Curriculum Vitae

Mohd Alam

Present Address	Contact Details		
C/O Prof. Sandip Chatterjee, Department of Physics, IIT (BHU), Varanasi-221005	**Mobile:**	+91-8176071945 +91-8948848171	
	E-Mail:	alamkhan817@gmail.com	

Career Objective:

To work to fulfill the need for innovative technology for real-life application so as to get an opportunity to learn new skills for personal and social growth.

Educational Qualifications:

Course	Name of the institution	University/ Board	Year of Completion	Percentage
Ph.D. (Physics)	Indian Institute of Technology (BHU) Varanasi	Indian Institute of Technology (BHU) Varanasi	2022	
M. Sc. (Physics)	Faculty of Science	Banaras Hindu University Varanasi -221005	2016	**78.50**
B. Sc. (Physics)	Institute of Science	Banaras Hindu University Varanasi -221005	2014	**76.20**
HSC	S. R. R. I. C. Hanswar, Ambedkar Nagar	UP Board	2010	**70.00**
SSLC	S. R. R. I. C. Hanswar, Ambedkar Nagar	UP Board	2008	**59.67**

Personal Details		Permanent Address / Contact Details
Father's Name:	Mr. Mukhtar Khan	Vill. – Kewtla, Post – Hanswar, Dist. – Ambedkar Nagar, UP - 224143
Date of Birth:	25/12/1991	

Nationality:	Indian	**Language Known:**	Hindi, English
Sex:	Male	**Marital status:**	Un-married

Ph.D. Topic: Electrical and Magnetic Properties of Some Magnetically Frustrated Materials

Under the guidance of
Prof. Sandip Chatterjee,
Department of Physics,
IIT (BHU), Varanasi -221005

Research interests:

Perovskite and double perovskite Materials, Spintronics, Multiferroic, Thin Film growth, strongly correlated electron systems, Magnetism, Dielectric, electronic structure by XPS/XAS studies, lattice dynamics study by Raman spectroscopy, crystal structure study, magneto-transport etc.

Technical competencies and skills:

- I am easy with graph analysis software like Origin, XPS_fit, Fullprof suit etc.
- Familiar with computer tools like MS office (Word, Excel, PPT etc.)
- Polycrystal synthesis by solid-state reaction route.
- The epitaxial thin film preparation of oxide samples by **Pulsed Laser Deposition (PLD)** technique.
- Experimental data analysis of **X-ray diffraction** (Rietveld refinement), Raman spectroscopy, DC and AC magnetization data, Dielectric and Impedance spectroscopy, X-ray photoemission spectroscopy, X-ray absorption spectroscopy, X-ray magnetic circular dichroism (XMCD), UV-visible spectroscopy, resistivity data, magneto-transport, etc.
- Manuscript preparation.

Instruments handling experience:

- Expertise in handling MPMS3 SQUID magnetometer - Quantum Design.
- X-ray diffractometer.
- He- closed cycle refrigerator, temperature controller, LCR meter, source-meter, electrometer based resistivity, dielectric, magneto-dielectric, magneto-resistance, Hall effect, etc set-ups are handled by me in our lab.
- Turbo-molecular pump and rotary pump.

- ❖ Programmable muffle furnace.
- ❖ KrF excimer pulsed laser deposition set-up (Lambda Physik COMPex 201 model).

List of publications:

1. *Extraordinary magnetic properties of double perovskite Eu_2CoMnO_6 wide band gap Semiconductor:* ***Mohd Alam*** *et al, J. Phys.: Condens. Matter* ***32*** *(2020) 365802.*

2. *Relaxor-super-paraelectric behaviour and crystal field driven spin-phonon coupling in pyrochlore Eu(2)Ti(2)O(7),* ***Mohd Alam*** *et al, 2021 EPL in press https://doi.org/10.1209/0295-5075/ac2455*

3. *Multifunctional property of $EuPrCoMnO_6$,* ***Mohd Alam*** *et. al, J. Phys. D: Appl. Phys.* ***55*** *(2022) 255003.*

4. *Novel Electrical and Magnetic Properties of Double Perovskites $Eu_{2-x}Tb_xCoMnO_6$ (x = 0.0 and 1.0),* ***Mohd Alam*** *et. al, communicated.*

5. *Effect of f-d and d-d interactions on Dielectric and Optical Properties of pyrochlore $Eu_{2-x}Fe_xTi_2O_7$,* ***Mohd Alam*** *et al, communicated.*

6. *Existence of Griffiths phase and unusual spin dynamics in double perovskite Tb_2CoMnO_6; K. Anand,* ***Mohd Alam****, et al, J. Magn. Magn. Mater.* ***528*** *(2021) 16797.*

7. *Roles of Re-entrant cluster glass state and spin-lattice coupling in magneto–dielectric behavior of giant dielectric double perovskite La1.8Pr0.2CoFeO6, P. Singh,* ***Mohd Alam****, et al, J. Phys.: Condens. Matter* ***32,*** *(2020) 445801.*

8. *Wasp – Waisted loop and spin frustration in Dy2−xEuxTi2O7 pyrochlore, P. Singh, A. Pal V. K. Gangwar, P. K. Gupta,* ***Mohd. Alam****, et al, J. Magn. Magn. Mater.* ***518*** *(2021) 167364.*

9. *Room temperature exchange bias in antiferromagnetic composite BiFeO3-TbMnO3, P. K. Gupta, S. Ghosh, S. Kumar, A. Pal, P. Singh,* ***Mohd Alam****, et al, J. Appl. Phys.* ***126*** *(2019) 243903.*

10. *Evidence of surface and bulk magnetic ordering in Fe and Mn doped Bi2(SeS)3 topological insulator, Mahima Singh, S. Kumar,* ***Mohd Alam****, et al, Appl. Phys. Lett.* ***118*** *(2021) 132409.*

11. *Probing the Griffiths like phase, unconventional dual glassy states, giant exchange bias effects and its correlation with its electronic structure in Pr2−xSrxCoMnO6, A. Pal, P. Singh, V K Gangwar, A G Joshi, P Khuntia, G D Dwivedi, P. K Gupta,* ***Mohd Alam****, et al, J. Phys.: Condens. Matter* ***32*** *(2020) 215801.*

12. *Emergence of metamagnetic transition, re-entrant cluster glass and spin phonon coupling in Tb_2CoMnO_6,*

*K. Anand, A. Pal, **Mohd. Alam**, et al, J. Phys: Condens. Matter **33** (2021) 275802.*

Seminars / Schools/Conferences attended:

1. First Indian Materials Conclave (IndMac) & 30th Annual General Meeting of MRSI, IISC Bangalore, 12-15th February 2019.
2. "International Conference on Functional Nanomaterials (ICFNM-2019)", IIT (BHU), Varanasi, 22-25th February 2019.
3. "64th DAE Solid State Physics Symposium" Organized by BARC Mumbai, IIT Jodhpur, Rajasthan, 18-22th December 2019.
4. Ist International e-Conference on Recent Advances in Physics & Materials Science-2020 (IC-RAPMS-2020) Organized by Kurseong College, Darjeeling, West Bengal, India-734203, 9-10th July 2020.
5. "Advanced Physical Tools and Techniques for Materials Characterization" (APTTMC-2020), Organized online at Department of Physics Mahatma Gandhi Central University, Motihari-845401, Bihar, 28th July-03rd August 2020.
6. "Online Workshop on Rietveld Refinement Method" Organized online by UGC-DAE Consortium for Scientific Research, 22-24 September 2020.
7. "7th Conference on Neutron Scattering (CNS -2021)" Organized by Bhabha Atomic Research Centre & Neutron Scattering Society of India at Anushaktinagar, Mumbai., November 25-27, 2021.
8. "65th DAE Solid State Physics Symposium" Organized by: Bhabha Atomic research centre, Mumbai, December 15-19, 2021.

Examinations Qualified:

1. I have qualified GATE 2016.

Experience:

- I have done TA ship successfully in IIT BHU.

Awards/fellowship received:

1. Awarded institute research fellowship by IIT (BHU) Varanasi.

References:

Name	Designation	Organization address	Contact number	Email
Sandip Chatterjee	Professor	Indian Institute of Technology (BHU) Varanasi, Pin-221005 India	+91 9453764478	schatterji.app@iitbhu.ac.in
Debaprasad Giri	Professor	Indian Institute of Technology (BHU) Varanasi, Pin-221005, India	+91 9839885243	dgiri.app@iitbhu.ac.in
Swapnil Patil	Assistant Professor	Indian Institute of Technology (BHU) Varanasi, Pin-221005, India	+91 9421066673	spatil.phy@iitbhu.ac.in
Anup Kumar Ghosh	Professor	Department of Physics, BHU, Varanasi - 221005 India	+91 5426701556	akghosh@bhu.ac.in

Date: **14/04//2022** **Mohd Alam**

Place: **Varanasi**