

Bio-Data

1. Personal Details

Name	Mohammad Mudassir Husain
Date of Birth	18-12-1969
Designation	Professor
Date of appointment	August 7' 1998
Teaching Experience	26 Years
Qualifications	Ph.D. (Physics)
Research Interests	i) Laser Spectroscopy ii) Modelling & Simulation of Nano-Electronics Devices
E-mail address	mmhusain@jmi.ac.in

2. Educational Qualifications

Ph.D	1998	Jamia Millia Islamia, N. Delhi	LASER Spectroscopy
M.Sc	1991	Jamia Millia Islamia, N. Delhi	Physics (Material Science)
B.Sc.	1989	Jamia Millia Islamia, N. Delhi	Physics (Hons.)

3. Fellowships

Post Doctoral Fellowship	University of Lecce, Italy	May 16' 2002 – Aug 13' 2002, Raman-LIDAR
Senior Research Fellowship	CSIR	July 17'1995-Mar. 30'1997
Junior Research Fellowship	DST	Oct.' 1993-July 16'1995
National Merit Scholarship	GOI	1989-91

4. Employment Profile

Lecturer	07-08-1998	06-08-2002	Jamia Millia Islamia
Sr. Lecturer	07-08-2002	06-08-2005	Jamia Millia Islamia
Reader	07-08-2005	06-08-2010	Jamia Millia Islamia
Associate Professor	07-08-2010	06-08-2013	Jamia Millia Islamia
Professor	07-08-2013	04-11-2019	Jamia Millia Islamia
Professor	05-11-2019	30-07-2024	Islamic University of Madinah IUM (KSA)
Professor	31-07-2024	...	Jamia Millia Islamia

5. Courses Taught

Fundamentals of Physics	B.Sc, B.Tech., BE
Electromagnetic Field Theory (EMFT)	B.E.
Advanced Quantum Mechanics	Master's (Academic)
Advanced Spectroscopy	Master's (Academic)
Laser Safety, Instrumentation	Master's (Professional)
Lasers and its Applications	M.Sc. (Electronics)
Classical Mechanics-II	Undergraduate (Physics)
Modern Physics	Undergraduate (Physics)
Quantum Mechanics-II	Undergraduate (Physics and Computer Sc)
Statistical Mechanics	Undergraduate (Physics)

6. (a) List of main Publications (International Journals)

18.	Analyzing the electronic and conductive characteristics of zigzag graphene nanoribbons upon NO _x and N ₂ O adsorption: An ab-initio study Materials Today Communications 39(2024)108725	M. Mudassir Husain, M. Taazeem Ansari, A. Almohammed
17.	Influence of varying carbon oxides concentrations on the selectivity of an electrical sensor utilizing graphene nanoribbons Micro and Nanostructures, 189 (2024) 207813	M. Mudassir Husain, M. Taazeem Ansari, A. Almohammed
16.	Occurrence of nonohmic trend in the ballistic transport of a modelled low dimensional device capable of performing electronic functions. Superlattices and Microstructures, 151(2021), 106808	M. Taazeem Ansari, A. Almohammed, M. Rafat M. Mudassir Husain
15.	Negative differential resistance, rectifying performance and switching behavior in carbon-chain based molecular devices. Organic Electronics 27 (2015)	Mudassir M. Husain, M. Kumar
14.	First-principles Modeling of the Smallest Molecular	

	Single Electron Transistor <i>Journal of Atomic, Molecular, Condensate & Nano Physics 2(1) (2015)</i>	Mudassir M. Husain, M. Kumar
13.	Spectroscopic interaction of coumarin derivative with Bovine serum albumin <i>Cancer Biotherapy & Radiopharmaceuticals 27 (7) (2012)</i>	Rajeev, Anjani Tiwari, Lokesh Mishra, Mudassir M. Husain
12.	Photophysical properties and estimation of ground and excited state dipole moments of 7-Diethylamino and 7-Diethylamino-4-methyl coumarin dyes from absorption and emission spectra <i>European Journal of Chemistry 3 (1) 2012</i>	Mudassir M. Husain, Rajeev, H.C. Tandon
11.	Determination of excited singlet-state dipole moments of hydroxyl and methoxy coumarins using solvatochromic method <i>European Journal of Chemistry 3 (1) 2012</i>	Mudassir M. Husain, Rajeev, H.C. Tandon
10.	Parametric coupling of low frequency whistlers to Alfvén waves in plasma <i>Physics of Plasmas 16 122301 (2009)</i>	N.Ahmad, V.K.Tripathi, M.Rafat Mudassir M. Husain
9.	Oscillating two stream instability of electromagnetic pump in the ion cyclotron range of frequency in a plasma <i>Physics of Plasmas 16 062308 (2009)</i>	N. Ahmad, V. K. Tripathi, M. Rafat, Mudassir M. Husain
8.	Computation of structural and electronic properties of single wall II-VI compound nanotubes. <i>Physica E, Low Dimensional Systems and Nanostructures 41(2009)</i>	Mudassir M. Husain
7.	Singlet and Doublet States UV-Visible Spectra and Electronic Parameters of 3-Methylchrysene and 4-Methylchrysene in Glass Matrix. <i>Spectrochimica Acta Part "A" 69 (2008)</i>	Mudassir M. Husain, H.C. Tandon, Pradeep R. Varadwaj
6.	Measurement and Theoretical Characterization of Electronic Absorption Spectra of Neutral Chrysene (C ₁₈ H ₁₂) and Its Positive Ion in H ₃ BO ₃ Matrix. <i>Spectrochimica Acta Part "A" 68 (2007) UK</i>	Mudassir M. Husain
5.	Molecular electronic properties and vibrational characteristics of PCCN...HX/DX (X=F, Cl, Br) in intermolecular complexes. <i>Chemical Physics Letters, 424, 4-6 (2006) 227-233</i>	Pradeep R. Varadwaj, Mudassir M. Husain
4.	Electronic Absorption Spectra of Radical Cations of 1-Methyl, 2-Methyl and 9-Methyl Anthracenes. <i>Canadian Journal of analytical Sciences and Spectroscopy, 45, 2 (2000)</i>	M. Shahid Khan, Mudassir M. Husain, Zahid H. Khan.
3.	Electronic Spectra of 1-Methyl and 2-Methyl Phenanthrenes and their Radical Cations. <i>Spectrochimica Acta Part A, 56 (2000)</i>	Mudassir M. Husain, M. Shahid Khan, Zahid H. Khan.
2.	Prediction of the Lowest-Energy Non-Koopmans Doublet States and the First Ionization Potentials of Polycyclic Aromatic Systems from their Triplet State Energies. <i>Applied Spectroscopy, 49, 6 (1995)</i>	Mudassir M. Husain, Zahid H. Khan, E. Haselbach
1.	On the Correlation Between Electronic Spectroscopy of Alternant Aromatic Hydrocarbons and Their Radical Cations. <i>Applied Spectroscopy, 47, 12 (1993)</i>	Zahid H. Khan, Mudassir M. Husain, E. Haselbach

6 (b) Publications (National Journals)

6.	Solvent effect on coumarin dye: Calculation of ground and excited state dipole moments <i>J. Indian Chem. Soc. 88,10 (2011)</i>	Rajeev, Sonam, Mudassir M. Husain
5.	Theoretical Study of H-bond complexes of Nitrous acid with Fluoromethanes. <i>J. Indian Chem. Soc. 88, 2 (2011)</i>	H.C. Tandon, Mudassir M. Husain
4.	Ab initio and DFT study of the electronic state, geometry and harmonic frequencies of OBBO...HX (X=F, Cl, Br) intermolecular complexes	Mudassir M. Husain, Vibha Saxena H.C. Tandon

	<i>J. Indian Chem. Soc. 87 (2010)</i>	
3.	Quantum chemical study of the structures, stability and vibrational spectra of the nitrous acid complexes with B ₂ O ₂ and C ₂ N ₂ molecules. <i>J. Indian Chem. Soc. 87,4 (2010)</i>	H.C. Tandon, <i>Mudassir M. Husain</i> , Asha Tandon
2.	Computation of Electronic Absorption Spectra and spectral Properties of Neutral 1-methyl Chrysene and its positive Ion in H ₃ BO ₃ Matrix by AM1 and PM3 Methods. <i>Asian J. of Chem 20, 2 (2008)</i>	<i>Mudassir M. Husain</i> , H.C. Tandon
1.	Polarizabilities and Energetics of Boroxopyrrole Homologues studied by Ab-initio and Density Functional Methods <i>J. Indian Chem. Soc. 84 (2007)</i>	H.C. Tandon, <i>Mudassir M. Husain</i>

6 (c) Publications (Conference Proceedings)

22.	Nanowire based size-dependent Photoluminescence and Raman studies of N type porous silicon etched under illumination of varying wavelengths <i>Electronics, Control and Automation (ICPECA); 2019</i>	M. Zaid, Abid, S. S. Islam and M. M. Husain
21.	Modeling of carbon chain device employing quantum mechanical method: A Hybrid Diode <i>IEEE Electron Devices Kolkata Conference (EDKCON); 2018</i>	Tazeem, <i>Mudassir, Rafat</i>
20.	Negative Differential Resistance in Naphthalene Based Molecular Device <i>5th Interdisciplinary Symposium on Material Chemistry; Proceedings BARC, Mumbai, Dec. 9-13' 2014.</i>	M.Kumar, <i>Mudassir M. Husain</i>
19.	Effect of electrodes on NDR in carbon nanowire: A first-principles study. <i>International E-Workshop/Conference on Computational Condensed Matter Physics and Material Science (IWCCMP-2014); Proceedings ABV-IITM Gwalior, Nov. 25-30' 2014</i>	M.Kumar, <i>Mudassir M. Husain</i>
18.	Red and blue-shifted non-covalent interactions revealed upon endohedral confinement of alkali-fluorides within the fullerene C ₆₀ cage: A density functional theory investigation <i>National Conference on "Advanced Trends in Nanoscience and Nanotechnology (ATNN-2013)" Department of Applied Sciences and Humanities, Faculty of Engineering and Tech. Jamia Millia Islamia, New Delhi.</i>	Pradeep R. Varadwaj, Arpita Varadwaj, <i>Mudassir M. Husain</i> , King C Lin
17.	CO ₂ adsorption on single walled bamboo like carbon nanotubes: A DFT study <i>National Conference on "Advanced Trends in Nanoscience and Nanotechnology (ATNN-2013)" Department of Applied Sciences and Humanities, Faculty of Engineering and Tech. Jamia Millia Islamia, New Delhi.</i>	M.Kumar, <i>Mudassir M. Husain</i>
16.	Interaction of coumarin derivatives with bovine serum albumin: Investigation by fluorescence technique. <i>3rd International conference on current developments in Atomic, Molecular, Optical and Nano Physics with Applications, Deptt. of Physics and Astrophysics, University of Delhi. (Dec.14-16' 2011)</i>	<i>Mudassir M. Husain</i> , Rajeev, H.C. Tandon
15.	Theoretical studies of structural and molecular electronic properties of bamboo type carbon nano tubes <i>3rd International conference on current developments in Atomic, Molecular, Optical and Nano Physics with Applications, Deptt. of Physics and Astrophysics, University of Delhi. (Dec.14-16' 2011)</i>	<i>Mudassir M. Husain</i>
14.	<i>Solvents effects on electronic transitions in some coumarins. Topical Conference on Atomic, Molecular and Optical Physics" (TC-2010), RRCAT, Indore (March 3-6' 2010)</i>	<i>Mudassir M. Husain</i> , Rajeev, H. C. Tandon, M. Kasim
13.	Effect of solvent on electronic absorption and fluorescence bands of 7-diethylamino and 7-diethylamino-4-methyl coumarins: Calculation of ground and excited states dipole moments <i>DAE-BRNS-Symposium on Atomic Molecular and Optical Physics, NSC, New Delhi (Feb. 10-13' 2009)</i>	<i>Mudassir M. Husain</i> , Rajeev, H.C. Tandon, Abdullah. A. Asiri
12.	On the measurement and computation of electronic absorption spectrum of neutral and ionized 2-methyl chrysene. <i>Topical Conference on Atomic, Molecular and Optical Physics" (TC-2008), Sardar Patel University, Gujrat (January 3-5, 2008)</i>	<i>Mudassir M. Husain</i>

11.	Ab-initio and Density Functional Study of the Electronic State, Geometry and Harmonic Frequencies of OBBO.....HX (X=F, Cl, Br) Intermolecular Complexes <i>Conference on High Resolution Spectroscopy, Dijon, France (September 3-7' 2007)</i>	H.C. Tandon, <i>Mudassir M. Husain</i>
10.	Assignment of α , p , β and β' bands in the measured electronic absorption spectra of Chrysene and its methyl derivatives on the basis of Clar's method. <i>First Asian Spectroscopy Conference, IISc, Bangalore (Jan 29-Feb 3' 2007)</i>	<i>Mudassir M. Husain</i>
9.	C ₂₀ , C ₈₀ : Simulation of Electronic Properties in Free State and Aqueous Media using PM3 method. <i>International Workshop on "The Application of Nanocrystalline Dimond like Carbon Materials (IWancDLC-2006)", Saha Institute of Nuclear Physics, Kolkata. (Nov. 28- Dec. 1'2006)</i>	<i>Mudassir M. Husain, K. Akram</i>
8.	Computation And Measurement Of Electronic Absorption Spectra of Monopositive Anthracene in H ₃ BO ₃ Matrix XXVIII European Congress on Molecular Spectroscopy (EUCMOS-XXVIII), Istanbul Turkey (3-8 September 2006)	<i>Mudassir M. Husain</i>
7.	Computation of Electronic Spectral Shift of Chrysene and 1-Methyl Chrysene in Aqueous Media <i>2nd International Conference on Current Developments in Atomic, Molecular and Optical Physics with Applications (CDAMOP-2006) Delhi University (March 21-23' 2006)</i>	<i>Mudassir M. Husain</i>
6.	Theoretical Spectral Properties of Chrysene and its Methyl-Derivatives (1-6) in neutral and Ionized States <i>National Symposium on Spectroscopy and its Applications (NSSA-2006) Department of Spectroscopy, IACS, Kolkata (January 18 – 20, 2006)</i>	<i>Mudassir M. Husain</i>
5.	Computation of Vibrational Spectra of Chrysene and its 1-Methyl Derivative (Neutral and Ionized State) in Gas Phase <i>Topical Conference on Atomic, Molecular and Optical Physics (TC-2005), December 13- 15, 2005, IACS, Kolkata pp. 20-21</i>	<i>Mudassir M. Husain</i>
4.	Electronic Absorption and laser-Induced Fluorescence Spectra of methyl Substituted Anthracenes. <i>National Laser Symposium, IIT Kanpur (December 14-16, 1998)</i>	Zahid H. Khan, <i>Mudassir M. Husain</i>
3.	Development of a Laser-Induced Fluorescence Set-up and Study of LIF Spectra of Naphthalene and its 1-Methyl Derivative. <i>National Laser Symposium, IIT Kanpur (December 14-16, 1998)</i>	<i>Mudassir M. Husain</i> Zahid H. Khan
2.	The Effect of Molecular Size in the Prediction of First Ionization of PAHs. <i>Molecular Spectroscopy and Lasers, Banaras Hindu University, Varansi, (November 26-28, 1994)</i>	<i>Mudassir M. Husain</i> , Zahid H. Khan
1.	Some Novel relations Among Singlet, Doublet and Triplet States of Alternant Aromatic Systems. <i>Saha Centenary International Symposium on Spectroscopy and Astrophysics University of Allahabad (October 4-6, 1993)</i>	<i>Mudassir M. Husain</i> , Zahid H. Khan

7. Books Published

3.	An Experience of Physics (2013) <i>Cadplan Publishers, New Delhi-110025</i>	<i>Mudassir M. Husain</i> , M. Rafat
2.	Interplay of Skills and Concepts: An approach to Physics (2006) <i>Cosmos Publishers, New Delhi</i>	M. Rafat, <i>Mudassir M. Husain</i>
1.	Physics Through Laboratory Exercises (2005) <i>Cadplan Publishers, New Delhi-110025</i>	M. Rafat, <i>Mudassir M. Husain</i>

8. Research Projects

Title	Funding Agency/Amount	Status	Category
Electronic Absorption Studies of Substituted Aromatic Hydrocarbons and their Cations of Astrophysical	Department of Science & Technology (DST), Govt. of India, under the Fast Track	Completed Nov. 2008	Major

Interests.	Proposals for Young Scientists Scheme (2005)	
Experimental electronic absorption, fluorescence and theoretical calculations of LASER dyes	University Grant Commission (UGC) (2008)	Minor Completed Dec. 2011

9. Participation in Workshops/Conferences/Symposium/Training Courses etc.

48.	6th International Conference on Emerging Technologies: Micro to Nano (ETMN-2024); Department of Electrical Engineering, Faculty of Engineering and Technology, Jamia Millia Islamia University.	22.11.2024-23.11.2024
47.	International Conference on Advanced Materials (ICAM-2019) organized by Centre for Nanoscience and Nanotechnology Jamia Millia Islamia, New Delhi-110025	06.03.2019-07.03.2019
46.	International Conference on Advances in Nanomaterials and Nanotechnology, Jamia Millia Islamia, New Delhi-110025.	04.11.2016-05.11.2016
45.	Training on antiplagiarism software, CIT Jamia Millia Islamia, New Delhi.	24.02.2016
44.	National Seminar on Photonics & Optical materials, Jamia Millia Islamia, New Delhi.	21.02.2016
43.	National Conference on Nanotechnology & Renewable Energy, Deptt. of Applied Sciences & Hum. Faculty of Engg. and Technology, Jamia Millia Islamia, New Delhi.	28.04.2014
42.	5th Interdisciplinary Symposium on Material Chemistry; BARC, Mumbai.	09.12.2014-13.12.2014
41.	International E-Workshop/Conference on Computational Condensed Matter Physics and Material Science (IWCCMP-2014); ABV-IIITM Gwalior.	25.11.2014-30.11.2014
40.	Workshop on Virtual Nano lab, JNU New Delhi	15.01.2014
39.	National Conference on "Advanced Trends in Nanoscience and Nanotechnology (ATNN-2013)" Department of Applied Sciences and Humanities, Faculty of Engineering and Tech. Jamia Millia Islamia, New Delhi.	25.02.2013
38.	International Conference on Sustainable Technologies (ICST-2013) Jamia Millia Islamia, New Delhi.	18.01.2013- 20.01.2013
37.	Symposium on Nanotechnology: Interdisciplinary Aspects; YMCA Univ. of Science and Technology, Faridabad	12.12.2012
36.	International School on "Quantum and Nano Computing Systems and Applications (QANSAS)" DEI, Agra.	28.11.2012 - 02.12.2012
35.	Workshop on "Scientific Applications of the IUAC HPC Facility", Inter University Accelerator Centre New Delhi.	22.11.2012- 23.11.2012
34.	Participated in Seminar on Practical education in Photonics, Delhi Technological University, New Delhi.	16.01.2012
33.	3 rd International conference on current developments in Atomic, Molecular, Optical and Nano Physics with Applications, Deptt.of Physics and Astrophysics, University of Delhi.	14.12.2011-16.12.2011
32.	Workshop on simulation of nanomaterials and nano devices, Singapore.	24.10.2011- 25.10.2011
31.	JES-IUCAA Workshop on Teaching and Research Using Small Telescopes, Aurangabad	17.10.2011-19.10.2011
30.	4 th Indian INUP Familiarization Workshop Winter School on Nano-scale Materials and Devices, IIT Bombay.	13.12.2010- 17.12.2010
29.	National Workshop on Computational Science, University of Delhi, N. Delhi.	01.07.2010- 07.07.2010
28.	3 rd National Symposium for Material Research Scholars (MR-10) Department of Metallurgical Engineering and Material Science, IIT Mumbai.	07.05.2010- 10.05.2010
27.	International Conference on Chemoinformatics, Chemogenomics and Computational Chemistry Approaches in Drug Discovery, Ernaculum (Kerela)	19.08.2010-21-08-2010
26.	Participated in 1-weeks QIP short term training on Nanomaterials: Synthesis and Characterization, sponsored by AICTE, at IIT Roorkee.	16-02.2009-20.02.2009
25.	DAE-BRNS Symposium on Atomic Molecular and Optical Physics, NSC, New Delhi.	10.02.2009- 13.02.2009
24.	Applications of Advanced Nanostructured Materials Workshop, Amman, Jordan.	10-11-2008- 13.11.2008
23.	4-weeks training on "Chemical Synthesis of Semiconducting and Metallic nano particles" DST nanoscience unit IIT, Chennai.	05.05.2008- 04.07.2008
22.	Participated in "Topical Conference on Atomic, Molecular and Optical Physics" (TC-2008) organized by Department of Physics, Sardar Patel University, Anand, Ahmedabad.	03.01.2008-05.-01.2008
21.	Participated in Conference on High Resolution Spectroscopy, Dijon, (France).	03.09.2007-07.09.2007

20.	Participated in 2-weeks QIP on Computational Chemistry Tools for Materials Science Research sponsored by AICTE, IIT Chennai.	12.03.2007– 23.03.2007
19.	Presented paper in 1st Asian international conference on spectroscopy and biospectroscopy, IISc. Bangalore	29.01.2007–02.02.2007
18.	Participated in Workshop on Overview of Existing Fluorescence Lifetime Acquisition Techniques, IISc. Bangalore (Karnataka)	28.01.2007
17.	Presented progress report of DST-research project, BITS Pilani Goa campus (Goa).	11.01.2007–12.01.2007
16.	Presented paper in the International Workshop on “The Application of Nanocrystalline Dimond like Carbon Materials (IWancDLC-2006)”, Saha Institute of Nuclear Physics, Kolkata	28.11.2006–01.12.2006
15.	Participated in 2 nd International Conference on Current Developments in Atomic, Molecular and Optical Physics with Applications (CDAMOP-2006) K.M. College, Delhi University.	21.03.2006
14.	Participated in 2 nd , 3-weeks UGC Sponsored Refresher Course “Experimental Techniques in Physics” ASC, Aligarh Muslim University (AMU), Aligarh	22.03.2006
13.	Presented paper in “National Symposium on Spectroscopy and its Applications” (NSSA-2006) organized by Department of Spectroscopy, IACS, Kolkata	18.01.2006–21.01.2006
12.	Presented paper in “Topical Conference on Atomic, Molecular and Optical Physics” (TC-2005) organized by Department of the Theoretical Physics, IACS, Kolkata	13.12.2005–15.12.2005
11.	Participated in first 3-weeks UGC Sponsored Refresher Course on “Environmental Studies” ASC, Jamia Millia Islamia, New Delhi.	19.09.2005–08.10.2005
10.	Participated in training program on Quantum Chemistry, New Delhi.	14.02.2005–16.02.2005
9.	Participated in training program on Quantum Chemistry, New Delhi.	13.10.2005–14.10-.2005
8.	Participated in the Workshop “Development of Quality Question Paper” organized by Academic Staff College, Jamia Millia Islamia, New Delhi.	10.01.2003– 13.01.2003
7.	Participated in National Conference on Physics of Matter (INF meeting) Bari, Italy.	24.06.2002– 28.06.2002
6.	Participated in 4-Weeks Orientation Course organized by University Grant Commission (UGC)-Academic Staff College, Himachal University Shimla.	04.09.2000– 30.09-.2000
5.	Presented paper in “National Laser Symposium” IIT Kanpur	14.12.1998–16.12.1998
4.	Presented paper in symposium on “Molecular Spectroscopy” at Banaras Hindu University, Varansi	26.11.1994– 28.11.1994
3.	Participated in “National Laser Symposium” organized by Department of Atomic Energy, Center for Advanced Technology, Indore	29.01.1994–01.02.1994
2.	Presented paper at Saha Centenary International Symposium on “Spectroscopy and Astrophysics”, University of Allahabad	04.10.1993–06.10.1993
1.	Participated in mini-workshop on “Techniques for Astronomical High Resolutions Optical and IR Spectroscopy” Organized by IUCCA, Pune at Mt. Abu.	22.03.1993–26.03.1993

10. Conference/workshops organized

Convener, National Conference on “Advanced Trends in Nanoscience and Nanotechnology (ATNN-2013)” Department of Applied Sciences and Humanities, Faculty of Engineering and Tech. Jamia Millia Islamia, New Delhi-110025; Feb 25’ 2013

11. Innovative Educational Initiatives

- 1) Created curricula for B.Tech. and B.E. Physics theory and laboratory courses
- 2) Developed laboratory manuals
- 3) Developed problem sets for theory courses in Physics
- 4) Upgraded physics laboratory
- 5) Regular assignments are provided to B. Tech students. Two sessional tests are administered per semester, with feedback given to students regarding their performance.

12. Invited Talks/Presentations

11.	The Catastrophic Consequences of a 3°C Rise in Global Temperature 5 th Scientific week (2024).
10.	An overview of Scanning Electron Microscopy (SEM) for Characterization of nanomaterials and Electrochemical Impedance Spectroscopy (EIS) for Analyzing and Modelling of Electrochemical and Allied Devices, 4 th Scientific week (2023 Islamic University of Madina).
9.	Fundamentals of Lidar Technique, Scientific week. (2021) Islamic University of Madina
8.	Modeling and Simulation of Molecular Transistors for Nanoelectronics Applications Scientific week. (2020) Islamic University of Madina

7.	Expert lecture on “Nano Transistors: Component of future generation computers” National seminar on “Scope, importance and future perspectives of nanotechnology” Govt. Degree College for women Anantnag’ J&K. March 18-19’ 2016
6.	Live lecture on “Modern Physics-I” IUC-UGC CEC Edu Sat Jan. 29’ 2015
5.	Expert lecture on “Molecular Transistors: Vital components of Nano Devices” Short term course (STC) on New Trends in Electronics and Communication, YMCA University of Science and Technology, Faridabad Aug. 17-21’ 2015
4.	Presentation on “Effect of electrodes on NDR in carbon nanowire: A first-principles study”. International E-Workshop/Conference on Computational Condensed Matter Physics and Material Science (IWCCMP-2014); Proceedings ABV-IIITM Gwalior, Nov. 25’ 2014.
3.	Presentation on “Simulation of single electron molecular transistor-A DFT study” International conference (ITNASETSD) Krishi Sanskriti JNU, New Delhi, July 27-28’ 2013.
2.	Presentation on “An experience of simulating structural and electronic properties of nanotubes and nano material”. AIAS-Lecture series (July 11’ 2013), Amity Institute of Applied Science, Amity University Noida
1.	Presentation on “Simulation of nano materials using classical & quantum Models” Workshop on Nanotechnology & Embedded Systems (July 23-Aug 12’ 2012), YMCA University of Science and Technology, Faridabad Aug. 1’ 2012

13. Technical Session Chaired

5.	Chaired Technical Session in the 6th International Conference on Emerging Technologies: Micro to Nano (ETMN-2024) Jamia Millia Islamia, New Delhi ,Nov 22-23’ 2024.
4.	Chaired Technical Session in International Conference on Advances in Nanomaterials and Nanotechnology. Jamia Millia Islamia, New Delhi. March 6-7’ 2019.
3.	Chaired Technical Session in International Conference on Advances in Nanomaterials and Nanotechnology. Jamia Millia Islamia, New Delhi. November 4-5’2016
2.	Chaired Technical Session in International Conference on Sustainable Technologies (ICST-2013) Jamia Millia Islamia New Delhi. Jan. 18-20’ 2013.
1.	Chaired Technical Session in Symposium on Nanotechnology: Interdisciplinary Aspects, YMCA University of Science and Technology, Faridabad (12-12-2012)

14. Membership of Research Scientific Society

Life member Indian Society for Atomic and Molecular Physics (ISAMP)

15. Technical Training

3.	Setup Laser-Induced Fluorescence (LIF) Experiment in Molecular Laser Spectroscopy Laboratory, Department of Physics, Jamia Millia Islamia. New Delhi.	1991-98
2.	Operation of Boxcar Averager and Gated Integrator, Bhabha Atomic Research Centre (BARC) Mumbai	23.03.1995-4.04.1995
1.	Fabricated Nitrogen pumped Dye Laser at Center of Advanced Technology (CAT), Department of Atomic Energy (Govt. of India), Indore.	10-03-1995-10.06.1995

16. Experimental and Computational Skill

1.	Fabricated Nitrogen pumped dye laser and setup Laser Induced fluorescence (LIF) system
2.	HyperChem 7.5; Gaussian G03 Gaussian View; Quantumwise Atomix Virtual Nanolab

17. Ph.D Guided

	Name	Topic	Status
3.	TAZEEM	Modeling of Miniaturized Functional Devices Employing Quantum Mechanical Methods for Applications in Nano Electronics	Completed (2021)
2.	MANAS	Simulation of Carbon Nanotubes and Nano based Materials for Molecular Device Applications	Completed (2017)
1.	RAJEEV	Experimental & Theoretical Spectroscopic Studies of Coumarin Dyes and their Derivatives	Completed (2012)