

Applicant Name: Aamir Shahzad

PERSONAL DATA

Father's Name : Muhammad Aslam
Place of Birth : Faisalabad (Punjab), Pakistan
Mobile Phone : (+92) 300-7942630
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Mailing Address : **Professor**, Department of Physics, GC
University, Faisalabad
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QUALIFICATION

PhD and Post Doctoral with Computational Physics/ Modeling and Simulation of Plasmas and Materials/ Fluid Materials Xian Jiaotong University, P.R. CHINA

Post Doctoral Thesis Project (Computational Plasma) : “Calculation on Thermal Conductivity and Internal Energy of Plasmas using Molecular Dynamics Simulations”
April 2013 to Dec 2015

PhD Thesis Project (Applied Physics) : “Thermophysical Properties of Materials/ Plasmas Using Molecular Dynamics Simulations”
Sep. 2009 to Dec. 2012

: **M.Phil. and M.Sc. Physics** (Solid State Physics emphasis on Semiconductor Physics) from University of Agriculture, Faisalabad.

M.Phil Thesis Project (M.Phil Physics) : “Development and Design Implementation of DC Motor Synchronization Control Based on Microcontroller for Industrial Automation”
Sep. 2004 to Sep. 2006
(**1ST Division**)

M.Sc. Thesis Project (M.Sc. Physics) : “Design and Fabrication of an Experimental Microcomputer Based on AT89C2051 Microcontroller”
Dec. 1999 to Jan. 2002
(**1ST Division**)

Bachelor of Science (B.Sc. Science) : **Double Math. and Physics** from Govt. Degree College Hafizabad
Sep. 1996 to Aug. 1998
(**1ST Division**)

: **F.Sc. and Matric** from BISE (Gujranwala) in **1ST Divisions**

SCIENTIFIC LANGUAGES

Computer Literacy

COMPUTATIONAL TECHNIQUES

Cluster Algorithm, Modeling and Simulation Code implementations

PROFESSIONAL SOFTWARE's

MEMBERSHIP Society

TEACHING/ RESEARCH EXPERIENCE

PROFESSIONAL EXPERIENCE

Productive Scientist for Pakistan (PAP)

Productive Supervisor for Pakistan (HEC)

Researcher ID (Google Scholar)

INTERNATIONAL PAPERS PUBLISHED/ REVIEWS ARTICLES

84

83

: **LINUX based C/C++, FORTRAN (77, 90 & 95), MATLAB and Assembly Language.**

Thorough knowledge & extensive use of Software like: MS-Word, Excel, Power Point, **Qt-Plot**, **SM Grace** TechPlot and **Origin**. **64-bit** Architecture **LINUX** based system

: Equilibrium Molecular Dynamics(**EMD**) and Nonequilibrium Molecular Dynamics (**NEMD**) Simulations; Brownian Dynamics (**BD**) and Langevin Dynamics (**LD**) simulations

: Used **LINUX** based 200-Node **CLUSTER** and **WORKSTATIONS** and developed a Cluster Algorithm for “Industrial Plasma and Fluid Materials”

: MD Simulation/ Visulization software; **LAMMPS**, **DL-POLY**, **AMBER**, **GASSIAN**, **GROMACS**, **Material Studio**, **VMD**. **OVITO**, **PyMOL**.

: A member of “Asian Council of Science Editors- ACSE” Deira, Dubai, UAE; 2015 and 2021-22

: Member of China Society of Engineering Thermophysics and Engineering Thermodynamics of Xian Jiaotong University, China

: Member of Physics society, GCUF (Faisalabad), Pakistan

: Member of Physics society, UAF (Faisalabad), Pakistan

: Ex-President and Member of Physics society of GC Hafizabad, Pakistan

: **GOVT. COLLEGE UNIVERSITY, FAISALABAD.**

I have been working as **Professor** in the Department of **PHYSICS**, and total experience since January, 2005 to till date (Nearly **Twenty years of experience**)

: I have been working as **ASSISTANT ELECTRONIC ENGINEER** in Sitara Textile, May 2002- Jan. 2005 (Nearly **THREE years**)

: **Register as a member of PAP/RPA; 2226**
INTERNATIONAL RESEARCH & PROJECTS

Higher Education Commission (HEC) Approved Supervisor
(Supervisor ID: 6429)

<https://scholar.google.com/citations?hl=en&oe=ASCII&user=EhpKuegA AAAJ>

Muhammad Kashif, **Aamir Shahzad**, Qurat-ul-Ain Asif, Nabeel Anjum First Principles Investigation of the Structural, Electronic, and Optical Properties of g-C3N4/HfSSe Hetrostructure, ACCEPTED in Journal of Electronic Materials

- (2025)
- 82** Ammara Naz, Muhammad Kashif. Qurat ul Ain Asif, Alina Manzoor, Ama tul Zahra, **Umedjon Khalilov** and **Aamir Shahzad**, Tuned Structural and Water-Diffusion in Single Walled Carbon Nanotubes Using Molecular Dynamics Simulations, ACCEPTED in Journal of Electronic Materials, (2025).
- 81** Tohir Akramov, Parthiban Marimuthu, Mukhriddin Makhkamov, **Aamir Shahzad**, Rasulbek Mashalov, Jamoliddin Razzokov6, Molecular Dynamics Insights into the Effects of Oxidative Modifications on α -Synuclein Aggregation and Stability, ACCEPTED in Frontier Physics, (2025).
- 80** Qurat ul Ain Asif, Akhtar Hussain, **Aamir Shahzad**, Muhammad Kashif, Hamayl Asim, Saima Rashid, Effect of sulfur concentration on electronic properties of h-BN monolayer: a computational study, Eur. Phys. J. Plus (2025) 140:288
- 79** Muhammad Muzammal Ilyas, Alina Manzoor, **Aamir Shahzad**, Muhammad Azhar Khan, Muhammad Nasir Rasul, Cd-Zn-Ni ferrites/GNP nanocomposite electrode for high-performance supercapacitors, Ceramics International, Volume 51: 13 (2025) 18140-18153.
- 78** Dिल्фуза Husanova, Kamoladdin Egamberdiev, Fakhriddin Safarov, Aziza Ergasheva, **Aamir Shahzad**, Sirojiddin, Mirzaev, and **Umedjon Khalilov**, Atomic-Scale Mechanisms Controlling the Early Aggregation of Sub 10 nm Amorphous Silica Nanoparticles in Vacuum, The Journal of Physical Chemistry C, 129:5, 2421-2428 (2025)
- 77** Muhammad Asif Shakoori, Misbah Khan, Haipeng Li (李海鹏), **Aamir Shahzad**, Maogang He(何茂刚) and Syed Ali Raza, Molecular dynamics evaluation of self-diffusion coefficients in two-dimensional dusty plasmas, Chinese Physics B, 34 (2025) 045202.
- 76** Muhammad Asif Shakoori1, Iqra Rahim, Misbah Khan, Haipeng Li, **Aamir Shahzad** and Maognag He, Shear viscosity of electrorheological complex plasmas, Phys. Scr. 100 (2025) 025605.
- 75** Amjad Sohail, Hazrat Ali, **Aamir Shahzad**, Tariq Munir, Rizwan Ahmed, Nanomechanically-Induced Transparency in *PT* –Symmetric Optical Cavities, International Journal of Theoretical Physics (2025) 64:25
- 74** Rizwan Ahmed· Hazrat Ali, **Aamir Shahzad**, S. K. Singh, Amjad Sohail3, Marcos César de Oliveira5, Nonreciprocal multipartite entanglement induced by Kerr nonlinearity, Quantum Information Processing (2025) 24:137.
- 73** Amna Tariq, Kiran Mehmood, **Aamir Shahzad**, Hamayal Asim, Saira Tariq, Qurat Ul Ain Asif, Role of Cr-dopant in tuning the properties of Mg-Ni ferrites nanoparticles synthesized by sol-gel auto combustion method for applications in electronic device, Materials today communications, 42, 111504, (2025).
- 72** Muhammad Muzammal Ilyas, Alina Manzoor, Muhammad Azhar Khan, **Aamir Shahzad**, Amir Muhammad Afzal, Muhammad Nasir Rasul, Muhammad Rizwan Saleem, “Synthesis, microstructure, and electromagnetic behavior of graphene nanoplatelets/CZCF ferrite nanocomposites”, **Synthetic Metals**, 307, pp: 117664, (2024)

- 71** Sobia Zareen, Sajid Bashir, **Aamir Shahzad***, Muhammad Kashif and Guogang Ren, “Direct and Indirect Effects for Radiosensitization of Gold Nanoparticles in Proton Therapy”, *Radiation Research*, 202:5, 795–806 (2024)
- 70** Ama tul Zahra, Jamoliddin Razzokov, Muhammad Kashif, Umedjon Khalilov, Haipeng Li, Kun Luo, **Aamir Shahzad*** Guogang Ren, G. Reza Vakili-Nezhaad “Strained Mechanical and Fracture Analyses of Armchair-Chiral-Zigzag based Carbon Nanotube Using Molecular Dynamics Simulations”, *ACS Omega*, **9:49**, 48055-48069 (2024)
- 69** Taqmeem Hussain, Rahila Kousar, Kanwal Younas, Khurram Saleem, **Aamir Shahzad**, Tariq Munir, Muhammad Fakhar-e-Alam, Arsalan Mehmood, Muhammad Asif, Kholood A. Dahlous, Mohamed F. Shibl and Noora H. Al-Qahtani, “Thermoluminescence response of Ce doped CaTiO₃ nanophosphor synthesized by hydrothermal method for gamma dosimetry” *Radiochim. Acta* (2024); <https://doi.org/10.1515/ract-2024-0282>
- 68** Rizwan Ahmed, Hazrat Ali, **Aamir Shahzad**, S K Singh, Amjad Sohail, and Marcos C’esar-de-Oliveira, “Nonreciprocal Multipartite Entanglement in a two-cavity magnomechanical system” *Chinese Journal of Physics*, (2024)
- 67** Nabeel Anjum, Muhammad Kashif, **Aamir Shahzad**, Abdur Rasheed, Guogang Ren, “2D Janus ZrSSe/SnSSe Heterostructure: A Promising Candidate for Photocatalytic Water Splitting” *ACS Omega* 2024, 9, 19848–19858
- 66** Akbar Kodirov, Davronjon Abduvokhidov, Shavkat Mamatkulov, **Aamir Shahzad**, Jamoliddin Razzokov, The Absorption Mechanisms of CO₂, H₂S and CH₄ Molecules in [EMIM][SCN] and [EMIM][DCA] Ionic Liquids: A Computational Insight, *Fluid Phase Equilibria*, in Press, (2024); <https://doi.org/10.1016/j.fluid.2024.114080>
- 65** Muhammad Asif Shakoori, Maogang He, **Aamir Shahzad**, Misbah Khan, Li Haipeng, Phase transitions of Yukawa systems in electric field, *European Physical Journal Plus*, 139 (4):316 (2024).
- 64** Zhongqing Zhang, Zhiyu Wang, Jianwei Lu, Jiayin Lyu, Xiangqun Zhuge, Kun Luo, **Aamir Shahzad**, Yurong Ren, Weiwei Lei, Dan Liu, Enhancing Electrochemical Performance of Aluminum-Oxygen Batteries with Graphene Aerogel Cathode, in *Small Materials*, 2301225 (2024)
- 63** Ama tul Zahra, **Aamir Shahzad***, Alina Manzoor, Jamoliddin Razzokov, Qurat ul Ain Asif, Kun Luo and Guogang Ren, “Structural and Thermal Analyses in Semiconducting and Metallic Zigzag Single-Walled Carbon Nanotubes using Molecular Dynamics Simulations”, *PLOS ONE*, 19 (2), e0296916 (2024).
- 62** Aadil Mahboob, **Aamir Shahzad***, Alina Manzoor, Amjad Sohail and Muhammad ikram “Polarization Effects on Thermal Conductivity of Dusty Plasmas” *Arabian Journal of Science and Technology*, **48**, 8047–8057 (2023).
- 61** Ama tul Zahra, **Aamir Shahzad***, Adil Loya, Muhammad Kashif and Maogang He, “Tuning Structural and Thermal Conductivity of Carbon Nanotubes under Strain Effects”, *Chinese Journal of Physics*, **86**, 24-38 (2023),
- 60** **Aamir Shahzad***, Amjad Sohail, Alina Manzoor, Muhammad ikram, Adil Loya, Amam Ur Rehman and Muhammad Asif Shakoori, Propagation Characteristics

- of Longitudinal Modes in Dusty Plasmas, *Physics of Plasmas*, 30 (1): 013702 (2023).
- 59 Xu-Feng Li, Lei-Yu Zhang, **Aamir Shahzad**, Pankaj Attri, Quanzhi Zhang, “Investigation of Plasma Propagation in packed Dielectric Barrier Discharge based on a customized PIC/MCC Model”, *Plasma* 6, 637–648 (2023).
- 58 Humaira Iqbal, Nazish Jahan, Shaukat Ali, **Aamir Shahzad** and Rashda Iqbal, “Formulation of Moringa Oleifera Nanobiopesticides and their Evaluation Against Tribolium Castaneum and Ryzopertha Dominica”, *Journal of Plant Diseases and Protection*, Online First Sep. 21 (2023) <https://doi.org/10.1007/s41348-023-00802-z>
- 57 Alina Manzoor, **Aamir Shahzad**, Wolfgang Kuch, Tauqir Shinwari, Ivar Kumberg, Yasser A. Shokr, Muhammad Azhar Khan, “Microstructure, Ferromagnetic Resonance, and Electrical Analysis of Ho-substituted Li-Ni Nanoparticles” *Journal of Alloys and Compounds*, 968 172235 (2023)
- 56 Mingxing Wang, Xiangqun Zhuge, Tong Liu, Shuyong Jia, Kun Luo, Yurong Ren, **Aamir Shahzad**, Xiaoteng Liu, Preparation of composite single-ion conductor membrane and its application in lithium-oxygen battery, *Advanced Energy and Sustainability Research*, 4, 2300111 (2023).
- 55 Qurat ul Ain Asif, Hamayl Asim, Azeem Ghulam Nabi, Muaz Rehman, **Aamir Shahzad**, Muhammad Kashif and Akhtar Hussain, “First-principles study of metals, metalloids and halogens doped monolayer MoSe₂ to tune its electronic properties”, *Physica Scripta*, **98**, 105917 (2023)
- 54 Davronjon Abduvokhidov, Maksudbek Yusupov, **Aamir Shahzad**, Pankaj Attri, Masaharu Shiratani, Maria C. Oliveira and Jamoliddin Razzokov, “Unraveling the Transport Properties of RONS across Nitro-Oxidized Membranes” *Biomolecules* 13, 1043 (2023).
- 53 Kenan Senturk, Tuba Sen, Turgay Coruhlu, **Aamir Shahzad** & Necdet Aslan, “Obtaining plasma parameters by Langmuir probes and optical emission spectroscopy in low-pressure DC plasma” *Radiation Effects and Defects in Solids, Incorporating Plasma Science and Plasma Technology*, 178, NOS. 7–8, 912–928, (2023),
- 52 Amjad Sohail, Zaheer Abbas, Rizwan Ahmed, **Aamir Shahzad**, Naeem Akhtar, and Jia-Xing Peng, “Enhanced Entanglement and Controlling Quantum Steering in a Laguerre–Gaussian Cavity Optomechanical System with Two Rotating Mirrors” *Ann. Phys. (Berlin)* 2300087 (2023).
- 51 Amjad Sohail, Rizwan Ahmed, Jia-Xin Peng, **Aamir Shahzad**, and S. K. Singh, “Enhanced entanglement via magnon squeezing in a two-cavity magnomechanical system” *Journal of the Optical Society of America B*, 40: (5) 1359-1366 (2023).
- 50 Amjad Sohail, Rizwan Ahmed, Jia-Xin Peng, Tariq Munir, **Aamir Shahzad**, S. K. Singh and Marcos César de Oliveira, “Controllable Fano-type optical response and four-wave mixing via magnetoelastic coupling in an opto-magnomechanical system” *J. Appl. Phys.* 133, 154401 (2023).
- 49 A. Mahboob, **A. Shahzad***, Amjad Sohail, M. Kashif and M.-G. He “Dynamical

- Density of Two-dimensional Dusty Plasmas”, Iranian Journal of Science and Technology, Transactions A: Science, 47 (1), 285-297 (2023).
- 48** S. Pervaiz, N. Kanwal, **A. Shahzad**, M. Saleem and Ijaz Ahmad Khan “Thermal and dielectric behavior of polymer-based nanocomposites flexible sheets as highly stable dielectric materials”, ‘International Journal of Polymer Science’ (Article ID 3892823, 2023), <https://www.hindawi.com/journals/ijps/2023/3892823/>
- 47** **Aamir Shahzad***, Ijaz Ahmad Khan, Alina Manzoor, Muhammad Kashif, Muhammad Ahsan, Mao-Gang He and Jamoliddin Razzokov, “Synthesis of Nickel Nanowires (Ni-NWs) as High Ferromagnetic Material by Electrodeposition Technique” Heliyon, 9 (1) e12576, (2023)
- 46** Shaoyu Lu, Dong Huang, **A. Shahzad**, and Yan Feng, Bulk modulus of two-dimensional Yukawa solids and liquids obtained from periodic compressions, Plasma Sci. Technol., 25 (3), 035002 (2023).
- 45** **Aamir Shahzad***, Muhammad Kashif, Aamir Hussain, Misbah Noreen, Mao-Gang He, Taqmeem Hussain, Jamoliddin Razzokov, Mawloud Belabbas and Sajid Bashir" Enhanced Photocatalysis Activity of Doped Magnetic Semiconductor (Rh/Ir):CdS by Improving Charge-Carrier Transfer Mechanism" Physica B: Physics of Condensed Matter, 652, 414643 (2023).
- 44** M A Shakoori, He M.-G, **A Shahzad**, M. Khan, Tuning the Structure and Transport Properties of Complex Plasmas Using Electric Field, Physica Scripta, 98, 015608 (2023).
- 43** M. Fakhar-e-Alam, Samira Saddique, Nazia Hossain, **Aamir Shahzad**, Inaam Ullah, Amjad Sohail, Muhammad Junaid Iqbal Khan and Malik Saadullah, “Synthesis, Characterization and Application of BaTiO₃ Nanoparticles for Anti-cancer Activity” ‘Journal of cluster science’ 34:1745–1755 (2023)
- 42** M A Shakoori, He M.-G, **A Shahzad**, M. Khan, “Diffusion Coefficient of Electrorheological Complex (Dusty) Plasmas” Journal of Molecular Modeling 28:398 (2022).
- 41** M A Shakoori, He M.-G and **A Shahzad**, “Diffusion Coefficients of Dusty Plasmas in an External Electric Field” ‘Eur. Phys. J. D, 76, 227 (2022).
- 40** M A Shakoori, He M.-G, **A Shahzad***, M. Khan, “Diffusion Coefficients for Complex Plasmas in Parallel Electric Field” Plasma Physics Reports, 48 (9), 1023-1033, (2022).
- 39** M. Kashif, N. Anjum, **A. Shahzad**, A. Rasheed, M. Imran and A. Manzoor, Tuning of Electronic and Optical Properties of ZrS₂/PtS₂ Van Der Waals Hetrostructure by External Electric Field Vertical Stain, ACS Omega, 7, 33453–33460, (2022)
- 38** A. Manzoor, M. A. Khan, A. M. Afzal, M. I. Arshad, **A. Shahzad**, S. Akbar, M. Kashif, G. A. Ashraf, M. Y. Khan, M. N. Rasul, M. S. Shifa, G. Nasar and A. Hussain “Dielectric, XPS, and Ferromagnetic Relaxation Studies of Ho-Substituted Polycrystalline Magnetic Oxide Materials”, Ceramics International, 48, 32266–32272 (2022).
- 37** Amjad Sohail Shah; Rizwan Ahmed; **Aamir Shahzad**; Muhammad Aslam Khan “Magnon-Phonon-Photon Entanglement via the Magnetoelastic Coupling in a

- Magnomechanical System” ‘International Journal of Theoretical Physics’ 61:174 (2022)
- 36** **A. Shahzad***, Alina Manzoor, Weizong Wang, Aadil Mahboob, Muhammad Kashif and **M-G He** “Dynamic Characteristics of Strongly Coupled Nonideal Plasmas” Arabian Journal for Science and Engineering, 47:957–969 (2022).
- 35** Jinrui Zhanga, Kai Zhang, Weizong Wang, **Aamir Shahzad**, Yufeng Cheng and Guobiao Cai, “Permeation by electrowetting actuation: revealing the prospect of micro-valve based on ionic liquid” Journal of Colloid and Interface Science, 608, 114–119 (2022).
- 34** **A. Shahzad***, M. Kashif, Ateeq-ur-Rehman, K. Kamran, S. Ghani, M. S. Shifa, and M. Yaseen “Modulating the Optoelectronic and Thermoelectric Properties of Chalcopyrite AgXTe_2 (X: Ga, In) via in-Plane Biaxial Strain” Journal Chalcogenide Letters, 18:(12), p.797-810 (2021);
- 33** Jinrui Zhanga, Guobiao Caia, **Aamir Shahzad**, Xuhui Liud, Weizong Wang “Ionic liquid electrospray behavior in a hybrid emitter electrospray thruster” International Journal of Heat and Mass Transfer, 175, 121369 (2021).
- 32** Alina Manzoor, Muhammad Azhar Khan, **Aamir Shahzad**, Tahani I. Al-Muhimeed, Abeer A. AlObaid, Hind Albalawi, Amir Muhammad Afzal, Muhammad Kashif, Sofia Tahir, Tariq Munir “Influence of B-site cations ordering on magnetization and dielectric relaxations in Li–Ni spinel ferrites” Ceramics International 47, 22662–22668 (2021),
- 31** M. Kashif, **A. Shahzad**, N. Nasir, K. Kamran, T. Munir, M. S. Shifa, M. Yaseen, A. Hussain, N. Anjum, S. Ghani, “Electronic and Optical Properties Modulation of LaCuOSe by Strain”, Journal of Ovonic Research, 17 (1), 45 – 51 (2021)
- 30** **A Shahzad***, M Kashif, T Munir, M-Un-N Martib, A Perveen, **M-G He** and S Bashir “Calculations of Uniaxial Tensile Strength of Al-Cu-Ni Based Metallic Glasses Using Molecular Dynamics Simulations” Physica B: Condensed Matter Physics, 602, 412566 (2021).
- 29** **A. Shahzad***, M Kashif, Tariq Munir M-G He, and Xin Tu, “Thermal Conductivity Analysis of two-dimensional Complex Plasma Liquids and Crystals” Physics of Plasmas 27 (10), 103702 (2020).
- 28** M Hussain, M N Nawaz, **A Shahzad**, M Taj, S Asghar, A Fatahi-Vajari, R Singh and A Tounsi “On mixing the Rayleigh-Ritz formulation with Hankel’s function for vibration of fluid-filled Fluid-filled cylindrical shell” Advances in Computational Design, 5 (4), 363-380 (2020).
- 27** **A Shahzad***, M. Kashif, T. Munir, M. A. Shakoori, M-G He, S. Bashir and Q. U Islam “Studies of weak external force on thermal conductivity of complex liquids using homogenous perturbed simulations” High Temperatures- High Pressures, 49 (4-6), 461–478 (2020).
- 26** **A Shahzad***, S Bashir, A Anwar, Establishment of age-specific reference levels and achievable doses for children and adults undergoing nuclear medicine exams, Journal of Radioprojection, 54(3), 187–194 (2019).
- 25** **A Shahzad***, M A Shakoori, M-G He and F Yang, Dynamical Structure Factor of Complex Plasmas for Varying Wave Vectors, Physics of Plasmas, 26, 023704

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A Shahzad* and M-G He, S Ghani, M Kashif, T Munir, F Yang, Crystalline Order and Disorder in Dusty Plasmas Using Nonequilibrium Molecular Dynamics Simulations, Chinese Physics B, **28**: 5, 055201-8 (2019)

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M. Kashif, T. Munir, N. Nasir, M. Sharif, **A. Shahzad**, T. Ahmad, A. Hussain, M. Noreen, First principles study of electronic, elastic and optical Properties of SnO under in-plane biaxial strain, Digest Journal of Nanomaterials and Biostructures, **14**, 127 – 137 (2019)

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M. S. Shifa, A. Misbah, T. Munir, **A. Shahzad**, M. N. Usmani, M. Khalid, S. Mutabar, Q. Imdadullah, Z. A. Gilani, H. M. N. UL Huda Khan Asghar, Characterization of Zirconium Substituted Cobalt Zinc Ferrites Synthesized via Co-Precipitation Technique, Digest Journal of Nanomaterials and Biostructures, **14** (3), 607 – 616 (2019).

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N. Nasir, M. Kashif, T. Munir, **A. Shahzad**, M. Noreen, K. Kamran, A. Hussain, A. Ahmed, The Effect of Strain on Electronic and Optical Properties of CuBO₂ (B=Y, SC) by First Principles Study, Digest Journal of Nanomaterials and Biostructures, **14** (4), 895-906 (2019).

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A Shahzad*, S I Haider, M Kashif, M S Shifa, T M and M-G He, Thermal Conductivity of Complex Plasmas Using Novel Evan-Gillan Approach, Commun. Theor. Phys. **69** 704–710 (2018).

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M. Hussain, M N Naeem, **A Shahzad***, **M-G He** and S Habib, Vibrations of rotating cylindrical shells with functionally graded material using wave propagation approach, Proc IMechE Part C: J Mechanical Engineering Science, **232**(23) 4342–4356 (2018).

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M. Kashif, T. Munir, A. Hussain, **A. Shahzad**, A. Rasheed, N. Amin, M. Noreen, W. Hussain, AB INITIO study of structural, electronic and optical properties of Al-doped SnO₂, Digest Journal of Nanomaterials and Biostructures, **13**(3), 875 – 883 (2018).

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T. Munir, M. Kashif, W. Hussain, **A. Shahzad**, M. Imran, A. Ahmed, N. Amin, N. Ahmed, A. Hussain, M. Noreen, First principles study of structural and electronic properties of Ti doped ZnO, Journal of Ovonic Research, **14** (5), 333 – 337 (2018).

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T. Munir, M. Rizwan, M. Kashif, **A. Shahzad**, S. Ali, N. Amin, R. Zahid, M. F. E. Alam, M. Imran, Effect of zinc oxide nanoparticles on the growth and Zn uptake in wheat (*TRITICUMAESTIVUM* L.) by seed priming method, Digest J. of Nanomaterials & Biostructures, **13**(1), 315 – 323 (2018).

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A Shahzad*, M-G He, S I Haider and Y Feng. Studies of force field effects on thermal conductivity of complex plasmas, Physics of Plasmas **24**, 093701 (2017).

14

T. Munir, H.S. Munir, M. Kashif, M. Fakhar-e-Alam, **A. Shahzad**, N.Amin, A.Sajid, M.Umair, Synthesis and characterization of Copper Oxide nanoparticles by solution evaporation method, Journal of Optoelectronics and Advanced Materials **19** (5-6), 417-423, (2017).

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M Hussain, M. N Naeem, **A Shahzad*** and **M-G He** “Vibrational behavior of single-walled carbon nanotubes based on cylindrical shell model using wave

	propagation approach” AIP Advances, 7, 045114 (2017).
<u>12</u>	A Shahzad* and Mao-gang He. Structural Order and Disorder in Strongly Coupled Yukawa Liquids, Physics of Plasmas 23, 093708 (2016)
<u>11</u>	Shaheen A, Shahzad A* , Bashir S , Hussain M. Y. and Nasim A, Improved Performance of Radiochromic Films for High Dose Dosimetry, Journal of Radio Protection (SCI-Journal); 51(2): 129-133 (2016)
<u>10</u>	A Shahzad* and M-G He , “Numerical Experiment of Thermal Conductivity in two-dimensional Yukawa Liquids” Physics of Plasmas, 22 (12): 123707 (9pp), (2015).
<u>9</u>	A Shahzad* and M-G He , Calculations of Thermal Conductivity of Complex (Dusty) Plasmas Using Homogenous Nonequilibrium Molecular Simulations, Radiation Effects and Defects in Solids: Incorporating Plasma Science and Plasma Technology, 170 (9): 758-770, (2015).
<u>8</u>	A Shahzad* and M-G He , Homogenous Nonequilibrium Molecular Dynamics Evaluation of Thermal Conductivity in 2D Yukawa Liquids, Int. J. Thermophys.: 36 (10-11), 2565–2576 (2015).
<u>7</u>	Shahzad A* and M-G He , Nonlinear Effects of Dusty Plasmas Using Homogenous Nonequilibrium Molecular Dynamics Simulations, Journal of Applied Nonlinear Dynamics, 4(3): 259–265 (2015).
<u>6</u>	Shahzad A* , Arfa A and He M –G, Equilibrium Molecular Dynamics Simulation of Shear Viscosity of Two-Dimensional Complex (Dusty) Plasmas, Radiation Effects and Defects in Solids: Incorporating Plasma Science and Plasma Technology, 169 (11), 931-941 (2014).
<u>5</u>	Shahzad A* , He M -G and Kai He, Diffusion Motion of Two-Dimensional Weakly Coupled Complex (Dusty) Plasmas. Physica Scripta, 87 (3): 035501 (6pp) (2013).
<u>4</u>	Shahzad A* and He M -G. Thermal Conductivity of Three-Dimensional Yukawa Liquids (Dusty Plasmas). Contributions to Plasma Physics, 52 (8): 667-675 (9pp) (2012).
<u>3</u>	Shahzad A* and He M -G. Shear Viscosity and Diffusion motion of Two-Dimensional Dusty Plasma Liquids. Physica Scripta, 86 (1): 015502 (6pp) (2012).
<u>2</u>	Shahzad A* and He M -G, Thermodynamics Characteristics of Dusty Plasma by using Molecular Dynamics simulations. Plasma Science and Technology, 14 (9): 771-777 (7pp) (2012).
<u>1</u>	Shahzad A* and He M -G. Thermal Conductivity Calculation of Complex (Dusty) Plasmas. Physics of Plasmas, 19 (8): 083707 (11pp) (2012).

INTERNATIONAL PAPERS UNDER REVIEW

6
5

Muhammad Kashif, **Aamir Shahzad**, Qurat-ul-Ain Asif, Abeeha Khalid, Taqmeem Hussain, Nabeel Anjum, “Type-II SnI₂/PbBr₂ vdW Heterostructure for Efficient Solar Water Splitting: A First-Principles Study”, Chemical Physics, (2025)

- 4 Dilber Iqbal, **Aamir Shahzad*** and Sajad Bashir, Muhammad Kashif, Q. Amjad Sohail Shah, “Development of Novel Deep Learning-Based Segmentation Models and MRI images for Low-Grade Glioma Brain Tumor”, PNAS, (2025), [Submitted]
- 3 Ikram Muhammad; Faisal Khan; Amin Esmaeili; **Aamir Shahzad**; Abdullah Khan; Majid Khan; shahid Ali; S. A Khan, “Impact of Excited Electron on Argon and Helium Background Gases in ELTRAP”, The European Physical Journal Plus, (2025), [Under Review]
- 2 MUHAMMAD IKRAM; Faisal Khan; Amin Esmaeili; Aamir Shahzad; Abdullah Khan; Majid Khan; Shahid Ali; Shabbir Ahmed Khan, Impact of excited electron on argon and helium background gases in ELTRAP, Arabian Journal of Science and Engineering, (2025), [Under Review]
- 1 Adil Loya, Suleman Sadiq, **Aamir Shahzad**, “Effect Of Design Modification on the Open Water Performance of Marine Propeller”, Fluid Dynamics (2025) [Under Review]

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10 **A. Shahzad***, A Mahboob, W. Wang and Ama Tul Zahra, Molecular Dynamics Evolution for Thermal Conductivity of Complex Yukawa Liquids, Applied Sciences and Technology (IBCAST), 14-17 January, 2022, 19th International Bhurban Conference: **IEEE Conference Proceeding, p.717-720, (2022)**. [Indexed by ISTP and within SCI indexed]
- 9 Linda Agun, Siti Sarah Safaai, Masnah Binti Hanim, Norhayati Ahmad, Norizah Redzuan, Muhamad Nor Firdaus Zainal, Mohd Fadthul Ikmal Misnal, Hom Bahadur Baniya, **Aamir Shahzad**, Raja Kamarulzaman Raja Ibrahim, Improvement of Honeydew Seed Germination Using Dielectric Barrier Discharge Planar (DBDP) Cold Plasma, Jurnal Fizik Malaysia Volume 43 (1), 10098-10104 (2022)
- 8 **Shahzad A***, M. Kashif, A. Fatima and **He M –G**, Wave analysis of Yukawa liquids and solids using molecular dynamics simulations, Applied Sciences and Technology (IBCAST), 14-17 January, 2020, 17th International Bhurban Conference: **IEEE Conference Proceeding, p.477-480, (2020)**. [Indexed by ISTP and within SCI indexed]
- 7 **Shahzad A***, S. I. Haider and **He M –G**, Particles Order-disorder in Complex (Yukawa) Fluids Using Molecular Dynamics Simulations, Applied Sciences and Technology (IBCAST), 9-13 January, 2018 15th International Bhurban Conference: **IEEE Conference Proceeding 509-512 (2018)**. [Indexed by ISTP and within SCI indexed]
- 6 **Shahzad A***, He M –G and M. A. Shakoori, Thermal Transport and Non-Newtonian behaviors of 3D Complex Liquids Using Molecular Simulations, Applied Sciences and Technology (IBCAST), 2017 14th International Bhurban Conference: **IEEE Conference Proceeding 472-474 (2017)**. [Indexed by ISTP and within SCI indexed]

- 5 **Shahzad A*** and He M -G “Thermal Conductivity of 3D Complex (Dusty) Plasmas Using Homogenous Nonequilibrium Molecular Dynamics Computer Experiment” Plasma Sciences (ICOPS), IEEE International Conference, (2015) pp: 1. [Indexed by ISTP and within SCI indexed/ web of science]
- 4 **Shahzad A***, Maryam S, Arfa A and He M –G, Thermal Conductivity Measurements of 2D Complex Liquids Using Nonequilibrium Molecular Dynamics Simulations, Applied Sciences and Technology (IBCAST), 2014 11th International Bhurban Conference: **IEEE Conference Proceeding** 212-217 (2014). [Indexed by ISTP and within SCI indexed]
- 3 **Shahzad A***, Sultana M., Aslam, A. and He M -G, Molecular dynamics simulations of thermal conductivity in 2D complex Yukawa liquids, IOP Conference Series: Materials Science and Engineering, 60 (1), 12038-12044 (2014). [Indexed by ISTP and within SCI indexed]
- 2 **Shahzad A***, Aslam, A., Sultana M. and He M -G, Shear Viscosity of Strongly Coupled Complex (Dusty) Liquids, IOP Conference Series: Materials Science and Engineering, 60 (1), 12014-12020 (2014). [Indexed by ISTP and within SCI indexed]
- 1 **Shahzad A*** and He M –G, Interaction Contributions in Thermal Conductivity of Three-Dimensional Complex Liquids. AIP Conf. Proc. 1547 (1), (2013) pp. 173 (Indexed by ISTP and within SCI indexed).

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(Full Book) **Aamir SHAHZAD*** “*Emerging Applications of Plasma Science in Allied Technologies*” By **IGI Global** Publisher (Hershey PA, USA), Edited by Dr. AamirShahzad,.ISBN13: 9798369309049;EISBN13: 9798369309056;DOI: 10.4018/979-8-3693-0904-9, **Online first (Dec 1, 2023)**, (In press); **13-Chapters**, pp. 1-300, Book Citation Indexed in **Thomson Reuters/ Web of Science™**, p. 1-300, (2023).
- 9
(Full Book) **Aamir SHAHZAD*** “*Advancements in Fine Particle Plasmas*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN (pdf):, ISBN (print):. Book Citation Indexed in **Thomson Reuters/ Web of Science™**, 2023, pp: (In press)
- 8
(Full Book) **Aamir SHAHZAD***, “*Advances in Fusion Energy Research. From Theory to Models, Algorithms, and Applications*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Bruno Carpentieri and Co-Edited by **Dr. Aamir Shahzad** ISBN 978-1-80356-279-7, Print ISBN 978-1-80356-278-0, wbook (pdf) ISBN 978-1-80356-280-3, **00-Chapters**, pp. 1-180, (2022) Book Citation Indexed in **Thomson Reuters/ Web of Science™**.
- 7
(Full Book) **Aamir SHAHZAD*** “*Plasma Science and Technology*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN 978-1-83969-624-4, Print ISBN 978-1-83969-623-7, ebook (pdf) ISBN 978-1-83969-625-1, **12-Chapters**, pp: 1-246 (2022). Book Citation Indexed in **Thomson Reuters/ Web of Science™**.
- 6 **Aamir SHAHZAD*** “*Emerging Developments and Applications of Low*

(Full Book)

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Temperature Plasma” By **IGI Global** Publisher, Edited by Dr. Aamir Shahzad, ISBN13: 9781799883982, ISBN10: 1799883981, EISBN13: 9781799884002, **09-Chapters**, p. 1-239 (2021). Book Citation Indexed in **Thomson Reuters/ Web of Science™**; DOI: 10.4018/978-1-7998-8398-2

Aamir SHAHZAD* “*Fusion Energy*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN 978-1-78985-414-5, Online ISBN 978-1-78985-413-8, Ebook (pdf) ISBN 978-1-78985-845-7, 06-Chapters, pp: 1-146 (2020). Book Citation Indexed in **Thomson Reuters/ Web of Science™**.

Aamir SHAHZAD* “*Thermophysical Properties of Complex Materials*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN: 978-1-78984-889-2, Print ISBN 978-1-78984-888-5, ebook (pdf) ISBN 978-1-83880-458-9, pp. 1-132 (2020). Book Citation Indexed in **Thomson Reuters/ Web of Science™**.

Aamir SHAHZAD* and Sajid Bashir “*Nuclear Medicine Physics*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN 978-1-83880-284-4, Print ISBN 978-1-83880-283-7, ebook (pdf) ISBN 978-1-83880-500-5, p. 1-108, (2019). Book Citation Indexed in **Thomson Reuters/ Web of Science™**.

Aamir SHAHZAD* “*Impact of Thermal Conductivity on Energy Technologies*” By **INTECH** Publisher (Croatia/ London, UK), Edited by Dr. Aamir Shahzad, ISBN 978-1-78923-673-6, Print ISBN 978-1-78923-672-9, ebook (pdf) ISSN 978-1-83881-689-6, pp: 1-197, (2018). Book Citation Indexed in **Thomson Reuters/ Web of Science™**; DOI: 105772/intechopen.72471.

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23

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Aamir Shahzad*, Rabia Waris, Muhammad Kashif, Alina Manzoor, Maogang He “Role of Electric Field on Diffusion Coefficients for Weakly Coupled Plasma” **Published as a 6th BOOK Chapter** in a BOOK entitled “*Emerging Applications of Plasma Science in Allied Technologies*”, By **IGI Global** Publisher, Edited by Dr. Aamir Shahzad, ISBN13: 9798369309049; EISBN13: 9798369309056, Book Citation Indexed in **Thomson Reuters/ Web of Science™**, Online first (Dec 1, 2023), Chp No. 6, pp: 139-151, (2024), DOI: 10.4018/979-8-3693-0904-9

Muhammad Asif Shakoori, Misbah Khan, Haipeng Li, Maogang HE, **Aamir Shahzad** and Syed Ali Raza “Numerical Approach to Thermal Conductivity of Electrorheological Complex (Dusty) Plasmas” **Published as a 9th BOOK Chapter** in a BOOK entitled “*Emerging Applications of Plasma Science in*

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Muhammad Asif Shakoori, Maogang HE, **Aamir Shahzad**, Misbah Khan and Ying Zhang “Molecular Dynamics Study of Diffusion in Low-temperature Dusty Plasmas in the presence of External Electric Field” **Published** as a BOOK 4th Chapter in a BOOK entitled “*Emerging Developments and Applications of Low Temperature Plasma*”, By **IGI Global** Publisher, Edited by Dr. Aamir Shahzad, ISBN13: 9781799883982, ISBN10: 1799883981, EISBN13: 9781799884002, **Chp 4**, p. 63-84, (2021). Book Citation Indexed in **Thomson Reuters/ Web of Science™**, DOI: 10.4018/978-1-7998-8398-2.ch004

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Aamir Shahzad*, Muhammad Kashif, Tariq Munir and Maogang He, “DC Motor Synchronization Speed Controller Based on Microcontroller” **Published** as a BOOK Chapter in a BOOK entitled “*Automation and Control*”, By **INTECH** Publisher (Croatia/ London, UK), Edited by Pedro Ponce, Arturo Molina Gutierrez and M. Ibarra, online ISBN: 978-1-83962-714-9; Print ISBN: 978-1-83962-713-2; 2Book (PDF) ISBN: 978-1-83962-715-6. Chp. 14, p.373-384 (2021), Book Citation Indexed in **Thomson Reuters/ Web of Science™**, DOI: <http://dx.doi.org/10.5772/intechopen.93080>

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Aamir Shahzad* “Introductory Chapter: Role of Nuclear Medicine in Medical Science” **Published** as an Introductory BOOK Chapter in a BOOK entitled “Nuclear Medicine Physics”, By **INTECH** Publisher (Croatia/ London, UK), Edited by **Aamir Shahzad**, ISBN 978-1-83880-284-4, Print ISBN 978-1-83880-283-7, ebook (pdf) ISBN 978-1-83880-500-5, Chp No. 1 pp. 1-5 (2019). Book Citation Indexed in **Thomson Reuters/ Web of Science™**.

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Aamir Shahzad* and Sajid Bashir “Applications of Diagnostic Reference Levels of Standard Doses in Nuclear Medicine” **Published** as a BOOK Chapter in a BOOK entitled “Nuclear Medicine Physics”, By **INTECH** Publisher (Croatia/ London, UK), Edited by **Aamir Shahzad**, ISBN 978-1-83880-284-4, Print ISBN 978-1-83880-283-7, ebook (pdf) ISBN 978-1-83880-500-5, Chp No. 6, pp. 81-98 (2019). Book Citation Indexed in **Thomson Reuters/ Web of Science™** 2019

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Aamir SHAHZAD* and Fang YANG “*Non-Newtonian Dynamics with Heat Transport in Complex Systems*” **PUBLISHED** as a BOOK Chapter in a BOOK entitled “Non Equilibrium Particle Dynamics”, By **INTECH** Publisher (Croatia/ London, UK), Edited by Albert S. Kim, ISBN 978-1-83968-078-6, Print ISBN 978-1-83968-077-6, eBook (pdf) ISBN 978-1-83968-079-3, Chp. No. 7, pp., (2019) Book Citation Indexed in **Thomson Reuters/ Web of Science™**.

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Aamir SHAHZAD*, Muhammad Asif Shakoori, Mao-Gang HE and Yan Feng, “*Numerical Approach to Dynamical Structure Factor of Dusty Plasmas*” Published as a BOOK Chapter in a BOOK entitled “Plasma Science and Technology-Basic Fundamentals and Modern Applications”, By **INTECH** Publisher (Croatia/ London, UK), Edited by Haikel Jelassi and Djamel Benredjem, ISBN 978-1-78985-240-0, Print ISBN 978-1-78985-239-4, ebook (pdf) ISBN 978-1-83962-043-0, Chp. No. 7, pp: 131-143 (2019), Book Citation Indexed in **Thomson Reuters/ Web of Science™**; DOI: 10.5772/intechopen.78334.

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Aamir Shahzad*, Syed Irfan Haider, Maogang He and Yan Feng, “*A Novel*

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Approach to Compute Thermal Conductivity of Complex System” Published as an Introductory BOOK Chapter in a BOOK entitled “Impact of Thermal Conductivity on Energy Technologies”, By **INTECH** Publisher (Croatia/ London, UK), Edited by **Aamir Shahzad**, ISBN 978-1-78923-673-6, Print ISBN 978-1-78923-672-9, ebook (pdf) ISBN 978-1-83881-689-6, Chp. No. 1, pp: 3-16, (2018). Book Citation Indexed in **Thomson Reuters/ Web of Science**TM; DOI: 10.5772/intechopen.75367.

Muzamal Hussain, **Aamir Shahzad***, M. Nawaz Naeem, and Maogang He, “*Vibration Characteristics of Fluid-Filled Functionally Graded Cylindrical Material with Ring Supports*” Published as a BOOK Chapter in a BOOK entitled “Computational Fluid Dynamics-Basic Instruments and Applications in Science”, By **INTECH** Publisher (Croatia/ London, UK), Edited by Adela Ionescu, ISBN: 978-953-51-3791-7, Print ISBN 978-953-51-3790-0, ebook (pdf) ISBN 978-953-51-4064-1, Chp. No. 14, pp: 333-355 (2018). Book Citation Indexed in **Thomson Reuters/ Web of Science**TM; DOI:10.5772/intechopen.72172.

Aamir Shahzad*, Muhammad Asif Shakoori, Maogang He and Sajid Bashir, “*Sound waves in Complex Plasmas (Dusty Plasmas)*” **Published** as a BOOK Chapter in a BOOK entitled “Computational and Experimental Studies of Acoustic Waves”, By **INTECH** Publisher (Croatia/ London, UK), Edited by, Muhmut Reyhanoglu ISBN: 978-953-51-3716-0, Print ISBN 978-953-51-3715-3, ebook (pdf) ISBN 978-953-51-3970-6, Chp. No. 3, pp: 47-61, (2017). Book Citation Indexed in **Thomson Reuters/ Web of Science**TM, DOI:10.5772/intechopen.71203,

<http://dx.doi.org/10.5772/intechopen.71203>

Aamir Shahzad* and Maogang He, “*Thermal Conductivity and Non-Newtonian Behavior of Complex Plasma Liquids*” Published as a BOOK Chapter in a BOOK entitled “Thermoelectric Power Generation - Advanced Materials and Devices”, By **INTECH** Publisher (Croatia/ London, UK), Edited by Mikhail Nikitin and Sergey Skipidarov, ISBN 978-953-51-2846-5, Print ISBN 978-953-51-2845-8, ebook (pdf) ISBN 978-953-51-4132-7, Chp. No. 13, pp:305-321,(2016). Book Citation Indexed in **Thomson Reuters/ Web of Science**TM; DOI: 10.5772/65563, <http://dx.doi.org/10.5772/65563>

STUDENTS THESIS SUPERVISED (TOTAL: 05-PhD, 33-M.Phil and 15-M.Sc/ BS-H)

PhD Physics

8

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5

08-PhD Students as a **Supervisor**, including 01-PhD, as **Co-Supervisor/ Supervisor-II**

Fazeelat Hanif (2022-2025), Tentative Thesis entitles as “Cold Plasma Immunotherapy for Anti-Cancer Treatment Using Molecular Level Simulations” (Synopsis approved in BOS and ASRB)

Muhammad Adnan (2021-2024), Tentative Thesis entitles as “Investigation of Wave Propagation Modes in Complex Plasmas using Molecular Dynamics Simulations” (Synopsis approved in BOS), working as a **PhD studentship under NRPU-HEC project, 2023**

Dilber Iqbal (2020-2023), Tentative Thesis entitles as “Cancer Segmentation in

	Medical Imaging using Deep Learning Based Computational Model” (Synopsis approved in BOS and ASRB)
<u>4</u>	Rabia Waris (2018-2021) , Tentative Thesis entitles as “Molecular Dynamics Computations of Transport Properties of Weakly Coupled Plasma” (Synopsis approved in BOS and ASRB), working as a PhD studentship under NRPU-HEC project, (Thesis submission stage)
<u>3</u> (Completed)	Ama Tul Zahra (2016-2019) , Thesis entitled as “Transport Properties of Singled Walled Carbon Nano Tubes Using Molecular Dynamics Simulation Techniques” (Completed)
<u>2</u> (Completed)	Muhammad Asif Shakoori (2018-2022) , Tentative Thesis entitles as “Transport Properties of Complex Plasmas Under Electric Field using Molecular Dynamics Simulations” in <u>Xi’an Jiaotong University China</u> , As a <u>Supervisor-II</u> with Collaborative work (Completed)
<u>1</u> (Completed)	Adil Mehboob (2015-2019) , Thesis entitled as “Transport Properties of Dusty Plasmas Using Molecular Dynamics Simulations” (Completed)
<u>MS/ M.Phil Physics</u>	
<u>46</u>	
<u>45</u>	Jazba Ahsan (2024-2026I)-Fall , Tentative topic: “MD Simulations of Sodium-Ion Battery”
<u>44</u>	Ahmad Irshad (2024-2026)-Fall , Tentative topic: “Cancer Treatment using Deep Learning”
<u>43</u>	Muhammad Awais (2024-2026)-Spring , Tentative topic: “Investigations of Structural Characteristics of Wheat Seeds using Plasma Simulations” (Is in Progress)
<u>42</u>	Laraib Batoon (2023-2025)-Fall , “Effects of Cold Plasma on Structural Properties as Anti Cancer Therapy Using Molecular Dynamics Simulations” (Is in Progress)
<u>41</u>	Gull Noor Fatima (2023-2025)-Fall , Tentative Thesis entitled as “Investigations of Plasma- Neuron Interactions Using Molecular Dynamics Simulations” (Is in Progress)
<u>40</u>	Abida Parveen (2023-2025)-Spring , Tentative Thesis entitled as “Experimental Observations of Cold Plasma Effects on Soybeans and Cotton Seeds” (Completed)
<u>39</u>	Rida Rasheed (2022-2024)-Fall , Tentative Thesis entitled as “Strained Thermal Conductivity of Boron Nitride Nanotubes Using Molecular Dynamics Simulations” (Completed)
<u>38</u>	Sheeza Munir (2022-2024)-Fall , Tentative Thesis entitled as “Numerical Study of Water Diffusive Flow in Single-Walled Carbon Nanotubes” (Completed)
<u>37</u>	Muhammad Asmat Ullah (2022-2024) , Tentative Thesis entitled as “Diffusion Coefficients in Boron Nitride Nanotubes Tagged Varying Flow Rates” (Completed)
<u>36</u>	Muhammad Shoaib Raza (2021-2023) Tentative Thesis entitled as “Investigation of Photocatalytic Enhancement of Electrospun g-C ₃ N ₄ /Mn-Doped ZnO Nanocomposites” (Completed)

<u>35</u>	Ammara Naz (2021-2023) Tentative Thesis entitled as “Tuning Structural and Diffusion Properties of Carbon Nanotubes using Computer Simulations” (Completed)
<u>34</u>	Areej Fatima (2021-2023) Tentative Thesis entitled as “Experimental Investigations of Cotton-Seed (<i>Gossypium hirsutum</i> L.) Treatment using Low Temperature Plasma” (Completed)
<u>33</u>	Muhammad Zubair (2020-2022) Tentative Thesis entitled as “Determination of Diffusion coefficients of Single Walled Carbon Nanotubes” (Completed)
<u>32</u>	Altaf Hussain (2020-2022) Tentative Thesis entitled as “Investigations of Electrowetting Behavior of Ionic Liquids on Solid Substrate Using Molecular Dynamics Simulations” (Completed)
<u>31</u>	Fazeelat Hanif (2020-2022), Tentative Thesis entitled as “Effects of Electric Field on Structural Behavior Complex Plasmas Using Molecular Dynamics Simulations” (Completed)
<u>30</u>	Arslan Ali (2019-2021), Tentative Thesis entitled as “Shear Waves in Ideal Plasma Using Molecular Dynamics Simulations” (Completed)
<u>29</u>	Samira Saddique (2019-2021), Tentative Thesis entitled as “Synthesis and Applications of Barium Titanate Nanoparticles for Targeted Drug Delivery System” (Completed)
<u>28</u>	Muhammad Ahsan (2018-2020), Tentative Thesis entitled as “Synthesis and Characterization of Template Assisted Nickel Nanowires” (Completed)
<u>27</u>	Sunnia Kiran (2018-2020), Tentative Thesis entitled as “Dynamical Structure Factor of Weakly Coupled Plasmas Using Molecular Dynamic Simulations” (Completed)
<u>26</u>	Zakia Rafiq (2018-2020), Tentative Thesis entitled as “Molecular dynamics computations of dynamical spectra in two dimensional dusty plasmas” (Completed)
<u>25</u>	Zamar Ahmad (2018-20), Tentative Thesis entitled as “Wave Analysis of 2D Complex dusty plasma through Molecular Dynamics Simulations” (Completed)
<u>24</u>	Muhammad Usman (2017-2019) Thesis entitled as “Synthesis and Characterization of Copper and Nitrogen Co-Doped TiO ₂ NanoFibers by Electrospinning Method” (Completed)
<u>23</u>	Mehar un Nisa (2017-2019) Thesis entitled as “Uniaxial Tensile Strength of Al-Cu-Ni based Metallic Alloys and Metallic Glass by Using Molecular Dynamics Simulations” (Completed)
<u>22</u>	Madeha Naheed (2017-2019) Thesis entitled as “Effects of polarization on thermal conductivity of complex plasmas through molecular dynamics simulations”(Completed)
<u>21</u>	Aneeqa Fatima (2017-2019) Thesis entitled as “Wave Analysis Of Two-Dimensional Yukawa Liquids And Solids Using Molecular Dynamic Technique” (Completed)
<u>20</u>	Muhammad Mubashir (2017-19-Spring) Thesis entitled as “Air Filtration Through Nanofibrous Filter Media” (Completed)

<u>19</u>	Sajid Ali (2017-2019-Spring) Thesis entitled as “Calculations of structural electronic and optical properties of Nobel element doped cds using ab-initio method” (Completed)
<u>18</u>	Muhammad Wali Ullah (2016-18-PU) Thesis entitled as “Calculations of Dynamical Structure Factor in Dusty Plasma using Equilibrium Molecular Dynamics Simulations” (As a Co-Supervisor in PU , Thesis is Completed)
<u>17</u>	Faiza Afzal (2016-2018) Thesis entitled as “Quantitative assessment of radiation dose to fibroglandular tissue using Monte Carlo simulation in digital mammography” (Completed) <u>Nuclear Medicine</u>
<u>16</u>	Laraib Siddiqi (2016-2018) Thesis entitled as “Assessment of Diagnostic Reference Standard in computed tomography” (Completed) <u>Nuclear Medicine</u>
<u>15</u>	Muhammad Irfan (2016-2018) Thesis entitled as “Investigations of structural, electronic and optical properties of strained AgInSe₂ using first principles study”(Completed)
<u>14</u>	Muhammad Umer (2016-2018) Thesis entitled as “Estimations of electronics, structural and optics properties of strained AgInTe₂ through first principles study” (Completed)
<u>13</u>	M Qasim Khan (2016-2018) Thesis entitled as “Nonequilibrium molecular dynamics evolution of 2D thermal conductivity in nonideal plasmas” (Completed)
<u>12</u>	Umair Akhtar (2016-2018) Thesis entitled as “Waves spectra in complex dusty plasma using equilibrium molecular dynamics simulations” (Completed)
<u>11</u>	Simab Liaqat (2016-2018) Thesis entitled as “Breast density classification using Convolutional Neural Network Model” (Completed) <u>Nuclear Medicine</u>
<u>10</u>	Naila Yasmeen (2016-2018) Thesis entitled as “Thermodynamics and particle motion of granular materials using molecular dynamics simulations” (Completed)
<u>9</u>	Muhammad Ali (2015-2017) Thesis entitled as “Thermodynamics Properties of Complex (Dusty) Plasmas Using Equilibrium Molecular Dynamics” (Completed)
<u>8</u>	Syed Irfan Haider (2015-2017), Thesis entitled as “Thermal Response and Conductivity of Dusty Plasma Using Evan-Gillan Simulation Technique” (Completed)
<u>7</u>	Ayesha Anwar (2015-2017), Thesis entitled as “Establishment of Diagnostic Reference Levels and Achievable Dose in Nuclear Medicine” (Completed) <u>Nuclear Medicine</u>
<u>6</u>	Muhammad Asif Shakoori (2015-2017), Thesis entitled as “Dynamical Correlation of Complex Dusty Plasma Using Molecular Dynamic Simulation” (Completed)
<u>5</u>	Saba Rashid (2014-2016), Thesis entitled as “Thermal properties of two-dimensional dusty plasmas using molecular simulation technique” (Completed)
<u>4</u>	Muhammad Irfan (2014-2016), Thesis entitled as “Thermodynamic and Structural properties of Simple Liquids Using Molecular Dynamics Simulation”

3

(Completed)

Iffat Ambreen (2013-2015), Thesis entitled as “Nonlinear Effects of Complex Plasmas Using Numerical Experiment” (Completed)

2

Arffa Aslam (2012-2014), Thesis entitled as “Shear Viscosity of Dusty Plasmas Using Equilibrium Molecular Dynamics Simulations” (Completed)

1

Maryam Sultana (2012-2014), Thesis entitled as “Thermal Conductivity of Strongly Coupled Dusty Plasmas Using Nonequilibrium Molecular Dynamics Simulations” (Completed)

M. Sc./ BS (Hons.) I have been supervised **08-M.Sc and 07-BS (Hons) students**

1

Noreen Afzal (2005), Comparison and characteristic study of pentagon type solar oven fitted with single and double reflector.

2

Teyyiba Kanwal (2005), Improved Circular Design and Performance Analysis of Electric Cum Solar Oven

3

Mahwish Maqsood (2005), Fabrication and performance study of an improved design of pentagon type solar oven fitted single reflector

4

Muhammad Faisal Wasim (2005), Design, Fabricated and Performance Study of an 8-Digit Presentable Up and Down Counter.

5

Muhammad Saif Ullah (2005), Fabrication and Characteristics Study of Two Phase DC Drive Motor using Silicon Control Rectifier

6

M. Rehman Amir, Baqir Ali, Ishtiaq Ahmed and Ali Raza (2005), The Performance and Characteristics Study of a Fabricated Single Phase DC Motor Drive

7

Hashim Farooq (2006), Design and Development of programmable Logic Controller (PLC) for Load Automation Controlling through PC

8

Sadia Naseem (2006), Development and Controlling of Dual Stepper Motor based on Microcontroller AT89C51

9

Saiqa Anjum (2006), Monitoring and controlling of a Switching system through PC Parallel Port

10

Faryal Khalid (2009), Study of Digital Temperature Control Magnetic Stirrer

11

Uzma Tariq (2009), Study of Digital Speed Control Magnetic Stirrer

12

Jamshed (2009), Performance Measurement of Digital Time Counter

PUBLICATIONS/REVIEW (National Publications)

13

12

Dilber Iqbal and **Aamir Shahzad**, “Prediction of thyroid cancer recurrence with machine learning models”, Pakistan Journal of Nuclear Medicine, 14(2):49–55 (2024). (HEC Approved Journal)

11

Alina Manzoor, **Aamir Shahzad**, Muhammad Imran Arshad, Amir Muhammad Afzal, Tauqir Shinwari, Muhammad Yaqoob Khan, “Impact of Holmium and Nickel Substitution on Y-Type Hexagonal Ferrites Synthesized via Sol-gel Method”, Journal of Materials and Physical Sciences (JMPS) 4(1):09-19, (2023); (HEC Approved Journal)

10

Arsa Nageena, Alina Manzoor, Amir Muhammad Afzal, Muhammad Imran Arshad, **Aamir Shahzad**, Muhammad Kashif, “Investigation of Dielectric, Magnetic and Electrical Behavior of BFO/GNPs Nano-Composites Synthesized via Sol-Gel Method” Journal of Materials and Physical Sciences (JMPS), 3:2, 59-70 (2022); (HEC Approved Journal)

9

Alina Manzoor, Aqib Javed, Amir Muhammad Afzal, M. Imran Arshad, **Aamir Shahzad**, “Impact of Ho and Ce Ions Substitution on Structural, Electrical, and Dielectric Properties of Ni-Zn Ferrites” Published in Journal of Materials and Physical Sciences, 1 (1): (2020), Pages 37 – 47. (HEC Approved Journal)

8

Aamir Shahzad*, Teyyiba Kanwal and Mao-Gang He. Design and development of efficient domestic electric cum solar oven. Journal of Basic and Applied Sciences, 9(1):296-301 (2013). (HEC Approved Journal)

7

Aamir Shahzad*, Qamar ul Islam, Shaheen Akhter and Mao-Gang He. Cost-effective micro programmable logic controller for system automation. Journal of Basic and Applied Sciences, 9(1):368-372 (2013). (HEC Approved Journal)

6

Shaheen Akhtar, Taqmeem Hussain, **Aamir Shahzad**, *et al.* Radiation Induced Decoloration of Reactive Dye in PVA Films for Film Dosimetry. Journal of Basic & Applied Sciences, 9:416-419 (2013). (HEC Approved Journal)

5

Shaheen Akhtar, Taqmeem Hussain, **Aamir Shahzad** and Qamar-ul-Islam. The Feasibility of Reactive Dye in PVA Films as High Dosimeter. Journal of Basic & Applied Sciences, 9: 420-423 (2013). (HEC Approved Journal)

4

Shahzad A*, *et al*, Hybrid Programmable Logic Controller for Load Automation, Journal of Applied Sciences, 7(19): 2904-2907 (2007). (HEC Approved Journal)

3

Shahzad A*, *et al*, Fabrication and performance study of an improved design of pentagon type solar oven fitted with single reflector, Life Sciences International J. 1(3): 324-329 (2007).

2

Shahzad A*, *et al*, A Comparative Study Single, double Reflector Solar Oven performance, Nature Farming and Environment. International J. 6(1): 50-57 (2007).

1

Shahzad A*, *et al*, Fabrication and Performance Study of Packed Solar Dryer Using Heat Absorbing Plates, J. Natural Sciences, 3-4(1-2):49-57 (2005-06).

National and International RESEARCH PROJECTS

I have a capacity to handle, run and independent responsible for the completion of international research projects.

6

(National, NRP, HEC, Pakistan,
as a PI)

Title: “Atomistic Utilization of Transport Activity and Heating Technique for Environment-Friendly Plasma Energy Development”, **as a PI (Dr. Aamir Shahzad)** and **Co-PI** by Dr. Muhammad Kashif Amount of Project= 5.592 Millions for 2 Years (2021-22 to 2023-24), Ref No. 20-15251/NRP/R&D/HEC/2021 2021, funded by NRP by Higher Education Commission (HEC) of Pakistan; **Status: Completed**

5

(National, NRP, HEC, Pakistan,

Title: Novel technique of Graphene based Solar Cell for Flexible Electronics, **as a Co- PI (Dr. Aamir Shahzad)** and PI by Dr. Tariq Munir, Amount of Project=

as a Co-PI)

4

(International Collaborative, NSFC and MOE, China, as a Co-PI)

3

(International Collaborative, NSFC and MOE, China, as a Co-PI)

2

(International Collaborative, NSFC and MOE, China, as a PI)

1

(National, SRGF, HEC, Pakistan, as a PI)

3.332274 **Million** for 2 Years (2019-2021) **NRPU** by Higher Education Commission (HEC) of Pakistan; **Status: Completed**

Title: The new measurement method for the thermophysical properties of fluid and its application, **Hosted (PI)** by Prof. Liu Zhigang and as a Collaborator Co-PI (Dr. Aamir Shahzad) and Prof. Maogang He, **Amount of Project=1800000RMB $\cong$ RS 30 Millions** for 5-years (2009.9-2013.12) funded by National Nature Science Fund Committee of and MOE China, (NSFC No. 50836004); **Status: Completed**

Title: Dynamic light scattering experimental measurement and theoretical estimation for thermal conductivity of fluid, **Hosted (PI)** by Prof. Maogang He as a Collaborator Co-PI (Dr. Aamir Shahzad), **Amount of Project=400000RMB $\cong$ RS 7 Millions** for 3-years (2010.1-2012.12) funded by National Nature Science Fund Committee and MOE of China (NSFC No. 50976091); **Status: Completed**

Title: Calculation on Thermal Conductivity and Internal Energy of Plasmas Using Molecular Dynamics Simulations, **Hosted (PI)** by Aamir Shahzad and Collaborator (Co-PI) by Prof. Maogang He, **Amount of Project=100,000RMB $\cong$ RS 1.8 Millions** is for 2-years (2013.6-2015.6) funded by China Postdoctoral Science Foundation and MOE of China (CPSF No. 2013M532042); **Status: Completed**

Title: Thermal Conductance and Nonlinear effects of Complex Liquids (Dusty Plasmas) using Molecular Simulation Technique, **Hosted (PI)** by Aamir Shahzad and Collaborator (Co-PI) by Abdur Rasheed, **Amount of Project = 0.5 Million** is for 1-years (2015.2-2016.1) Start-up Research Grant Funded by Higher Education Commission (HEC) of Pakistan, (No. IPFP /HRD /HEC /2014/ 916); **Status: Completed**

INDUSTRIAL LINKAGE PROJECTS/ MARKET BASED IMPACT

1

(National, Industrial Linkage, GOP, As a Consultant-PI)

Title: "PVD/ plasma coating system" having cost of **Rs. 1.8 Millions** and work as a Consultant, PI (from GCUF, Physics department) in Metal industries Development Centre (MIDC) and Surgical Institute of Technology, Sialkot, Govt. of Punjab, TEVTA, for the year of 2 years (Jan 2022 to Jan 2024), **Status: Ongoing**

2

(National, Industrial Linkage, GOP, As a PI)

Title: Experimental and Computational Material Science and Plasmas, **PI by Dr. Aamir Shahzad** and **Co-PI** by Dr. Tariq Munir/ Dr Ijaz Ahmed Khan for 3 Years (2016.5 to 2020.3), jointly collaborative proposal of GCUF-MIDC Sialkot, TEVTA Govt of Punjab; **Status: Completed**

PROJECTS ARE UNDER REVIEW

5

(International, International Exchanges Program, Royal Society UK, as a PI)

Title: "*Exploring Graphite and Graphene-based Quantum Dots Dispersions in Hydrophobic and Hydrophilic Fluids*" **PI** by Dr. Aamir Shahzad (GC University Faisalabad, PAK) and **PI** Dr. Ren, Guogang (University of Hertfordshire, UK), **Amount of Project= 40,000£** for 2 years, funded by International Exchanges 2026, **British Council, UK**, **Status: Under Review**

4

(International,

Title: "*Collaborative Research on Interface Coordination and Regulation Technology of Key Materials of Zinc-Ion Batteries for Large-Scale Energy*

PSF-Pakistan and
NSFC-China, as a PI

3
(National, NSLP, PSF,
Pakistan, as a PI)

2
(National, 7th PSDP, PSF,
Pakistan, as a PI)

1
(National, NTIF, PSF,
Pakistan, as a
Collaborator)

Storage” PI by Dr. Aamir Shahzad (GC University Faisalabad, PAK), PI Prof. Xiang Lu (HUST, China) and Prof. Dr Sardor Tulaganov (ACU, Uzbekistan), Amount of Project= 15Million (Pak Side) and (3Million RMB), (3 Million Uzbek) for 2 years, funded by PSF-Pakistan and SCO, Status: Under Review

Title: “Green Plasma Technology as Affordable and Sustainable Seeds Production and Fertilization” PI by Dr. Aamir Shahzad (GCUF) and Co-PI Dr Ijaz Ahmad Khan (GCUF), Amount of Project= 8Million for 3 years, funded by PSF under NSLP, Pakistan, Status: Under Review (No.: CP-2-2023-2809-0PW2)

Title: “Explore Antimicrobial and Antiviral Filtration Systems Using Novel Nanofiber Materials” PI by Dr. Aamir Shahzad (GCUF) and Co-PI Dr Muhammad Kashif (GCUF), Amount of Project= 20Million for 2 years, funded by PSF under 7th call of PSDP, Pakistan, Status: Under Review (No: CP-1-2023-2103-MCN7)

Title: “Development of laser spectroscopy for cancer diagnosis” as a Collaborator with PI (Dr Zahid Farooq, Associate Prof. UE Lahore, Faisalabad Campus), Amount of Project~ 2.0 Millions for 2 years, funded by Pakistan Science Foundation (PSF), under Consortium Research Plan, Islamabad, Status: Under 2nd Review, after Approval

INTERNATIONAL and NATIONAL CONFERENCES/ WORKSHOPS/ SYMPOSIUM

1
Oral Presentation

“Shear Viscosity and Time Correlation Functions of Two-Dimensional Strongly Coupled Yukawa Liquids” **PRESENTED** in 19th European Conference on ThermoPhysical Properties (ECTP), Thessaloniki, Greece, Aug. 28- Sep.1, 2011.

2
Oral Presentation

“Thermal Conductivity of Three-Dimensional Strongly Coupled Yukawa Liquids (Dusty Plasma)” **PRESENTED** in 19th European Conference on ThermoPhysical Properties (ECTP), Thessaloniki, Greece, Aug. 28- Sep.1, 2011.

3
Oral Presentation

“Diffusion Motion of Two-Dimensional Weakly Coupled Complex (Dusty) Plasmas” **PRESENTED** in 18th Symposium on ThermoPhysical Properties, Boulder, Colorado, U.S.A, June 24th – 29th, 2012.

4
Oral Presentation

“Thermal Conductivity Calculation of Complex (Dusty) Liquids” **PRESENTED** in 18th Symposium on ThermoPhysical Properties, Boulder, Colorado, U.S.A, June 24th – 29th, 2012.

5
As a Participant

An International **UK-CHINA Workshop on Electricity and Energy**, attended as a Xian Jiaotong University **Representative** from April 12th - 14th, 2010, Suzhou, China

6
Oral Presentation

“Interaction Contributions in Thermal Conductivity of Three-Dimensional Complex Liquids” **PRESENTED** in 7th International Symposium on Multiphase Flow (ISMF 2012), Heat Mass Transfer and Energy Conservation, Xian, Shaanxi, China, October 26th-30th, 2012, **Published** in AIP Conference Proceeding Journal.

7

12th International Conference on Clean Energy (ICCE 2012), attended as a

As an Organizer

8

As a Organizer

9

As a Participant

10

Oral Presentation

11

Oral Presentation

12

Oral Presentation

13

Poster Presentation

14

Oral Presentation

15

Oral Presentation

16

As a Participant

17

Poster Presentation

18

Poster Presentation

Xian Jiaotong University representative, share the service and information provided by the same organizer as in the **ISMF 2012 and CCMF 2012** scientific forum, **Xian, Shaanxi, China**, October 26th -30th, 2012.

Annual Conference of National Association of Multiphase Flow (**CCMF 2012**), attended as a Xian Jiaotong University representative, share the service and information provided by the same organizer, as in the **ISMF 2012 and ICCE 2012** scientific forum, **Xian, Shaanxi, China**, October 26th -30th, 2012.

Attend and Arrange a (**As a Staff Member participation**) **6th international conference** on cooling and heating technologies (**ICCHT 2012**), November 9-12, 2012, **Xi'an, China**.

“Homogenous Nonequilibrium Molecular Dynamics Evaluation of Thermal Conductivity in 2D Yukawa Liquids” **PRESENTED** in The 10th Asian Thermophysical Properties Conference (10th-ACPT-2013) (ACPT-2013-KOREA), Jeju, Korea, Sep 29-Oct 3, 2013.

“Shear Viscosity of Two-Dimensional Strongly Coupled Complex (Dusty) Plasmas” **Presented** in **ISAM2013** International Symposium, Islamabad, Pakistan, 23-27 Sep 2013. **Published** in Proceeding by IOP Conference Series: Materials Science and Engineering (MSC).

“Molecular Dynamics Simulations of Thermal Conductivity in 2D Complex Yukawa Liquids” **PRESENTED** in **ISAM2013** International Symposium, Islamabad, Pakistan, 23-27 Sep 2013. **Published** in Proceeding by IOP Conference Series: Materials Science and Engineering (MSC).

“Shear Viscosity of Two-Dimensional Strongly Coupled Complex (Dusty) Plasmas” **PRESENTED (Poster)** in **First Abdus Salam ICTP-NCP** International College on Plasma Physics, Islamabad, Pakistan, 11-15 Nov 2013.

“Effect of γ -irradiation on Newly Developed Polymeric Film Dosimeter based on Sandal Fix Red C4BLN Dye” **PRESENTED** in 1st International Conference on Applied Chemistry (**ICAC2013**), Faisalabad, Pakistan, 18-20 November, 2013.

“Thermal Conductivity Measurements of 2D Complex Liquids Using Nonequilibrium Molecular Dynamics Simulations” **PRESENTED** in 11th International Bhurban Conference on Applied Sciences & Technology (**IBCAST**), Islamabad, Pakistan, 14-18 January, 2014. **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

One day workshop on Vacuum Science and Technology, attended as a member of Department of Physics, GC University Faisalabad from January 17, 2014 Faisalabad, Pakistan.

“Homogenous Nonequilibrium Molecular Dynamics Simulations of Thermal Conductivity in Yukawa Liquids” **PRESENTED** in International Scientific Spring (**ISS-2014**), jointly conducted by International Centre of Theoretical Physics (**ICTP**), Italy and National center of Physics (**NCP**), Islamabad, Pakistan, 10-14 March, 2014.

“Thermal Properties of Dusty Plasmas using Novel Nonequilibrium Molecular Dynamics Simulations” **PRESENTED** a Poster in **39th International Nathiagali Summer College (INSC-2014)** on Physics and Contemporary Needs, Nathiagali,

19
As a Participant

Pakistan, 04th – 16th August, 2014.

To attend a “**5th International Work Shop on National Tokamak Fusion Program**” 04th – 09th August, 2014, in addition with 39th **INSC-2014**, Nathiagali, Pakistan

20
As a Co-Author

“Nonlinear Effects of Dusty Plasmas Using Homogenous Nonequilibrium Molecular Dynamics Simulations” **PRESENTED** in 5th Conference on Nonlinear Science and Complexity (**NSC-2014**) international conference, August 04-09, 2014, **Xi'an P. R. China**. **Paper** is published in Proceeding by Journal of Applied Nonlinear Dynamics (SCI-Journal).

21
As a Co-Author

“Thermal Conductivity of 3D Complex (Dusty) Plasmas Using Homogenous Nonequilibrium Molecular Dynamics Computer Experiment” **PRESENTED** in 42nd IEEE International Conference on Plasma Science (IEEE-ICOPS-2015) international conference, May 24-28, 2015, **Belek, Antalya, Turkey**. **Conference Proceeding** has been published in 2015 IEEE International Conference (ICOPS).

22
Oral Presentation

“Numerical Experiment of Heat Transfer in 3D Yukawa Liquids” **PRESENTED** in 12th International Bhurban Conference on Applied Sciences and Technology (**IBCAST-15**), Islamabad, Pakistan, 13-17 January, 2015.

23
Poster Presentation

“Numerical Calculation of Thermal Conductivity of Complex Plasmas Using Homogenous Nonequilibrium Molecular Simulations” **PRESENTED** in International Conference on Physics and Contemporary Needs (**ICPCN-2014**), 19th - 21st November, 2014, **GC University Lahore, Pakistan**. Paper will be Published in SCI-Journal, decided by organizer.

24
Poster Presentation

“Novel Approaches and Nonlinear Effects of Complex (Dusty) Plasmas Using Numerical Experiment” **PRESENTED** in International Scientific Spring (**ISS-2015**), jointly conducted by International Centre of Theoretical Physics (**ICTP**), Italy and National center of Physics (**NCP**), Islamabad, Pakistan, March 16-20, 2015.

25
Oral Presentation

“Measurements of Thermal Conductivity of Complex Liquids Using Molecular Simulations” **PRESENTED** in 14th international Symposium on Advanced Materials (**ISAM-2015**), Islamabad, Pakistan, September 12-16, 2015. Proceeding will be **Published** in Proceeding by IOP Conference Series: Materials Science and Engineering (MSC).

26
Oral Presentation

“Potential Energy and Thermal Conductivity of Complex (Dusty) Plasmas Using Computer Experiment” **PRESENTED** in 14th international Symposium on Advanced Materials (**ISAM-2015**), Islamabad, Pakistan, September 12-16, 2015. Proceeding will be **Published** in Proceeding by IOP Conference Series: Materials Science and Engineering (MSC).

27
Oral Presentation

“Computer Simulation of Microscopic Properties of Yukawa Complex Systems (Dusty Plasmas)” **PRESENTED** in 3rd Annual Computational Science Conference, jointly conducted by Govt. College University Faisalabad (GCUF), Institute for Space Technology (IST), and Pakistan Society for Computational Biology/ Science (PSCB), Islamabad, Pakistan, May 13-15, 2015.

28

One day seminar on Nano-Materials for Optoelectronic Applications, attended as

As a Participant

29

Poster Presentation

30

As a Participant

31

As a Co-author

32

As a Co-author

33

As a Participant

34

As a Co-author

35

As a Co-author

36

As a Co-author

37

As a Participant

38

a member of Department of Physics, GC University Faisalabad from **June 03, 2015 Faisalabad**, Pakistan.

“Thermal Conductivity and Nonlinear Behaviors of Complex Plasmas Using Numerical Simulations” **PRESENTED** a Poster in **40th International** Nathiagali Summer College (**INSC-2015**) on Physics and Contemporary Needs, Nathiagali, Pakistan, 03th – 15th August, 2015.

To attend a “**6th International WorkShop on National Tokamak Fusion Program**” 03th – 08th August, 2015, in addition with **40th INSC-2015**, Nathiagali, Pakistan.

Tariq Munir, H. S. Munir, **A. Shahzad**, M. Umair, “Influence of Annealing Temperature on Structure of Copper Oxide Nanoparticles by Solution Evaporation Method” **PRESENTED** in 14th international Symposium on Advanced Materials (**ISAM-2015**), Islamabad, Pakistan, September 12-16, 2015. Proceeding will be **Published** in Proceeding by IOP Conference Series: Materials Science and Engineering (MSC).

T. Munir, H. S. Munir, N. Amin, **A. Shahzad**, M. Umair, “Effect of PH on Structure of Copper Oxide Nanoparticles by Solution Evaporation Method” **PRESENTED** in 14th international Symposium on Advanced Materials (**ISAM-2015**), Islamabad, Pakistan, September 12-16, 2015. Proceeding and Engineering (MSC will be **Published** in Proceeding by IOP Conference Series: Materials Science).

Aamir Shahzad, One day seminar on Implementation of Self assessment Process in HEIs QEC, GC University Faisalabad from **May 21, 2015 Faisalabad**, Pakistan.

Muhammad Shahzad Shifa, Muhammad Azhar Iqbal, **Aamir Shahzad** and Imtiaz Ul Khawaja, Role of Lighting Roads and Its Impact to Control Accidents, A Poster is **PRESENTED** in International Symposium on Light and Life (ISLL-2015), COMSATS Institute of Information Technology (CIIT), Islamabad, 14-16 October, 2015

Muhammad Shahzad Shifa, Adnan Ali, **Aamir Shahzad**, Khalid Mahmood, Asif Shehzad and Abubakar Siddique, “Micro Analysis of Zinc Sulphide Films Prepared by Solid State Reaction” **PRESENTED** in International Conference on Solid State Physics (ICSSP-15), University of the Punjab, Lahore, Pakistan, 13-17 December, 2015.

Munir, T., Munir, H. S., Fakhar-e-Alam, M., **Shahzad, A.**, and Amin, N, “Influence of Growth Temperature on Structure of Zinc Oxide Nanoparticles by Solution by Solution Evaporation Method” **PRESENTED** in International Scientific Spring (**ISS-2015**), jointly conducted by International Centre of Theoretical Physics (**ICTP**), Italy and National center of Physics (**NCP**), Islamabad, Pakistan, March 16-20, 2015.

Aamir Shahzad, TWO days WORKSHOP on “Vacuum Systems” attended as a member of Department of Physics, GC University Faisalabad (GCUF), **and Faisalabad City** Pakistan, from **January 27-28, 2016**.

Aamir Shahzad, TWO NATIONAL WORKSHOP on “**Government Academia**

As a Participant

39

Poster Presentation

40

As a Co-author

41

Poster Presentation

42

As a Co-author

43

Poster Presentation

44

As a Participant

45

As an ORGANIZER

46

Oral Presentation

47

As a Co-author

Industry Linkage” attended as a member of Department of Physics, Organized by Office of Research, Innovative and Commercialization (ORIC) GC University Faisalabad (GCUF) and Higher Education Commission (HEC) of Pakistan, from **January 25-26, 2016**.

Aamir Shahzad, Mao-Gang He, and Saba Rashid, “Novel Numerical Technique for Dusty Plasma Dynamics (Yukawa Liquids): Microfluidic and Role of Heat Transport” **PRESENTED** in International Scientific Spring (**ISS-2016**), jointly conducted by International Centre of Theoretical Physics (**ICTP**), Italy and National center of Physics (**NCP**), Islamabad, Pakistan, March 7-11, 2016.

Munir, T., Munir, H. S., **Shahzad, A.**, Amin, N., and Hussain W., “Synthesis and Characterization of Copper Oxide Nanoparticles by Solution Evaporation Method” **PRESENTED** in International Scientific Spring (**ISS-2016**), jointly conducted by International Centre of Theoretical Physics (**ICTP**), Italy and National center of Physics (**NCP**), Islamabad, Pakistan, March 7-11, 2016.

Aamir Shahzad and Mao-Gang He “Homogenous Nonequilibrium Molecular Dynamics Simulations of Thermal Conductivity in Dusty Plasmas (Yukawa Liquids)” A Poster is **PRESENTED** in **41st International Nathiagali Summer College (INSC-2016)** on Physics and Contemporary Needs, Nathiagali, Pakistan, **18-30 July, 2016**.

Aamir Shahzad, **Mao-Gang He**, Hussain Raza and Aadil Mahboob, “Order-disorder Structures and Energies in Strongly Coupled Yukawa Liquids”. Oral Presentation is **PRESENTED** in “**The 11th Thermophysical Properties Conference (ATPC-2016)**”, October 2-6, 2016, Yokohama, **Japan**.

Aamir Shahzad and Mao-Gang He “Shear Viscosity of Complex Plasmas using Equilibrium Molecular Dynamics Simulations”. POSTER Presentation is **Presented** in “**14th National Symposium on Frontiers in Physics**”, November 21-23, 2016, Lahore, **Pakistan**.

Aamir Shahzad, ONE day WORKSHOP on “Infrared Spectroscopy: Principle and Applications” attended as a Participant of Department of Physics, Organized by ORIC, GC University Faisalabad (GCUF) from **February 25, 2016**.

Aamir Shahzad (ORGANIZER), ONE day Seminar on “**Currents Trends in Nanotechnology and Future Perspectives**” arranged as a **Main Organizer**, Department of Physics, GC University Faisalabad (GCUF), Pakistan, from **December 5, 2016**.

Aamir Shahzad, Mao-Gang and Muhammad Asif Shakoory “Thermal Transport and Non-Newtonian behaviors of 3D Complex Liquids Molecular Simulations” **ORAL Paper Presented** in 14th International Bhurban Conference on Applied Sciences & Technology (**IBCAST-2017**), Islamabad, Pakistan, 10-14 January, 2017. Paper has been **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

Muzamal Hussain, M. Nawaz Naeem, **Aamir Shahzad** and Mao-Gang He “Vibrational behavior of single-walled carbon nanotubes based on cylindrical shell model using wave propagation approach” **ORAL Paper Presented** in 14th International Bhurban Conference on Applied Sciences & Technology

48
Oral Presentation

49
As a Co-author

50
As an ORGANIZER

51
As a Participant

52
As a Participant

53
As an ORGANIZER

54
As an ORGANIZER

55
Oral Presentation

56
Oral Presentation

57
As a Co-author

(IBCAST-2017), Islamabad, Pakistan, 10-14 January, 2017.

Aamir Shahzad, Mao-Gang He, Tariq Munir, Muhammad Asif Shakoori and Muhammad Bilal “Numerical Studies of Structural Properties and Energies of Simple Liquid Materials” **ORAL Paper Presented** in 1st International Conference on Mathematics and Physics (ICMP-2017), Islamabad, Pakistan, **14th – 16th February, 2017**. Paper will be Published in Proceeding by **Punjab University Journal of Mathematics PUJM (HEC recognized journal)**

Muzamal Hussain, **Aamir Shahzad** and M. Nawaz Naeem, “Vibration Characteristics of Fluid-Filled Functionally Graded Cylindrical Material with Ring Supports” **ORAL Paper Presented** in 1st International Conference on Mathematics and Physics (ICMP-2017), Islamabad, Pakistan, **14th – 16th February, 2017**.

Aamir Shahzad (ORGANIZER), First Series of ONE day Training Workshop on “**Applications of Physics in Radiation Medicine**” arranged as a **Main ORGANIZER**, jointly organized with PINUM-Cancer Hospital and Department of Physics, GC University Faisalabad (GCUF), Pakistan, from **January 12, 2017**.

Aamir Shahzad, ONE day National Seminar on “**Advancement of Pure and Applied Mathematics**” attended as a Participant of Department of Physics, Organized by Department of Mathematics, GC University Faisalabad (GCUF) from **January 24th, 2017**.

Aamir Shahzad, ONE day training Workshop on “**Learning Management System**” attended as a Participant of Department of Physics, Organized by Directorate of Distance Learning Education, GC University Faisalabad (GCUF) from **April 05, 2017**.

Aamir Shahzad (ORGANIZER), ONE day Symposium on “**Plasma Science and Applications**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF), Pakistan, from **February 22, 2017**.

Aamir Shahzad (ORGANIZER), ONE day **International Conference** on “**Materials Science and Nanotechnology (MSNANO-17)**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from **February 18-19, 2017**.

Aamir Shahzad, S. I. Haider, Tariq Munir, and Mao-Gang He “Exploration of Thermal Conductivity of Complex Material using Novel Evan-Gillan Simulation Technique” **PRESENTED** in 15th international Symposium on Advanced Materials (**ISAM-2017**), Islamabad, Pakistan, Oct 16-20, **2017**.

Aamir Shahzad, M. Ali, Shahzad Shifa, and Mao-Gang He “Free Energy and Pressure of Complex Liquid Material using Equilibrium Molecular Dynamics Simulations” **PRESENTED** in 15th international Symposium on Advanced Materials (**ISAM-2017**), Islamabad, Pakistan, Oct 16-20, **2017**.

Muzammal Hussain, M. Nawaz Naeem, **Aamir Shahzad**, Mao-Gang He, Siddra Habib “Vibration analysis of single-walled carbon nanotubes based on nonlocal elasticity theory using wave propagation approach” **PRESENTED** in 15th international Symposium on Advanced Materials (**ISAM-2017**), Islamabad,

<u>58</u> <u>Oral Presentation</u>
<u>59</u> <u>As a Co-author</u>
<u>60</u> <u>Oral Presentation</u>
<u>61</u> <u>As an ORGANIZER</u>
<u>62</u> <u>As an ORGANIZER</u>
<u>63</u> <u>Poster Presentation</u>
<u>64</u> <u>As a Participant</u>
<u>65</u> <u>As a Participant</u>
<u>66</u> <u>Oral Presentation</u> <u>(SPEAKER)</u>
<u>67</u> <u>As a GUEST/ Participant</u>

Pakistan, Oct. 16-20, 2017.

Aamir Shahzad, Syed Irfan Haider and Mao-Gang “Thermal Response and Conductivity of Dusty Plasma using Novel Evan-Gillan Simulation Technique” **PRESENTED** in 5th international Conference on Aerospace Science and Engineering (**ICASE-2017**), IST, Islamabad, Pakistan, Nov 14-17, **2017**. Paper will be **Published** in “**IEEE Transaction**”.

M. Hussain, M. N. Nawaz, **A. Shahzad**, M. –G. He “Vibration Characteristics of rotating FGM cylindrical shell using Novel Wave Propagation Wave Approach” **PRESENTED** in 5th international Conference on Aerospace Science and Engineering (**ICASE-2017**), IST, Islamabad, Pakistan, Nov 14-17, **2017**.

Aamir Shahzad, Mao-Gang and Syed Irfan Haider “Particles Order-disorder in Complex (Yukawa) Fluids Using Molecular Dynamics Simulations” **ORAL Paper Presented** in 15th International Bhurban Conference on Applied Sciences & Technology (**IBCAST-2018**), Islamabad, Pakistan, 09-13 January, **2018**. Paper has been **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

Aamir Shahzad (ORGANIZER), Two days “**2nd International Conference on Materials Science and Nanotechnology (MSNANO-18)**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from February 19-20, **2018**.

Aamir Shahzad (ORGANIZER), One day “**International Symposium on Modern Trends in Physics (ISMTP-18)**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from April 18, **2018**.

Aamir Shahzad, Irfan Haider and Mao-Gang He, “**Impact of External Force on Thermal Conductivity of Dusty Plasmas**” **PRESENTED** in International Scientific Spring (**ISS-2018**), jointly conducted by National center of Physics (NCP) and Abdus Salam International Centre for Theoretical Physics (AS-ICTP), Trieste, Italy, Islamabad, Pakistan, March 12-16, **2018**

Aamir Shahzad, Two days International Conference on “**New Frontiers in Experimental and Theoretical Physics**” attended as a Participant of Department of Physics, Organized by Department of Physics, and University of Agricultural Faisalabad (UAF) from **April 16-17, 2018**.

Aamir Shahzad, One day International Symposium on “**New Frontiers of Physics**” attended as a Participant of Department of Physics, Organized by Department of Physics, and University of Agricultural Faisalabad (UAF) from **October 19, 2018**.

Aamir Shahzad, Mao-Gang He and Muhammad Qasim Khan, “**Thermal Conductivity of Two-dimensional Complex (Dusty) Plasmas**” **PRESENTED** in 1st International Physics Conference (IPC) on “Innovation in Material Science and Nanotechnology” conducted by Organized by Department of Physics, and Lahore Garrison University, Pakistan from **December 18-19, 2018**

Aamir Shahzad, 1st International Seminar on “**Space Physiology**” attended as a **Gust/ Participant** of department of Physics, Organized by Department of Physics, Riphah International University, Faisalabad Campus, from **January 14,**

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As an ORGANIZER

69
As a Participant

70
As an ORGANIZER

71
As a Co-author

72
As a ORGANIZER and
Oral Presentation
(SPEAKER)

73
As a ORGANIZER and
Oral Presentation
(SPEAKER)

74
ORGANIZER as a ITC
Member

75
Oral Presentation
(SPEAKER)

76
Oral Presentation
(SPEAKER)

77

2019.

Aamir Shahzad (ORGANIZER), Three days “**3rd International Conference on Materials Science and Nanotechnology (MSNANO-19)**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from February 18-20, **2019**.

Aamir Shahzad, Seminar on “**Recent Developments in Space Exploration**” attended as a Participant of Department of Physics, Organized by Department of Physics, university of Agricultural Faisalabad (UAF) from **January 29, 2019**.

Aamir Shahzad (ORGANIZER), One Day “**Symposium on Modern Trends in Physics (SMPT-2019)**” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from December 09, **2019**.

Aamir Shahzad, M. Shakoori, M-G HE, “Measurements of Weak External Force on Thermal Conductivity of Complex Liquids Using Homogenous Perturbed Simulations” PRESENTED in The 12th Asian Thermophysical Properties Conference (ACPT-2019) Xi'an, China, Oct 02-05, **2019**.

Aamir Shahzad, Muhammad Kashif, Tariq Munir and Mehar un Nisa, “Calculations of Uniaxial Tensile Strength of Al-Cu-Ni Based Metallic Alloy and Glass Using Molecular Dynamics Simulations”, PRESENTED in 4th International Conference on Materials Science and Nanotechnology (MSNANO-20)” Department of Physics, GC University Faisalabad (GCUF) from March 5-6, **2020**.

Aamir Shahzad, Muhammad Kashif, Nadeem Nasir, Tariq Munir and Muhammad Usman Zia, “Electrospinning Method for Production and Characterization of Copper and Nitrogen Co-Doped TiO₂ NanoFibers”, PRESENTED in 4th International Conference on Materials Science and Nanotechnology (MSNANO-20)” Department of Physics, GC University Faisalabad (GCUF) from March 5-6, **2020**.

Aamir Shahzad (International Technical Committee Member), Three days “International conference on Physics, Mechanics and Mathematical Sciences (PMMS 2020)” worked as an ITC Member,, October 18-19, **2020** in Xi'an, China, http://www.pmms2020.com/pmms2020/bk_22484577.html

Aamir Shahzad, Muhammad Kashif, Aneeqa Fatima and Mao-Gang “Wave Analysis of Yukawa Liquids and Solids Using Molecular Dynamics Simulations” **ORAL Paper Presented** in 17th International Bhurban Conference on Applied Sciences & Technology (**IBCAST-2020**), Islamabad, Pakistan, January 14-18, **2020**. Paper has been **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

Aamir Shahzad, Zammar Ahmad and Maogang HE, “Investigations of Dust Acoustic waves in Weakly Coupled Plasmas using molecular Dynamics Simulations” **Oral Paper Presented** in “**3rd International Conference on Advances in Theoretical and Applied Physics (Virtual)**” organized by department of Physics, Government College Women University, Faisalabad (GCWUF) from **February 24-26, 2021**

Aamir Shahzad (ORGANIZER), Two day WEBINAR “**2nd International**

As an ORGANIZER

78

Oral Presentation
(SPEAKER)

Symposium on Modern Trends in Physics (ISMTP-21)” arranged as an organizer of Department of Physics, GC University Faisalabad (GCUF) from March 17-18, **2021**.

Aamir Shahzad, Ama tul Zahra, Alina Manzoor, Muhammad Kashif and Maogang He “thermal conductivity of single-walled carbon nanotubes using molecular dynamics simulations” **PRESENTED** in 17th international Symposium on Advanced Materials (**ISAM-2021**), Islamabad, Pakistan, Oct 18-22, **2021**.

79

Oral Presentation
(SPEAKER)

Aamir Shahzad, Muhammad Ahsan, Alina Manzoor Muhammad Kashif and Maogang He “exploration of template supported nickel nanowires using electrodeposition method” **PRESENTED** in 17th international Symposium on Advanced Materials (**ISAM-2021**), Islamabad, Pakistan, Oct 18-22, **2021**.

80

Oral Presentation
(SPEAKER)

Aamir Shahzad, Aadil Mahboob, Weizong Wang and Ama Tul Zahra “Molecular dynamics evolution for thermal conductivity of complex Yukawa liquids” **ORAL presentation** in 19th International Bhurban Conference on Applied Sciences & Technology (**IBCAST-2022**), Islamabad, Pakistan, 16-20 August, **2022**. Paper will be **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

81

As a Co-author

Aamir Shahzad, Zakia Rafeeq, Aadil Mahboob, Zamamr Ahmed, Rabia Waris and Maogang He “Dynamical Structural Analysis of Complex plasma Liquids” **ORAL Paper Presented** in 19th International Bhurban Conference on Applied Sciences & Technology (**IBCAST-2022**), Islamabad, Pakistan, 16-20 August, **2022**. Paper will be **Published** in Proceeding by IEEE Conference Series: Applied Science and Technology (IBCAST).

82

Oral Presentation
(SPEAKER)

Aamir Shahzad, Rabia Waris, Muhammad Kashif and Maogang He “Molecular dynamics simulations of Dynamical Analysis in Weakly Coupled Dusty Plasmas” **PRESENTED** in 1st international Conference on Innovations in Chemistry and Physics (**ICP-2022**), University of Education Lahore, Faisalabad Campus, Pakistan, March 14-15, **2022**.

83

Oral Presentation
(SPEAKER)

Aamir Shahzad, Ama Tul Zahra, Muhammad Kashif and Maogang He “Thermal conductivity of single-walled carbon nanotubes using molecular dynamics simulations” **PRESENTED** in 1st international Conference on Innovations in Chemistry and Physics (**ICP-2022**), University of Education Lahore, Faisalabad Campus, Pakistan, March 14-15, **2022**.

84

Oral Presentation
(SPEAKER)

Ama tul Zahra, **Aamir Shahzad** and Adil Loya, “Molecular dynamics Evolution of Thermal Behavior in Single-Walled Carbon Nanotubes” **PRESENTED** in V. International Turkic World Congress on Science and Engineering (Online) (**TURK-COSE-2022**), Turkey, organized by L.N. Gumilyov Eurasian National University (ENU), Kyrgyz-Turkish Manas University (KTMU), and Niğde Ömer Halisdemir University (NOHU), June 23-24, **2022**.

85
Oral Presentation
(SPEAKER)

Aamir Shahzad and Maogang He, “Electric Field Effects on Structural Order and Disorder and Thermal Behavior in Complex Plasmas” **PRESENTED** in V. International Turkic World Congress on Science and Engineering (Online) (**TURK-COSE-2022**), Turkey, organized by L.N. Gumilyov Eurasian National University (ENU), Kyrgyz-Turkish Manas University (KTMU), and Niğde Ömer Halisdemir University (NOHU), June 23-24, **2022**.

86
As a Participant

Aamir Shahzad, Attend as a Participant in One day National Seminar on “Application of Ionizing Radiation in Everyday Life-Its Hazards and Protection”, GC University Faisalabad, Pakistan, 24th June, **2022**.

87
As a Participant

Aamir Shahzad, Attend as a Participant in 47th International Nathiagali Summer College (**INSC-2022**) on Physics and Contemporary Needs, Nathiagali, Pakistan, 20th – 25th June, **2022**.

88
As a Participant

Aamir Shahzad, Attend as a Participant in **One day workshop** on “Research proposal writing and Managing the Financial Constraints”, Organized by ORIC-GCUF, Physics Seminar Hall, Main Campus, GCUF, June 28, **2022**.

89
As a Participant

Aamir Shahzad, Attend as a Participant in **One day workshop** on “Drafting and filing patent application”, Organized by ORIC-GCUF, STC Hall, New campus, GCUF, June 29, **2022**.

90
As a Participant

Aamir Shahzad, Attend as a Participant in **ICESCO International Aerospace Symposium**, Model Satellite (CanSat) Workshop & AeroSpace, ICESCO Headquarters, Rabat, Morocco in **Hybrid** mode, Jul 18, **2022**.

91
As a ORGANIZER and
Oral Presentation
(SPEAKER)

Aamir Shahzad, Ijaz Ahmad Khan, Alina Manzoor, Muhammad Kashif and Muhammad Ahsan, “Synthesis of Nickel Nanowires (Ni-NWs) as High Ferromagnetic Material by Electrodeposition Technique” Presented in 5th International Conference on Materials Science and Nanotechnology (**MSNANO-22**), Organized by Physics department, GCUF, KhanasPur, KPK, Pakistan, August 22-23, **2022**.

92
As a ORGANIZER and
Oral Presentation
(SPEAKER)

Ama tul Zahra, **Aamir Shahzad**, Adil Loya, Amjad Sohail and Alina Manzoor, “Tuning Thermal Conductivity of Carbon Nanotubes under Stain Effects” Presented in 5th International Conference on Materials Science and Nanotechnology (**MSNANO-22**), Organized by Physics department, GCUF, KhanasPur, KPK, Pakistan, August 22-23, **2022**.

93
Oral Presentation
(SPEAKER)

Aamir Shahzad, Aadil Mahboob, Muhammad Kashif and Maogang HE, “Thermal conductivity of dusty plasmas under influence of polarization” **PRESENTED** In 2nd International Conference on Environment, Technology and Management (**ICETEM-2022**), Turkey, October 13-15, **2022**.

94
Oral Presentation
(SPEAKER)

Aamir Shahzad, Fazeelat Hanif, Muhammad Asif Shakoori and Maogang HE, “Effects of electric field on structural behavior of complex plasmas using molecular dynamics simulations” **PRESENTED** In 2nd International Conference on Environment, Technology and Management (**ICETEM-2022**), Nigde, Turkey, October 13-15, **2022**.

95
Oral Presentation
(SPEAKER)

96
Oral Presentation
(SPEAKER)

97
As a ORGANIZER and
Oral Presentation
(SPEAKER)

98
As a ORGANIZER and
Oral Presentation
(SPEAKER)

99
As a ORGANIZER and
Oral Presentation
(SPEAKER)

100
As a ORGANIZER and
Oral Presentation
(SPEAKER)

101
As a ORGANIZER and
Oral Presentation
(SPEAKER)

102
Oral Presentation
(SPEAKER)

Aamir Shahzad, Ama Tul Zahra, Muhammad Zubair, Adil Loya and Maogang HE, “Diffusion coefficients of water in single walled carbon nanotube” **PRESENTED** In 2nd International Conference on Environment, Technology and Management (**ICETEM-2022**), Nigde, Turkey, October 13-15, **2022**.

Aamir Shahzad, Fazeelat Hanif, Muhammad Asif Shakoori and Maogang HE, “Effects of electric field on structural behavior of complex plasmas using molecular dynamics simulations” **PRESENTED** In 2nd International Conference on Environment, Technology and Management (**ICETEM-2022**), Nigde, Turkey, October 13-15, **2022**.

Dilber Iqbal, **Aamir Shahzad** and Sajad Bashir, “Development of Novel Deep Learning-Based Segmentation Models using MRI images for Low-Grade Glioma Brain Tumor Treatments” Presented in 6th International Conference on Materials Science and Nanotechnology (**MSNANO-23**), Organized by Physics department, New Campus, GCUF, Pakistan, **September 25-27, 2023**.

Sobia Zareen, **Aamir Shahzad** and Sajad Bashir, “**Radiosensitization Effects of Gold Nanoparticles in Proton Treatment**” Presented in 6th International Conference on Materials Science and Nanotechnology (**MSNANO-23**), Organized by Physics department, New Campus, GCUF, Pakistan, **September 25-27, 2023**.

Ama tul Zahra1 and **Aamir Shahzad**, “Strained Mechanical Analysis of Carbon Nanotube Using Molecular Dynamics Simulations” Presented in 6th International Conference on Materials Science and Nanotechnology (**MSNANO-23**), Organized by Physics department, New Campus, GCUF, Pakistan, **September 25-27, 2023**.

Ama tul Zahra and **Aamir Shahzad**, “Structural and Mechanical Characterizations of Zigzag Single-Walled Carbon Nanotubes using Molecular Dynamics Simulations” Presented in 1st International Conference on Physics Horizons and Multidisciplinary Sciences (ICPHMS-2023), Organized by Physics department, COMSATS University Lahore (Pakistan), **February 27, 28, 2023**.

Rabia Waris and **Aamir Shahzad**, “Effects of Electric Field on Diffusion Coefficients Using Molecular Dynamics Simulations” Presented in 1st International Conference on Physics Horizons and Multidisciplinary Sciences (ICPHMS-2023), Organized by Physics department, COMSATS University Lahore (Pakistan), **February 27, 28, 2023..**

Aamir Shahzad and Rabia Waris, “Diffusion Coefficients in Weakly Coupled Plasmas Tagged with Effects of Electric Field Using Molecular Dynamics Simulations” Presented in V. International Turkic World Congress on Science and Engineering (TURK-CONSE-2023), Organized by Kyrgystan Turkiye Manas University, Bishkek, Kyrgystan, **September 14-16, 2023**.

PhD/ M.Phil Courses Design:

1

Advanced Modeling and Simulation Techniques [PHY-737; 3(3-0)] Modeling and Simulation Techniques [PHY-736; 3(3-0)] for PHD and Mphil (Approved by

2

BOS)

Simulation Techniques for Nanotechnology [PHY-712; 3(3-0)] for MS Nano Technology (Approved in BOS)

MEMBERSHIP/ EDITORS/ REVIEWERS OF JOURNALS

1

(As a Regular Reviewers)

International regular Reviewer of International Journal of Plasma Physics and Controlled Fusion (PPCF), Journal of Physics D, IOP Publishing, UK; Physics of Plasmas, AIP Publishing, USA; Applied Physics Letter; IEEE-Transactions on Plasma Science, International Journal of Thermophysics Springer

2

(As a Regular Reviewers)

International Reviewer of International Journal “Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry”.

3

(As a Regular Reviewers)

A reviewer of International journal “Mechanical Sciences” and “Journal of Mechanical Engineering Science” and “J of Engineering, Physical Sciences” in 2015-2020 to till date. In addition, a regular reviewer of Springer book publishing, IGI-Publisher and INTECH book publishing groups.

4

(As a Guest Editor)

Guest Editor for “Science Publishing Group” an International publisher international publisher of 110+ open access, online, peer-reviewed journals covering a wide range of academic disciplines.

5

(As a Topic Editor)

Topic Editor of **Low-Temperature Plasma Physics’ Section of a Journal ‘Frontiers in Physics’ (IF: 3.3)** with topic “**Transport Properties of Dusty Plasmas and Applications**” having ID: ‘RT ID 47600’, for 2022-2023, in HEC/ HJRS recognized journal’s list.

6

(As a Associate Editor and Advisory Board Member)

Associate Editor (Regular) for ‘**International Journal of Innovations in Science and Technology’ Section of a Journal ‘Computational Physics’** and **Advisory Board Member**, For 2022-2023, in HEC/ HJRS recognized journal’s list.

7

(Editorial Board Member)

Editorial Board Members of WSR Journals “World Journal of Engineering and Physical Sciences”. in HEC recognized journal’s list.

8

(Deputy Section Editor)

Deputy/Regional Section Editor of TEXTROAD journals: “Journal of Basic and Applied Scientific Research (JBASR)” **Since 2015 to date**, in HEC recognized journal’s list.

9

(Editorial Board Member)

A regular member of Editorial Board of **Open Journal of Modelling and Simulation (OJMS) in 2021** and to date

10

(External Theses Evaluator)

PhD/M.Phil Theses reviewer of HEC recognized Universities, “Federal Urdu University of Arts, Sciences and Technology (FUUAST-ISLAMABD)”, University of Agriculture Faisalabad (UAF) and University of Lahore (UOL).

11

(External paper Setter)

Serving as an External Paper Setter and Paper Checker of the M.Sc. Physics classes for the Affiliated Colleges of GC University Faisalabad

12

(Board Member)

A member of “**Asian Council of Science Editors- ACSE**” Deira, Dubai, UAE, for the years of 2015, 2016; and 2021, 2022.

13

NATURE OF SERVICE/ POSITION IN GCUF

1

Providing Community services during Covid-19, 2020: A video lectures for

(Community Services)

- 2
- 3
- 4
- 5
- 6
(Focal person)
- 7
(Committee for PhD Thesis)
- 8
- 9
(QEC Team Member)
- 10
(Member for Industrial Linkage)
- 11

the community services in the field of “Modeling and Simulations of Dusty PLASMAS” during Covid-19, 2020, on YouTube Channel.

<https://www.youtube.com/watch?v=ucX5jBGnnsY>

Class coordinator, M.Sc. Physics (2013-15), (2015-17), (2017-19) and (2019-2021) Morning Physics classes

In-charge Computer Lab, department of Physics (2005-2009 and 2013-2016)

Member of “**Research Lead Group**” during 2015, for training and operation of the use of equipments Central High-Tech Lab, GCUF

Manage the Tutorial classes in the department of Physics, during Fall 2014-13 and Spring 2014 sessions

Focal person, from Physics department, for First Job Fair at GC University, Faisalabad (8th Dec 2013 and 2015)

Member of Faculty Scrutiny Committee for PhD Defense of the following sessions: 2015-18, 2016-19, 2017-20 and 2018-21, 2019-22, 2020-23, 2021-24, 2022-25 and 2023-26.

Duties performed for 9th Convocation, 2019 (Appreciation Certificate)

Departmental Team Member of **Quality Enhancement Centre (QEC)**, GCUF, from Physics department for years of **2019-20 and 2020-21**

Departmental representative/ **Team Member for Industrial Linkage (IL)** Program at GC University Faisalabad, 2020-2021, 2021-2022.

REFERENCES (NATIONAL AND INTERNATIONAL)

Prof. Dr. Maogang He, Vice Dean of Graduate School, School of Energy and Power Engineering, Xi'an Jiaotong University, P.R. China; Email: mghe@mail.xjtu.edu.cn

Prof. Dr. Necdet Aslan, Yeditepe Universitesi, Fizik Bolumu, 34755 Kayisdagi, Istanbul, Turkey, Email: naslan@yeditepe.edu.tr, Tel: +90216 578 0674; Mobile: +905334831405

Prof. Dr. Weizong Wang, Deputy Dean of the School of Astronautics, Beihang University, Beijing, P.R. China; Email: wangweizong@buaa.edu.cn

Prof. Dr. Yan Feng, Center for Soft Condensed Matter Physics and Interdisciplinary Research, College of Physics, Optoelectronics and Energy, Soochow University, Suzhou 215006, China; Email: fengyan@suda.edu.cn

Prof. Dr. Khurram Saleem, Professor, Department of Nuclear Sciences, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan
Email: khurram@pieas.edu.pk, Mobile: +923355093833

Prof. Dr. Anam Ur Rehman, Professor, Department of Nuclear Sciences, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan
Email: amansadiq@gmail.com; aman@pieas.edu.pk, Mobile: +923367353099

Chairman/ Dr. Abdul Ghaffar, Department of Physics, University of

Agriculture Faisalabad, Pakistan; Email: chabdulghaffar@yahoo.com, Mobile: +923005275455

ACADEMIC DISTINCTIONS (ACHIEVEMENTS DURING EDUCATIONS)

- ❖ I have got Chinese Government Scholarship (CSC), Sep. 2009- Dec. 2012
- ❖ I have scored position **and best RESEARCHER of the year 2011-12**, in the Xi'an Jiaotong University, P.R. China
- ❖ I have selected for a Chinese National **RESEACH** productivity **Award** for 2012 in School of Energy and Power Engineering, Xian Jiaotong University, China.
- ❖ Scored the **GAT-general** certificate (more than 50%) conducted by **NTS**, Islamabad (Test date: 11th January 2009 and valid upto 10th January 2011)
- ❖ Scored the **3rd position** in M.phil, Department of Physics (**UAF**), Faisalabad
- ❖ Scored the **2nd Position** in M.Sc., Department of Physics (**UAF**), Faisalabad
- ❖ Scored **4/4 CGPA** in the 3rd semester during M.Sc., (**UAF**), Faisalabad
- ❖ Winning the **2nd Prize** in quiz competition during M.Sc. (**UAF**), Faisalabad
- ❖ I have scored position **1st in Aggregate & best Student of the year**, in the college during B.Sc.
- ❖ I have scored the award of prize **1st in Mathematics** during 1st year (during Intermediate-F.Sc.).
- ❖ I have scored the award of prize **2nd in Aggregate** during 2nd year (during Intermediate-F.Sc.).

PROFESSIONAL TRAINING'S/ WORKSHOPS

- | | |
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| <p>Training Certificate (NAHE), HEC, Islamabad</p> <p>PINUM, Faisalabad</p> <p>Pakistan Atomic Energy Commission (PAEC) (In PINUM, Faisalabad)</p> <p>Nishat Industries, Faisalabad.</p> <p>Sitara Textile, Industries, Faisalabad.</p> <p>Sitara Textile, Industries, Faisalabad.</p> <p>NIAB, Faisalabad</p> <p>NIAB, Faisalabad</p> | <p>ONE Month Training workshop on ‘Staff Development Course’ Sponsored by National Academy of Higher Education (NAHE), HEC, Islamabad conducted by GC University, Faisalabad.</p> <p>TWO Months Intensive Internship Course (Basic physics and Nuclear Technology, Presentation skill, Research Methodology, Reporting, etc) Quality Management and its Significance in the Present Scenario</p> <p>Staff Development Training on Electronics Instrumentation, Development Techniques and Methods, Operational Assessment, Fault Tracing.</p> <p>Calibration of Electronics Equipments.</p> <p>Quality Management System, Quality Control & Quality Assurance</p> <p>05 Days Seminar on the “Safety Measure, the Use of Radiation in Agriculture & Biology”</p> <p>04 Days Seminar on the “Safety Measure, the Use of Radiation in Agriculture & Biology”</p> |
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TRAVELING HISTORY (INTERNATIONAL)

- China/Korea** (September 22, 2013 to October 04, 2013)
- China** (September 2009 to January 10, 2013)
- Greece** (27 Aug. – 3 Sep. 2011)
- USA (Five year Visa)**

PRINCIPAL FUNCTIONS & OUTLINES OF DUTIES (AS A UNIVERSITY TEACHER/RESEARCHER)

- I have more than **Eighteen** years of Academics & Research Experience, Lab practical, Planning; monitoring of Examinations for the classes of PhD/ M.Phil, M.Sc./ B.S. (Hons) Physics, of Pakistan's leading **HEC recognized University (GCUF)**.
- To supervise the **Research, Development Projects and Thesis** of PhD/ M.Phil, M.Sc./ B.S. (Hons) Physics classes.
- To teach the **Statistical Mechanics, Method of Mathematical Physics, Computational Physics, Electrodynamics, Plasma Physics, Physical Electronics and Quantum Mechanics** to PhD/ M.Phil, M.Sc./ B.S. (Hons) Classes.
- To teach and have an experience of **Mechanics, Optics and Modern Physics** and **Electronics LAB**. Establishment, Overhauling, Reporting and Maintain the Quality of Electrical/Electronic Equipments to M.Sc. and B.S. (Hons) Physics Classes.
- To teach and manage the **Theory and Practical** for the **Mechanics, Electricity and Magnetism, Computational** LABs to M.Sc. and B.S. (Hons) Physics Classes.
- To teach the **Molecular Modeling and Simulations, Plasma Physics** as a **Special Paper** for outgoing **Ph.D/ M.Phil** and MS Nano Science Classes.
- To teach the **Semiconductor Physics/Optoelectronic, Digital and Communication Electronics** as a **Special Paper** for outgoing Master and Honors Classes.
- To teach and manage the Theory and practical for the **Microelectronics, Circuit Analysis and Optoelectronics; Molecular Modeling and Simulations** to **Postgraduate Diploma in Electronics and Computational Physics** in Physics Department (Planned Project).
- To handle and Monitoring the **Computer lab** as a **Incharge** for PhD/M.Phil, M.Sc./B.S (Hons), Physics Classes.
- Take participation in developing the **Course Curriculum** and **Course Convener** for PhD/ M.Phil, M.Sc./ B.S. (Hons) Physics classes as per required.
- To work as **External Examiner** and **Evaluator** For PhD/ M.Phil, M.Sc./ B.S. (Hons) **Thesis**, Department of Physics, UAF, FUUAST-ISLAMABAD and UOG.
- To ensure implementation of effective monitoring and evaluation procedures to promote transparency, accountability and measurable impact of all related Research activities.
- To manage timely submission of quality reports, and to assist and provide technical support in long-term, medium-term and short-term project planning.
- I have been the member of **Monitoring & Evaluation** Sub-Committee of **QEC** in GC University, Faisalabad.
- To manage the lecturers with the latest teaching methodologies according to the mental approach of students & have the ability to prepare students so that there is no need for private tuition.
- To investigate the failure causes of students and to study the behaviors of students

[REDACTED] and suggest modification, renovation and up keeping existing related students.