



JAMAL MOHAMED COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI.

DEPARTMENT OF PHYSICS

Individual Staff Profile (as on 2015)

I. General Information

1. Name : Dr. N. Peer Mohamed Sathik.

2. Sex : Male

3. Designation : Associate Professor

4. Date of Birth : 31 – 07 – 1967

5. Address :

Residential : 9, Kalyana Sundaram Nagar,
Airport Post,,
Trichy – 620 007.

Phone : 9367779628 & 7598401742

E-mail : drnpmsathiknsky@gmail.com

6. Academic Qualification :

	Examination Passed	Year
i) Master's Degree	M.Sc., Physics	1989
ii) Research Degree	M.Phil., Physics	1992
	Ph.D., Physics	1998
iii) Any other degree/ Diploma / Certificate	-----	-----
iv) NET / SELT	-----	-----

7. Area of Specialisation : Experimental Nuclear Physics

II. Teaching Experience:

	Years	Months
i) UG :	24	---
ii) PG :	24	---
iii) M.Phil :	20	---
iv) Any other:	---	---

III. a. Research Guidance:

	No of Candidates		
	Awarded	Submitted	Pursuing
i). M.Phil up to Academic year 2011 (till date)	45	---	---
ii). Ph.D up to Academic year 2011 (till date)	---	---	---

III. b. Details of Ph.D Awarded:

S.No	Name of the Candidate	Title of the Thesis	Year
---	---	---	---

IV. Research Projects: (Major / Minor / Other Research Projects)

S.No	Title of the Project	Name of the funding Agency	Amount in Rs.	Direction	Remarks Completed / Pursuing
---	---	---	---	---	---

V. Seminars / Conferences / Workshop

A. Seminars / Conferences / Workshops – Attended / Participated	Up to Academic year 2023 (till date)	In the Academic year 2011 – 2012 (till date)
(i). At the state level	10	---
(ii). At the National Level	8	---
(iii). At the International Level	3	---

B. Seminars / Conferences / Workshops / Participated & Presented papers	Up to Academic year 2023 (till date)	In the Academic year 2011 – 2012 (till date)
(i). At the state level	---	---
(ii). At the National Level	10	---
(iii). At the International Level	2	---

Note: **Annexure – I**

C. Seminars / Conferences / Workshops – Acted as Resource person	Up to Academic year 2011 (till date)	In the Academic year 2011 – 2012 (till date)
(i). At the state level	---	---
(ii). At the National Level	---	---
(iii). At the International Level	---	---

D. Seminars / Conferences / Workshops – Organised	Up to Academic year 2011 (till date)	In the Academic year 2011 – 2012 (till date)
(i). At the state level	---	---
(ii). At the National Level	---	---
(iii). At the International Level	2	---

VI. Publication:

Number of Publications	Up to Academic year 2023 (till date)		In the Academic year 2011 – 2012 (till date)	
	Published	Accepted for Publication	Published	Accepted for Publication
(i). Books	---	---	---	---
(ii). Contribution to edited volumes of Books	---	---	---	---
(iii). Journals (National level)	17	---	---	---
(iv). Journals (International level)	09	---	---	---

Note: **Annexure - II**

VII. Citation Index: (furnish the details)

VIII. Awards reserved if any (furnish the details)

IX. Membership in Academic body:

(Board of studies in –Universities and Autonomous Colleges)

X. Membership in Professional body:

XI. Participation in Consultancy, Training and Development etc.

XII. Participation in Extracurricular Activities (NSS, NCC, Sports, Games, Voluntary association and cultural activities)

1. Chairman, AUT., JMC., Unit.-2008-10
2. Zonal Secretary, AUT, Trichy Zone.2010 -14
3. Secretary, UCC-BARD.2010-12
4. Secretary, JCC – BARD.2010-12
5. Member, Joint Action Council, Tamilnadu.2010 -14
6. Zonal secretary, AUT, Trichy Zone 2015 – 2017
7. Zonal Secretary, AUT, Trichy Zone 2017 – 2019
8. Zonal Treasurer, AUT, Trichy Zone 2019 – 2025

XIII.

.

XIV. Administrative position held in the College.

XV. Member ship in autonomous programme.

1. Students welfare committee, Jamal Mohamed College, Trichy-20.
2. student monitoring committee, Jamal Mohamed College, Trichy-20.

XVI. Any other information if any.

1. Research collaboration with Department of Physics, Aligarh Muslim University.(U.P) India.
2. Research collaboration with Inter University Accelerator Centre / Nuclear Science Centre (Autonomous to University Grant Commission), NewDelhi – 67. Also having contact with I A E A (International Atomic Energy Agency) Austria Center, Vienna.

3. Research Collaboration with variable Energy cyclotron centre(VECC), Department of Atomic Energy (DAE), Kolkatta, India.
4. Research collaboration with central university Jarkand - India

ANNEXURE – I

National Level:-

1. Measurement of Excitation Functions in $^{16}\text{O} + ^{74}\text{Ge}$ Reactions, D. Singh, M. Afzal Ansari, M. Ismail and **N.P.M. Sathik**; Proc. DAE-BRNS Symp. Nucl. Phys., (India) 45B (2002) 244.
2. Study of $^{16}\text{O} + ^{45}\text{Sc}$ System below 7 MeV / nucleon, D. Singh, G.N. Dar, R. Ali, **N.P.M. Sathik**, M. Ismail and M. Afzal Ansari; Proc. DAE-BRNS Symp. Nucl. Phys. (India) 46B (2003) 218.
3. Particle-Gamma Coincidence Measurements for the Study of Complete and Incomplete Fusion Reactions, D. Singh, R. Ali, M. Afzal Ansari, **N.P.M. Sathik**, Ajay K. Tyagi, K.S. Golda, Pankaj Kumar, P. Sugathan, S. Muralithar, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 50 (2005) 338.
4. Isomeric Cross-section Ratios of ^{86}Y in the Fusion of ^{16}O with ^{74}Ge , D. Singh, **N.P.M. Sathik**, M. Afzal Ansari and M. Ismail; DAE-BRNS Symp. Nucl. Phys. (India) 52 (2007) 353.
5. Investigation of incomplete fusion dynamics in $^{16}\text{O} + ^{74}\text{Ge}$ system at 4-8/A, \square energies D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; DAE-BRNS Symp. Nucl. Phys. (India) 56 (2011) 510.
6. Study of incomplete fusion dynamics by using particle-gamma coincidence technique for the system $^{19}\text{F} + ^{154}\text{Sm}$, D. Singh, Harish Kumar, Rahbar Ali, R. Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 57 (2012) 418.
7. Incomplete fusion dynamics in $^{16}\text{O} + ^{154}\text{Sm}$ system by using particle gamma coincidence technique, D. Singh, Harish Kumar, Rahbar Ali, R.

Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 58 (2013) 354.

8. Incomplete fusion dynamics in $^{19}\text{F} + ^{154}\text{Sm}$ system @ 110 MeV, D. Singh, Rahbar Ali, Harish Kumar, R. Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 58 (2013) 356.

International Level:

1. Pre-equilibrium Emission in α - Induced Reactions on Bromine and Thallium, **N.P.M. Sathik**, M. Afzal Ansari, B.P. Singh, M. Ismail and M.H. Rashid; Phys. Rev. C (**U.S.A.**) 66, 14602 (2002).

2. Excitation Functions of α -induced Reactions in Cobalt and Preequilibrium Effects, M. Afzal Ansari, Mouner A. Abd al Salam, **N.P.M. Sathik**, M. Ismail and M.H. Rashid; Inter. J. Mod. Physics E (**Singapore**) 13, 585 (2004).

3. Measurement and Analysis of Alpha Particle Induced Reactions on Praseodymium, M. Afzal Ansari, **N.P.M. Sathik**, D. Singh and M.H.Rashid; Jour. Phys. Soc. Japn. (**Japan**) 74, 1150 (2005).

4. Complete and Incomplete Fusion Reactions in $^{16}\text{O} + ^{45}\text{Sc}$ System: Measurement and Analysis of Excitation Functions below 7 MeV/nucleon, D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; Jour. Phys. Soc. Japn. (**Japan**) 75, 104201 (2006).

5. A Study of Excitation Functions for Some Residues Produced in the System $^{16}\text{O} + ^{74}\text{Ge}$ blow 7 MeV/nucleon, D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; Chinese J. Physics (**China**) 46, 27(2008).

6. Reaction Mechanism in ^{16}O Ion Interaction with Light Nuclei ^{45}Sc , ^{74}Ge and Mass- Asymmetry Effect on Incomplete Fusion Dynamics D. Singh, M. Afzal Ansari, Rahbar Ali, **N.P.M. Sathik**, B.S. Tomar and M. Ismail; Jour. Phys. Soc. Japn. (**Japan**) 82, 114201 (2013).
7. investigation of incomplete fusion dynamics at energy 4-8 MeV/nucleon H. Kumar, S. A. T Ali, M.A. Ansari, D. Singh, R. Ali, K. Kumar, N.P.M. Sathik, Nuclear Physics A 960, 53-77 – (2017)
8. Effect of the Critical Angular Momentum on Incomplete Fusion Dynamics, D. Singh^{1*}, S. Bharti Linda¹ , Pankaj Kumar Giri¹ , H. Kumar² , Rahbar Ali³ , M. Afzal Ansari² and N. P. M. Sathik, Journal of Nuclear Physics, Material Sciences, Radiation and Applications, 2015/8/3, Pages 13-17
9. Sensitivity of low-energy incomplete fusion to various entrance-channel parameters H Kumar, SA Tali, M Afzal Ansari, D Singh, R Ali, K Kumar, NPM Sathik, The European Physical Journal A 54, 1-13
10. Spin distribution of evaporation residues formed in complete and incomplete fusion in $^{16}\text{O} + ^{154}\text{Sm}$ system D Singh, Sneha B Linda, Pankaj K Giri, Amritraj Mahato, Rahul Tripathi, Harish Kumar, M Afzal Ansari, NPM Sathik, Rahbar Ali, Rakesh Kumar, S Muralithar, RP Singh, Physics Letters B 774, 7-13

ANNEXURE – II

LIST OF PUBLICATIONS

1. Study of Excitation Functions in Rh (α , xn) Ag Reactions, M. Afzal Ansari, **N.P.M. Sathik**, B.P. Singh, M.G.V. Sankracharyalu and R. Prasad; Int. Report IC/94/229, I.C.T.P. (**Italy**) 1994.
2. Measurement and Analysis of Excitation Functions for Alpha Induced Reactions on Iodine and Cesium, **N.P.M. Sathik**, M. Afzal Ansari, B. P. Singh and R. Prasad, Pramana, J. Physics (**India**) 47, 401 (1996).
3. Study of Excitation Functions in Rh (α , xn) Ag Reactions, M. Afzal Ansari, **N.P.M. Sathik**, B.P. Singh, M.G.V. Shankarcharyalu and R. Prasad; Inter. J. Mod. Physics E (**Singapore**) 5, 345 (1996).
4. Pre-equilibrium Emission in α - Induced Reactions on Bromine and Thallium, **N.P.M. Sathik**, M. Afzal Ansari, B.P. Singh, M. Ismail and M.H. Rashid; Phys. Rev. C (**U.S.A.**) 66, 14602 (2002).
5. Excitation Functions of α -induced Reactions in Cobalt and Preequilibrium Effects, M. Afzal Ansari, Mouner A. Abd al Salam, **N.P.M. Sathik**, M. Ismail and M.H. Rashid; Inter. J. Mod. Physics E (**Singapore**) 13, 585 (2004). 6
6. Measurement and Analysis of Alpha Particle Induced Reactions on Praseodymium, M. Afzal Ansari, **N.P.M. Sathik**, D. Singh and M.H.Rashid; Jour. Phys. Soc. Japn. (**Japan**) 74, 1150 (2005).
7. Complete and Incomplete Fusion Reactions in $^{16}\text{O} + ^{45}\text{Sc}$ System: Measurement and Analysis of Excitation Functions below 7 MeV/nucleon, D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; Jour. Phys. Soc. Japn. (**Japan**) 75, 104201 (2006).
8. A Study of Excitation Functions for Some Residues Produced in the System $^{16}\text{O} + ^{74}\text{Ge}$ blow 7 MeV/nucleon, D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; Chinese J. Physics (**China**) 46, 27(2008).
9. Reaction Mechanism in ^{16}O Ion Interaction with Light Nuclei ^{45}Sc , ^{74}Ge and Mass- Asymmetry Effect on Incomplete Fusion Dynamics D. Singh, M. Afzal Ansari, Rahbar Ali, **N.P.M. Sathik**, B.S. Tomar and M. Ismail; Jour. Phys. Soc. Japn. (**Japan**) 82, 114201 (2013).
10. Role of input angular momentum and target deformation on the incomplete-fusion dynamics in the $^{16}\text{O} + ^{154}\text{Sm}$ system at E_{Lab} = 6.1 MeV/nucleon, PHYSICAL REVIEW C 97, 064604 (2018)
11. Probing incomplete fusion dynamics and role of the projectile deformation in the $^{19}\text{F} + ^{154}\text{Sm}$ system, The European Physical Journal A, Springer Berlin Heidelberg, 2019/9, Page: 164

12. Complete and Incomplete Fusion Reactions in $^{16}\text{O}+^{45}\text{Sc}$ System: Measurement and Analysis of Excitation Functions below 7 MeV/Nucleon, D Singh, M Afzal Ansari, R Ali, N PM Sathik, M Ismail, Journal of the Physical Society of Japan 75 (10), 104201
13. Disentangling fractional momentum transfer in the system, Physical Review C, American Physical Society, 2023/1/3, Page: 014601

.....

CONFERENCE CONTRIBUTIONS :

1. Alpha Induced Reactions with Rhodium, **N.P.M. Sathik**, M.G.V. Sankaracharulu, B.P. Singh, M. Afzal Ansari and R. Prasad; 11 Proc. Nucl.Phys. Symposium, (India) 35B (1992).
2. (a, xn) La Reactions, □24. Excitation Function Studies of Cs (**N.P.M. Sathik**, M. Afzal Ansari, B.P. Singh, M.G.V. Sankaracharulu and R. Prasad; Proc. Nucl. Phys. Symposium, (India) 36B (1993) 250.
3. Pre-equilibrium Particle Emission in Alpha Particle Induced Reactions with Iodine, **N.P.M. Sathik**, M.Afzal Ansari, B.P. Singh, M.G.V. Sankracharyalu and R. Prasad; Proc. Nucl. Phys. Symposium, (India) 37B (1994).
4. Measurement and Analysis of Excitation Function for Alpha Induced Reactions in Bromine, **N.P.M. Sathik**, M. Afzal Ansari, B.P. Singh, M. Ismail and M.H. Rashid; International conference on Nuclear Physics, B.A.R.C. Bombay, (India) (ICNP-95), A-55, (1995).
5. A Study of Alpha Particle Induced Reactions on Thallium at Cyclotron Energies, **N.P.M. Sathik**, M. Afzal Ansari, M. Ismail, and M.H. Rashid; Proc. Nucl. Physics Symposium, (India) 39B (1996) 206.
6. Alpha Particle Induced Excitation Functions with PR-141, **N.P.M. Sathik**, M. Afzal Ansari, M. Ismail and M.H. Rashid; Proc. Nucl. Physics Symposium, (India) 41B (1998) 170.
7. Excitation Function Studies for Alpha Induced Reactions with Co-59, Mounir A. Abd-al-salam, **N.P.M. Sathik**, M. Afzal Ansari, M. Ismail and M.H. Rashid; Proc. Nucl. Phys. Symposium, (India) 42B (1999) 186.

8. Pre- Equilibrium Fractions in Alpha Induced Reactions in Some Nuclei, M. Afzal Ansari, **N.P.M. Sathik**, M. Ismail and M.H. Rashid; Proc. Nucl. Phys. Symposium, (India) 43B (2000) 117. 12 , 2n) 161Ho,
9. Excitation Function for the Reaction $159\text{Tb}(\text{D. Singh}, \mathbf{N.P.M. Sathik}, \text{M. Afzal Ansari}, \text{M. Ismail and M.H. Rashid}; \text{Proc. Nucl. Phys. Symposium, (India) 44B (2001) 218.}$
10. Measurement of Excitation Functions in $16\text{O} + 74\text{Ge}$ Reactions, D. Singh, M. Afzal Ansari, M. Ismail and **N.P.M. Sathik**; Proc. DAE-BRNS Symp. Nucl. Phys., (India) 45B (2002) 244.
11. Study of $16\text{O} + 45\text{Sc}$ System below 7 MeV / nucleon, D. Singh, G.N. Dar, R. Ali, **N.P.M. Sathik**, M. Ismail and M. Afzal Ansari; Proc. DAE-BRNS Symp. Nucl. Phys. (India) 46B (2003) 218.
12. Particle-Gamma Coincidence Measurements for the Study of Complete and Incomplete Fusion Reactions, D. Singh, R. Ali, M. Afzal Ansari, **N.P.M. Sathik**, Ajay K. Tyagi, K.S. Golda, Pankaj Kumar, P. Sugathan, S. Muralithar, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 50 (2005) 338.
13. Isomeric Cross-section Ratios of 86Y in the Fusion of 16O with 74Ge , D. Singh, **N.P.M. Sathik**, M. Afzal Ansari and M. Ismail; DAE-BRNS Symp. Nucl. Phys. (India) 52 (2007) 353.
14. Investigation of incomplete fusion dynamics in $16\text{O} + 74\text{Ge}$ system at 4-8/A, \square energies D. Singh, M. Afzal Ansari, R. Ali, **N.P.M. Sathik** and M. Ismail; DAE-BRNS Symp. Nucl. Phys. (India) 56 (2011) 510.
15. Study of incomplete fusion dynamics by using particle-gamma coincidence technique for the system $19\text{F} + 154\text{Sm}$, D. Singh, Harish Kumar, Rahbar Ali, R. Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 57 (2012) 418.
16. Incomplete fusion dynamics in $16\text{O} + 154\text{Sm}$ system by using particle gamma coincidence technique, D. Singh, Harish Kumar, Rahbar Ali, R. Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 58 (2013) 354.

17. Incomplete fusion dynamics in $^{19}\text{F} + ^{154}\text{Sm}$ system @110 MeV, D. Singh, Rahbar Ali, Harish Kumar, R. Tripathi, **N.P.M. Sathik**, M. Afzal Ansari, Rakesh Kumar, S. Muralithar, Indu Bala, R.P. Singh, and R.K. Bhowmik; DAE-BRNS Symp. Nucl. Phys. (India) 58 (2013) 356.
