

CURRICULUM VITAE

Dr. NASEEB AHMAD (HEC Approved Supervisor)

A researcher with expertise in the processing and characterization of metallic materials using advanced techniques. Experienced in metallography and comprehensive materials analysis, including scanning electron microscopy, X-ray diffraction, and mechanical testing. Skilled in experimental design, data analysis, and interpreting microstructure-property correlation. Possesses the ability to work both independently and collaboratively. Committed to advancing metallic materials for structural and energy applications.

Personal Information

- **Passport Number:** VY1153082
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- **Mailing/Office address:** Department of Physics, Baba Guru Nanak University, Nankana Sahib-39100, Pakistan
- **Permanent address:** House no. 82, Rana Street, Village Farooqabad, Tehsil and District Sheikhpura, Punjab, Pakistan

Education

- **PhD (Physics)**, 2015
Title: A STUDY OF THE STRUCTURE AND PHYSICAL PROPERTIES OF TERNARY Cu-M-Pd (M= Fe and Ni) ALLOYS
- **M. Phil. (Physics)**, 2010
Title: THE INFLUENCE OF TERNARY ADDITION OF SOME TRANSITION METALS ON THE ATOMIC ORDERING BEHAVIOR OF CuZn AND CoTi ALLOYS
- **Master of Science, M.Sc. (Physics)**, 2000
- **Master of Education M.Ed. (Sc. Ed.)**, 2004

Teaching/Research Experience

- **Chairperson / Associate Professor**, Department of Physics, Baba Guru Nanak University, Nankana Sahib, Pakistan (July 2024 to date)
- Assistant Professor, Institute of Physics, Khawaja Fareed University of Engineering and Information Technology, Abu Dhabi Road Rahim Yar Khan (July 2017 to July 2024).
- Assistant Professor, Department of physics, GC University, Faisalabad (April 2016 to June 2017)

- Visiting Researcher, Institute of Materials Science, **University of Tsukuba, Japan**
(June, 2011 to December, 2011)

Research Interests & Expertise

- To produce unique alloys (ordered alloys and high entropy alloys) and control of composition using alloy phase diagrams
- To produce metal and alloy powders through electrochemical deposition and chemical reduction methods
- To prepare alloy ingots using Arc-melter
- In metallography including Cold Rolling, Cutting, Grinding, Polishing and Glass Sealing of Metals and Alloys
- To index and identify crystalline phases from X-ray diffraction (XRD) data using the standard procedure described by B. D. Cullity
- To determine and analyze the phase changes in the samples from Differential Scanning Calorimeter data
- To improve strength, hardness, and durability of metallic materials using Vickers Hardness Testing Machine with a diamond indenter
- Green synthesis of nanoparticles (Doped and composites)

Teaching Interests

- Atomic and Molecular Physics
- Nuclear Physics
- Modern Physics
- Electrodynamics/Electricity and Magnetism
- Solid State Physics
- Structure and Properties of Materials
- X-Ray and Electron Diffraction
- Materials Science
- Quantum Mechanics
- Classical Mechanics/Mechanics
- Relativity and Cosmology
- Electronics/Digital Logic Design
- Mathematical Methods of Physics
- Heat and Thermodynamics

Research Project Won

- Project titled “*Preparation and Characterization of Non-Toxic Ni-Ti-Al Shape Memory Alloys for Biomedical Applications*” under National Research Program for Universities (NRPU) (10.5 million PKR), Funded by the Higher Education Commission of Pakistan, 2022.
- Project titled “*Fabrication of Exchange-Coupled Magnetic Nanocomposites for Energy Conversion Applications*” under (NRPU) (13.3 million PKR), Funded by the Higher Education Commission of Pakistan, 2022.
- Project titled “*Preparation and Characterization of Some New Environment Friendly Lead-Free Solders*” under Start-up Research Grant Program (SRGP) (0.5 million PKR), Funded by the Higher Education Commission of Pakistan, 2016-17.

Research Student Supervised

- More than 20 research students including MS and PhD students are supervised.

List of International Research Publications

1. *Investigation of the photocatalytic potential of CuFe₂O₄ embedded on a g-C₃N₄ nanosheet toward malachite green (MG) dye*, Manal F. Abou Taleb, Mohamed M. Ibrahim, Hafiz Muhammad Tahir Farid, Salma Aman, Naseeb, Ahmad and Zeinhom M. El-Bahy, Journal of Taibah University for Science 19 1, 2480843 (2025).
DOI: [10.1080/16583655.2025.2480843](https://doi.org/10.1080/16583655.2025.2480843)
2. *Hydrothermally developed spinel bimetallic oxide SrCr₂O₄ particles rationally linked with conductive PANI for supercapacitor*, Muhammad Hassnain Abid, B. M. Alotaibi, Ahmed Hussain Jawhari, Haifa A. Alyousef Albandari, W. Alrowaily, Muhammad Faizan and Naseeb Ahmad, Journal of the Australian Ceramic Society (2025).
DOI: [10.1007/s41779-025-01275-z](https://doi.org/10.1007/s41779-025-01275-z)
3. *The Improvement in Ordered Phase Transformation Temperature of Cu₇₅Fe₀₅Pd₂₀ Alloy for Advanced Engineering Applications*, Amer Bashir ziya, Shabbar Atiq, Muawya Elhadi and **Naseeb Ahmad**, Phys. Solid State 65, 66-71 (2023).
DOI: <https://doi.org/10.1134/S1063783423600164>
4. *Atomic Ordering Behavior of CoTi Alloy with Addition of Transition Metals*, Abid Hussain, Amer Bashir Ziya, Shabbar Atiq, Muhammad Saleem, Mahtab Ullah, Sajjad Ahmad and

Naseeb Ahmad, Journal of Archives of Materials Science and Engineering, 66 425-430 (2021). DOI: <https://10.24425/amm.2021.135874>

5. *Enhancement in Properties of Silver doped Fe-Ni Invar Nano-alloys Synthesized by Chemical Reduction Method*, Zaheer-ul-Hassan, Tariq Munir, **Naseeb Ahmad**, Meshal Alzaid, Hussein Alrobei, Muhammad Bilal Tahir, Abid Hussain, Jalil ur Rehman and Abdul Ghafar Wattoo, Journal of Superconductivity and Novel Magnetism, **34** 1-6 (2021). DOI: <https://10.1007/s10948-021-06026-2>
6. *Influence of Fe on Microstructure and Physical Properties of $Cu_{90-x}Fe_xPd_{10}$ Ternary Alloys with $x = 5, 10, 15,$ and 20* , M. Riaz, **Naseeb Ahmad**, A. Rasheed, M. Khalid, Journal of Physics of Solid State, 62 592-596 (2020). DOI: 10.1134/S1063783420040198
7. *Effect of Pd concentration on the structure and physical properties of $Ag_{100-x}Pd_x$ ($x = 40, 50$ and 60 at. %) alloys*, **Naseeb Ahmad**, Sikkendar Hayat, Amer Bashir Ziya and Farooq Bashir, Journal of Physics of Solid State, 62 1 45-58 (2020). DOI: 10.1134/S1063783420010126
8. *A Study of Thermal Properties of $Au_{25}Pd_{75}$ Alloy using X-ray Diffraction*, Amer Bashir Ziya, Aziz Ahmad, Sijjad Ahmad Khan and **Naseeb Ahmad**, Journal of The Physics of Metals and metallography, 120, 844-847 (2019). DOI: 10.1134/S0031918X1909014X
9. *The Site Preference Analysis and Ordering Characteristics of Ternary $Cu_{0.5}(Zn_{1-x}M_x)_{0.5}$ ($M =$ Transition metals) Alloys*, **Naseeb Ahmad**, Amer Bashir Ziya, Shabbar Atiq, Khalid Saifullah, Muhammad Hashim and Muhammad Saleem, Journal of Archives of Materials Science and Engineering, 63, 1533-1537(2018). DOI: 10.24425/123844
10. *Improved magnetic and electrical properties of Cu doped Fe-Ni invar alloys synthesized by chemical reduction technique*, Sajjad Ahmad, Amer Bashir Ziya, Muhammad Naeem Ashiq, Ather Ibrahim, Shabbar Atiq, **Naseeb Ahmad**, Muhammad Shakeel and Muhammad Azhar Khan, Journal of Magnetism and Magnetic Materials, 419, 125-130 (2017). DOI: <https://doi.org/10.1016/j.jmmm.2016.06.033>
11. *Enhancement of Curie temperature (T_c) and magnetization of Fe-Ni Invar alloy through Cu substitution and with He^{+2} ion irradiation*, Sajjad Ahmad Khan, Amer Bashir Ziya, Ather Ibrahim, ShabbarAtiq, Muhammad Usman, **Naseeb Ahmad** and Muhammad Shakeel, Journal of Electronic Materials, 45, 2258-2265 (2016). DOI: <https://doi.org/10.1007/s11664-015-4293-4>
12. *The enhanced range of temperature for coefficient of low thermal expansion, electrical and thermal conductivities of Cu substituted Fe-Ni invar alloys*, Khan Sajjad, Ziya A,

- Ibrahim Ather, Atiq Shabbar, **Ahmad Naseeb**, Bashir Farooq, Physica Scripta, 91, 57-61 (2016). DOI: [10.1088/0031-8949/91/3/035701](https://doi.org/10.1088/0031-8949/91/3/035701)
13. *The structure and thermal parameters of ordered $Cu_{65}Fe_{10}Pd_{25}$ ternary alloy*, **Naseeb Ahmad**, A. B. Ziya, S. Atiq, A. Ibrahim, S. Ahmad and F. Bashir, Physica B, 461, 129-133 (2015). DOI: [10.1016/j.physb.2015.01.004](https://doi.org/10.1016/j.physb.2015.01.004)
 14. *Phase analysis of Cu-Fe-Pd ternary alloys*, **Naseeb Ahmad**, A. B. Ziya, S. Atiq and A. Ibrahim, Metallic Materials, 53, 313-317 (2015). DOI: [10.4149/km-2015-5-313](https://doi.org/10.4149/km-2015-5-313)
 15. *Effect of additional 3d elements M (M = Fe and Ni) on atomic ordered structure in Cu-M-Pd alloys*, **Naseeb Ahmad**, Miwako Takahashi, Amer Bashir Ziya and Ken-ichi Ohshima, Journal of the Physical Society of Japan, 012020, 1-4 (2014). DOI: [10.7566/jpscp.1.012020](https://doi.org/10.7566/jpscp.1.012020)
 16. *A study of structure of ternary Cu-Ni-Pd alloys*, **Naseeb Ahmad**, A. B. Ziya, M. Takahashi, S. Atiq, A. Ibrahim and F. Bashir, Metallic Materials, 52, 197-201 (2014). DOI: [10.4149/km-2014-4-197](https://doi.org/10.4149/km-2014-4-197)