

BIODATA

NAME : Dr. Aruna Gulabrao Patil
DESIGNATION : Professor
DEPARTMENT : Physics
QUALIFICATION : M.Sc. Ph.D.
E-MAIL : arunapatil@vivekanandcollege.edu.in
TEACHING EXPERIENCE : 1993 to till date (27 years)
BOOKS PUBLISHED : 10

I: RESEARCH PAPERS PUBLISHED:

- Study of Ultrasonic Properties of Binary Liquid Mixtures; AIP Conference Proceedings of 2nd International conference on Advanced Technologies for Societal Applications .Springer, Vol. 1 , Chapter 91, Aug 2019, 2142.100001-1 to 100001-5,AIP Publication
- Study of Thermo Physical Properties of Binary Liquid Mixtures of Trichloroethylene with 1- Pentanol at 308 K; Malaysian Journal of Chemistry, Vol. 21, Issue (1), 2019, Page 29-35
- Investigation on Some Thermo Physical Properties of Nitrobenzene and Acetone Binary Mixtures; JASC Journal of Applied Science and Computations Vol. VI, Issue I, Jan 2019, Page 949-953
- Study of Acoustic Properties of Binary Mixture of Acetone in Toluene; JASC Journal of Applied Science and Computations; Vol. VI, Issue I, Jan 2019, Page 894-899
- Study of Thermo Physical Properties of Binary Liquid Mixtures; Malaysian Journal of Chemistry, Vol. 20 , Issue 02, 2018, Page 148-153
- Study of Thermo Acoustic Properties of binary Liquid Mixtures of NM With Toulene at 293K; Journal of Emerging Technologies & Innovative Research; Vol.5, Issue2, Feb 2018 Page 1178 – 1185
- Study of Physical Properties of Polar Liquids; International Journal of Advance-research in Science & Engineering, Vol. 06, Issue 12, Dec 2017, Page 1126-1131
- Study of Ultra Sonic Properties of Nitro methane + DMSO at 313 K; Asian Journal of Research Chemistry, Vol. 10 , Issue 04, Aug. 2017, Page 523-525
- Study of Various Synthesis Techniques of Nanomaterial; International Journal of Advanced Research in Basic & Applied Science, Special Issue, Jan 2017, Page 62-65
- Study of Physical Properties of Polar Nonpolar Binary Liquid Mixtures. Liquids; Journal of Emerging Technologies & Innovative Research, Vol.4, Issue-12, Feb. 2018, Page 1292-1295

- The Role of ICT In Higher Education; KESONA REPORT, Vol.1, Issue1, Sept 2016, Page 13-17
- Effect of Concentration on Ultrasonic Properties of Polar Polar Binary Mixture; International Journal of Advanced Research In Basic & Applied Sciences, Vol. 2, Issue 2, Jan 2016, Page 25-26
- Study of Ultrasonic Velocity Density & compressibility by using polar nonpolar binary liquid mixtures at 303.15⁰k; Journal of Basic & Applied Research International, Vol. 19(4), 2016, Page 263-266
- Density Ultrasonic Velocity Study of 1-Butanol with Nitromethane binary liquid at 303.15⁰k; BIONANOFRONTIER, Vol. 8(3), Dec 2015, Page 227-229
- Study of Acoustic Properties of Nitromethane + Isopropyl Alcohol at 303⁰k; BIONANOFRONTIER, Vol.8(3), Dec 2015, Page 161-164
- Density Ultrasonic Velocity Study of Nitro Methane + Ethanol binary Liquid Mixture at 313K; Journal of Advances in Applied Sciences & Technology, Vol. 1, Issue 2, Dec 2014, Page 213-216
- Molecular Interactions of Nitro Methane + Ethanol at 303 K Through Ultrasonic Study.; International Journal of Advanced Research in Basic & Applied Sciences, Vol.(1) Issue 1, Dec 2014, Page 5-7
- Growth of fractal using electro deposition Technique; Deccan Current Science, Vol-9, Issue 1, 2013, June 2013, Page 218 To 220
- Viscous fluid model by Hele-Shaw method and study of dimension calculations; Deccan Current Science, Vol-7, June 2012, Page 131 To 134
- Finite element analysis of Trapezoidal cross section plasma field wave guide; Bulletin of Marathawada Mathematical Society, Vol. 12, Issue.1, 2010, Page 23 To 36
- Fractal pattern growth simulation in electro-deposition and study of the shifting of centre of mass; Elsevier, Chaos Solutions & Fractals, Vol. 42(2009), Page 2796 To 2803

III: PAPER PRESENTED IN CONFERENCE/WPRKSHOP/SYMPOSIUM:

- ‘Fractal growth of copper Sulphate’; **National Conference**, Indian Science Congress 3-7 Jan 2000, Pune University
- ‘Rescale range analysis of fluctuating weather parameters’; **National Conference**, Indian Science Congress 3-7 Jan 2006, A. N. G. R. University Hyderabad
- ‘Study of self-similarity fractal using iterated function system model’: National Conference,; **National Conference**, School of Mathematical Sciences Mar 2012, N.M. University Jalgaon
- ‘Characterization of Fractal by simulation technique and effect of different bias conditions’; **National Conference**, National Conference on Nanotechnology 7-8 Sept 2012, M.M. Nilanga
- ‘Alternative conception about understanding the concepts of Physics’; **National Seminar**, Innovative Teaching Methods in Physics 30-31 Aug 2013, Deogiri College Aurangabad

- ‘Study of Density, Viscosity of N-Butanol + Nitro-Methane’; **National Conference** , Non-Conventional Energy Sources for Rural Development of India 5-6 Sept 2014, MGM Ahemadpur
- ‘Density & Ultrasonic Velocity Study of 1-Butanol with Nitromethane Binary Liquid Mixture at 303.15 0k;’; **International Conference**, International Conference on Functional Materials & Microwaves, 30 Dec 2015, Dr. B. A. M. U. Abad
- ‘Study of Ultrasonic Velocity Density & Compressibility by Using Polar Nonpolar Binary Liquid Mixtures at 303.15 0k’; **National Conference**, Materials in Advanced Technology & Applications, MATA 2016, M. I. T. College Aurangabad 20, 21 Sept 2016
- ‘Review of Study of Vibrational Spectroscopy through FTIR’; **International Conference**, Recent Innovations in Science, Engineering Humanities and Management 16 Sept 2017, Recent Innovations in Science, Engineering Humanities and Management 16 Sept 2017
- ‘Study of Physical Properties of Polar Liquids’; **International Conference**, Recent development in Engineering Science, 23rd Dec 2017, Maratha Chamber of Commerce, Industries and Agriculture Senapati Bapat Road , Pune
- ‘Study of Thermo Physical Properties of Binary Liquid Mixtures of Pyridine with Methanol at 293K’; **International Conference**, 2nd International Conference on Multidisciplinary Research 8 & 9 Sept 2018, Maratha Chamber of Commerce, Industries and Agriculture Senapati Bapat Road , Pune

2.: BOOKS, CHAPTERS, ARTICALS PUBLISHED etc.-

BOOKS PUBLISHED:

- **Advanced Physics:** Atomic Molecular Physics, Lasers Non-Conventional Energy Sources & Fiber Optics; Page-1 to 149, Co-Author, **93-82202-60-8**, Anand Publication, Aurangabad
- **Advanced Physics:** Classical, Quantum Mechanics ,Electrodynamics; Page-1 to 175, Co-Author , **93-82202-50-9**, Anand Publication, Aurangabad
- **Concepts of Physics:** General Electronics, Solid-State Physics, ,Page-1 to 219, First author, **93-82202-21-9** Anand Publication, Aurangabad
- **Concepts of Physics:** Mathematical Statistical Physics & Relativity, Modern & Nuclear Physics, Page-1 to 207, Co-Author, **93-82202-37-0**, Anand Publication, Aurangabad
- **Fundamentals of Physics:** Geometrical & Physical Optics, Electricity, Magnetism, Page-1 to 205, Co-Author, **93-82202-21-9**, Anand Publication, Aurangabad
- **Fundamentals of Physics:** Mechanics Properties of Matter & Sound, Heat, Thermodynamics, Page-1 to 199, Co-Author, **93-82202-09-7**, Anand Publication, Aurangabad
- **Concepts of Physics:** Mathematical & Statistical Physics, Modern Physics & Lasers, Page-1 to 140, Co-Author, **93-82202-02-6**, Anand Publication, Aurangabad
- **Fundamentals of Physics:** Electricity & Magnetism , Waves & Oscillations, Page-1 to 175, First author, **93-82202-03-5**, Anand Publication, Aurangabad

- **Advanced Physics:** Atomic & Molecular Spectra, Nuclear Physics, Solid State and Nano Physics, Electronics, Page-1 to 175, Co-Author, **81-922357-4-5**, Anand Publication, Aurangabad
- **Advanced Physics:** Classical & Quantum Mechanics, Solid State Physics & Semiconductor Devices, Page-1 to 201, First author, **81-922357-0-7**, Anand Publication, Aurangabad

3: RESEARCH STUDENTS : 1) REGISTERED- 01

4: RESEARCH PROJECT/SURVEY : 1) MINOR - 01 Completed

5: CRITERIA OF ICT MEDIATED TEACHING LEARNING DEVELOPMENT:- E Content

- **Audios prepared entitled**
 - **Planks Quantum Theory & Postulates** for B.Sc. Third Year Students
 - **Crystal Physics** for B.Sc. Second Year Students
 - **Quantum Physics** for B.Sc. Third Year Students

6: INVITED SPECIAL LECTURES

- **Guest Lecture Delivered on -**
 - **‘LASER ‘** at S.B.E.S.C. Aurangabad on 8 & 9 Jan 2019
 - **‘Atomic Physics’** at R.S. A. C. S. College, Pathri on 17 Dec 2017
 - **Classical Mechanics & its Applications** at Swami Vivekanand Sr, College, Mantha, Jalana on 14 Aug 2016

7: ACTIVITIES

- **‘E Content Development’**, Two Days State Level Workshop Organised on 29 & 30 Sept 2018 Funded by Dr. B.A. M. U. Aurangabad
- Working as a member of IQAC
- Convenor of Science Forum Committee
- Convenor of Internal Complaint Committee
- Chairman of Affiliation Committee
- Member of Student Council Committee
- Member of Jagar Janiwacha Prakalp Under Maharashtra Government
- Member of NSS Committee

- Worked as DCAS Committee Member
- Member of Local Management Council of College
- Worked as member of Magazine Committee
- Worked as Chairman and Member of Affiliation
- Worked as Subject Expert
- Organized **Raman Lecture Series** funded by Dr. B. A. M. U. Aurangabad

MEMBERSHIP OF PROFESSIONAL BODIES:

1) Life Member of Indian Science Congress

2) Life Member of IAPT Association

3) Senate Member at Dr. BAMU

(2010 to 2015)

Awards: “Vivekanand Shikshak Shree” 2010

ANY OTHER :

- MOU Sanctioned with MCED Aurangabad & organised workshop for students
- MOU Sanctioned with Sudarshan Sour Waluj Aurangabad & sent students for implant training
- MOU Sanctioned with 3 D Containers & sent students for implant training

DR. PATIL ARUNA GULABRAO

**Professor
Department of Physics**