

BIO-DATA

1. **Name** Dr. Mohinder Singh
2. **Father's Name/** S. Ashok Singh
3. **Mother's Name** Smt. Kamaljit Kaur
4. **Designation** Assistant Professor (Physics)
3. **Department** Department of Basic & Applied Sciences
4. **Date of Birth** 12th March, 1986,
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- 6 **Areas of Specialisation** Radiation physics



7. Academic Qualifications:

Sr.	Degree	Year	Board/Univ./	Marks (%)	Division	Subjects Studied
1	BSc.	2007	Punjabi University Patiala	65.67	1 st	Physics, Chemistry, Mathematics, Punjabi, English.
2	MSc.	2009	Punjabi University Patiala	74.25	1 st	Physics
3.	CSIR (JRF)	2010	UGC-CSIR		Qualified	Physical Sciences
4	Ph. D.	2020	Punjabi University Patiala			Radiation Physics.

8. Membership of Professional Bodies/Organisations

- i) Life Member: Indian Society of Radiation Physics.

9. Details of Experience:

S. No	Name of the Inst./Employer	Position Held	Duration	Major Job Responsibilities and Nature of Experience
1.	Dept. of Basic & Applied Sciences Punjabi University Patiala	Assistant Professor (Physics)	Dec 2011 to till date	Teaching and Research

10. Published Work (Please specify numbers only) :

- a. Research Papers i) National = **03**
 ii) International = **08**
- b. Research Paper published in conference/symposia proceedings: **07**

11. List of Papers/Courses taught at P.G. and U.G. Level

S. No.	Papers	Class
1.	Waves and Optics	FYI M. Sc. Physics (Honours School System)
2.	Applied Physics-I	B. Tech
3.	Applied Physics-II	B. Tech

12. Technical Proficiency

I have an experience to handle NaI (TI) (scintillation detector) and electronic equipments associated with it, HPGe (solid state detector), radioactive sources of different strengths. Knowledge of PC based ORTEC Mastreo-32 Multi channel analyzer (MCA), Origin, Windows, Projector overhead. Experience in measurements of radiation interaction parameters and interface determination in gamma ray-spectrometry using Compton scattering techniques.

13. Administrative/Academic Experience

1. Worked as member of ACD of Department of basic and applied sciences.
2. Member of various Departmental Committees (Admission Committee, Fee Concession Committee, Orientation Committee, Discipline Committee, Anti-Ragging).

14. Citations of Research publications (as per Google Scholar)

	All	Since 2015
Citations	24	24
h-index	3	3
i10-index	0	0

15. List of Papers Published

- (a) Published in National/International Journals.

1.	A Compton scattering technique to determine wood density and locating defects in it. Akash Tondon, Mohinder Singh , B. Singh, B. S. Sandhu AIP Conference Proceedings 1675 (2015) 020048
2.	Compton scattering technique in concentration and fluid-fluid interface measurements using low resolution detector. Akash Tondon, Mohinder Singh , B.S. Sandhu and Bhajan Singh NSRP-20 Conf. Proc. , ISBN 978-93-82845-96-6, (2015).
3.	Use Of Gamma Ray Back Scattering For The Detection Of Foreign Body In Dalbergia Sissoo Wood Akash Tondon, Mohinder Singh , B. Singh, B. S. Sandhu Non-Destructive Evaluation (NDE)-INDIA (2016)
4.	A Compton scattering technique for concentration and fluid-fluid interface measurements using NaI(Tl) detector Akash Tondon, Mohinder Singh , B. Singh, B. S. Sandhu Nuclear Instruments and Methods in Physics Research B 403 (2017) , 21–27
5.	Non-destructive study of wood using the Compton scattering technique Akash Tondon, Mohinder Singh , B. Singh, B. S. Sandhu Applied Radiation and Isotopes, 129 (2017), 204–210
6.	Molar extinction coefficient of organic compounds as a function of effective atomic number Mohinder Singh , Akash Tondon, B. S. Sandhu, and Bhajan Singh AIP Conference Proceedings 1953 , (2018) 140129.
7.	Effective Atomic Number Dependence of Radiological Parameters of Some Organic Compounds at 122 KeV Gamma Rays Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu Journal of Nuclear Physics, Material Sciences, Radiation and Applications, 5 (2018) 299-310
8.	Energy dependence of radiation interaction parameters of some organic Compounds Mohinder Singh , Akash Tondon, B. S. Sandhu, and Bhajan Singh Radiation Physics and Chemistry, 145 (2018) 80-88
9.	Effect of addition of cerium (III) nitrate hexahydrate on gamma ray interaction properties in acetone at various gamma energies obtained by Compton scattering technique Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu Chemical Physics 525 (2019) 110377
10.	Importance of Voxel Size in Defect Localization Using Gamma-Ray Scattering Akash Tondon, Mohinder Singh , B. S. Sandhu, and Bhajan Singh Nuclear Science and Engineering (2019).
11.	Study of radiation interaction parameters for organic compounds at gamma photon energies different from available standard radioisotope. Mohinder Singh , Akash Tondon, B. S. Sandhu, and Bhajan Singh Chinese Journal of Physics 65 (2020) 221–234

(b) Papers in the Symposia/Conferences:

	Evaluation of Radiological parameters for various organic compounds at different Energies. 1. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu Two Days National Conference on “Research Trends In Physics And Electronics (NPE-2016)” S. G. G. S. Khalsa College Mahilpur, Nov. 25, 26 (2016)
	Variation of mass attenuation coefficient of Organic compounds as a function of Effective atomic number at different energies. 2. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu 20 th Punjab Science Congress. IET Bhaddal, Ropar, Punjab. Feb, 7-9, 2017.
	Variation of mass attenuation coefficient of Organic compounds as a function of Effective atomic number at different energies. 3. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu 5th International Conference on Advancements in Engineering & Technology-2017 (ICAET), B. G. I. E.T., Sangrur, Punjab. March 24, 25 (2017).
	Energy dependence of Effective Atomic Number and Electron Density for various Organic compounds. 4. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu International Conference on Advancements in Science and Technology (ICAST), Mohali, April, 20, 21 (2017).
	Energy dependence of molar extinction coefficient and effective atomic number of organic compounds. 5. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu Two-day National Seminar on Recent Trends in Chemistry Chemistry department, Punjabi University Patiala, 15-16 Feb (2018).
	Z_{eff} dependence of radiological parameters at 511 keV gamma energy. 6. Mohinder Singh , Akash Tondon, Bhajan Singh and B. S. Sandhu 21 st Symposium on Radiation Physics (NSRP21) Indore, March 5-7 (2018).
	Compton scattering: A tool to study the radiation interaction parameters for low-Z organic compounds. 7. Mohinder Singh , Akash Tondon, B. S. Sandhu and Bhajan Singh 23 rd Punjab Science Congress, February 7-9 (2020), SLIET, Longowal, Sangrur.

Date:12-05-2020

(Mohinder Singh)
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