

Najam Ul Hassan, PhD

ORCID: 0000-0001-8406-3305



Email: najamphys@gmail.com
najam.hassan@ue.edu.pk

Phone No: +92-3336841688

Date of Birth: 01-05-1986

Passport ID: AF9554093

Address: Al Qaim Lodge House # 18, Adjacent Jamia Masjid Aolya, Mohalla Khursheed Shah Bhakkar, Punjab, Pakistan.

Google Scholar ID: <https://scholar.google.com/citations?hl=en&tzom=-300&user=vP00qbYAAAAJ>

Personal Information & Objectives

My research focus is on key materials and technology for supercapacitor based energy storage devices, aiming to enhance the performances of materials by tuning their structure and surface/interface chemistry, on the basis of investigation on the correlations among surface/interface chemistry, synthesis and performances of the materials. The recent interest is to use MXenes and MOFs for storage devices.

Education

- Doctor of Philosophy (Ph.D., Session: 2014-18): **Materials Science and Engineering, Nanjing University of Science & Technology, Nanjing, China**
Advisor: **Prof. Dr. Feng Xu**
- Master of Philosophy in Science (M.Phil. Physics, Session: 2010-12): **Department of Physics, Federal Urdu University of Arts, Science & Technology, Islamabad, Pakistan**
- Master of Science (M.Sc. Physics, Session: 2006-08): **Department of Physics, Baha-Uddin Zakariya University, Multan, Pakistan**
- Bachelor of Science (B.Sc., Session: 2003-05): **Department of Physics, Baha-Uddin Zakariya University, Pakistan**

Experience

30-11-2021 – Till date	Assistant Professor, Department of Physics, University of Education Lahore, Jauharabad Campus.
22-07-2019 – 30-11-2021	Assistant Professor, Department of Physics, Punjab College (University of Central Punjab), Sargodha Campus.
01-08-2018 – 21-02-2019	Assistant Professor (Visiting), Department of Physics, University of Sargodha Punjab, Bhakkar Campus.
2012 – 2014	Senior School Teacher, Punjab Education Department, Pakistan
2009 – 2012	Lecturer, Department of Physics, Indus College of Science, Rawalpindi, Pakistan.

2008-2009

Lecturer, Department of Physics, Punjab College, Rawalpindi, Pakistan.

Technical skill

- Synthesis: synthesis & characterization of different nanomaterials
- Synthesis: synthesis & characterization of different alloys
- Fabrication of electrodes for supercapacitor base energy storage devices
- Scattering experiments: XRD
- Vibrating sample magnetometer
- Spectroscopy: Raman spectroscopy, FTIR
- Microscopy: TEM and SEM analysis
- Analysis: TGA, BET, DSC
- Electrochemical Characterizations: Galvanostatic characterizations (Charge/Discharge, Cyclic performance, Efficiency, Rate Performance), CV, EIS etc.
- Image and data analysis: Origin, ChemDraw, Adobe Photoshop, Materials Studio, MDI Jade, ZView, Neware Analyzing software, LAND Analyzing software

Research Students

- Current Graduate (MS) Research Students under Supervision **05**
- Current Graduate (MS) Research Students under Co-supervision **02**
- Graduated (MS) Research Students Supervised **11**
- Graduated (MS) Research Students Co-supervised **02**
- Graduated (BS) Research Students Supervised **22**

Book Chapters

PROJECTS

- **Najam Ul Hassan**, Nawishta Jabeen, Ahmad Hussain, and Jazib Ali “MXene based hybrid for optical sensing applications”. **Chapter 13** “MXenes as Emerging Modalities for Environmental and Sensing Application” 2024 Elsevier.
- Muhammad Adnan Qaiser, Ahmad Hussain and **Najam Ul Hassan** “Overview of Nanomaterials Various Nanomaterials with Different Morphologies” **Chapter 01** “Nanomaterials in Industrial Chemistry” 2024 CRP Press Taylor & Francis Group Boca Raton New York.
- Nawishta Jabeen, Ahmad Hussain, **Najam Ul Hassan** and Jazib Ali “Ferroic Characteristics of Metal-Halide Perovskites **Chapter 13** Ferroic Materials-Based Technologies” 2024 Wiley.

INTERNATIONAL CONFERENCES AND PRESENTATIONS

TALKS

- **Invited speaker:** 2025, 7th International Conference on Material Science & Technology, GC University Faisalabad, Pakistan.
- **Invited speaker/Session chair** 2024 1st International Conference on Sciences for Future Trends (ICSFT), The University of Lahore, Sargodha Campus, Pakistan

- **Key note speaker** 2024, 2nd international conference on “Emerging Trends in Physics” Islamic University Bahawalpur, Pakistan.
- **Invited speaker** 2024, 03 days International conference on Physical Sciences and Engineering, KFUEIT, Rahim Yar Khan, Pakistan.
- **Invited speaker** 2023, 4th Edition of International Conference on Material Science & Engineering Singapore (Hybrid Event).
- **Invited speaker** 2023, 3 Days International Conference on Physical Science & Engineering, KFUEIT, Rahim Yar Khan, Pakistan.
- **Invited speaker** 2023, 2nd International Conference on Global Challenges in Energy & Environment Development, Women University Multan, Pakistan.
- **Invited speaker:** 2023, International Conference on Material Science & Technology, GC University Faisalabad, Pakistan.
- **Guest speaker** 2022, 02 Days International conference on emerging trends in energy and sensing applications, KFUEIT, Rahim Yar Khan, Pakistan.
- **Invited speaker** 2022, 2nd Edition of Chemistry World Conference Chicago, USA (Hybrid Event).
- **Invited speaker** 2022, 2nd Edition of International Conference on Materials Science and Engineering (Hybrid Event).
- **Invited speaker** 2022, 2nd International Conferences on Nanotechnology & Chemistry, Webinar, Geneva, Switzerland (Hybrid Event).
- **Oral Presentation** 2020, 5th International conference on Nano Materials Modelling & Simulation AIOU, Islamabad, Pakistan.

INTERNATIONAL CONFERENCES ATTENDED

- **Participant** 2019, 44th International Nathiagalli Summer College on Physics and Contemporary needs, NCP, Islamabad Pakistan.
- **Participant** 2016, International High Level Forum on Trend in Material Development Nanjing, China.
- **Participant** 2016, Fifth National Conference on Intermetallic Alloys Beijing, China.
- **Participant** 2016, International High Level Forum on Trend in Material Development, Nanjing, China.
- **Participant** 2015, IEEE International Magnetics Conference Beijing, China.
- **Participant** 2014, Herbert Glitter International Symposium on Physics, Nanjing, China.
- **Participant** 2012, Vacuum and Surface Sciences Conference of Asia and Australia, Pakistan.

INTERNATIONAL CONFERENCES ORGANIZED

- 2024, International Conference on Recent Trends in Natural Sciences, UE Jauharabad campus, Pakistan.
- 2023, International Conference on Recent Trends in Natural Sciences, UE Jauharabad campus, Pakistan.
- 2022, International Conference on Recent Trends in Natural Sciences, UE Jauharabad campus, Pakistan.
- 2022, 2nd International symposium on advances in Physics and Materials Science” UOE, Jauharabad campus, Pakistan.

HONORS AND AWARDS

- Awarded Chinese Government Scholarship for PhD studies under CSC Program 09-2014 to 06-2018.
- Outstanding M. Phil Graduate Student, FUUAST, Islamabad, Pakistan 2010-2012.

PROFESSIONAL ACTIVITIES

SUPERVISORSHIP

- Approved Supervisor of Higher Education Commission of Pakistan (HEC)

COORDINATOR

- Time Table/Examination coordinator department of Physics, University of Education, Lahore, Jauharabad.

EDITORIAL BOARD MEMBERSHIP

- Review Editor **Frontiers in Materials**.
- Guest Editor of special issue (Ferroelectric and Piezoelectric Properties of Ceramics) **Crystals**
- Reviewer of several well-known International Journals.

SELECTED PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

1. Muhammad Usama Bin Aslam, **Najam Ul Hassan**, Fahim Ahmed, Farhan Yousaf, Mushtaq Ali, and Yasir Altaf "Enhanced Thermoelectric and Optical Properties via In Substitution in $\text{Cs}_2\text{XInBr}_6$ ($\text{X}=\text{Na, In}$) Double Perovskites for Low-Cost Energy Applications" **Chemistry Select IF=1.9**, 10 (2025), e01001 (1 - 13).
2. Asmaa F. Kassem, **Najam Ul Hassan**, Mohsan Jelani, Ebraheem Abdu Musad Saleh, Sana Ullah Asif, **Kakul** Husain, Gehan A. Hammouda "Superior supercapattery performance enabled by $\text{MnS}/\text{Fe}_2\text{O}_3$ nanosheets and theoretical evaluation of contributing currents" **Inorganic Chemistry Communications IF=4.4**, (2025) In press.
3. **Najam Ul Hassan**, Nawishta Jabeen, Waqar Younas, Fahim Ahmed, Ahmad Hussain, Sana Ullah Asif, Majed M. Alghamdi, and Muhammad Naveed "Efficient hybrid supercapacitor performance enabled by large surface area of 2D mesoporous zinc sulfide nano-sheets synthesized via microwaves" **Journal of Electroanalytical Chemistry IF=4.1**, 975 (2024)118794.
4. Mohsan Jelani, **Najam Ul Hassan**, Shahbaz Ahmad, Habib Ur Rehman and Said Nasir Khisro "Surface, structural and mechanical transformations of titanium under excimer laser irradiance in a nitrogen environment" **Radiation Effects and Defects in Solid IF=1.3**, (2025).
5. Farhan Yousaf, Fahim Ahmed , **Najam Ul Hassan** and Sajad Hussain "Theoretical insights on thermoelectric transport properties and optical properties of half Heusler FeTaX ($\text{X} = \text{As, Sb, Sn}$) for low cost energy applications" **Chemical Physics 601 IF=2.4**, (2025) 112953.

6. Fahim Ahmed, Mushtaq Hussain, Farhan Yousuf, **Najam Ul Hassan**, Yasir Altaf “Comprehensive analysis of structural, electronic, optical and thermoelectric Properties of X_2PtCl_6 ” **Chemical Physics** **595** IF=2.4, (2025) 112517.
7. Tayyaba Mubashir, Aftab Farrukh, **Najam Ul Hassan**, Rashid Mahmood, Mudassir Hussain Tahir, “Enhancing aromatic hydrocarbon production via catalytic co-pyrolysis of cabbage waste and low density polyethylene using Fe-modified ZSM-5 catalyst” **Biomass conversion and biorefinery** IF=3.7, (2024) 06453.
8. Asmaa F. Kassem, **Najam Ul Hassan**, Ebraheem Abdu Musad Saleh, Rabbia Hasan, M.M. Moharam, Raed H. Althomali, Sana Ullah Asif, Kakul Husain and Gehan A. Hammouda “Al intercalated ZnS nanosheets as anode for supercapattery application with wide operating potential window” **Inorganic Chemistry Communications** IF=4.4, 171 (2024) 113588.
9. Mawaheb Al-Dossari, **Najam Ul Hasan**, Ahmad M. Saeedi, Raed H. Althomali, A. Alqahtani, Gideon F.B. Solre and Ishfaq Ahmed “Exploring the structure, morphology and magnetic perspectives of Al-substituted $BaSrPr_{0.5}Fe_{11.5-x}Al_xO_{19}$ (x = 0.00, 0.6, 1.2, 1.8) hexaferrite nanoparticles” **Inorganic Chemistry Communications** IF=4.4, 172 (2024) 113636.
10. Shabbir Ahmed Khan, Fahim Ahmed, **Najam Ul Hassan**, Muhammad Zulfiqar, Muhammad Nauman Usmani, Asma A. Alothman, Saikh Mohammad, Md Rezaul Karim, and Dongwhi Choi “Tuning structural and electrical properties of Co-precipitated and Cu incorporated nickel ferrite for energy applications” **Nanotechnology Reviews** IF=6.1, 13 (2024) 20240017.
11. Fatima Kainat, Nawishta Jabeen, Ali Yaqoob, **Najam Ul Hassan**, Ahmad Hussain and Mohamed E. Khalifa “Effect of Ca, Ba, Be, Mg, and Sr Substitution on Electronic and Optical Properties of $XNb_2Bi_2O_9$ for Energy Conversion Application Using Generalized Gradient Approximation–Perdew–Burke–Ernzerhof” **Crystals** IF=2.4, 14 (2024) 14 710.
12. Rabbia Hasan, Yasir Altaf, Nawishta Jabeen, **Najam Ul Hassan**, Fahim Ahmed, Sajad Hussain, Ahmad Hussain, Sana Ullah Asif and Bandar Ali Al-Asbahi “ZnS@Fe₂O₃ core–shell nanorod arrays for supercapattery applications; theoretical evaluation of faradic and non-faradic behavior using Dunn’s model” **Journal of Electroanalytical Chemistry** IF=4.1, 966 (2024)11841.
13. Nawishta Jabeen, A Dahshan, H.H. Hegazy, Ahmad Hussain, **Najam ul Hassan**, “Hierarchical high K content birnessite MnO₂ nanosheet arrays as high capacity cathode for asymmetric supercapacitor with broaden potential window of 2.6 V” **Electrochimica Acta** IF=5.5, 478 (2024) 143874.
14. Zunash Umar, Yasir Altaf, Fahim Ahmed, **Najam Ul Hassan**, Mushtaq Ali, Muhammad Zulfiqar and Farhan Yousaf “Band structure engineering to improve the optical and thermoelectric properties of Rb_2AgXBr_6 (X=Al, In, Ga) for energy applications within DFT framework” **Materials Science & Engineering B** IF=3.9, 310 (2024) 117724.

15. Habib ur Rehman, **Najam ul Hassan**, Mohsan Jelani, Kaseb D. Alanazi, Nasar Ahmed, Tariq Saif Ullah, Muhammad Sufyan Javed and Khaled Fahmi Faw “Compositional analysis of Swertia chirayita medicinal plant using laser-induced breakdown spectroscopy and ICP-MS” **PLOS ONE** IF=2.9, 19 (2024) e0309647.
16. Maryam Bashir, **Najam UI Hassan**, Muhammad Ibrahim, Hayssam M. Ali, Tahir, Khalida Naseem, Rana Muhammad Irfan, Hina Zain, Muhammad Nadeem, and Asa Ali Tariq “Synergistic Interaction during Copyrolysis of Soybean Straw and Tire Waste: Improving Emissions and Product Quality” **ACS Omega** IF=3.7, 09 (2024) 32697–32705.
17. Karma M. Albalawi, **Najam UI Hassan**, Ahmad M. Saeedi, Gideon F. B. Solre, Ebraheem Abdu Musad Saleh, Asmaa F. Kassem “Tailoring the physical and magnetic properties in chromium-substituted calcium-zinc (1:1) hexaferrites” **Materials Science & Engineering B** IF=3.9, 308 (2024) 117584.
18. He Wang, Yi-Han Wang, Yuan-Yuan Gong, Gui-Zhou Xu, Er Liu, Xue-Fei Miao, Yu-Jing Zhang, **Najam UI Hassan**, Ishfaq Ahmad Shah and Feng Xu “Designing (Hf,Ta)Fe₂-based zero thermal expansion composites consisting of multiple Laves phases” **Rare Metals** IF=9.6, 24 (2024) 02867.
19. Fahim Ahmed, Syed Zuhair Abbas Shah, **Najam UI Hassan**, Shanawer Niaz, Vineet Tirth, Mohamed Hussien and Amna Parveen, “Band gap engineering of vacancy-ordered halide perovskite Cs₂SnCl₆ from substitutional doping of Pt (Cs₂Sn_(1-x)Pt_xCl₆ where x = 0, 0.25 ,0.50, 0.75 and 1.00) and its effects on thermoelectric properties using the first-principles approach” **Inorganic Chemistry Communications** IF=4.4, 164 (2024) 112461.
20. Nawishta Jabeen, **Najam UI Hassan** , Awais Bokhari, Muhammad Farooq Khan, Sayed M. Eldin, Waqas UI Arifeen, Ahmad Hussain and Aboud Ahmed Awadh Bahajjaj, “High performance δ -Bi₂O₃ nanosheets transformed Bi₂S₃ nanoflakes interconnected nanosheets as negative electrode for supercapacitor applications” **Fuel** IF=6.7, 347 (2023) 128392.
21. Ahmad Hussain, Nawishta Jabeen, **Najam UI Hassan**, Waqar Hussain, Muhammad Adnan Qaiser, P. Rosaiah h , Maduru Suneetha and Muhammad Sufyan Javed “High-entropic relaxor ferroelectric perovskites ceramics with A-site modification for energy storage applications” **Ceramics International** IF=5.1, 49 (2023) 39419–39427.
22. Muhammad Farooq Khan, Ehsan Elahi, **Najam UI Hassan**, Malik Abdul Rehman, arim Khan, and Jonghwa Eom “Bipolar Photoresponse of a Graphene Field-Effect Transistor Induced by Photochemical Reactions” **Applied Electronic Materials** IF=4.3, 09 (2023) 5111–5119.
23. Iqra Ashraf , Qasim Abbas , Yaqin Huang, **Najam UI Hassan**, Munirah D. Albaqami, Ammar Mohamed Tighezza, Sayed M. Eldin, Muhammad Sufyan Javed “V-Mn-O aerogel composite-based high-energy Zn-ion hybrid supercapacitor” **Journal of Energy Storage** IF=8.9, 60 (2023)106601.

24. Abdul Mateen, Zubair Ahmad, Salamat Alic, **Najam Ul Hassan**, Fahim Ahmed, Sayed M. Eldinf, Mohd Zahid Ansarig, Muhammad Sufyan Javedh, Kui-Qing Penga "Silicon intercalation on MXene nanosheets towards new insights into a superior electrode material for high-performance Zn-ion supercapacitor" **Journal of Energy Storage IF=8.9**, 71 (2023) 108151.
25. Ahmad Hussain, Nawishta Jabeen, **Najam ul Hassan**, Sara Rasheed, Asim Idrees, Sayed M. Eldin, Mohamed Ouladsmene, Shaukat Khan, Bhargav Akkinapally, and Muhammad Sufyan Javed "Structural, piezoelectric and ferroelectric analysis of 0.96Bi0.5Na0.5TiO3-0.06BaTiO3: xwt%MnO2 ceramics for high-tech applications" **Ceramics International IF=5.1**, 49 (2023) 27848–27854.
26. Muhammad Abubakr, Zeesham Abbas, Shania Rehman, **Najam Ul Hassan** , Honggyun Kim, Karim Khan, Deok-kee Kim and Muhammad Farooq Khan "Systematic study on the optoelectronic and elastic properties of Cu-based ternary chalcogenides: Using ab-initio Approach" **Materials Science in Semiconductor Processing IF=4.2**, 162 (2023) 107512
27. Mudassir Hussain Tahir, Tayyaba Mubashir, Aftab Farrukh, **Najam Ul Hassan** and Rana Muhammad Irfan "Thermo-chemical conversion of pre-treated cucumber peel" **Envirnmental Progress and Sustainable Energy IF=4.2**, 14 (2022) 14103.
28. Sana Ullah Asif, Qasim Ali Ranjha, Ubaid-ur-Rehman Ghorri, Mehrun Nisa, Muhammad Saeed Ahmad, Najam Ul Hassan, and Fahim Ahmed "Exploring the structural and magnetic trends in Ba_{0.9}Sm_{0.1}Fe_{12-x}Al_xO₁₉ M-type Hexaferrites" **Physica Scripta IF=2.6**, 98 (2023) 015836.
29. Qasim Abbas, Abdul Mateen , Sajid Hussain Siyal , **Najam Ul Hassan**, Sayed M. Eldin, Mohd Zahid Ansari and Muhammad Sufyan Javed "In-situ construction of binder-free MnO₂/MnSe heterostructure membrane for high-performance energy storage in pseudocapacitors" **Chemosphere IF=8.1**, 313 (2023) 137421.
30. Ahmad Hussain, Nawishta Jabeen, **Najam Ul Hassan**, Altaf Ur Rahman, Muhammad Usman Khan, Adeela Naz and El Sayed Youse "Influence of Mn Ions' Insertion in Pseudo-Tetragonal Phased CaBi₄Ti₄O₁₅-Based Ceramics for Highly Efficient Energy Storage Devices and High-Temperature Piezoelectric Applications" **International Journal of Molecular Sciences IF=4.9**, 23 (2022) 12723.
31. Zeeshan Mustafa, Nawishta Jabeen, **Najam ul Hassan**, Mohsan Jelani, Muhammad Adnan Qaiser, Fatima Sehar, Nadeem Nasir and Asim Idrees "Realization of Room Temperature Exchange Bias Effect in Co/NiO Bilayer via All-Solid-State Li-Ion Redox Capacitor" **Ceramics International IF=5.1**, 49 (2023) 2115-2120.
32. Ruihong Zhang, Tayyaba Mubashir, Muhammad Sulaman, **Najam Ul Hassan**, Sajjad Haider, Mudassir Hussain Tahir "Rational polymer design for organic solar cells through similarity index-based data mining" **Computational and Theoretical Chemistry IF=3.0**, 1227 (2023) 114247.
33. Nawishta Jabeen, Anum Zaidi, Ahmad Hussain, **Najam Ul Hassan**, Jazib Ali, Fahim

- Ahmed, Muhammad Usman Khan, Nimra Iqbal, Tarek A. Seaf Elnasr and Mohamed H. Helal. "Single- and Multilayered Perovskite Thin Films for Photovoltaic Applications" **Nanomaterials** IF=4.4, 12 (2022) 3208.
34. Zeeshan Ahmad, Zain ul Abidin Jaffri, **Najam ul Hassan** and Meng Chen "Robust adaptive beamforming using modified constant modulus algorithms" **Journal of ELECTRICAL ENGINEERING** IF=1.0, 73 (2022) 248.
 35. Nawishta Jabeen, Altaf Ur Rehman, **Najam Ul Hassan**, Muhammad Adnan Qaise, Anum Zaidi, Muhammad Usman Khan, Imtiaz Ahmad Khan and Muhammad Nouman Qasim. Boosting of Magnetic, Ferroelectric "Energy Storage Efficiency, and Piezoelectric Properties of Zn Intercalated $\text{SrBi}_4\text{Ti}_4\text{O}_{15}$ -Based Ceramics" **Materials** IF=3.1, 15 (2022) 5057.
 36. Qasim Abbas, Lianghua Wen, Abdul Mateen, **Najam Ul Hassan**, Asim Idrees, Zia Ur Rehman, Majed A. Bajaber and Muhammad Sufyan Javed "Facile Hydrothermal Synthesis of Binder-Free Hexagonal MnO_2 Nanoparticles for a High-Performance Supercapacitor's Electrode Material" **Coatings** IF=2.9, 12 (2022) 1101.
 37. Mohsan Jelani, Shahbaz Ahmad, **Najam ul Hassan**, Muhammad Naeem, Nasar Ahmed, Muhammad Ashfaq Jamil, Said Nasir Khisro and Muhammad Shafiq Ahmed " Ion induced effects and defects on surface, structural and mechanical properties of Ni ion irradiated titanium" **Zeitschrift für Naturforschung A** IF=1.8, (2022) 0062.
 38. Qasim Abbas , Sajid Hussain Siyal , Abdul Mateen, **Najam Ul Hassan** , Asim Idrees, Zia Ur Rehman, El Sayed M. Tag El Din, Majed A. Bajaber & Muhammad Sufyan Javed "Hydrothermal Synthesis of Binder-Free Metallic NiCo_2O_4 Nano-Needles Supported on Carbon Cloth as an Advanced Electrode for Supercapacitor Applications" **Materials** IF=3.0, 15 (2022) 4499.
 39. **Najam Ul Hassan**, Mohsan Jelani, Ishfaq Ahmad Shah, Khalil Ur Rehman, Abdul Qayyum Khan, Shania Rehman, Muhammad Jamil, Deok-kee Kim & Muhammad Farooq Khan "Tunable Martensitic Transformation and Magnetic Properties of Sm-Doped NiMnSn Ferromagnetic Shape Memory Alloys" **Crystals** IF=2.4, 11 (2021) 115.
 40. Uzair Ahmed, Mohsin Jeelani, **Najam Ul Hassan**, Muhammad Naeem, Tahir Zaman and Shahbaz Ahmed "Sputtering of gold and copper surfaces under low energy cesium ions" **Surface review and letters** IF=1.2, 29 (2021) 2250022.
 41. Muhammad Farooq Khan, Shania Rehman, Malik Abdul Rehman, Rizwan Ur Rehman Sagar, Deok-kee Kim, H.M. Waseem Khalil, Pragati, **Najam ul Hassan**, Pradeep Raj Sharma, Jonghwa Eom & Seong Chan Jun "Multi heterostructured spin valve junction of vertical FLG/ MoSe_2 /FLG" **APL Materials** IF=5.2, 8 (2020) 071104.
 42. Munazza Gul, Mohsin Jeelani, **Najam ul Hassan**, Muhammad Naeem, Sobia Allah Rakha, Aqeel Ahsan Khurram, Naveed Ali & Arshad Munir "Modified electrical and microwave absorption properties of silver nanowires grown on graphene nanoplatelets", **Materials Research Express** IF=1.2, 6 (2020) 1250f8.

43. Mohsan Jelani, Zewen Li, Zhonghua Shen, **Najam Ul Hassan** & Maryam Sardar "Mechanical Response and Failure Evolution of 304L Stainless Steel under the Combined Action of Mechanical Loading and Laser Heating" **Metals IF=2.6**, 8 (2018) 620.
44. **Najam ul Hassan**, Ishfaq Ahmad Shah, Mohsan Jelani, Muhammad Naeem, Saira Riaz, Shahzad Naseem, Feng Xu & Zaka Ullah "Effect of Ni-Mn ratio on structural, martensitic and magnetic properties of Ni-Mn-Co-Ti ferromagnetic shape memory alloys", **Materials Research Express IF=1.2**, 5 (2018) 086102.
45. Ishfaq Ahmad Shah, **Najam ul Hassan**, Abudu keremu, Saira Riaz, Shahzad Naseem, Feng Xu & Zaka Ullah "Realization of Magnetostructural Transition and Magnetocaloric Properties of Ni-Mn-Mo-Sn Heusler Alloys" **Journal of Superconductivity and Novel Magnetism IF=1.6**, 32 (2019) 659-665.
46. Ishfaq Ahmad Shah, Guizhou Xu, **Najam ul Hassan**, Youyurong, Liu Jun, Yuanyuan Gong & Feng Xu "Structural and magneto-transport properties of $Mn_{1+x}Co_{1-x}Sn$ ($x=0.0-1.0$) alloys" **Journal of Magnetism and Magnetic Materials IF=2.5**, 465(2018) 360-364.
47. **Najam ul Hassan**, Ishfaq Ahmad Shah, Jun Liu, Yuanyuan Gong, Xuefei Miao & Feng Xu "Magnetostructural coupling and giant magnetocaloric effect in off- Stoichiometric MnCoGe alloys" **Journal of Superconductivity and Novel Magnetism IF=1.6**, 11 (2018) 3809-3815.
48. **Najam ul Hassan**, Ishfaq Ahmad Shah, Abdur Rauf, Jun Liu, Yuanyuan Gong & Feng Xu "Magnetostructural transformation and magnetocaloric effect in $Ni_{42}Mn_{47.5}Sn_{10.5}$ and $Ni_{41.5}Mn_{47.5}Sn_{10.5}Zn_{0.5}$ ferromagnetic shape memory alloys" **Materials Research Express IF=1.2**, 5 (2018) 026108.
49. **Najam ul Hassan**, Ishfaq Ahmad Shah, Tahira Khan, Jun Liu, Yuanyuan Gong, Xuefei Miao & Feng Xu "Magnetostructural transformation and magnetocaloric effect in $Mn_{48-x}V_xNi_{42}Sn_{10}$ ferromagnetic shape memory alloys" **Chinese Physics B IF=2.8**, 27 (2018) (037503).
50. Mohsan Jelani, Zewen Li, Zhonghua Shen, **Najam ul Hassan** & Maryam Sardar "Mechanical behavior and fracture characteristics of simultaneously tensile loaded and laser heated Ti6Al4V alloy" **Materials Research Express IF=1.2**, 6 (2018) 036506.
51. Saqif Jillani, Mohsan Jelani, **Najam ul Hassan**, Shahbaz Ahmad & Muhammad Hafeez. Synthesis "characterization and biological studies of copper oxide Nanostructures" **Materials Research Express IF=1.2**, 5 (2018) 045006.
52. S. Naseem shah, M. Naeem, S. Rizwan ali, S. Mahmood, S. Imran ali, yasmeen bibi, S. Masood raza & **Najam ul Hassan** "Morphological change in Cu-doped ZnO from rod-like to flowers-like nanostructures: a vital role for the optical band gap tuning" **Surface Review and Letters IF=1.2**, 25 (2018) 1850001.
53. **Najam ul Hassan**, Fenghua Chen, Mingang Zhang, Ishfaq Ahmad Shah, Jun Liu, Yuanyuan Gong, Guizhou Xu & Feng Xu "Realisation of Magnetostructural transformation and magnetocaloric effect in $MnCoGe_{1+x}$ system" **Journal of Magnetism and Magnetic**

Materials IF=2.5, 439 (2017) 120-125.

54. **Najam ul Hassan**, Zahid Hussain, Muhammad Naeem Khan, Ishfaq Ahmad Shah, G. Husnain, Ishaq Ahmad & Zaka Ullah "Influence of ion beam irradiation on structural magnetic and electrical characteristics of Ho-Doped AlN thin films" **Surface Review and Letters IF=1.2**, 24 (2017) 1750021.
55. Ishfaq Ahmad Shah, **Najam ul Hassan**, Abdur Rauf, Jun Liu, Yuanyuan Gong, Guizhou Xu & Feng Xu "Influence of Ni/Mn ratio on magnetostructural transformation and magnetocaloric effect in $\text{Ni}_{48-x}\text{Co}_2\text{Mn}_{38+x}\text{Sn}_{12}$ ($x = 0, 1.0, 1.5, 2.0, \text{ and } 2.5$) ferromagnetic shape memory alloys" **Chinese Physics B IF=2.8**, 26 (2017) 097501.
56. Ishfaq Ahmad Shah, **Najam ul Hassan**, Jun Liu, Yuanyuan Gong, Guizhou Xu & Feng Xu "Effect of Sb-doping on martensitic transformation and magnetocaloric effect in Mn-rich $\text{Mn}_{50}\text{Ni}_{40}\text{Sn}_{10-x}\text{Sbx}$ ($x = 1, 2, 3 \text{ and } 4$) alloys" **Chinese Physics B IF=2.8**, 26 (2017) 017501.
57. Jun Liu, Yuanyuan Gong, Guizhou Xu, Guo Peng, Ishfaq Ahmad Shah, **Najam ul Hassan** & Feng Xu "Realization of magnetostructural coupling by modifying structural transitions in MnNiSi-CoNiGe system with a wide Curie-temperature window" **Scientific Reports IF=3.8**, 6 (2016) 23386.
58. Muhammad Usman, M. Naeem, **Najam ul Hassan**, Muhammad Maqbool, Iftikhar Ahmad, Ishaq Ahmad and Zahid Hussain "Structural, optical, and electrical characteristics of AlN:Ho thin films irradiated with 700keV protons" **Applied Surface Science IF=6.3**, 357 (2015): 179-183.
59. Ishfaq Ahmad Shah, Tahir Abbas, Zaka Ullah, **Najam ul Hassan**, Abdur Rauf, Kaleemullah & Shahzad Naseem "Sintering Effects on Structural and Magnetic Behaviours of NdFeB Magnets" **Armenian Journal of Physics** 8 (2015) 185-190.

REFERENCES

Dr. Feng Xu

Professor/Vice Dean
School of Materials Science and Engineering,
Nanjing University of Science and Technology,
Nanjing, 210094, China.
Tel: [+86-13337808420](tel:+86-13337808420)
E-mail: xufeng@njjust.edu.cn

Dr. Sajad Hussain

Associate Professor/Chairman
Department of Physics,
University of Education,
Lahore, Pakistan.
Tel: [+92-331-6578780](tel:+92-331-6578780)
E-mail: sajad.hussain@ue.edu.pk