Name: Dr. Manpreet Kaur

Designation: Assistant Professor

Specialization: Theoretical Nuclear Physics

Email: manpreetk.pta@gmail.com

Contact Number: +91- 9646055487

Education

M.Sc. Physics (Hons. School) (2008, Panjab University, Chandigarh),

National Eligibility Test (NET)-2018

Ph.D. (February, 2014, Thapar University, Patiala)

Title of Ph. D Thesis: Decay of hot and rotating nuclei formed in heavy ion reactions at low energies.

Professional Experience:

Department of Physics, Multani Mal Modi College, Patiala India (11 August 2018 to till date)

Department of Physics, Khalsa college, Patiala India (01 July, 2014 to 25 May, 2018)

Teaching Interests:

Nuclear Physics, Nuclear and Particle Physics, Statistical and Thermal Physics

Research Interest:

Heavy ion reactions, Fission, Fusion, Decay study of Compound Nucleus

Publications

1. **Manpreet Kaur,** Mahesh K. Sharma and Manoj K. Sharma, Analysis of fragment distribution and associated effects in $^{12,13}C$ induced reactions, Int. J. Mod. Phys. E 23, no.5, 1450030 (2014).
   https://doi.org/10.1142/S021830131450030X
2. **Manpreet Kaur** and Manoj K. Sharma, Dynamics of $^{58}Ni + {}^{54}Fe \rightarrow {}^{112}Xe^{*}$ reaction across the Coulomb barrier, Eur. Phys. J. A 50, 61 (2014).
   https://doi.org/10.1140/epja/i2014-14061-6
3. **Manpreet Kaur**, Manoj. K. Sharma, Raj K. Gupta Effects of deformations and orientations in the fission of actinide nuclear system $^{254}Fm^{*}$ formed in $^{11}B + {}^{243}Am$ reaction, **Physical Review C** 86, 064610 (2012).
   https://doi.org/10.1103/PhysRevC.86.064610

4. **Manpreet Kaur,** Raj Kumar, Manoj K. Sharma Systematic study of the decay of $^{118,122}Ba^{*}$ formed in $^{78,82}Kr$-induced reactions at E_{lab} = 5.5 MeV/nucleon**, , Physical Review C** 85, 014609, (2012).
   https://doi.org/10.1103/PhysRevC.85.014609

5. **Manpreet Kaur**, Manoj K. Sharma**,** Decay mechanism of the $^{204}Po^{*}$ nucleus formed in ^{16}O and ^{28}Si induced reactions**, Physical Review C** 85, 054605, (2012).
   https://doi.org/10.1103/PhysRevC.85.054605

Conference / Seminars (Presented/Attended)

1. **Manpreet Kaur,** Kavita, Pooja Rani, Kanandeep, Palvinder Kaur, Decay of medium mass compound system formed in alpha -induced reactions, UGC Sponsored 10th National Conference on “Recent Advances in Chemical And Environmental Sciences” organized by Multani Mal Modi College, Patiala, (April 11^{th} -12^{th}, 2019)(Abstract book page no.117)

2. Pooja Rani, Kavita, **Manpreet Kaur**, Palwinder Kaur, Kanandeep, DFT Study of Electronic Properties of Toluene adsorbed on Na-Graphene Interface UGC Sponsored 10th National Conference on “Recent Advances in Chemical And Environmental Sciences” organized by Multani Mal Modi College, Patiala, (April 11^{th} -12^{th}, 2019)(Abstract book page no.118)
3. Palvinder Kaur, Pooja Rani, **Manpreet Kaur**, Kanandeep, Kavita Semiconductor nanocrystals (ncs) and quantum confinement, UGC Sponsored 10th National Conference on “Recent Advances in Chemical And Environmental Sciences” organized by Multani Mal Modi College, Patiala, (April 11^{th} -12^{th}, 2019)(Abstract book page no.119)
4. **Manpreet Kaur,** Attended 62th DAE-BRNS Symposium on Nuclear Physics, sponsored by Board of Research in Nuclear Sciences and organized at Thapar Institute of Engineering &Technology (Deemed University), Patiala, from December 20-24, 2017.
5. **Manpreet Kaur,** Decay of hot and rotating nuclei formed in heavy ion reactions at low energies , Proceedings of the DAE Symp. on Nucl. Phys. 58, 1018 (2013) http://inspirehep.net/record/1506998/files/T8.pdf
6. **Manpreet Kaur** and Manoj K. Sharma Possible decay mechanisms of ^{220}Ra formed in carbon induced reaction, , AIP conf. Proc. 1524, 151 (2013). https://doi.org/10.1063/1.4801700
7. **Manpreet Kaur**, Manoj K Sharma, Analysis of ER and fission in decay of ^{210}Rn formed in ^{16}O + ^{194}Pt reaction, DAE Nucl. Phys. Symp. BARC, Mumbai, Vol.58, 440 (2013). http://www.sympnp.org/proceedings/
8. **Manpreet Kaur**, Manoj K Sharma, Role of diffuseness coefficient in reaction dynamics using collective clusterization method, DAE Nucl. Phys. Symp. BARC, Mumbai, Vol.58, 442 (2013). http://inspirehep.net/record/1506726/files/B67.pdf
9. **Manpreet Kaur**, Manoj K Sharma, Contribution of incomplete fusion cross sections in ^{13}C + ^{207}Pb reaction, , Punjab Science Congress, Baba Farid University of Health Sciences, Faridkot, February 7-9, (2013).

10. **Manpreet Kaur,** Attended 23rd Annual General Meeting AGM-MRSI (Functional Materials for sustainable Energy and Advanced Technologies) held at Thapar University, Patiala jointly organized by Thapar University, Patiala and Material Research Society of India (MRSI), during February 13-15, (2012).
11. **Manpreet Kaur**, Manoj K Sharma , Decay of $^{254}Fm^{*}$ nucleus formed in $^{11}B+^{243}Am$ reaction, , DAE Nucl. Phys. Symp., Delhi University, Delhi, Vol. 57, 426 (2012).
    http://inspirehep.net/record/1428854/files/B19.pdf
12. **Manpreet Kaur**, Manoj K Sharma, Fusion-fission and related aspects of ^{204}Po formed in heavy ion reactions, DAE Nucl. Phys. Symp., Andhra University, Vishakhapatnam, Vol.56, 476, (2011).
    http://inspirehep.net/record/1505997/files/B12.pdf
13. **Manpreet Kaur**, Raj Kumar, Manoj K Sharma Decay of $^{118,122}Ba$ formed in $^{78,82}Kr + ^{40}Ca$ reactions at beam energy 5.5 MeV/A, , DAE Nucl. Phys. Symp., Andhra University, Vishakhapatnam, Vol.56, 514, (2011).
    https://www.osti.gov/etdeweb/biblio/21577491
14. **Manpreet Kaur**, Manoj K Sharma Decay of ^{204}Po nucleus formed in ^{16}O and ^{28}Si induced reaction, **Manpreet Kaur**, Manoj K Sharma, DAE Nucl. Phys. Symp., BITS Pilani, Vol.55, 384, (2010).
    http://inspirehep.net/record/1428396/files/B80.pdf

Workshops and training courses

1. Attended National workshop on 'Research Methodology in Physical Sciences" at Khalsa College, Patiala. (15 February, 2020)
2. Attended Faculty Development Program on "Emerging Issues & Challenges in Higher Education" at Multani Mal Modi College, Patiala. (17-22 July, 2019)
3. Attended one day workshop on "Computer Interfaced Science Experiments for Physics Teachers and Engineers" at Khalsa College Patiala. (22 December,2017)

4. Certificate awarded from the National Institute of Technical Teacher Training and Research sponsored by MHRD/AICTE for attending the winter school at Swami Vivekananda Institute of Emerging Technology, Banur from 22/12/2008 to 27/12/2008.

Achievements, Awards and Recognitions

- Organizing Physics Quiz and Poster Making Competition to celebrate National Science Day at M.M.Modi College, Patiala since 2019.
- Successfully organised National Seminar on September 26-27, 2019 on 'Popularization of Physical Sciences' under aegis of Silver Jubilee celebrations of International Academy of Physical Sciences (IAPS), Allahabad, India at M.M.Modi College, Patiala on
- Awarded Certificate of Appreciation for participating in SCI FEST 2019 held at Thapar Institute of Engineering &Technology (Deemed to be University), Patiala,Punjab on 21st
  February 2019.
- Awarded UGC Research Fellowship in Science for Meritorious Students in Ph.D.