- Member organizing committee “International Conference on Solid State Physics (ICSSP'13)”, <http://www.icssp13.org.pk/>, Lahore, Pakistan, December 1<sup>st</sup>-6<sup>th</sup>, 2013.
- Member organizing committee “International Conference on Solid State Physics (ICSSP'17)”, <http://www.icssp17.org.pk/>, Lahore, Pakistan, December 10<sup>th</sup>-14<sup>th</sup>, 2017.
- Member organizing committee “International Conference on Solid State Physics (ICSSP'19)”, <http://www.icssp19.org.pk/>, Lahore, Pakistan, December 08<sup>th</sup>-12<sup>th</sup>, 2019.

#### **Conferences/Workshops/ Trainings attended**

### **International**

- The Pakistan Institute of Physics International Conference, (PIP) Lahore, 23<sup>rd</sup>-26<sup>th</sup> February 2009.
- 3rd International symposium on advanced Magnetic and Applications (ISAMMA 2013) Taichung, Taiwan 21<sup>st</sup>-25<sup>th</sup> July 2013.
- International Workshop on Radiotracers: Production Technology and Applications, COMSTECH, Islamabad, 21<sup>st</sup>-23<sup>rd</sup> October 2013.
- World Congress on Advanced Nano, Biomechanics and Energy Research” Seoul Korea 25<sup>th</sup>-28<sup>th</sup> August 2013.
- International Conference on Solid State Physics (ICSSP’13) University of the Punjab, Lahore, Pakistan, 1<sup>st</sup>-6<sup>th</sup>, December 2013.
- The 2014 World Congress on Advances in Civil, Environmental, and Materials Research BEXCO, Busan, Korea 24<sup>th</sup> – 28<sup>th</sup> August 2014.
- International Conference on Solid State Physics (ICSSP’15) University of the Punjab, Lahore, Pakistan, 13<sup>th</sup>-17<sup>th</sup>, December 2015.
- International Conference on Solid State Physics (ICSSP’17) University of the Punjab, Lahore, Pakistan, 10<sup>th</sup>-14<sup>th</sup>, December 2017.
- International Conference on Solid State Physics (ICSSP’19) University of the Punjab, Lahore, Pakistan, 8<sup>th</sup>-12<sup>th</sup>, December 2019.
- International Conference on Quality of Life, Education and Health 2019, University of Central Punjab, Lahore, Pakistan, 13<sup>th</sup> April 2019.
- Attended International Webinar on “Stress Management” organized by Psychological Well-being Centre, GC Women University, Sialkot on 18<sup>th</sup> June 2021 at 12:30pm.
- Attended all courses of IKCEST Training Programme —UASR Virtual Summer Courses 2021 themed on Frontiers in Materials Research, 30<sup>th</sup> July 2021.
- International Conference on Solid State Physics (ICSSP’21) University of the Punjab, Lahore, Pakistan, 21<sup>st</sup>-24<sup>th</sup>, February 2022.

### **National**

- National Meeting on Nanotechnology Research in Pakistan, Lahore, August 03<sup>rd</sup>, 2010.
- 6th Vacuum and Surface Science Conference of Asia and Australia (VASSCAA-6), Islamabad, October 9<sup>th</sup>-13<sup>th</sup>, 2012.
- One Day National Symposium on Modern Trends in Physics Research, Government College Women University Sialkot, Pakistan, May 11<sup>th</sup>, 2017.
- A Conference on Microbiology & Molecular Genetics, MMG University of the Punjab, Lahore, Pakistan, February 7<sup>th</sup>-9<sup>th</sup>, 2018.
- Two day’s workshop “Two days Scientific Research Training Workshop” Centre of Excellence in Solid State Physics, University of the Punjab, Lahore, Pakistan, June 27<sup>th</sup>-28<sup>th</sup>, 2018.
- One day training program on “Academic Programs and Teaching: Innovate to Lead” at GC Women University Sialkot, March 02<sup>nd</sup>, 2019.
- One day training on “Digital Library” GC Women University Sialkot, April 26<sup>th</sup>, 2019.
- Community Basic Life Support & Fire Safety Orientation Course” conducted by Punjab Emergency Services, at GC Women University Sialkot, 15<sup>th</sup> May 2019 to 16<sup>th</sup> May 2019.

- Three days training on ‘How to Conduct Online Classes’, GC Women University Sialkot, 21<sup>st</sup>-23<sup>rd</sup> April 2020.
- NBEAC online training: “Effective Distance Learning in COVID-19 Lock Down, 04<sup>th</sup> May 2020.
- Attended “Five-day online Faculty Orientation Training Workshop”, conducted by Punjab Higher Education Commission (PHEC), on September 28<sup>th</sup> to October 02<sup>nd</sup>, 2020.
- Attended Online Teaching Level 1 course offered by National academy of Higher education, Islamabad from 20<sup>th</sup> March 2021 to 10<sup>th</sup> April 2021 and won 2<sup>nd</sup> position by attaining 94.7% marks.
- Attended Professional Development of Faculty 2022, organized by HEC at GCWUS, Sialkot on June 20<sup>th</sup>-July 2<sup>nd</sup>, 2022.
- Attended Training on FTIR organized by GCWUS held at Central Research Lab, GCWUS on 10<sup>th</sup> August 2022.
- Attended Training on AAS organized by GCWUS held at Central Research Lab, GCWUS on 23<sup>rd</sup> November 2022.
- Attended Information Literacy sessions held on 24<sup>th</sup> November 2022 at Govt. College Women University Sialkot.
- Attended one day seminar entitled “Research and Publication Ethics in Science” held on November 07<sup>th</sup>, 2023 organized by Department of Botany, GC Women University, Sialkot.
- Participated in two-day training on safeguarding academic Integrity Mastering Intellectual Property Rights conducted by Punjab Higher Education Commission (PHEC) at Veterinary Academy, University of Veterinary & Animal Sciences (UVAS), Lahore on April 25<sup>th</sup> to April 26<sup>th</sup>, 2024.
- Participated in Hands-on Workshop on Patent Writing/Drafting and Submission conducted by Punjab Higher Education Commission (PHEC) at Veterinary Academy, University of Veterinary & Animal Sciences (UVAS), Lahore on September 12<sup>th</sup> to September 13<sup>th</sup>, 2024.

#### **Additional Professional Responsibilities**

- Member BS, MSc, MS/MPhil and PhD Admission Committee, Department of Physics, GC Women University Sialkot.
- Member Admission committee (MS/PhD) Centre of Excellence in Solid State Physics, University of the Punjab, Lahore.
- Member Stock Checking Committee in Department of Physics, GC Women University Sialkot.
- Summer semester 2018 coordinator in Department of Physics, GC Women University Sialkot.
- Mechanics Lab in-charge in Department of Physics, GC Women University Sialkot.
- Timetable in charge in Department of Physics, GC Women University Sialkot from March 2018 to April 2021.
- Semester coordinator (2017-2021) in Department of Physics, GC Women University Sialkot.
- In-charge Physics society in Department of Physics, GC Women University Sialkot.

- Member Program Team of QEC for preparation of Self-Assessment Report, GC Women University Sialkot.
- Internal Member for Board of Studies of Department of Physics, GC Women University Sialkot 2020-2023.
- Member/ Secretary Departmental Research Committee (DPRC), Department of Physics, GC Women University Sialkot.
- Coordinator, Intermediate Section, GC Women University Sialkot.
- Resident Inspector in BISE Gujranwala Exams 2021.
- Convener, Intermediate Admission Committee 2021, GC Women University Sialkot.
- Convener, Intermediate Admission Committee 2022, GC Women University Sialkot.
- Member, Central Admission Committee 2021, GC Women University Sialkot.
- Member, Central Admission Committee 2022, GC Women University Sialkot.
- Member/Secretary Venue Committee, GC Women University Sialkot.
- Focal Person LMS, department of Physics, GC Women University Sialkot.
- Focal Person/ Incharge Alumni Association, Department of Physics, GC Women University Sialkot.
- Member University Sports Committee 2021, GC Women University Sialkot.
- Departmental Focal person/Coordinator BS and MSc Programs, GC Women University Sialkot.
- Member University Sports Committee 2021, GC Women University Sialkot.
- Member MS/PhD Physics Admission Committee, GC Women University Sialkot.
- Member, pre-ISAC committee for Ehsaas Interview, GC Women University Sialkot.
- Member Book Fair Committee, GC Women University Sialkot
- Member Science Fair Committee, GC Women University Sialkot
- Chair/member Refreshment Committee, Book Fair, GC Women University Sialkot
- Member, Sports Committee for 5<sup>th</sup> Annual Sports Gala 2022, GC Women University Sialkot.
- Member, University Sports Committee for conduction of one day sports activity, GC Women University Sialkot.
- Member Departmental Self-Assessment Report Committee, GC Women University Sialkot.
- Member, Hospitality/Refreshment Management Committee, 4<sup>th</sup> Convocation 2023, GC Women University Sialkot.
- External Examiner for MS/PhD admission interviews, Centre of excellence in Solid State Physics, University of the Punjab, Lahore 5<sup>th</sup>-7<sup>th</sup> September 2023.
- Member, Hospitality/Refreshment Management Committee, 5<sup>th</sup> Convocation 2024, GC Women University Sialkot.
- ITSC Coordinator, Department of Physics, GC Women University Sialkot.
- Member QEC Team, Department of Physics, GC Women University Sialkot.
- Refreshment committee member, Department of Physics, GC Women University Sialkot.
- Convener/Focal Person, BS Physics Admission Committee 2024, GC Women University Sialkot.
- Departmental Focal person for annual report and prospectus 2025, GC Women University Sialkot.

- Member, Procession and Robe Committee, 6<sup>th</sup> Convocation 2025, GC Women University Sialkot.
- Member, Hospitality/Refreshment Management Committee, 6<sup>th</sup> Convocation 2025, GC Women University Sialkot.

**External Examiner for Viva Voce exam of MS/MPhil Thesis**

- Centre of Excellence in Solid State Physics, University of the Punjab, Lahore for the years 2019, 2020, 2021, 2022, 2023 and 2024.
- Department of Physics, University of Sialkot, Sialkot for the years of 2023 and 2024.

**Reviewer**

- Materials Research Express
- International Journal of Energy Research

**Thesis Supervised****MS/Mphil****Supervisor****Completed [16]**

1. Zainib Shehzadi	2018-20	Theoretical study of electronic and optical properties of ZnWO <sub>4</sub> and BaWO <sub>4</sub>
2. Suheera Saeed	2019-21	DFT Based structural, Optical, and electronic properties of Ruthenium Dioxide (RuO <sub>2</sub> )
3. Faiza Imran	2019-21	Theoretical studies of Iron chromite (FeCr <sub>2</sub> O <sub>4</sub> )
4. Mehr u Nisa	2019-21	DFT studies of Structural optical and electronic properties of Zirconia
5. Iqra Nisar	2019-21	Theoretical Investigations of optical properties of magnetic (Fe <sub>3</sub> O <sub>4</sub> )
6. Ghulam Zahra	2019-21	Theoretical Investigations of graphene like Iron Oxide (g-FeO)
7. Saleh Asif	2020-22	DFT Based Study of Electronic, Optical and Elastic Properties of Cubic Cadmium Sulfide (c-CdS)
8. Noreen Shehzadi	2020-22	Theoretical Study of Structural, Electronic and Optical Properties of Beryllium Sulfide (BeS)
9. Komal Naz	2021-23	Structural, Electronic and Optical Properties of Aluminum Antimonide: A density Functional Theory based Study
10. Aima Kalsoom	2021-23	Structural and Optical Properties of Cerium Dioxide (CeO <sub>2</sub> ) by Green Synthesis Method
11. Fatima Rabbani	2021-23	Theoretical Investigation of Structural, Optical, Electronic and Elastic Properties of Boron Nitride (BN)
12. Mahnoor Cheema	2021-23	Density Functional Theory (DFT) Based Study of Structural, Electronic, Optical and Elastic Properties of Indium Phosphide
13. Tanziha	2021-23	Synthesis and Characterization of Selenium Nanoparticles by Biogenic Route
14. Sana Afzal	2022-24	Experimental Investigations of Mexenes (Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> ) Synthesized by Etching Method
15. Hafsa Saeed	2022-24	Electronic and Optical Properties of Mexene (Sc <sub>4</sub> C <sub>3</sub> ): A

- |                   |         |                                                                                                                                               |
|-------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 16. Sadia Hussain | 2022-24 | Density Functional Theory based Study<br>Synthesis and Characterization of ZnO/Ti <sub>3</sub> C <sub>2</sub> Composite<br>by Chemical Method |
|-------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|

**Ongoing [03]**

- |                 |                   |                                                                                                                                      |
|-----------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1. Ayesha Fiaz  | 2023-25           | Synthesis And Characterization of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> (Mxene)<br>Co-Catalyst via Chemical Method           |
| 2. Jaweria      | 2023-25           | Role Of 2D Materials to Improve Photocatalytic<br>Performance of Bi <sub>2</sub> O <sub>3</sub> Semiconductor for Dye<br>Degradation |
| 3. Saba         | 2023-25           | Effect of Ti <sub>3</sub> C <sub>2</sub> T <sub>x</sub> on Visible Light Driven CeO <sub>2</sub> for<br>Photocatalytic Application   |
| 4. Nimra Fatima | 2024-26<br>Spring | Curcuma Longa-Mediated Green Synthesis of ZnO<br>Nanostructures for sensing applications                                             |
| 5. Saadia       | 2024-26<br>Spring | Synthesis and Characterization of CuFe <sub>2</sub> O <sub>4</sub> by Biogenic<br>Method for sensing applications                    |

**Co-Supervisor  
Completed [08]**

- |                          |         |                                                                                                                           |
|--------------------------|---------|---------------------------------------------------------------------------------------------------------------------------|
| 1. Maryam Tariq          | 2016-18 | First principle calculation of Electronic and optical<br>properties of Graphene like SiO (G-SiO)                          |
| 2. Ayesha Liaqat         | 2017-19 | Optical, Elastic and Electronic Properties of Molybdenum<br>Disulfide MoS <sub>2</sub> by using Density Functional Theory |
| 3. Aneela Fardous        | 2017-19 | Electronic, Optical and Elastic Properties of MoSe <sub>2</sub> by<br>using Density Functional Theory                     |
| 4. Hafiza Sadia<br>Ayyub | 2018-20 | Synthesis and Characterization of Zinc Tungstate<br>(ZnWO <sub>4</sub> ) by Solvo Hydrothermal Method                     |
| 5. Ayesha Bibi           | 2019-21 | Theoretical study of electronic & optical properties of<br>Silicon Carbide by using first principle methods               |
| 6. Taiba Shahid          | 2019-21 | DFT Based studies of electronic and optical properties of<br>Niobium Dioxide (NbO <sub>2</sub> )                          |
| 7. Ume Habiba            | 2019-21 | Theoretical studies of electronic and optical properties of<br>Nickel Ferrites (NiFe <sub>2</sub> O <sub>4</sub> )        |
| 8. Rida Fatima           | 2019-21 | Electronic, elastic, and optical properties of Iron oxide<br>(Fe <sub>2</sub> O <sub>3</sub> ) by DFT study               |

**PhD  
Co-Supervisor  
Ongoing [02]**

- |                 |         |                                                                               |
|-----------------|---------|-------------------------------------------------------------------------------|
| 1. Arbab Arif   | 2019-22 | Theoretical Studies of Bi <sub>12</sub> MO <sub>20</sub> Sillenites Compounds |
| 2. Maryam Tariq | 2019-22 | First Principal Study of Graphene Like Metal Oxides (G-<br>MO)                |

**Supervisor**



**Ongoing [03]**

1. Habiba Kiran 2021-24 Synthesis and Characterization of Mxenes Nanostructures for the Efficient Photocatalytic Applications
2. Taiba Shahid 2021-24 Theoretical Calculations of Alkaline Earth Metals Doped Transition Metal Sulphides
3. Saleh Asif 2022-25 Synthesis and Characterization of Mxenes ( $Ti_3C_2T_x$ ) for Sensing Application

**Completed Projects at GC Women University Sialkot****Projects of BS and MSc**

Sr. No.	Student's Name	Project Title	Year	Program
1.	Summeya Akram	Synthesis Techniques of Hematite and Meghamite Nanoparticles- A Review	2018-20	MSc
2.	Chanda Kiran			
3.	Hira Nazir			
4.	Abida Naseer			
5.	Iqra sanaullah			
6.	Rabia Ahmed			
7.	Amna Inam			
8.	Hafsa Malik			
9.	Kaynat Baig	Synthesis Techniques for Magnetite Nano Particles: A Review	2016-20	BS
10.	Maria Khan			
11.	Ifra Bibi			
12.	Tehreem Sabir			
13.	Alishba			
14.	Tahira Begum			
15.	Nimra Mir	Magnetic Properties of Iron Oxide Nanoparticles- A Review	2016-20	BS
16.	Sidra Bibi			
17.	Tania Arif			
18.	Asma Rasheed			
19.	Seemab Shafaq			
20.	Sumbal Sardar			
21.	Amina Tariq	Bio-Medical Applications of Iron Oxide Nano-Structures - A Review	2016-20	BS
22.	Misbah Javaid			
23.	Shafaq Amjad			
24.	Sitara Nawaz			
25.	Rameen Tabassum			
26.	Maria Ansar			
27.	Aqsa Nazar	Synthesis Techniques of Hematite and Maghemite Nanoparticles- A Review	2018-20	MSc
28.	Anam Shehzadi			
29.	Rabia			
30.	Rabia			
31.	Omama			
32.	Ume Shifa			

33.	Asma Bibi			
34.	Talha Rehman			
35.	Shaista Mushtaq	A Review of wearable	2017-21	BS
36.	Saira Arshad	organic solar cells		
37.	Amna Shafiq			
38.	Anam Shahzadi			
39.	Faiza Iqbal			
40.	Amina Tahir			
41.	Maha Jabeen	A Review of Synthesis and	2017-21	BS
42.	Maryam Nawaz	Characterization of		
43.	Ayesha Jamshaid	Zirconium (Metals, Alloys		
44.	Faiza Tariq	and Oxides)		
45.	Rabia Boota			
46.	Sana Majeed			
47.	Fasiha Arif	A Review of Gold	2017-21	BS
48.	Iqra	Nanoparticles in Anti-		
49.	Mahnoor	Cancer Treatment		
50.	Sana Fatima			
51.	Hafiza Tuba Kainat			
52.	Maryam Fayyaz			
53.	Ayesha Shah Nawaz	A Review on Capacitive	2017-21	BS
54.	Anmol Zafar	Touch Sensor		
55.	Noshaba Saleem			
56.	Nisha Mursaleen			
57.	Arooj Rasheed			
58.	Nimra Ghafoor			
59.	Sidra Tul Muntiha Malik	A review on anticancer	2017-21	BS
60.	Mahnoor Cheema	treatment using graphene		
61.	Tanzeela	oxide nanoparticles		
62.	Anzeela Asghar			
63.	Ayesha Ashraf			
64.	Fatima Rabbani			
65.	Nayab Akhtar	Permanent Magnet	2018-22	BS
66.	Ammara Kulsoom Al Majeedi	Generator		
67.	Amna Javed			
68.	Nabah	Treatment of Lung Cancer	2018-22	BS
69.	Rimsha Naheed	Using Cobalt Nanoparticles		
70.	Eman Fatima			
71.	Mehak Shabbir Mughal	A Review of Synthesis and	2018-22	BS
72.	Maryam Bibi	Characterization of		
73.	Insharah Asif	Zirconium Metal		
74.	Amina Jamil	A Review of Application of	2018-22	BS
75.	Mahnoor Shahbaz	Zinc Oxide and their		

76.	Huda Riaz	Antibacterial Activity		
77.	Khizra Tahir	A Review of the Study of	2018-22	BS
78.	Ramsha Khadim	Green Synthesis of Titanium		
79.	Zarob Shabbir	Dioxide Using Leaf Extract		
80.	Aqsa Rani	Thermal Heat Sensors	2018-22	BS
81.	Aima Shafique			
82.	Iqra			
83.	Nargis Nadeem	Review of Study of Effect of	2018-22	BS
84.	Rubab Fatima	Doping on Structure of		
85.	Zummar Shakeel	Titanium Dioxide		
86.	Esha Kanwal	A Review on Application of	2018-22	BS
87.	Sahar Liaqat	Titanium Dioxide in		
88.	Rimsha Abdul Islam	Cosmetic		
89.	Maryam Shehzadi	A Review of Synthesis and	2018-22	BS
90.	Sehar Riaz	Characterization of Gold		
91.	Fariha butt	Nanoparticles		
92.	Fatima Pakeeza Kiran	Cancer Treatment Using	2018-22	BS
93.	Sundas	Super Paramagnetic Iron		
94.	Mubarrah Shabir	Oxide Nanoparticles		
95.	Maria Hussain	A Review on Spinel's	2018-22	BS
96.	Shahrukh Shoukat			
97.	Rukhma Malik			
98.	Faryal Jamil	Theoretical Study of	2019-23	BS
99.	Kinza	Magnesium Ion Based		
100.	Fatima Abbas	Batteries: A Review		
101.	Hamna Jamil	Nanotechnology for water	2019-23	BS
102.	Jawaria Ijaz	purification		
103.	Tanir Jamil			
104.	Anaya Noor	Transition Metal Type	2019-23	BS
105.	Noreen Bibi	Sulphide-A Review		
106.	Kainat Shehzadi			
107.	Amina Shahzadi	Removal of Water	2019-23	BS
108.	Eman Tijala	Contaminant Arsenic using		
109.	Momna Sundas	Iron Oxide Nanoparticles: A		
		Review		
110.	Ishna	Applications of Iron Oxide	2019-23	BS
111.	Hadia Spall	Nanoparticles for		
112.	Ammara	Magnetic Resonance		
		Imaging-A Review		
113.	Zainab Mohsin	Antibacterial Activity of	2019-23	BS
114.	Masooma Batool	ZnO Nanoparticles: A		
115.	Afshan	Review		
116.	Zartash Javed	Iron Based Soft Magnetic	2019-23	BS

117. Razia Zulfiqar Ali	Alloys: A Review		
118. Fizza Shafique			
119. Shanzey Fatima	Analysis of Biodegradable	2019-23	BS
120. Nimra Zahid	Plastic, Their Uses and		
121. Maria Sarfraz	Impact		
122. Rimsha bibi	Synthesis and	2019-23	BS
123. Laiba	Characteristics of TiO <sub>2</sub>		
124. Iqra Razzaq	Nanoparticle by Sol- Gel		
	Technique		
125. Nadia Qaisar	Nano Silica in Concrete: A	2019-23	BS
126. Sana Arif	Review		
127. Nisar Fatima			
128. Nasreen Akhtar	Applications of Mxenes for	2020-24	BS
129. Aleesha Imtiaz	Energy Production		
130. Zoya Tabassum			
131. Eman Fatima	Applications of Mxenes as	2020-24	BS
132. Amna Bibi	Supercapacitor		
133. Ayesha Sadaf			
134. Syeda Zulqaf Fatima	Photocatalytic degradation	2020-24	BS
135. Mahnoor Fatima	of Dyes by Mxenes		
136. Saniea Shehzad			
137. Isma	Synthesis of ZnO	2020-24	BS
138. Jaweria Nawaz	nanostructures by Curcuma		
139. Benish	longa (turmeric)		
140. Shehzadi Nimra Bilal	A review on Composites of	2020-24	BS
141. Ammarah Bibi	Mxenes		
142. Iqra			
143. Syeda Qudrat Abbas	Synthesis of Mxenes by	2020-24	BS
144. Alishba Shehzadi	etching Method		
145. Hafsa Rani			
146. Areeba Nawaz	A review on Green synthesis	2021-25	BS
147. Bisma Asif	of CuFe <sub>2</sub> O <sub>4</sub>		
148. Maida Tabassum			
149. Hamna Faryad	A review on Green synthesis	2021-25	BS
150. Ifra Amanullah	of Bi <sub>2</sub> O <sub>3</sub>		
151. Anfal Bibi			
152. Amna Naveed	A review on Green synthesis	2021-25	BS
153. Ayesha Rauf	of CeO <sub>2</sub>		
154. Neha Shahzadi			
155. Kubra Sajjad	A review of sensing	2021-25	BS
156. Malaika Naeem	applications of Mxenes		
157. Rabia Sajjad			
158. Arooj Fatima	Applications of Mxenes For	2021-25	BS

159. Maria Sultan wastewater treatment  
160. Noor-ul- Ain

### **Languages**

- English
- Urdu
- Punjabi

### **Professional Membership**

- Life-Time Member, Society for Solid State Physics
- Member, Material Science Society, Pakistan
- Council Member, Organization for Women in Sciences Pakistan (OWSP) for 2024-2025

### **Countries visited**

- Dubai
- Taiwan
- Korea
- China

### **References**

1. Prof. Dr. Shahzad Naseem  
(Professor Emeritus, HEC Distinguished National Professor)  
Ex-Director,  
Centre of Excellence in Solid State Physics,  
University of Punjab, Quaid-e-Azam Campus,  
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2. Prof. Dr. Saira Riaz  
Director,  
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3. Prof. Dr. Tariq Mahmood  
(Incharge, Faculty of Natural Sciences)  
Chairperson  
Department of Physics,  
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