

**Dr. Hajara. K.**  
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Dr. Hajara. K has earned her B. Sc. Degree in Physics from S. S College Areecode, University of Calicut, Kerala. She did her Post-graduation in Physics from Govt. Arts and Science college Meenchanda, University of Calicut, and Doctorate in Physics on the topic '**systematic study of heavy ion induced reactions near and above Coulomb barrier in the mass region A>200**' from University of calicut, in the year 2022. She has six years of research experience in nuclear physics in Inter University Accelerator Center IUAC, New delhi. Her topics of interest include Heavy ion induced nuclear reactions, Statistical model calculations and target preparation and characterisation of target for the heavy ion induced nuclear reaction experiments. She has published more than 14 research articles in reputed national and international journals.

## EDUCATION

<b>B.Sc. (Physics)</b>	University of Calicut, Kerala, India	2003-2005
<b>M.Sc. (Physics)</b>	University of Calicut, Kerala, India	2005-2007
<b>Ph.D. (Physics)</b>	University of Calicut, Kerala, India	2015-2022

## ACADEMIC EXPERIENCE

- Worked as a ***Guest Lecturer*** in the Department of Physics, S S College Areacode from August 2009 to January 2015.

## TOPICS OF RESEARCH

Heavy ion induced nuclear reactions

➤ **TITLE OF PH.D THESIS**

Systematic study of heavy ion induced reactions near and above Coulomb barrier in the mass region A>200.

➤ **LIST OF SEMINARS/ WORKSHOPS/ SCHOOLS ATTENDED:**

- National conference on enchanting developments in advanced materials. 27 July 2015, University of Calicut, Kerala.
- Wokshop on Recent trends in nuclear physics. 14 - 15 September 2015, IUAC New Delhi.
- National seminar on ibnul-haytham and his world of science. 18 November 2015, University of Calicut, Kerala.
- School on Physics and Instrumentation of NUSTAR FAIR(SPIN 2016), 15 - 19 November 2016, University of Calicu, Kerala.
- National workshop on fondations of statistical and quantum mechanics. 5-6 Jan 2017, S. A. R. B. T. M GOVT. College, Koyilandi, Kerala.

➤ **AWARDS AND RECOGNITION**

<b>SL. No</b>	<b>Name of Fellowship</b>	<b>Funding Agency</b>	<b>Year</b>
1	MANF fellowship	UGC	2015
2.	Best poster presentation award	Farook College	2020

## LIST OF PUBLICATIONS

<i>S. No</i>	<i>Names of authors</i>	<i>Title of the paper</i>	<i>Name of the journal, volume, page and year</i>
1.	<b>K. Hajara, M.M.</b> Musthafa, C.V. Midhun, Shaima. Akbar, F.S. Shana, P.T.M. Shan, N. Madhavan, S. Nath, J. Gehlot, Gonika, Rohan. Biswas, Amninder Kaur, Prashant N. Patil	Evaporation residue cross section measurement for $^{30}\text{Si} + ^{176}\text{Yb}$ reaction	<i>Physical Review C</i> 105, 044619 (2022)
2.	<b>Hajara. K, M. M.</b> Musthafa, C.V. Midhun, Abhilash. S. R and D. Kabhiraj	<i>Development of thin <math>^{187}\text{Re}</math> targets for nuclear reaction experiments</i>	<i>Applied radiation and isotopes</i> 1016, 110467 (2022)
3.	Muhammed Shan P.T, M.M. Musthafa, Najmunnisa T, Mohamed Aslam P, Rajesh <b>K.K, Hajara K,</b> Surendran P, J.P. Nair, Anil Shanbagh, S. Ghugre.	Measurement of excitation functions and analysis of isomeric population in some reactions induced by proton on natural indium at low energy.	Nuclear Physics A 974 (2018) 921.
4.	P.T.M. Shan, M.M. Musthafa, Najmunnisa T, Mohamed Aslam P, Rajesh K.K, <b>Hajara K</b> , Surendran P, J.P. Nair, Anil Shanbagh, S. Ghugre	Systematic study on some isotopes of medical and industrial applications, produced in proton induced reaction on natural cadmium	Eur. Phys. J. Plus (2020) 135:385
5.	C. V. Midhun, M. M. Musthafa, S. V. Suryanarayana, T. Santhosh, A. Baishya, P. N. Patil, A. Pal, P. C. Rout, S. Santra, R. Kujur, Antony Joseph, Shaima A., <b>Hajara. K.</b> , P. T. M. Shan, Satheesh B., Y.	Impact of $^7\text{Be}$ breakup on the $^7\text{Li}(p, n)$ neutron spectrum	<i>Physical Review C</i> 104, 054606 (2021)

	Sawant,B. V. John, E. T. Mirgule, K. C. Jagadeesan, and S. Ganesan		
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✓ ***B : published in Conferences /Symposia , etc.:***

<b>S. No</b>	<b>Names authors</b>	<b>Title of the paper</b>	<b>Name of the proceedings/Book, volume, year and page</b>
1.	<b>Hajara. K</b> , M. M. Musthafa, Abhilash.S.R and D.Kabhiraj	Preparation of $^{187}\text{Re}$ targets for nuclear reaction experiment	Proceedings of the DAE-BRNS symposium on nuclear physics. V. 64 (2019), 922
2.	<b>Hajara.K</b> , M.M Musthafa, Rajesh.K. K	Study of the dependence of survival probability on neutron shell closure in heavy mass region ( $A \sim 200$ )	Proceedings of the DAE-BRNS symposium on nuclear physics. V. 64 (2019)
3.	<b>K.Hajara</b> , M.M.Musthafa, K.K.Rajesh	Isotopic Effect in ER Cross Sections for Heavy Ion Reactions	Proceedings of DAE International Symposium on Nuclear physics Vol 63(2018),560
4.	<b>K.Hajara</b> , M.M.Musthafa, K.K.Rajesh	Analysis of Quasi fission mechanism in Heavy ion reactions around mass A 200	Proceedings of DAE International Symposium on Nuclear physic Vol 63(2018),562
5.	K.K Rajesh, M.M. Musthafa, P.T. Muhammed shan, <b>K. Hajara</b>	A study on the effect of shell closure in the fusion enhancement of $^{86}\text{Kr} + ^{100}\text{Mo}$ reaction	Proceedings of the DAE Symp. on Nucl. Phys. 64,459 (2019)
6.	K.K Rajesh, M.M. Musthafa, N. Madhavan, S. Nath, J. Gehlot, M.M. Hosamani, P. Mohamed Aslam, P.T. Muhammed shan , <b>K. Hajara</b> , T. Varughese, Abhishek Yadav, Vijay R	A study of fusion suppression in the $^{48}\text{Ti} + ^{138}\text{Ba}$ reaction	Proceedings of the DAE Symp. on Nucl. Phys. 63, 608 (2018).

	Sharma, Vishal Srivastava, Md. Moin Shaikh,		
7.	Prashant N. Patil, N. M. Badiger, M. M. Hosamani, A. Vinayak, S. K. Duggi, Neeraj Kumar, N. K. Rai, D. Arora, R. N. Sahoo, A. Gandhi, S. Dhuri, C. V. Midhun, <b>K. Hajara, F. S.</b> Shana, A. Kaur, P. Sherpa, Mohit Kumar, N. Saneesh, K. S. Golda, A. Jhingan, K. Ramachandran, P. Sugathan and B. K. Nayak	Neutron Multiplicity studies in case of $^{30}\text{Si} + ^{232}\text{Th}$ reaction.	Proceedings of the DAE Symp. On Nucl. Phys. 65, 421 (2021).

### **LIST OF PRESENTATIONS**

1. Entrance channel dependence of quasi-fission of  $^{206}\text{Po}$ (Poster).  
National conference on low enegy nuclear reaction dynamics during 7-10 March 2022, Department of Physics, Aligarh Muslim University, India.
2. Study Of The Dependance Of Evaporation Residue Cross Section On Incident Channel Parameters  
International Conference on Application of Radio Tracers and Energetics Beams in Science at SINP Kolkatha during November 11-17 2018(Oral)
3. Fission and Evaporation competition in Heavy ion induced reactions in the mass region  $A \sim 200$   
International Conference on Theoretical and Experimental Physics at Department of Physics, Farook college during 5 - 7 February 2020 (Best poster award).
4. Systematic study of Heavy ion induced reactions near and above Coulomb barrier in the mass region  $A \sim 200$ .  
National Seminar Sir Sayid College Thalipparambu, Kannur during 25-26 November 2016(Oral)