

Curriculum Vitae

1.Name : DR. MINAKSHI CHAKRABORTY



2.Designation : Associate Professor of Physics, Asansol Girls' College (Affiliated to Kazi Nazrul University, India.

3.Education :

Examination		Name of the University	Year of passing	Marks obtained(%)	Class/ Grade
MA/M.Sc./M.Com.		VISVA-BHARATI UNIVERSITY	1989	62%	FIRST
Any other examination	NET	-	1990	-	-
	GATE	-	1990	98.13 (percentile)	

4.Specialisation : Atomic, Molecular & Optical Physics

5.Fellowships/ Awards received : i) Junior research fellowship from Indian Institute of Technology' Kharagpur in 1990

ii) Senior research fellowship from Indian Institute of Technology , Kharagpur in 1992

iii) Prof. S. N. Ghosh Young Scientist Award Conferred by Indian Society of Atomic and Molecular Physics in 1994

iv) Council of Scientific and Industrial Research (Individual) Research Associate-ship in 1995

v) *Third best prize* for poster presentation **National Seminar** on CONDENSED MATTER, LASER AND COMMUNICATION in 2015.

6.Research activities & experience :

- **Doctoral level** – (1990 -1995) at Indian Institute of technology (IIT) Kharagpur
Title of the thesis : ‘*Studies of some aspects of Photon-Molecule Interaction*
- **Post doctoral level** – Post doctoral research carried out in the field of ‘*Studies of some aspects of photon-atom & photon-molecule interaction*’ with **Council of Scientific and Industrial Research, India (CSIR) Associateship** from **June 1995 to December 2000** at IIT Kharagpur.
- **Research project undertaken (completed / ongoing) :**
Co-investigator of the University Grants Commission (UGC) Minor Research Project [Ref. No. F.PSW-0014/14-15(ERO) dated 03.02.2015] entitled ‘*Studies of entanglement in photoelectron spectroscopy of atoms and molecules*’, (started from March 2015 and ended on February 2017).
- **Current area of research interest :** Quantum entanglement & Information of qubits and qudit systems, Electron optics

7. Member of Academic / Professional Committees/Societies/Associations : Life Member of

- i.) Indian Society of Atomic & Molecular Physics
- ii.) Indian Association of Physics Teachers(IAPT)
- iii.) Indian Science Congress Association

8. Member, Editorial Board: i) ‘**American Journal of Physics and Applications (AJPA)**’

(www.sciencepublishinggroup.com/ajpa)

Published by Science Publishing Group.

ii) ‘**SCIREA Journal of Physics**’

(www.scirea.org/journal/physics)

Published by Science Research Association

9. Research Publications :

i) **No. of Publications** : 18 (Details given in Enclosure No. 1)

ii) **No. of Paper** presented in Conferences /Seminars /Symposiums : 20 (Details given in Enclosure No. 2)

Enclosure No. 1

List of Publications

1. Bipartite Entanglement in Auger Ionization of N₂
S.Sen and M. Chakraborty
Pramana- J.Phys. **94**(2020)..
2. Tripartite Entanglement for Qubits and Qudit in Double Photoionization of Xenon Atom
M. Chakraborty and S. Sen
TMLAI, Transactions on Machine Learning and Artificial Intelligence **7**(1) (2019)
p. 1-9
3. Quantum Information and higher education
M. Chakraborty
Challenges of Higher Education: the Role of IQAC (IQAC, Asansol Girls’ College, (2017) p.152-157

4. Bipartite Entanglement for Two Electronic Qubits in Double Photoionization of Xenon
M. Chakraborty
Indian Journal of Science and Technology 10(27) (2017) p. 1-7
5. Entanglement of mixed quantum states for qubits and qudit in double photoionization of atoms
M. Chakraborty and S. Sen
J. Electron. Spectrosc. Relat. Phenom. **203** (2015) p. 60-70.
6. Swami Vivekananda's thoughts and vision on science
M. Chakraborty
UGC – sponsored National Seminar on Vevekananda's Philosophy of Nationalism in 21st Century (Department of Political Science, Asansol Girls' College, 2014) p. 117 - 120.
7. Entanglement dynamics for qubit and qudit in double photoionization of atoms
M. Chakraborty and S. Sen
2nd International Conference on Computing & Systems, 2013, (McGraw Hill Education (India) Private Limited 2013), p. 94-100.
8. Quantum Information Technology
M. Chakraborty
NAAC-sponsored National Seminar on Role of Stakeholders in imparting Quality Higher Education (IQAC, B. B. College, 2013)
9. Photoelectron spectroscopy of rotationally state selected and oriented molecules: Theory for angular distribution of spin polarized photoelectrons
S. Sen and M. Chakraborty
10. *Proceedings of the international conference on LASER, MATERIALS SCIENCE & COMMUNICATION* (SPS Education India Pvt. Ltd. 2011) p.115 -117.
Geothermal Energy, a significant Source for Renewable Energy
M. Chakraborty
UGC – sponsored National Seminar on FUTURE OF CIVILIZATION: RECENT TRENDS IN ENERGY RESEARCH (SPS Education India Pvt. Ltd. 2011) p. 47 – 54.
11. Radioactive waste Pollution effect to the environment and Human rights
M. Chakraborty
UGC – sponsored National Seminar on Human Rights and Human Developments (Department of Political Science, Asansol Girls' College, 2011) p. 155-163.
12. Entanglement in Double Photoionization of Atoms
N. Chandra and M. Chakraborty
J. Phys. B **35** (2002) 2219-2238.
13. Angular anisotropy and dichroism in ionization in molecular Auger Spectroscopy following photoabsorption
M. Chakraborty
Pramana – J. Phys. **52** (1999) 479-491 .
14. Rotationally state-selected photoelectron spectroscopy and dichroism in ionization of symmetric top Molecules
N. Chandra and M. Chakraborty
Eur. Phys. J. D **2** (1998) 253-266 .
15. State selected and oriented molecules : Rotationally resolved photoelectron spectroscopy and Dichroism in ionization of symmetric tops
N. Chandra and M. Chakraborty

- Z. Phys. D **41** (1997) 43-55.
16. Auger Electron Spectroscopy of Molecules : Theory for Angular and spin Correlation with photoelectron
N. Chandra and M. Chakraborty
J. Chem. Phys. **99** (1993) 7314-7336 .
 17. Auger Electron Spectroscopy of Molecules : Theory for spin polarization Following Photoabsorption
N. Chandra and M. Chakraborty
J. Chem. Phys. **97** (1992) 236-244 .
 18. Photoelectron spectroscopic studies of polyatomic molecules : Degree of orientation and ionization of rotationally state selected, oriented molecules
N. Chandra and M. Chakraborty
J. Chem. Phys. **95** (1991) 6382-6399.

Enclosure No. 2

No. of Paper presented in Conferences /Seminars /Symposiums

1. Quantum Computer: A Revolutionary Change in Higher Education in the Twenty First Century
M. Chakraborty
National Seminar on *New Methodology of NAAC*, November 2019, organized by IQAC, Asansol Girls, College.
2. Quantum Information and Higher Education
M. Chakraborty
State Level Seminar on *Challenges of Higher Education: The Role of IQAC*, April, 2017 sponsored by UGC, organized by IQAC, Asansol Girls, College.
3. Entanglement for qubit and qudit in single photoionization of rotationally state selected, oriented CH₃Br molecules
M. Chakraborty
National Seminar on RECENT TRENDS IN CONDENSED MATTER PHYSICS INCLUDING LASER APPLICATIONS ,**March 2017**, University of Burdwan, Burdwan.
4. Entanglement for qubits and qudit in double photoionization of Helium atom
M. Chakraborty
National Seminar on Condensed Matter, Laser and Communication (NSCMLC 2015), February 2015, University of Burdwan, Burdwan.
5. Swami Vivekananda's thoughts and vision on science
M. Chakraborty
National seminar on 'Vivekananda's Philosophy of Nationalism in 21st Century', September 2013, Asansol Girls' College, Asansol.
6. Entanglement Dynamics for Qubit and Qudit in Double Photoionization of Atoms
M. Chakraborty and S. Sen
Second International Conference on Computing and Systems -2013 (ICCS -2013), September, 2013, University of Burdwan, Burdwan.
7. Quantum Information Technology
M. Chakraborty

- National Seminar on Role of Stakeholders in imparting Quality Higher Education, March 2011, B. B. College, Asansol.
8. Grand Unification Theory and Advaita Vedanta
M. Chakraborty
National Seminar on Practical Vendanta : A Possibility of Resurgence of Social Values, December 2011, Asansol Girls' College, Asansol.
 9. Photoelectron Spectroscopy of rotationally state selected and Oriented Molecules: Theory for angular distribution of spin polarized photoelectrons
S. Sen and M. Chakraborty
International Conference on Laser, Materials Science and Communication (ICLMSC – 2011), December 2011, University of Burdwan, Burdwan.
 10. Geothermal Energy, a Significant Source for Renewable Energy
M. Chakraborty
National Seminar on Future of Civilization: Recent Trends in Energy Research (FCRTER – 2011), September 2011, Raghunathpur College, Raghunathpur.
 11. Radioactive waste Pollution effect to the environment and Human rights
M. Chakraborty
National Seminar on Human Rights and Human Developments, September 2011, Asansol Girls' College, Asansol.
 12. Electronic waste: an added pollution to the environment
M. Chakraborty
National Seminar on Disbalancing the Global Environment : Threats & Prevention, March 2011, Bolpur College, Bolpur.
 13. Entanglement in Double Photoionization of Atoms
N. Chandra and M. Chakraborty
National Symposium on Atomic Physics at the Frontiers, April 2000, University of Roorkee, India.
 14. Double Photoionization of Molecules
N. Chandra and M. Chakraborty
XII National Conference on Atomic and Molecular Physics, December 1998, M.L.S. University, Udaipur, India.
 15. Rotationally state-selected and Oriented Molecules : Photoelectron spectroscopy and Chirality of C_{3v}
National Conference on Theoretical Physics Today : Trends and perspectives, April 1998, IACS, Calcutta, India.
 16. Auger Electron Spectroscopy following photoabsorption in fixed molecules
N. Chandra and M. Chakraborty
XI National Conference on Atomic and Molecular Physics, December 1996, I.I.T., Madras, India.
 17. Photoelectron spectroscopy rotationally state selected, oriented symmetric top Molecules
N. Chandra and M. Chakraborty
Tenth National Conference on Atomic and Molecular Physics, March 1995, Ch. Charan Singh University, Meerut, India.
 18. Angle and spin-resolved Photoelectron spectroscopy rotationally state selected, oriented molecules

N. Chandra and M. Chakraborty
National Conference on Current Trends in Atomic and Molecular Physics,
December 1994, BARC, Bombay.

19. Circular Dichroism in ionization in molecular Auger Spectroscopy following photoabsorption in non-linear molecules

N. Chandra and M. Chakraborty
National Conference on Current Trends in Atomic and Molecular Physics,
December 1993, BARC, Bombay.

20. Angular and spin correlation between Molecular Auger and Photoelectrons

N. Chandra and M. Chakraborty
Ninth National Conference on Atomic and Molecular Physics, December
1992, BARC, Bombay.