

Curriculum Vitae

Dr. Mohammad Ajmal Khan

(Associate Professor)

Present Address:

Department of Physics

Jamia Millia Islamia

New Delhi- 110025, India

E-mail: majkhan@jmi.ac.in (official)

Educational Qualification

- **Ph.D. in Physics** from Jamia Millia Islamia New Delhi, in 2005

Field of my Research Work: Material Science

Total Teaching Experience: 19 years (approx)

- At present, working as an Associate Professor (Physics), in the Department of Physics, Jamia Millia Islamia, New Delhi.

Research Index: Citations: 1100

h-index: 19,

i10-index: 35

Publications:

S. No.	Title with page nos. and date of publication	Journal	ISSN No	Whether peer reviewed	Listed in UGC-CARE/ Scopus/ WoS or not?
1.	Harnessing the half-metallicity and thermoelectric insights in Cs ₂ AMrBr ₆ (M= V, Mn, Ni) double halide perovskites: A DFT study, 2025/2/1, Volume: 186, Pages,109023	Materials Science in Semiconductor Processing	1369-8001	Peer reviewed	Scopus
2.	Pioneering computational insights into the structural, magnetic, and thermoelectric properties of A ₃ XN (A= Co, Fe; X= Cu, Zn) anti-perovskites for advanced material applications 2025/1/1, Volume: 185, Pages108925	Materials Science in Semiconductor Processing	1369-8001	Peer reviewed	Scopus
3.	Thermoelectric Response of Vacancy Order Double Perovskite K ₂ PtBr ₆ for Energy Harvesting Applications 2024/10/1, 179-188 https://doi.org/10.1007/978-3-031-62620-3_17	Advanced Functional Materials for Sustainable Environments, Springer Nature Switzerland	978-3-031-62620-3	Peer reviewed	Scopus
4.	Unlocking the role of 3d electrons on ferromagnetism and spin-dependent transport properties in K ₂ GeN ₆ (X= Br, I) for spintronics and thermoelectric applications 2024/3/28, 112022	Journal of Physics and Chemistry of Solids	1879-2553	Peer reviewed	Scopus
5.	Exploring the lead-free halide Cs ₂ MGaBr ₆ (M = Li, Na) double perovskites for sustainable energy applications 2024/3/6, Volume: 14, Issue 1, Pages, 5520	Scientific Reports, Nature Publishing Group UK	2045-2322	Peer reviewed	Scopus
6.	Eco-friendly lead-free halide double perovskites A ₂ CuMCl ₆ (A= K, Rb; M= Sb, Bi): stability, thermoelectric, and optoelectronic advancements through theoretical insights, 09 Sep 2024, 12, 16045-16058	Journal of Materials Chemistry C, Royal Society of Chemistry	2050-7534	Peer reviewed	Scopus
7.	Control of spin on ferromagnetism and thermoelectric properties of K ₂ GeMnX ₆ (X= Cl, Br, I) halide perovskites: emerging candidates for semiconductor spintronics and thermoelectric applications 8th May, 2024, 5, 4913-4931	Materials Advances Royal Society of Chemistry	2633-5409	Peer reviewed	Scopus
8.	Detection of insulation degradation by-products in transformer oil using ZnO coated IDC sensor Volume 17 (2024): Issue 1 (January 2024)	International Journal on Smart Sensing and Intelligent Systems	1178-5608	Peer reviewed	Scopus
9.	Ecofriendly blue emissive ZnO-graphene nanocomposite and its application as superior catalytic reduction of methyl orange and congo red 2023/11, Volume: 108, Issue: 2, Pages 411-422	Journal of Sol-Gel Science and Technology	1573-4846	Peer reviewed	Scopus
10.	High electrochemical performance of rGO-CNTs composites as an electrode material for supercapacitors applications 2023/5/27, Page -100051	Hybrid Advances	ISSN: 2773-207X	Peer reviewed	Scopus/ Directory of Open Access Journals

					(DOAJ)
11	Sensor Based Conditioning Monitoring of Oil Immersed Transformer 2023/5/1, 275-280	2023 International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies (REEDCON), IEEE	978-1-6654-9382-6	Peer reviewed	
12	Improved performance of biopolymer composite electrolyte based cellulose acetate/Zinc Oxide filler for supercapacitors 2023/3/2, 1-23	Energy & Environment	ISSN: 0958305X	Peer reviewed	Scopus
13	Enhancement of Electrochemical Stability Window and Electrical Properties of CNT-Based PVA-PEG Polymer Blend Composites 2022/10/28, 40116-40131	ACS omega	ISSN: 2470-1343	Peer reviewed	Scopus
14	Density Functional Theory Studies on a Novel 1-Ethyl-4-phenyl-1, 5-benzodiazepin-2-thione Molecule and Its Derivatives for Opto-nonlinear Applications 2022/6/3, 319-329	Engineered Science	ISSN: 2576-9898	Peer reviewed	Scopus
15	Spray pyrolysis developed Nd doped Co3O4 nanostructured thin films and their structural, and opto-nonlinear properties for optoelectronics applications 2022/6/1, 107959	Optics & Laser Technology	ISSN 0030-3992	Peer reviewed	Scopus
16	DFT studies on a novel 1-Ethyl-4-phenyl-1, 5-benzodiazepin-2-thione molecule and its derivatives for opto-nonlinear applications, 2022	Eng. Sci,	ISSN: 2576-9898	Peer reviewed	Scopus
17	Phase transition, band structure, optical spectra and magnetic moment of MnO magnetic material upon compression 2021/10, 94, 10, 1-12	The European Physical Journal B	ISSN: 1434-6036	Peer reviewed	Scopus
18	Band Structure and Optical Spectra of Bulk, Tri-Layer, Bi-Layer and Monolayer Cds System: A Comparative Study 2021/8/31, 404-413	Transactions on Electrical and Electronic Materials	ISSN: 20927592	Peer reviewed	Scopus
19	High-pressure effect on elastic properties, mechanical stability and microhardness of ZnTe 2021/4/8, 167-172	Journal of Optoelectronics and Advanced Materials	ISSN: 14544164	Peer reviewed	Scopus
20	Crystal structure and optical spectra of MnAs with a NiAs-type hexagonal structure 2021/2/15, 153-57	Journal of Optoelectronics and Advanced Materials	ISSN: 14544164	Peer reviewed	Scopus
21	The effect of pressure on optical constants and exciton properties in ZnTe 2021, 166389	Optik	ISSN 2666-9501	Peer reviewed	Scopus
22	Positron chemical potential and diffusion constant in AlSb crystal compound under compression 2020/11/4, 147010	Journal of Electron Spectroscopy and Related Phenomena	ISSN 0368-2048	Peer reviewed	Scopus
23	Facilely fabricated Dy:PbI2/glass thin films and their structural, linear and nonlinear optical studies for opto-nonlinear applications 173 (2020) 109122	Vacuum	0042207X	Peer reviewed	Scopus
24	Eucalyptus Concoction Mediated Synthesis of Gold Nanoparticles and Its Bioactive Role Explored via Antimicrobial and Cytotoxic Studies 2020/10/1, 6326-6333	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
25	Band structure and chemical bonding of GaP: pressure-induced effects 2020/9/9, 1-8	Phase Transitions	ISSN:10290338	Peer reviewed	UGC care/Scopus
26	Enhanced Photocatalytic Performance of Sn6SiO8 Nanoparticles and Their Reduced Graphene Oxide (rGO) Nanocomposite 2020/9/1, 5426-5432	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
27	Influence of Incorporated Barium Ion on the Physio-Chemical Properties of Zinc Oxide Nanodisks Synthesized via a Sonochemical Process 2020/9/1, 5452-5457	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
28	Structural, Optical and Magnetic Properties of Zn1-x Co x O Nanoparticles 2020/9/1, 5525-5532	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
29	Visible-Light Driven Effective Photocatalytic Degradation of Methylene Blue Dye Using Perforated Curly ZnO. 1NiO. 9O Nanosheets 2020/9/1, 5759-5764	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
30	Electronic properties, optical spectra and magnetisation of MnAs material under compression 2020/7/31, 2972-2985	Philosophical Magazine	ISSN: 09500839	Peer reviewed	Scopus
31	A comprehensive study on molecular geometry, optical, HOMO-LUMO, and nonlinear properties of 1,3-diphenyl-2-propen-1-ones chalcone and its derivatives for optoelectronic applications: A computational approach February 2020, 164172	Optik	ISSN 2666-9501	Peer reviewed	Scopus

32	Pseudopotential study of wide band-gap GaN at high pressures 2020, 94, 82	Pramana–J. Phys	ISSN 0304-4289	Peer reviewed	Scopus
33	Removal of fluoroquinolone drug, levofloxacin, from aqueous phase over iron based MOFs, MIL-100 (Fe) 2020/1/1, 121029	Journal of Solid State Chemistry	ISSN 1095726X	Peer reviewed	Scopus
34	Collective effects and optical characteristics of CdSe _x Te _{1-x} February 2020, 163952	Optik	ISSN 2666-9501	Peer reviewed	Scopus
35	Positron characteristics and positronium work function in gallium nitride under high compression June 2020, 108721	Radiation Physics and Chemistry	ISSN 0969-806X	Peer reviewed	Scopus
36	Performance Enhancement and Extension of DGA-Based Transformer Fault Diagnosis Methods Using Soft-Computing Techniques 2020, 287-324	Book: Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems Springer, Singapore	978-981-15-1532-3	Peer reviewed	Scopus
37	Removal of Cr (VI) from aqueous solution using VO ₂ (B) nanoparticles Volume 739, January 2020, 136934	Chemical Physics Letters	1873-4448	Peer reviewed	Scopus
38	Fabrication of water soluble and luminescent Eu ₂ O ₃ nanoparticles for specific quantification of aromatic nitrophenols in aqueous media Volume 736, December 2019, 136799	Chemical Physics Letters	1873-4448	Peer reviewed	Scopus
39	Crystal structure and electronic properties of wurtzite Mg _x Zn _{1-x} O: Ab initio study December 2019, 102694	Results in Physics	2211-3797	Peer reviewed	Scopus
40	Optical constants and exciton properties of Zn _x Cd _{1-x} S	Optik	0030-4026	Peer reviewed	Scopus
41	Enhanced solar light-mediated photocatalytic degradation of brilliant green dye in aqueous phase using BiPO ₄ nanospindles and MoS ₂ /BiPO ₄ nanorods	Journal of Materials Science: Materials in Electronics	1573-482X	Peer reviewed	Scopus
42	Temperature dependence of the optical and lattice vibration properties in gallium arsenide 176 (2019) 366-371	Optik	0030-4026	Peer reviewed	Scopus
43	Impact of increasing concentration of l-alanine environment on structural, UV-vis, SHG efficiency, luminescence and dielectric traits of zinc thiourea chloride (ZTC) crystal Volume 185, May 2019, Pages 317-324	Optik	0030-4026	Peer reviewed	Scopus
44	Growth of NH ₄ H ₂ PO ₄ crystal in urea environment to optimize linear-nonlinear optical traits for photonic device applications Volume 185, May 2019, Pages 1247-1252	Optik	0030-4026	Peer reviewed	Scopus
45	Band parameters for Zn _{1-x} MoxTe studied by means of spin-polarized first-principles calculations Volume 19, pages 38–46, (2020)	Journal of Computational Electronics	1572-8137	Peer reviewed	Scopus
46	Pseudopotential calculations of AlSb under pressure February 2018, Pages 215-219	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	1386-1425	Peer reviewed	Scopus
47	Optical phonon modes and polaron related parameters in GaIn _{1-x} P February, 2018, Pages 144-148	Physica B: Condensed Matter	0921-4526	Peer reviewed	Scopus
48	Ag-Doped ZnO Nanoparticles for Enhanced Ethanol Gas Sensing Application Volume 18, Number 5, May 2018, pp. 3557-3562(6)	Journal of Nanoscience and Nanotechnology	1533-4880	Peer reviewed	Scopus
49	Dependence on pressure of the elastic parameters and microhardness of InSb 86 (2017) 176–180	Infrared Physics & Technology	1350-4495	Peer reviewed	Scopus
50	Energy gaps, valence and conduction charge densities and optical properties of GaAs _{1-x} P _x (2018) 1850125	International Journal of Modern Physics B	1386-1425	Peer reviewed	Scopus
51	Energy gaps and refractive index of lattice-matched and mismatched In _x Al _{1-x} As _y Sb _{1-y} quaternaries (2018) 1850125	Optik	0030-4026	Peer reviewed	Scopus
52	Conduction and valence band offsets of Zn _{1-x} MgxSe/Zn _{1-y} MgySe heterointerfaces, August 2018, Pages 54-59	Physica B: Condensed Matter	0921-4526	Peer reviewed	Scopus
53	Elastic constants and mechanical stability of In _x Al _{1-x} As _y Sb _{1-y} lattice-matched to different substrates, 2582–2594, 2018	Philosophical Magazine	1478-6443	Peer reviewed	Scopus
54	Microhardness, phase transition, acoustic wave velocities and melting temperature of Al _x Ga _{1-x} Sb (2018) 1850210	International Journal of Modern Physics B	1386-1425	Peer reviewed	Scopus
55	Optical properties and exciton binding energy and related parameters of CdTe: Pressure-induced effects, 170 (2018) 37–42	Optik	0030-4026	Peer reviewed	Scopus
56	Composition dependence of penetration range and backscattering coefficient of electrons impinging on SixGe _{1-x} and GaAs _x N _{1-x} semiconducting alloys,	Ultramicroscopy	0304-3991	Peer reviewed	Scopus

	(2018) 53–57				
57	Temperature dependence of the refractive index in ZnSe _{1-x} S _x , 2018, Pages 292-296	Optik	0030-4026	Peer reviewed	Scopus
58	Positron affinity and bulk lifetime and positronium work function in indium phosphide under pressure, May 2018, Pages 5-9	Journal of Electron Spectroscopy and Related Phenomena	1386-1425	Peer reviewed	Scopus
59	Ag-Doped ZnO Nanoparticles for Enhanced Ethanol Gas Sensing Application,	Journal of Nanoscience and Nanotechnology	ISSN: 24235911	Peer reviewed	UGC care/Scopus
60	Fuzzy approach for residual life assessment of paper insulation 2017, Pages 26-30	, IEEE	978-1-5386-3138-6	Peer reviewed	
61	Fabrication and Temperature Dependent Electrical Characterization of n-ZnO Nanowires/p-Si Substrate Heterojunction Diodes Pages 1162 - 1166 October 2017	Journal of Nanoelectronics and Optoelectronics	1555130X	Peer reviewed	Scopus
62	Band structure and optical constants of GaAs _{1-x} N _x Pages 317 – 322, 1 February 2017	Optik	0030-4026	Peer reviewed	Scopus
63	A comparative study of key properties of glycine glycinium picrate (GGP) and glycinium picrate (GP): A combined experimental and quantum chemical approach Pages 352 – 362 March 2018	Elsevier's Journal of Saudi Chemical Society	13196103	Peer reviewed	Scopus
64	Long Range Interaction and Structural Stability of Close Packed Polytropic Materials	Mater. Focus	2169-4303	Peer reviewed	NA
65	Molecular structure, vibrational, optical, molecular first order hyperpolarizability analysis of {Dibromobis(L-proline)zinc(II)}: A novel nonlinear optical material Pages 2852 – 2860 1 March 2016	Optik	0030-4026	Peer reviewed	Scopus
66	Molecular structure, spectroscopic (IR, Raman, Ultra violet-Visible) and nonlinear optical investigation on DCBLPZ: A novel semiorganic NLO material Vol. 14, No. 8 (2015) 1550061	Journal of Theoretical and Computational Chemistry	0219-6336	Peer reviewed	Scopus
67	Effect of organic ligands (L-Proline and L-Methionine) on growth, structural, vibrational, crystalline perfection, SHG efficiency, microscopic and optical properties of KDP single crystals (2014) 571–578	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	1386-1425	Peer reviewed	Scopus
68	Synthesis, growth, crystal structure, EDX, UV-vis-NIR and DSC studies of L-proline lithium bromide monohydrate—A new semiorganic compound (2014) 104–110	Journal of Crystal Growth	0022-0248	Peer reviewed	Scopus
69	Optical and energy-loss spectra of ZnS from ab initio molecular dynamics simulation: Temperature Effect	Optik	0030-4026	Peer reviewed	Scopus
70	Ab initio study of structural parameters and optical properties of ZnTe _{1-x} O _x	Superlattices and Microstructures	1096-3677	Peer reviewed	Scopus
71	Polymorphism and Polytypism in Elements-I,	Journal of Advanced Physics	2168-1996	Peer reviewed	Scopus/UGC care
72	Polymorphism and Polytypism in Elements-II (M.D. Simulation),	Journal of Advanced Physics	2168-1996	Peer reviewed	Scopus/UGC care
73	Molecular Dynamics Study of Silver Iodide	Materials Focus	2169-429x	Peer reviewed	
74	Pressure-dependent dynamical properties of Zn-based II-VI semiconductors	Physica B: Condensed Matter	1873-2135	Peer reviewed	Scopus
75	Quantum confinement effects on the band structure and dielectric properties of nanostructured GaAs	Phys. Scr	0031-8949	Peer reviewed	Scopus
76	Exciton and polaron properties in GaIn _{1-x} As ternary mixed crystals	Journal of Luminescence	0022-2313	Peer reviewed	Scopus
77	Structural and Dielectric Studies of Pure and Mn Doped GaSe	Science of Advanced Materials	1947-2935	Peer reviewed	Scopus
78	Stabilities of Modulated Phases of Close Packed Materials	phys. stat. sol. (b)	1521-3951	Peer reviewed	Scopus
79	Molecular Dynamics Simulation of ZnS using Interatomic potentials, 221-224, 2011	AIP Conf. Proc. 1370	doi: 10.1063/1.3638105, (2011)	Peer reviewed	Scopus
80	Molecular Dynamics Study of Phase Transformation in Cobalt,	Conf. Proceeding NC-ATIC, Delhi university		Peer reviewed	
81	Simulation of close packed Polytropic Materials	Proc. Intl Workshop Prep. & Charct. Tech. Imp. Single Crystals, National Physical Laboratory, New Delhi		Peer reviewed	
82	A Semi Flexible Integrated Wireless Humidity Sensor	12th IEEE International Conference INDICON 2015 17th -20th Dec, 2015, Jamia Millia Islamia, New Delhi	2325-9418	Peer reviewed	
83	Wireless Monitoring of Temperature and Humidity Using Sensor Array	12th IEEE International Conference	2325-9418	Peer reviewed	

		INDICON 2015 17th -20th Dec, 2015, Jamia Millia Islamia, New Delhi			
84	Fault Severity Determination in Transformers Using Dissolved Gas Analysis(DGA)	12th IEEE International Conference INDICON 2015 17th -20th Dec, 2015, Jamia Millia Islamia, New Delhi	2325-9418	Peer reviewed	

Book Chapters:

1. Performance Enhancement and Extension of DGA-Based Transformer Fault Diagnosis Methods Using Soft-Computing Techniques, *Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems*, Springer, 287-324 , 2020
2. Thermoelectric Response of Vacancy Order Double Perovskite K_2PtBr_6 for Energy Harvesting Applications. *Advanced Functional Materials for Sustainable Environments*. Springer, Cham. 2024
https://doi.org/10.1007/978-3-031-62620-3_17
3. Novel Thermoelectric Material Ba_2AlNbO_6 for Energy Harvesting Applications. *Recent Advances in Nanotechnology*. ICNOC 2022. Springer Proceedings in Materials, vol 28. Springer, Singapore, 2023.
https://doi.org/10.1007/978-981-99-4685-3_12
4. First-Principles Insights into the Half-Metallic and Thermoelectric Properties of Vacancy-Ordered Halide Double Perovskite Rb_2VCl_6 : A Spintronic and Energy Conversion Prospect, *ETMN-24*, CRC Press, 2024 (In Press)
5. First principle calculation of structural, electronic and optical properties of double perovskite Ba_2AlTaO_6 , for optoelectronic device applications, *Proceeding of ETMN24*, Springer, 2024 (In Press).

Major Research Projects completed:

1. "Structure and Fundamental Properties of Materials-2" of amount SR 200000 (Approx. INR 3,945,520) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
2. "Investigation of Physical Properties of Semiconducting Materials under High Pressure" of amount SR 100000 (Approx. INR 1,972,228) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
3. "Functional Nanomaterials: New Avenues for Mitigating Energy and Environmental Problems" of amount SR 500000 (Approx. INR 9,862,510) funded by Research Centre for Advanced Material Science, King Khalid University, Abha, Saudi Arabia.
4. "Temperature dependence of Optical Properties in GaAs" of amount SR 50000 (Approx. INR 986,237) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
5. "Structure and Fundamental Properties of Materials" of amount SR 200000 (Approx. INR 3,945,520) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
6. "Ag doped ZnO Nanomaterial for Enhanced Ethanol Gas Sensing Application" of amount SR 50000 (Approx. INR 986,237) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
7. "Fabrication and Temperature Dependent Electrical Characterizations of n-ZnO Nanorods/p-Si Substrate Hetrojunction diode" of amount SR 50000 (Approx. INR 986,237) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
8. "Molecular Dynamics study of Structural and Thermodynamical Properties of AgI" of amount SR 66,400 (Approx. INR 1,309,673) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.
9. "Stabilities of Modulated Phases in Nanocrystals" of amount SR 6,40,000 (Approx. INR 12,623,677) funded by Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia.

Workshop and Conference

1. MSSC2010: Ab-initio Modelling in Solid State Chemistry, Imperial College London from September 13-17, 2010
2. Physics And Energy Horizons, SPS5, King Khalid University, Abha Saudi Arabia from October 25-27, 2010
3. Project management professional (PMP), MTiC (Management & Technology Innovation Comapny) USA, December 19th -23rd , 2012

4. Workshop on "Teaching and Assessment in Higher Education", Academic Development and Quality Deanship, King Khalid University, Abha, Saudi Arabia, November 17-18, 2012
5. Training program (Developing Research Abilities: Idea Formulation and Research Management), KACST, Saudi Arabia, March-05, 2013
6. First Scientific Meeting of Department of Physics, King Khalid University, Abha Saudi Arabia April 27, 2016
7. Second Scientific Meeting of Department of Physics, King Khalid University, Abha Saudi Arabia May 03, 2017
8. Third Scientific Meeting of Department of Physics, King Khalid University, Abha Saudi Arabia March 28, 2018
9. Workshop on Research Methods and Statistical Analysis, King Khalid University, Abha Saudi Arabia from November 18-19, 2015
10. Fault Severity Determination in Transformer using Dissolve Gas Analysis (DGA), 12th INDICON 2015, at Jamia Millia Islamia, New Delhi, December 17th - 20th, 2015
11. Wireless monitoring of temperature and humidity using sensor array, 12th INDICON 2015, at Jamia Millia Islamia, New Delhi, December 17th - 20th, 2015
12. A semi flexible integrated wireless humidity sensor, 12th INDICON 2015, at Jamia Millia Islamia, New Delhi, December 17th - 20th, 2015
13. Seminar on Physics of Materials, University of Jammu, November 24-25th, 2004.
14. Science Academies Online **Lecture Workshop** on Frontiers in Science & Engineering - Opportunities for Graduates. Science Foundation and MHRD-IIC-DDUC Chapter, Deen Dayal Upadhyaya College, University of Delhi, New Delhi, **September 14-19, 2020**
15. Webinar on Academic Publishing & Enhancing Research Effectiveness, Dr. Zakir Hussain Library, Jamia Millia Islamia, New Delhi-**June 09, 2020**
16. "**Invited Lecture**" on topic entitled "Biopolymer composite electrolytes for EDLCs Application: Characterization, fabrication and performance" in 2nd International Conference on "Advanced Functional Materials and Devices" (AFMD-2023) organised by IQAC & Department of Physics, ARSD College, University of Delhi during **13-15th March 2023**
17. First principle calculation of structural, electronic and optical properties of double perovskite Ba_2AlTaO_6 , for optoelectronic device applications, Paper presentation in ETMN24 at **JMI 22-23 November, 2024**
18. First-Principles Insights into the Half-Metallic and Thermoelectric Properties of Vacancy-Ordered Halide Double Perovskite Rb_2VCl_6 : A Spintronic and Energy Conversion Prospect, Paper presentation in ETMN24 at **JMI 22-23 November, 2024**

- Member, Course Development Committee of the Department of Physics, Jamia Millia Islamia, New Delhi
- Member Computer Committee of the Department of Physics, Jamia Millia Islamia, New Delhi
- worked in the **Course Development Committee**, Department of Physics, King Khalid University, Abha, Saudi Arabia, as a member and developed:
 - (i) New Bachelor Program in Physics
 - (ii) New Ph.D. Program in Physics

Membership:

- Member of Saudi Physical Society

Training & Development:

- Project Management Professionals (**PMP**) at King Khalid University, Abha, Saudi Arabia.
- **Blackboard** Training (A software for e-learning) at King Khalid University, Abha, Saudi Arabia
- **Linux Administration** at OSS, Malaysia
- **LIMS** (Laboratory Information Management System) development at OSS Malaysia

Computer skills

High Performance Computing, Linux and Windows operating system

Programming language : C/C++ and Mathematica

Simulation Packages: Wien2k, GULP, CASTEP, Moldy NAMD, VMD, Gromacs,

Statistical Packages: Origin, SPSS, R

Main Scientific Skills

Molecular Dynamics Technique, DFT, Ising Model Based Computations; Crystal Growth; Thin films (dip coating),