

CURRICULUM VITAE

Dr. Muhammad Asif Nawaz

Ph. D in Physics,

Nano Lab in Semiconductor Division,

Department of Physics,

The Islamia University of Bahawalpur, Pakistan

Gender: Male

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OBJECTIVES:

- Academic:** Courses on Semiconductor Materials and Device Characterization, Methods of Experimental Techniques, Material Science and Plasma Physics for M.Sc, M.Phil and Ph. D. students and all under-graduate courses of Physics could be offered. So that a high quality manpower in the field of Science and Technology may be prepared for the development of our motherland, Pakistan
- Research Experience:** Fabrication and Characterization of Semiconductor Devices using Growth Techniques: CVD, Aqueous Chemical Reaction, Sol-gel and Heat-resistive method. Characterization Techniques: DLTS, Raman Scattering, SEM, XRD, TEM, FTIR, Photo Luminescence, 4-Prob Resistivity and Spectroscopy.

EDUCATION:

- Ph.D. (PHYSICS) 2016
The Islamia University of Bahawalpur, Pakistan
Title: Effect of Transition Metals Doping on the Properties of ZnO Thin Film
- M.Phil (PHYSICS) 2011 (First Division, Grade B+)
The Islamia University of Bahawalpur, Pakistan
Title: Spectroscopic Investigation in Metal Exploding Wire under Deep Water
- M.Sc. (PHYSICS) 2007 (First division, Grade B)
- B.Sc. (Physics, Mathematics A & B Courses) 2004 (First division, Grade B)

TEACHING/RESEARCH EXPERIENCE

Over 3 years university teaching experience as a visiting faculty and 6 year research experience

PROFESSIONAL DATA:

CAREER HISTORY: (DESIGNATION/ORGANIZATION)

- Assistant Professor in Physics
Department of Physics
University of Sahiwal, Sahiwal, Pakistan
- Project Director of BS Program
Punjab Group College Chishtian, Pakistan
September, 2017 to-April, 2019.
- Visiting Lecturer of Physics
University of Education Lahore (Multan Campus), Pakistan
February, 2017 to September, 2017

4. Visiting Lecturer of Physics
The Islamia University of Bahawalpur, Pakistan
September, 2012 to 2016
5. Principal
The Career College Lodhran, Pakistan
February, 2009 to 2012

SKILLS & EXPERTISE:

1. Electrical and Optical Characterization of Shallow and Deep Level Defects and Interfacial levels in: Semiconductors Material.
2. Techniques: Deep Level Transient Spectroscopy (DLTS), RAMAN Spectroscopy, X-ray diffraction (XRD), Chemical Vapor Deposition (CVD), Scanning Electron Microscope (SEM), Energy Dispersive X-ray (EDAX), Resistivity Measurements, Sol-Gel and Heat-resistive Method
3. Preparation of Schottky Contacts on Semiconductors using Thermal Evaporation Technique
4. Computer programming in (FORTRAN, Turbo C++) Languages

COURSES TAUGHT:

1. Statistical Mechanics, Circuit Theory, Digital Logic Design and Solid state Physics.
2. Modern Physics Practical's.
3. Basic Electronics Practical's.

MEMBER OF DISTINGUISHED SOCIETIES:

1. Life Member of Pakistan Vacuum Society (PVS)

COURSES ATTENDED:

1. Post-Graduate Diploma in Computer Science (PGD)
(December, 2004 To December, 2005), Bahauddin Zakariya University Multan, Pakistan

WORKSHOP ATTENDED

1. Workshop on Vacuum Science and Technology, Dec (14-18), 2009, NINVAAT, Islamabad, Pakistan.

CONFERENCES ATTENDED AS INVITED SPEAKER

1. 4th National Conference on Physics & Emerging Sciences, March 2-3, 2017, Allama Iqbal Open University, Islamabad

CONFERENCES ATTENDED AS SPEAKER

1. International Conference on Solid State Physics-2015, (12-16) December, 2015, Center of Solid State Physics, Lahore, Pakistan
2. 3rd International Conference on Semiconductor Materials and Nano-Devices (ICSMAND-2013), April 22-24, The Islamia University of Bahawalpur
3. Two-Day International Seminar on Semiconductor Materials and Nano-Devices, (10-12) October, 2011, at The Islamia University of Bahawalpur
4. International Symposium on Advanced Material-2013, (22-27) September, 2013, Institute of Space and Technology, Islamabad, Pakistan
5. International Conference on Solid State Physics-2013, (2-6) December, 2013, Center of Solid State Physics, Lahore, Pakistan

SEMINARS/WORKSHOPS ORGANIZED:

1. 2nd International Seminar on Semiconductor Materials and Nano-Devices, (10-12) October, 2011, at The Islamia University of Bahawalpur.
2. 3rd International Conference on Semiconductor Materials and Nano-Devices (ICSMAND-2013), (22-24) April at The Islamia University of Bahawalpur
3. International Conference in Photovoltaic and renewable energy sources, (12-14) March, 2014, at The Islamia University of Bahawalpur

PUBLICATIONS

1. **Muhammad Asif Nawaz**, M. ASGHAR, M. Y. Shahid, Noor Ul Ain, F. Iqbal, Muhammad Asim Shahzad and H. E. Ruda, Effect on microstructural properties of Mg-doped ZnO nanorods at various temperatures by using Williamson-Hall analysis, PLOS ONE, 2019 (Accepted)
2. F. Iqbal, **Muhammad Asif Nawaz**, M. Y. Shahid, M. Asif Nawaz, Structural and optical properties of as grown ZnO and Sr doped ZnO thin films prepared by sol-gel method, Advance Material Letter, 2017 (Submitted)
3. M. Faisal Malik, **Muhammad Asif Nawaz**, F. Iqbal, M. Y. Shahid, H. E. Ruda, M. Asghar, Influence of antimony doping on structure and morphology of ZnO nanowires grown by vapor-liquid-solid technique, Nanoscale Research Letter, 2019 (Accepted and in-press)
4. Muhammad Asghar, Ya Hong Xie, **Muhammad Asif Nawaz**, Hammad M. Arbi, M. Y. Shahid, F. Iqbal, M. Waqas, Growth and characterization of graphite doped CdTe/CdS thin film heterojunction, Applied Material Letter, 2019 (Accepted and in-press)
5. Sadaf Yasmeen, Faisal Iqbal, Tauseef Munawar, **Muhammad Asif Nawaz**, M. Asghar, Altaf Hussain, Synthesis, structural and optical analysis of surfactant assisted ZnO–NiO nanocomposites prepared by homogeneous precipitation method, Ceramic International, Vol. 45, No. 14, 2019, p. 17859-73. **I.F. 3.45**
6. **Muhammad Asif Nawaz**, M. Asghar, M. Y. Shahid, N. Ul Ain, F. Iqbal, F. Malik, H. E. Ruda, Microstructural study of as grown and 650 °C annealed ZnO nanorods: X-ray peak profile analysis. Digest Journal of Nanomaterials and Biostructures, Vol. 11, No. 2, 2016, p. 537 – 546. **I.F. 0.638**
7. M. Asghar, M. Y. Shahid, F. Iqbal, K. Fatima, **Muhammad Asif Nawaz**, H. M. Arbi, and R. Tsu, Simple method for the growth of 4H silicon carbide on silicon substrate, AIP Advances 6, 2016, 035201. . **I.F. 1.653**
8. A. Shabbir, Z. A. Gilani, **Muhammad Asif Nawaz**, M. F. Warsi, M. A. Khan, S. Nazir, M. F. A. Aboud, Enhanced dielectric and photocatalytic behavior of Dy-Co Co-doped multiferroic BiFeO₃ nanoparticles. Digest Journal of Nanomaterials and Biostructures, Vol. 11, No. 4, 2016, p. 1189-1195. **I.F. 0.638**
9. Muhammad Asim Shahzad, Muhammad Shahid, Ismat Bibi, Muhammad Azhar Khan, **Muhammad Asif Nawaz**, Mohamed F. Aly Aboud, M. Asghar, Rizwan Nasir Paracha, Muhammad Farooq Warsi, The effect of rare earth Dy³⁺ ions on structural, dielectric and electrical behavior of new nanocrystalline PbZrO₃ perovskites, Ceramic International, Vol. 11, No. 1, 2016, p. 1073-79. **I.F. 3.45**
10. M. Asghar, K. Mahmood, **Muhammad Asif Nawaz**, Samaa B.M, S. Rabia Ejaza, Y. H Xie., Enhancement of P diffusion density in bulk ZnO for p-type conductivity, Materials Today: Proceedings, 2, 2015, 5230 – 5235.
11. F. Malik, M. Asghar, K. Mahmood, **Muhammad Asif Nawaz**, M.Y.A.Raja, R. Tsu, Characterization of phosphorus-doped zinc oxide pellets using solid state reaction method, J. Ovonic Research, 11 (1), 2015, 27-34. **I.F. 0.701**
12. M. Asghar, K. Mahmood, **Muhammad Asif Nawaz**, R. Tsu, Growth and characterization of epilayers of SiC on Si (111) by molecular beam epitaxy IOP Conf. Ser: Ser: Material Science and Engineering, 60, 2014, 012069. **I.F. 0.701**