



BOLPUR COLLEGE

THE UNIVERSITY OF BURDWAN



1. Name (Block letters) : **DR. ALENDU BAURA**
2. Department : Chemistry
3. Current Designation & Grade Pay : Assistant Professor, Stage 2, Level 11
4. Date of Appointment at Bolpur College: 13.06.2017
5. Residential Address : 'Gita', Sabujpally, Bandhgora South,
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9. Website: <https://alendubaura.weebly.com/>
10. Free Education Channel: <https://www.youtube.com/c/DrAlenduBaura>

11. **Academic Staff College Orientation/ Refresher Course attended:**

Name of the Course/Summer School	Place	Duration	Sponsoring Agency	Grade Obtained
Online Refresher Course In Chemistry For Higher Education	Sri Guru Tegh Bahadur Khalsa College, University of Delhi	01.09.19 to 16.02.20	SWAYAM ARPIT ONLINE COURSE CERTIFICATION, GOI, MHRD	A
Online 30 th Orientation Course In Chemistry For Higher Education	Mizoram University	28.07.20 to 17.08.20	UGC, HRDC, MIZORAM UNIVERSITY	A
Online Refresher Course on New Frontier of Chemical Sciences	University of North Bengal	23.08.23 to 05.09.23	UGC, HRDC, UNIVERSITY OF NORTH BENGAL	A+

12. **Educational Qualification :**

Name of Examination passed	Name of Board/University/ Institution	Division/ Class	Year of passing	% of Marks / Percentile	Subjects taken
10	WBBSE	I	2002	78.25	Beng, Eng, P Sc, L Sc, Math, Hist, Geo, Addl Math
10 + 2 (Science)	WBCHSE	I	2004	85.3	Beng, Eng, Math, Phys, Chem, Bio
BSc	Visva Bharati	1 st Class First with distinction	2007	80.00	Hons: Chemistry Subsi: Physics & Math
MSc	Visva Bharati	1 st Class Second	2009	77.08	Specialization in Physical Chemistry
LS NET	CSIR	Qualified	Dec 2008	NA	Chemical Sciences
JRF NET	CSIR	AIR-293	June 2009	NA	Chemical Sciences
GATE	IISc Bangalore	AIR-475	2008	NA	Chemical Sciences
GATE	IIT Roorkee	AIR-103	2009	NA	Chemical Sciences
Course Work for PhD	Visva Bharati	Qualified	2013	85.67	NA

13. Books Published:

Sr. No	Title of the book/chapter published	National/ International	Year of publication	ISSN/ ISBN No.	Name of the publisher
1	General and Physical Chemistry	National	2021	978-93-90970-04-9	Asian Press
2	Rigid Rotor	National	2022	978-93-94689-05-3	Kolkata Press Books
3	Hydrogen Atom	National	2023	978-93-94689-33-6	Kolkata Press Books

14. Research Publications:

Sl. No.	Paper Title	Journal/ Book	Vol	Page	Year	UGC listed/not	Remarks
1	Noise induced escape through an unstable limit cycle in the presence of a fluctuating barrier	<i>JSTAT</i>	P	P11004	2009	Yes	International
2	Information Dynamics of a particle in a magnetic field	<i>Eur. Phys. J. B</i>	75	267–273	2010	Yes	International
3	Magnetic-field-induced breakdown of equivalence of multidimensional motion	<i>Phys.Rev. E</i>	82	041102	2010	Yes	International
4	Colored non-Gaussian noise driven open systems: Generalization of Kramers theory with a unified approach	The Journal of Chem. Phys.	134	044126	2011	Yes	International
5	Barrier crossing dynamics of a charged particle in the presence of a magnetic field: A new turnover phenomenon	Phys. Chem. Chem. Phys	13	9445–9451	2011	Yes	International
6	Study of thermodynamically inspired quantities for both thermal and	Int. J. Stochastic Anal	10.1155	721352	2011	Yes	International

	external colored non Gaussian noises driven dynamical system						
7	Work fluctuation theorem for colored noise driven open systems	Eur. Phys. J. B	83	381-389	2011	Yes	International
8	Upper limit of rate of information transmission for thermal and external colored non-Gaussian noises driven dynamical system	Int. J. of Modern Physics	26	1250113	2012	Yes	International
9	Lifetime of the incoherent state of coupled phase oscillators	Eur. Phys. J. B	85	306	2012	Yes	International
10	Effect of multiplicative noise on the self-induced aggregation kinetics of Brownian particles	Chemical Physics Letters	559	117-122	2013	Yes	International
11	Study of non-Markovian dynamics of a charged particle in presence of a magnetic field in a simple way	J. Appl. Phys	113	124905	2013	Yes	International
12	Effect of non Markovian dynamics on Barrier crossing dynamics of a charged particle in presence of a magnetic field	Chemical Physics	417	30-36	2013	Yes	International
13	Tuning of barrier crossing time of a particle by time dependent magnetic field	J. Chem. Phys.	138	244110	2013	Yes	International
14	Synchronization of Non identical Coupled Phase Oscillators in the Presence of Time Delay and Noise	Journal of Complex Systems		ID 591513	2013	Yes	International
15	Magnetic field induced dynamical chaos	Chaos	23	043121	2013	Yes	International

16	Non equilibrium entropic temperature and its lower bound for quantum stochastic processes	<i>Phys. Rev. E</i> , 89,	89	032148	2014	Yes	International
17	Fluctuating magnetic field induced resonant activation	<i>The Journal of Chemical Physics</i>	141	224101	2014	Yes	International
18	Rate laws of the self-induced aggregation kinetics of Brownian particles	<i>Physica A: Statistical Mechanics and its Applications</i>	445	128-137	2015	Yes	International
19	Comparative Analysis on Selected Anthropometric and Motor Fitness Variables between Secondary and Higher Secondary Students	<i>Indian Journal of Applied Research</i>	6 (10)	197	2016	Yes	National
20	A generic signature of a fluctuating magnetic field: An additional turnover prior to the Kramer's one	<i>Physica A: Statistical Mechanics and its Applications</i>	502	58-76	2018	Yes	International

15. **Research Experience:**

a. **Doctoral:**

Degree	Name of University/ Institution	Subject	Date of award	Title of Thesis
PhD (2009-2015)	Visva Bharati	Non equilibrium statistical mechanics	08.01.2015	Studies of some aspects of non-equilibrium Stochastic processes with special reference to Brownian motion of a charged particle in a magnetic field.

b. Post-Doctoral:

Degree	Name of University/ Institution	Duration	Title of the Project
Post-Doc (Unofficial)	Visva Bharati	One Year	A generic signature of a fluctuating magnetic field : An additional turnover prior to the Kramer's one

16. Paper Setter / Moderator:

Moderator of BSc Sem 2 Gen paper of Burdwan University

Paper setter of BSc Sem 5 Advanced Physical Chemistry Practical paper of Burdwan University

Examiner and Scrutinizers of various papers of Burdwan University

Paper setter and Examiner of Internal Assessment and Final Practical exams

17. Participation in Workshop, Short term course:

Sl No	Name of the Programme	Duration with Date	Venue
1	Short Duration Lecture Workshop on Recent Trends in Interdisciplinary Sciences	12.02.2018 to 14.02.2018	ISERC, Siksha-Bhavana, Visva-Bharati, Santiniketan-731235
2	Participation in the FKSP on 'Modern Teaching Technique'	18.08.2017	IBS, ICFAI Business School

18. List of Papers presented in the Seminar/Conference:

Sl No	Topic	Organised By	Date	Title of the Paper
1	International "Science Seminar"	Burdwan Raj College & Indian Chemical Society	10.10.2017	Tuning of barrier crossing time of a particle by time dependent magnetic field
2	National Seminar on Recent Trends in Chemical Science Research and Applications	Department of Chemistry, Visva Bharati	13.09.2019	Effect of Magnetic Field on barrier crossing processes
3	Elements of Periodic Table in the Chemical Avenues of Biological World	Department of Chemistry and Zoology, South Calcutta Girl's College	17.12.2019	Magnetic field induced enhancement of barrier crossing rate
4	Recent Trends in Chemistry and related Disciplines	Department of Chemistry, The University of Burdwan	11.01.2024	Magnetic Field Induced Ionic Reactions: A Theoretical Study

19. Development of Online courses/ ADD-ON courses:

“Basics of Computer Application” for the academic session 2022-23 (Odd Semester).

20. Experience of PG teaching/ Teaching in other Institute as guest faculty etc.:

Teaching experience in Guskara College, Guskara, Purba Burdwan and Krishna Chandra College, Hetampur, Birbhum as part of the Teacher exchange MOU signed with Bolpur College.

21. Awards/ Recognitions etc:

- a. National Scholarship
- b. University topper Scholarship
- c. First Class First with Distinction in Under Graduate level (B.Sc. Honors in Chemistry) : University Topper
- d. First Class Second in Post Graduate level (M.Sc. in Chemistry having specialization in Physical Chemistry): University 2nd Rank
- e. Best Poster award in the Physical Chemistry section in the International Conference held at Midnapore College
- f. Qualified TET in 2013
- g. Recruited as an Assistant Teacher in Chemistry (H/PG) through West Bengal School Service Commission & posted in Rampurhat Railway Adarsha VidyaMandir, Rampurhat
- h. Recruited as an Assistant Master in Chemistry (H/PG) through West Bengal Public Service Commission & posted in Barasat Government High School, Barasat
- i. Recruited as an Assistant Professor in Chemistry through West Bengal College Service Commission & posted in Bolpur College, Bolpur : All State Rank 6 under unreserved category
- j. Adjudicated as the Best Presenter in as a participant of Refresher Course on New Frontier of Chemical Sciences organised by the UGC-Human Resource Development Centre, University of North Bengal from 23rd August 2023 to 5th September 2023

22. College / Department additional duties performed (Co-ordinator/Bursar/ IQAC/ Governing Body member etc):

Co-ordinator of the Department of Chemistry, Bolpur College since 01.07.2022 till date.

23. Webinar attended:

Sl No	Title of the Webinar	Organized by	Whether International/ National/State or University level	Date
1	Recent trends and prospects of Chemistry	K. C. College, Hetampur	International	05.07.2020
2	Recent advances in Chemistry	Vivekananda Mahavidyalaya	International	15.07.2020
3	Chemistry and recent developments in medicinal field	Surendranath Evening College	International	23.08.2020
4	Mapping the complex folding and misfolding mechanisms in protein using single molecule force spectroscopy	NSHM, Durgapur	National	28.08.2020
5	NEP 2020: Challenges and Opportunities	Dept of Education, Ramsaday & G.G.M College	National	06.09.2020

24. Webinar organized:

Sl No	Organized by	Title of the Webinar	Whether International/ National/State/ University/College level	Date
1	Dept. of Chemistry, Bolpur College	Recent Trends in Scientific, Engineering and Industrial Research and Environment Concern	International	30.09.2020
2	Dept. of Chemistry, Bolpur College	Impact of Chemistry on the Development of Forensic Science: Contribution and Challenges	College	13.01.2024

25. Teaching and Research Statement:

Teaching became my passion when I was doing my undergraduate in Visva Bharati University. I was deeply inspired by my teachers who ignited the said passion in my heart. During the end of my UG I even used to coach my friends in various topics in which they felt uneasy and during the tenure of my PhD I used to take classes of UG

students. After getting opportunity to serve in Bolpur College as an Assistant Professor in Chemistry I focussed on grooming, thinking and questioning ability of students than pouring in only lots of information. Alongside utilization of ICT I mainly use chalk-black board method which proved to be more fruitful in teaching learning process. Just after the pandemic was over and when College was reopened we found depression and lethargy among students and as a remedy we started mobilising the students through cultural activities, field visits, picnic, career counselling and competitive exam coaching. We got astonishing results in 2023 when a large number of students from the outgoing batch qualified in JAM and in MSc entrance examinations of many Universities. We will continue this process and intensify it to improve the outcome. Let us hope for the best.