



Dr. P. JAIKUMAR

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Department of Physics
National College
Trichy – 01

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“A person with strong inclination for teaching as a career, more keen on professional ethics. I strongly believe in the synthesis of functional obligations and the institution values. Keeping to accountability is another quality for maintaining high quality standards”.

Educational Qualification

EXAM PASSED	NAME OF THE INSTITUTION	CLASS & PERCENTAGE	YEAR OF PASSING
Ph.D (Physics)	Periyar EVR College, Trichy (Bharathidasan University)	COMMENDED	2018
SET Exam (Physics)	State Eligibility Test conducted by Mother Theresa University- Tamilnadu	QUALIFIED	2016
M.phil (Physics)	National college, Trichy	First & 65.3%	2010
PGDCA	Alagappa University, Distance Education	First & 62.7%	2010
M.Ed.,	Dhanalaxmi Srinivasan College of Education Perambalur.	First & 69.33%	2008

Work Experience

Classes	Years		Institution	Department	Years of Experience
	From	To			
UG & PG	2011	Till Now	National College (Autonomous) -Trichy	Physics	12 Yrs
B.Ed	2008	2010	Andavar College of Education-Nagapattinam	Education	2 Yrs
Higher Secondary	2007	2008	Periyar Centinary Memorial Matriculation School-Trichy	PG teacher in Physics	11 Months

Research Experience

Research Level	Title of work / Thesis
Ph.D	Investigations on growth and characterization of some organic and semiorganic single crystals
M.Phil	Growth & characterization of picric acid with different amino acids and Amines
M.Ed	The Study of Multiple Intelligence and Achievement in Physics Among Higher Secondary School Students

Research Project Awarded

- National College – Seed Money funded project entitled “Investigation on the photocatalytic and antibacterial efficiency of Zinc and Zirconium oxides nanocomposites”, (PI) of worth Rs. 20,000 for the period 2022-2023 **(Completed)**.

List of Publications

- P. Jaikumar**, T. Balakrishnan, C. Indumathi, T. C. Sabari Girisun, K. RamamurthiNonlinear optical behaviour of bis (cytosinium) tartarate monohydrate single crystal. Chemical Physics Impact (Elsevier) 5.100114.(2022)
- P. Jaikumar**, T. Balakrishnan, K. Ramamurthi, M.Saravanan, T. C. Sabari Girisun Synthesis growth, and two – photon absorption induced optical limiting action of cytosinium benzoate single crystal, Journal of materials Science: Materials in Electronics 33, 17502 – 17512 (2022)
- P. Jaikumar**, S. Sathishkumar, T. Balakrishnan, K. Ramamurthi, Growth, Optical,Thermal and Mechanical Properties of Cytosinium Hydrogen Selenite: A Novel Nonlinear Optical Single Crystal, Materials Research Bulletin 78(2016) 96 – 102.
- P. Jaikumar**, T. Balakrishnan, M. S. Mohamed Jaabir, S. Sakthivel. Investigations on growth, Structural, Optical, Mechanical and Cytotoxicity Properties of a semiorganic single crystal: Cytosinium nitrate, International Journal of Current research and Review Vol (9), Issue (4) Feburary.

- **P. Jaikumar**, T. Balakrishnan, T. V. Sundar, K. Ramamurthi, Hydrogen-bonding patterns in cytosinium tartarate monohydrate, Journal of IUCR, Crystallography Data, March – 2017
- **P. Jaikumar**, T. Balakrishnan, P. Revathi and K. Sakthivel. Growth and Characterization of pure and Mg – doped L –lysine Monohydrochloride single crystals, International Journal of Research and Analytical Reviews. Vol – 5, Issue – 3, 556 – 565 (2018).
- S. Sakthivel, T. Balakrishnan, **P. Jaikumar**, and P. Revathi. Growth, Strutural, Optical, Thermal and Mechanical prperties of Copper Glutamate Dihydrate Single Crystal, IOSR Journal of Applied Physics, Volume 9, Issue – 4, 56 – 66 (2017).
- S. Sakthivel, T. Balakrishnan, P. Revathi, A. Krishnaveni and **P. Jaikumar**. Synthesis, structural, mechanical, thermal, magnetic and antimicrobial properties of β - L -Glutamic acid, International Journal of Research, Vol – 5, Issue 16, 1064 – 1069 (2018).

Academic Distinctions

- **Head of the department of Physics (Un – aided program)** from 2012 – till date.
- **Coordinator – Outreach program** for Higher secondary school students (2020 – 23)
- Acted as a **Chief Invigilator – TNPSC Combined civil service exams**, National College December – 2022.
- **Core member of NAAC criteria III** (Research consultancy and extention).
- **Assistant Chief Examiner** of exam wing – Continuous Internal Assessment Examinations, Un – aided section, National College, Trichy (2022-23).
- **Organizing member** - International Conference on recent trends & innovations in Science, Engineering and Social Sciences, held at National College (10 -11 February,2023)
- **Program Coordinator** –Inter departmental competitions and **Dr. APJ. Abdul Kalam Memorial day Lecture**.
- **Coordinator – State level Science competitions for college students** in association with **Arivial Sangam, Tamilnadu (Unit of Vijnana Bharathi)**.
- Acted as a **member** of the organizing committee in the **NICHE CARVER leadership program** for school students held at National College during 30.11.19 – 01.12.19. This program was organized by **ROTARY CLUB** of cauvery, Trichy.
- **Laboratory demonstrator** in the DST – INSPIRE internship science camp held at National College during 6 – 11 August 2018.
- Acted as an **Association Vice – President of Physics association** and conducted association meetings.

Resource Persons and Special Talks

- Invited talk on “Role of Physics in modern health science” in department association meeting organized by Indra Ganesan institute of medical science, Trichy on 15 May 2023.
- Invited talk on “Novel Materials and its applications” in Physics association inaugural meeting organized by Holy Cross College, Trichy on 07, October 2020.
- Invited talk on “Macro to Micro” in Radiant 2019 -Physics association meet organized by Department of Physics, Servite, arts and science college for women, Thogaimalai, Karur on 22 October 2019.
- Invited talk on “Physics in everyday life” in Department Association meeting organized by Department of Physics, Auxilium college, Pudukottai on 14 March 2019.
- Acted as a judge for science and Robotics expo in Rajam Krishnamurthy Public school, Trichy on 3 December 2022.

Details of Memberships in Professional Societies

- Life time Member in Indian Association of Crystal Growth
- Annual Member Arivial Sangam Tamilnadu (Unit of Vibha)

Paper Presented in National and International Seminars

- Attended a Hands on training program on Lasers and Z –Scan experiments (LAZE – 2022) at Nanophotonics Laboratory, Bharathidasan University, Trichy.
- Participated in the virtual Symposium on International Day of Light (IDL -2020), IIT - Guwahati
- Participated in Faculty development program National Webinar on “ICT enabled Higher education in India: Challenges and opportunities” Guru Angad Dev teaching learning centre, New Delhi.
- Participated in Faculty development program National Webinar on “Development of higher education in India: An Overview” Guru Angad Dev teaching learning centre, New Delhi.
- Presented a Paper on “Growth and characterization of pure and Mg⁺ doped L – Lysine monohydrochloride single crystals” and Participated in the INTERNATIONAL Conference on Advances in Materials Science at Holy Cross College, Trichy.
- Presented a Paper on “Growth and Characterization of Pure and Dyes Doped L – Asparagine Monohydrate single Crystals” and Participated in the II-INTERNATIONAL Conference on Recent Trends in Materials at Devanga Arts College, Arupukottai.

- Participated in one day Workshop on “Thermal & Elemental Analysis Of Solids” conducted by Department of Energy & Environment (DEE), NIT, Trichy.
- Participated in the UGC Sponsered National Seminar on “Recent Trends in Advanced Materials Science” held at Periyar EVR College, Trichy – 1
- Presented a Poster on “Synthesis, Crystal Growth and characterization of Organic Single Crystals of Cytosine Benzoic Acid” and Participated in the INTERNATIONAL Conference on Crystal Growth and Biomolecular Crystallography” at Sastra University, Thanjavur.
- Participated in the workshop on “Modern Analytical Techniques” held at National College, Trichy – 1
- Participated in the XVIII National conference on crystal growth (with international participation) at SSN college of engineering, Kalavakkam, Chennai.
- Presented a paper on “Growth and characterization of picric acid with different amino acids and amines” and Participated in the CSIR sponsored NATIONAL Level Seminar at Jayaraj Annapackiam college,Theni.
- Presented a paper on “CRYSTAL GROWTH” and Participated in the NATIONAL Level Seminar at A.D.M. college for women,Nagapattinam.
- Presented a paper on “History of Technology” and Participated in the International Conference at Thiruvayaru Tamil sangam at Thiruvaiyaru.
- Presented a paper on “Applications of Remote sensing” and participated in the UGC sponsored NATIONAL Level Seminar at ADM college for women, Nagapattinam.
- Participated in the state level workshop on “Workshop on Atomic Molecular Science (WAMS-10) “ at PRIST university thanjavur
- Presented a paper on “Astronomical Telescope” and Participated in the Astronomy Awareness camp at NATIONAL College, TIRUCHIRAPALLI Dt.
- Presented a paper on “CRYSTAL GROWTH OF LASERS AND NON LINEAR OPTICAL MATERIALS” and Participated in the UGC sponsored NATIONAL Level Seminar at NATIONAL College, TIRUCHIRAPALLI Dt.
- Presented a paper on “PHOTOVOLTAIC SYSTEMS” and participated in the UGC sponsored NATIONAL Level Seminar at ADM college for women,Nagapattinam.
- Presented a paper on “Preparation of e-content on pn-junction diode at tertiary level” and Participated in the NACC sponsored NATIONAL Level Seminar at Indira Ganesan college of education,Trichy.

- Presented a paper on “Integrating Technology for Enhanced Learning” and Participated in the International Conference at Bharathidasan University, Trichirappalli.
- Presented a paper on “Recent Trends in distance Educational” and Participated in the National Level Conference at Bharathidasan University, Trichirappalli.
- Participated in the National conference on “Tomorrow’s Technology for Education :Visions,Directions,Issues & Concerns”
- Presented a paper on “Quality Enhancement of Education Through Computer Assisted Instruction” and Participated in the State Level Seminar at Servite College of Education, Thogaimalai, Manapparai.

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