

Dr Rajib Konwar



Educational Qualification:

M.Sc., M.Phil., Ph.D

Joined Tinsukia College on 1st April, 1992

Superannuated on 31st May, 2024

- Completed B.Sc from Sibsagar College (Joysagar) under Dibrugarh University in 1985
- Completed M.Sc in Physics from Dibrugarh University in 1987
- Completed M.Phil in Laser Physics from Dibrugarh University in 1990 and Ph.D from Dibrugarh University in 2009 under the supervision of Prof. G. D. Baruah, Emeritus Fellow (AICTE), Ex HOD of Dept. of Physics Dibrugarh University
- Worked as Head of the Department of Physics from 2013 to 2024.

Research Interest:

Laser Physics and Non-Linear Optics

Specialized Courses:

Non-Linear Optics and Advanced Spectroscopy

Seminar/Conference:

1. National Conference on Laser and Optical Science, Oct. 11-13, 2010, D.H.S.K. College, Dibrugarh, Assam.
2. NAAC sponsored National Workshop, Jun. 28&29, 2009, Digboi College, Digboi, Assam.
3. 5th Conference of Physics Academy of the North East, Mar. 1&2, 2007, Department of Physics, Gauhati University.

4. Indian Science Congress, Jan, 3-7, 2007, Annamalai University, Chidambaram.
5. International Conference on Perspectives in Vibrational Spectroscopy, Feb. 25-28, 2006, Meerut College, Meerut.
6. International Conference on Spectrophysics, Feb. 9-12, 2005, Pachaiyappa's College, Chennai.
7. National Conference on Lasers and Their Applications in Basic and Applied Science, Jan 10-13, 2005, Department of Physics, Visva-Bharati, Santiniketan.
8. National Conference on Engineering Optics & Spectroscopy, April 5-7, 2004 CCS University, Meerut-250004
9. National Symposium on Recent Advances in Electro ceramics, April 8, 2004 Meerut College, Meerut.
10. National Conference on Laser & Spectroscopy, Feb 25 to 28, 2003, Meerut College, Meerut-250001, India.
11. Third Regional Conference on Physics Research in North East India, Nov,09,2002, at Department of Physics, Dibrugarh University.
12. National Conference on Laser and Its Applications, Nov. 05-07, 2001 at Department of Physics, Dibrugarh University.

Publication:

1. "On the nature of Laser Induced Fluorescence, SEM, and Iridescence Patterns of Molluscan Shells". R. Konwar, B. Gogoi, J. Saikia, M. Konwar and G.D. Baruah. *International Journal of Advanced Research(IJAR)* ,8(07), 464-471,2020
2. "On the Nature of the Flame Emission Spectra of Crude Oil Blaze at Baghjan". R. Konwar, R. Mahanta, J. Saikia, S. Konwar and G.D. Baruah. *International Journal of Advanced Research(IJAR)*, 8(08), 574-578, 2020
3. "Raman, FT Raman and FTIR spectra of Molluscan Shells". R. Konwar and GD Baruah, *International Journal of Advanced Research(IJAR)*, 5(06), 1408-1415, 2017
4. "On the Nature of Iridescence Patterns of Some Molluscan Shells". Konwar R and Baruah G D. *International Journal of Technology Enhancements and Emerging Engineering Research, Vol-4, 4, 28-29, 2016.*
5. "Investigation on Cornu's Spiral and Fibonacci numbers in the Evolution of Molluscan shells". Konwar R and Baruah G D. *International Journal of Technology Enhancements and Emerging Engineering Research, Vol-2, 10, 2014.*
6. "An Exploration of Self Consistent Nature of Natural Laws Appearing in Different Domains of Physical Science" RBordoloi, R Konwar....et.al.,*Proc. Of National Conference on Advances in Laser and Spectroscopy, Nov 1-3, 2012, Department of Applied Physics, ISM, Dhanbad.*
7. "Evidence of self-consistency of Natural Laws appearing in different domains of physical science". Bordoloi RB, Bordoloi R, Konwar R et.al. *Indian Journal of Science, Vol-1, No-1, Nov 2012.*

8. "Vector representation and Fibonacci Numbers in Molluscan shells". R. Konwar and G.D. Baruah. *Journal of Laser and Optical Science, Vol-2, No.1, 2012.*
9. "Persistent band heads of N₂ molecule at (12,7) and (11,6) in laser induced fluorescence of Molluscan shells". R. Konwar and G.D. Baruah. *Journal of Laser and Optical Science, Vol-1, 2011.*
10. "On the Nature of Low Frequency Vibrations in the Raman Spectra of some Molluscan shells" R Konwar & GD Baruah, *Proc. Of 5th Conference of Physics Academy of the North East, March 1-2, 2007*, Department of Physics, Guwahati University, Guwahati.
11. "Laser Induced Fluorescence of Neat Polymer Film with reference to the persistent lines at (12,7) and (11,6) Of N₂. R Konwar, *Proc. 94th Indian Science Congress, Jan 3 -7 2007*, Annamalai University, Annamalainagar, Chidambaram.
12. "Laser Raman Spectroscopic studies of some Molluscan Shells(Unio)" R Konwar & GD Baruah, *Proc. Of the International Conference on Lasers and Nanomaterials, Nov 30- Dec 2, 2006*, Department of Physics, University of Calcutta.
13. "On the nature of Laser Induced Fluorescence of Molluscan shells with reference to the persistent lines of N₂" R Konwar, R Changmai M Konwar & GD Baruah, *Proc. Of the International Conference on Perspectives in Vibrational Spectroscopy, Feb. 25-28, 2006*, Dept. of Physics, Meerut College, Meerut.
14. "On the nature of (12,7) and (11,6) First positive band of N₂ observed in Laser Induced Fluorescence of some polymers and a meteorite sample" R. Changmai, R. Konwar, T. Tamuli, N. Dehingia and G. D. Baruah, *Proc. Of the International Conference on SpectroPhysics, Feb. 9-12, 2005* Post Graduate & Research Department of Physics, Pachaiyappa's College, Chennai.
15. "Laser Induced Fluorescence of Molluscan Shells" R Konwar, R. Changmai, M Konwar & GD Baruah, *Proc. Of the International Conference on SpectroPhysics, Feb. 9-12, 2005* Post Graduate & Research Department of Physics, Pachaiyappa's College, Chennai.
16. "Laser Induced Fluorescence of Molluscan Shells (12,7) and (11,6) persistent band of N₂." R Konwar, N Dehingia, R Changmai & GD Baruah, *Proc. Of National Conference on Laser & their Applications in Basic & Applied Sciences. Jan. 10-13, 2005*, Dept. of Physics, Visva-Bharati, Santiniketan. W. B.
17. "Laser Induced Fluorescence of Molluscan shells and their Spectroscopic Behaviour" R. Konwar, R. Changmai, K. K. Chetia and R. Mahanta, *Proc. 91st Indian Science Congress, Jan 3-7, 2004*, Punjab University, Chandigarh.
18. "Spectroscopic Investigation of Molluscan Shells" R Konwar, R Changmai & GD Baruah, *Proc. Of National Symposium on Atomic, Molecular Structure, Interactions & Laser Spectroscopy*, March 14-15, 2004, Dept. of Physics, Banaras Hindu University.
19. "Laser Induced Fluorescence of Molluscan Shells and Their Spectroscopic Behavior" R Konwar, R Changmai, R Mahanta & GD Baruah, *Proc. Of National Conference on Perspectives in Engineering Optics & Spectroscopy*, April, 5-7, 2004, Dept. of Physics, CCS University, Meerut.
20. "Importance of the persistent lines at (12,7) and (11,6) first positive bands of N₂ in solid films excited by Ar⁺ laser" by R Changmai, R Konwar, T Tamuli, N Dehingia &

GD Baruah, *Proc. Of International Conference on Optics & Optoelectronics, 12-15 Dec. 2005*, IRDE, Dehradun, India.

21. "Laser – Induced Fluorescence of Dergaon Meteorite" S. Bhattacharyya, A GohainBarua, R Konwar, R Changmai& GD Baruah, *Asian Journal of Physics*, Vol. 13. No. 1, 2004 23-24.
22. "Nature of the emission band of Dergaon meteorite in the region 5700 - 6700Å" S Bhattacharyya, A GohainBarua, R Konwar, R Changmai& GD Baruah, *Pramana*, Vol. 62, No. 6, June 2004, pp. 1299 – 1301.
23. "Spectroscopic studies of Molluscan Shells", R. Konwar, R. Changmai& G.D. Baruah. *Indian Journal of Pure & Applied Physics*, Vol. 42, Nov.2004, pp 812-815.

Workshop:

UGC Sponsored National Level Workshop on the use of SPSS in Analytical Works of Research Problems, Department of Statistics & Economics, Tinsukia College, Oct. 10-16, 2017.

Research Project:

1) Title: Optical and Spectroscopic Studies of Molluscan Shell

Agency: UGC

Period: 2 years

Grant/Amount Mobilized (Rs. Lakh): 0.90545/-

Status: Completed

2) Title: Investigation on Cornu's Spiral and Fibonacci Numbers in the Evolution of Bivalve using Laser Induced Fluorescence Technique

Agency: UGC

Period: 2 years

Grant/Amount Mobilized (Rs. Lakh): 0.90545/-

Status: Completed

Orientation/ Refresher Course:

Orientation course : Guwahati University, From Dec 02, to 22 Dec, 1999.

Refresher Course : a) The University of Burdwan, From Jan,24 to Feb 13, 2001.

b) Dibrugarh University, From 6th July to 26th July, 2001.

c) Tezpur University, From 09 Dec to 30 Dec, 2005.

Corporate Activities:

1. Coordinator IQAC
2. Member of IQAC 03 years (from 2013-2016)
3. Teacher Member, Governing Body
4. HOD, Deptt. of Physics (since 2013)
5. Member of Examination Board 3 years
6. Assistant Zonal Officers H.S. Zone 4 years
7. Member of UGC 7th pay Revised & Fixation preparation committee, 2018
8. Member of Minor research project proposal Screening Committee, 6 years (Since 2013)
9. Member of Library Committee, 6 years
10. Member, GDA Planning Board since 2016
11. Member, UGC undergraduate Planning Board for GDA, 2 years (since 2017)
12. Member of Advisory Board to student Union,
13. Member of BCA Management Committee, 8 years
14. Assistant Supervisor for APSC Examination, year, 2017
15. Member, Grievance Redressal Cell, Tinsukia College Students' Union Elections
16. Convenor, Admission Committee (Science) 2 years, 2017 & 2018
17. Member of UGC Equipment Purchase Committee, 1 Year 2013
18. Member of College construction Committee, 2 year 2012 & 2018
19. Member of RUSA Committee, 2 years (since 2017)
20. UGC construction Committee, 2 Years, (since 2017)
21. Member of Vigilance Committee.
22. Member of centre Committee for HS Examination, 2016
23. Member of salary raising committee for Non- Sectioned employees, 3 Years 2011, 2012 & 2017
24. Advisor of Diamond Jubilee Souvenir Sub Committee
25. Chairman Of School Adoption Committee 2 years (since 2017)
26. Member of Tinsukia college Data Bank 3 Years (since 2015)
27. Member of Tinsukia College Parents' –Teachers' Association (since 2015)
28. Member of Tinsukia College Alumni Association, (since 2015)

Co-Curricular Activities:

1. Examiner, Higher Secondary and D.U's Major and Core Subjects
2. Scrutinizer, Higher Secondary Examination

3. Head Examiner, D.U's Part I examination, Tinsukia College Zone
4. Assistant Zonal Officer for H.S Final Year Arts Zone
5. Member of College Examination Board
6. Paper Setter, D.U Major and Core
7. Subject Expert and V.C. nominee for appointment of Asst. Professor and Associate Professor in different Colleges.
8. University Observer for the P.G. & PGDMM/PGDJMC examination
9. Officer on Special Duty (OSD) for NIOS Examination
10. Member of District level Supervision Committee for H.S school 2 Years (2016 & 2017)
11. External Examiner for Evaluation of Ph. D Thesis
12. Reviewer of the research paper (Online Paper)

Extension Activities:

1. Member, Governing Body, Doom Dooma College.
2. Working President for District level National Children Science Congress
3. Working President of Reception committee for 25th National Children Science Congress, Tinsukia.
4. President, SMDC (School Management and Development Committee), Sarvajanin H.S. Valika Vidyalaya, Tinsukia, (2016 to 2022)

Membership:

1. Life member of Indian Science Congress
2. Life member of Laser and Spectroscopy Society of India
3. Life member of Assam Science Society
4. Life member of Society for Laser and Optical Science
5. Member of editorial board of the Journal of Laser and Optical Science
6. Executive Member of Assam College Teachers Association