

Dr.M. Saravanan, M.Sc.,M.Phil, ADCHN, M.Tech,Ph.D
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Dr.M. Saravanan Working as an Assistant Professor (Selection Grade) in the Department of Physics at SRMIST, Ramapuram. He Graduated in Physics at Madras University, Chennai, Tamilnadu, India. He secured Master of Science in Physics at Madras University, Chennai, Tamilnadu, India. He Pursued Ph.D. in the field of Solid-State Physics-Crystal Growth at Bharathiar University, Coimbatore, Tamilnadu, India. He has 21 years of dynamic resourceful teaching experience with genuine interest in student's cognitive and social growth. Actively involved in all areas of education in including curriculum development, teaching monitoring, student career preparation and community work. Combine strong passion for engineering to motivate and inspire students, creating a challenging environment. A self-driven leader with excellent communication and interpersonal skills who effectively collaborates with all levels of staff members and fosters quality relationships with students.

Key Strengths include

Student Evaluation & Assessment, Progress Monitoring, Classroom Management, College-to-Career Connection, Class Co-ordinator, ISO Co-ordinator & Auditor, NAAC Co-ordinator, Cultural Committee Member, Science Association (forum of sciences) Co-ordinator, Laboratory in-charge (Physics, Materials Science & Electronics Labs), Anti-Ragging Committee member, Discipline Duty In-Charge, ERP Co-ordinator, Convenor and Organizing Committee Member of Department Events & Conferences, HOD(i/c), Arranging Resource Persons for National Conferences.

He has published number of research papers in reputed SCI and WoS journals with high impact factor. He also presented number of papers in National and International Journals, Conference and Symposiums.

Areas of Research:

Crystal Growth, Crystallography, Spectroscopy and Materials Synthesize.

Selected Publications:

Web of Science/SCI

1. **Saravanan, M.**, Priyadharshini, R.S. and Praveen, B., 2022. Bulk growth and portrayal investigation of 2, 4, 6-trinitrophenol crystal for nonlinear optical, electro-optic appliances. *Optics & Laser Technology*, 156, p.108556. **(Impact factor – 5)**.
2. **Saravanan M**, Senthil A and Abraham Rajasekar S (2015), ‘Growth and characterization of noncentrosymmetric single crystals of L-Argininium-4-nitro Phenolate Monohydrate’, (LARP): A potential second order nonlinear optical material’, *Optical Materials*, V48, pp. 226-232. **(Impact factor – 3.9)**
3. B.Praveen, **Saravanan M** (2020), Second harmonic generation, optical, thermal, piezoelectric and mechanical properties of adipic acid-doped ADP crystals’, *Journal of Nonlinear Optical Physics & Materials*, Vol. 30, pp. 215008 **(Impact factor – 2.7)**
4. **Saravanan M** (2020), Growth and characterization of efficient second-order nonlinear optical material: N-(2-chlorophenyl) -(1-propanamide)’, *Journal of Nonlinear Optical Physics & Materials*, Vol. 29, pp. 2050001 **(Impact factor – 2.7)**
5. **Saravanan M**, Senthil A and Abraham Rajasekar S (2016), ‘Investigations on the Low Temperature Solution growth, etching, laser damage threshold, Photoluminescence, electrical characterization and nonlinear optical Properties of organic material: Ammonium hydrogen Lmalate’, *Optik - International Journal for Light and Electron Optics*, V127, pp. 1685-1689. **(Impact factor – 3.1)**
6. **Saravanan M**, Senthil A, Abraham Rajasekar P, Vijayan N. (2016), ‘Effects of semi-organic additives on the solubility, growth, optical, thermal, mechanical, dielectric and NLO behaviors of ADP crystals for optoelectronic applications’, *Optik- International Journal for Light and Electron Optics*, V127,3, pp1463-1470. **(Impact factor – 3.1)**
7. **Saravanan M**, Senthil A and Abraham Rajasekar S (2016), ‘Growth and characterization proficient second order nonlinear optical material: L- asparaginium picrate (LASP).’ *Optics & Laser Technology*, V83, pp. 67-75. **(Impact factor –5)**
8. **Saravanan M**, Senthil A and Abraham Rajasekar S (2016), ‘Crystal growth, solubility, structural, optical, thermal, mechanical and electrical studies of L- argininium adipate: An

organic nonlinear optical material', *Optik – International Journal for Light and Electron Optics*, Volume 127, Issue 3, pp 1372-1377. **(Impact factor – 3.1)**

9. **Saravanan M** and Abraham Rajasekar S (2016), Growth and characterization of benzaldehyde 4-nitrophenyl hydrazone (BPH) single crystal: A proficient second order nonlinear optical material', *Optical Materials*, V54, pp. 217-228. **(Impact factor – 3.9)**

10. **Saravanan M** (2016), Growth and characterization of dexteros nonlinear optical material: Dimethyl amino pyridinium 4-nitrophenolate 4-nitrophenol (DMAPNP)', *Optical Materials*, V58, pp. 327-341. **(Impact factor – 3.9)**

11. **Saravanan M** and Abraham Rajasekar S (2016), Growth and characterization of high proficient second order nonlinear optical material: L-Valinium Picrate', *Optical Materials*, V52 , pp. 75-86. **(Impact factor – 3.9)**

12. **Saravanan M**, Senthil A and Abraham Rajasekar S (2016), 'Effects of 1, 2-dichloroethane on the optical, thermal, mechanical and NLO behaviors of ADP crystals' *Optik - International Journal for Light and Electron Optics*, V127, 2, pp 781-786. **(Impact factor – 3.1)**

13. Praveen, B. and **Saravanan, M.**, 2022. Investigation on structural, theoretical, optical, vibrational, morphological, crystalline nature and nonlinear optical properties of propanone 2, 4-dinitrophenyl hydrazone (PDNPH). *Optical Materials*, 132, p.112858. **(Impact factor – 3.9)**

14. Priyadharshini, R. S., and **Saravanan Manickam, M.** (2023). Investigational studies of crystalline, optical, dielectric, thermal, mechanical, second besides third order nonlinear optical properties of urea itaconic acid solitary material. *Ferroelectrics*, 602(1), 135-165. **(Impact factor – 0.8)**

15. Priyadharshini, R. S., and **Saravanan, M.** (2023). Synthesis, crystal growth, crystal structure, optical, thermal and NLO studies of Vanillin– 3, 5-Dinitrosalicylic acid (VDNS)- A novel organic material. *Optics & Laser Technology*, 164, 109512. **(Impact factor –5)**

16. Priyadharshini, R. S., and **Saravanan, M.** (2023). Doped potassium dihydrogen phosphate single crystals with enhanced second-harmonic generation efficiency: an investigation of phase purity, nonlinear, piezoelectric, optical, and crystalline qualities. *Physica Scripta*, 98(2), 025801. **(Impact factor –3.08)**

17. Priyadarshini, R. S., and **Saravanan, M.** (2023). An extensive Investigation of Crystalline, Nonlinear, Piezoelectric, Optical, Phase purity and Electro optic properties of doped Ammonium Dihydrogen Phosphate Single Crystals. Journal of Nonlinear Optical Physics & Materials. (**Impact factor –2.7**).

18. Priyadarshini, R. S., and **Saravanan, M.** (2023). Investigations of the L-ornithinium dipicrate nonlinear optical material with an emphasis on very efficient second-harmonic generation in electro-optical and optoelectronic devices, Materials Chemistry and Physics,2023 (Article in Press). (**Impact factor –4.6**).

19.B. Praveen, **Saravanan M** (2023), Investigation on Growth, spectral, hardness, Piezoelectric, contact angle, Optical Stress and nonlinear optical properties of Acid Blue 22 dye on ADP single crystals, Journal of Nonlinear Optical Physics & Materials, (Article in Press). (**Impact factor –2.7**).

Working Papers

- Growth and Characterization of Dexterous Nonlinear Optical Material for Electro-Optic Device Applications
- Synthesis and characterization of adroit organic & semi-organic NLO materials.
- Investigating Amphidynamic Crystals for Ultrafast Molecule Machines.
- Synthesize and characterization of Nanomaterials, Nanocomposites and Nanoparticles.

Work In Progress

- Growth and Characterization of high efficacy (proficient) organic NLO materials for electro optic and biological applications.
- Develop nanomaterials, nanocomposites, and nanoparticles, and perform the characterization for Nonlinear and biological activities.

Funded projects : Co-Co-Principal Investigator of DST-SERB Funded project entitled “Unidirectional Growth and Characterization of High Quality, Nonlinear Optical (NLO) Hydrazone Derivative Single Crystals for Second Harmonic Generation (SHG) Device Applications”.

Other Professional Experiences

- Overall Campus Life coordinator
- Convenor for UG Inaugural function.
- Institution coordinator for Stay Safe Online Campaign (SSO).
- Convenor for G20 Presidency of India Events.
- Science Association Co-ordinator.

- Co-ordinator of Mini Project contest for I and II year B.Tech Students.
- Alumni coordinator.
- ISO Coordinator.
- Attended Quality management System & Audit Training for Internal Auditor (ISO 9001:2015) on 29th July 2017 by Creative Management Consultants, Chennai-600106.
- Attended Mission10X (Wipro) workshop on “High Impact Teaching Skills” at SRM Institute of Science and Technology (formerly known as SRM University), Kattankulathur, Chengalpattu, Tamilnadu on April 2013.
- Attended Quality management System & Audit Training for Internal Auditor (ISO 9001:2008) on 9&10th May 2009 by Creative Management Consultants, Chennai-600106.
- Coordinator and Organizing Secretary of 1st , 2nd, 3rd , 4th and 5th,6th ,7th and 8th National conference on Hierarchically structured Materials (NCHSM 2013, NCHSM 2014 , NCHSM 2015, NCHSM 2016 and NCHSM 2017,NCHSM 2018,NCHSM 2019,NCHSM 2020,NCHSM 2021,ICHSM 2022), SRM Institute of Science and Technology (formerly known as SRM University), Ramapuram Campus, Chennai.
- Convenor, Coordinator and Organizing Secretary of Workshop on Indian Nuclear Programme in association with IGCAR, Kalpakkam, Tamilnadu, India.
- Organizing member of Workshop on Materials Characterization Techniques,
- Reviewer in the International Journal of Spectrochemica Act A: Molecular Biomolecular, Chinese Journal of Chemistry and springer.
- Convenor-Faculty Development on “One Week Online National Level Faculty Development Programme on Advanced Computational and Experimental Research in Physics” from 20.06.2022 (Monday) to 27.06.2022 (Monday) for School Teachers, Faculties, Research Scholars & PG Students.
- Organizing Secretary of National Conferences (8 Nos.)- (NCHSM 2013, NCHSM2014, NCHSM 2015 & NCHSM 2016, NCHSM 2017, NCHSM 2018, NCHSM 2019 & NCHSM 2020)

- Workshop on Sustainable Materials Advances and Applications for School and Diploma Students on 22.07.2022.

Convenor

- i) Webinar on "Basic Physics in Day-to-Day life" on 28h July 2022 for Higher secondary, Diploma students and School Teachers.
 - ii) Faculty Development on “One Week Online National Level Faculty Development Programme on Advanced Computational and Experimental Research in Physics” from 20.06.2022 (Monday) to 27.06.2022 (Monday) for School Teachers, Faculties, Research Scholars & PG Students.
 - iii) Workshop on Sustainable Materials Advances and Applications for School and Diploma Students on 22.07.2022.
 - iv) WORKSHOP ON BRIDGING SCIENCE WITH TECHNOLOGY exclusively for School, Diploma Students and UG students on 02.09.2022.
 - v) Online competition “Physics Puzzles” for School and Diploma students on 30.06.2022.
 - vi) Guest lecture on " **Concepts of Science in Day to Day life**" exclusively for I Year B.Tech students on **14^h October 2022 for I year B.Tech students.**
 - vii) "**MOTIVATIONAL TALK ON A COMPUTING MIND**" on October 27th, 2022 **for I year B.Tech students.**
- Convenor-Faculty Development on “One Week Online National Level Faculty Development Programme on Advanced Computational and Experimental Research in Physics” from 20.06.2022 (Monday) to 27.06.2022 (Monday) for School Teachers, Faculties, Research Scholars & PG Students.

Training/Workshops Attended

- Attended National Workshop on “Crystallography” and acquired hands-on Training in “3-dimensional structure determination of Biomolecules”, during December 14-15, 2006 held at Department of Physics, R.K.M. Vivekananda College, Mylapore, and Chennai.

- Attended Quality management System & Audit Training for Internal Auditor (ISO 9001:2008) on 9&10th May 2009 by Creative Management Consultants, Chennai-600106.
- Attended Mission10X (Wipro) workshop on “High Impact Teaching Skills” at SRM Institute of Science and Technology, Kattankulathur, Chengalpattu, Tamilnadu on Feb’2012.
- Attended AICTE Sponsored One Week Short Term Training Programme (Phase-III) entitled "Empowering the Moral Values, Ethics and Behavioral Attitude in Teaching Skills among Teachers" during 19/04/2019 to 24/04/2019, organized by Department of Electronics and Communication Engineering, Dr.N.G.P Institute of Technology, Coimbatore.
- Attended one week FDP on "Being Super Teacher" from July 6 to July 12, 2018, organized by Bannari amman institute of technology, school of management.
- Attended International Faculty Development Programme on "Research Methodology & Innovation" organized by Institution's Innovation Council of PPG College of Arts and Science, Coimbatore from 5th July - 12th July, 2018.
- Attended One-week online faculty development program on " Advanced Research Methodology and innovative Teaching Pedagogy" organized by Tulsiraniii Gaikwad-Path College of Engineering and Technology, Nagpur, from 08-06-2020 to 13-06-2020 in association with The Institution of Engineers (India), Indian Society for Technical Education.
- Attended a Five-day National Level Faculty Development Programme on “Investor education”, conducted online by sraddha Academy for Financial Education in association with the Department of management Sciences. Hindusthan Itstitute of Technology, Coimbatore, from 24th to 29th January", 2019.
- Attended Two Weeks Workshop entitled "Project management as a Life Skill" from 22nd September to 5th October 2017 organized by Sathyabama institute of science and technology.
- Attended one week FDP on “Research methodology and pedagogy of writing research papers” organized at St.Joseph’s Academy, from 23/02/2020 to 02/03/2020.

- Attended Six Days International Faculty Development Program titled “Novel Materials for Energy and biomedical Healthcare applications” organized by Department of Science and Humanities, M. Kumarasamy college of engineering, Karur from 11th to 16th may 2018.
- Attended “ONE WEEK NATIONAL LEVEL SHORT TERM COURSE ON ICT TOOLS FOR INTERACTIVE TEACHING AND BLENDED LEARNING” with 96 % score conducted from 12-07-2021 to 19-07-2021 organized by DEANERY OF ACADEMICS, BISHOP HEBER COLLEGE, Tiruchirappalli.
- Attended 7 days Faculty development programme on "ETHICAL PRACTICES IN ENGINEERING" from 28th May 2018 to 03rd June 2018 organized by Department of Mechanical Engineering, Sri Sairam Engineering College, Chennai, Tamil Nadu, 600044.
- Attended Seven Day Faculty development programme on "Institutional Benchmarking of Best Practices” organized by 10 premier Institutes of India from 8th June to 14th June 2018.
- Attended International Faculty Development Programme on “Advances in technologies, evolving new dimensions in e- society” organized by the Department of CSE, JIS College of Engineering, West Bengal from 2nd September, 2018 to 6th September 2018.
- Attended and successfully completed Two Week Online Course on “Art and Skills for Effective Teaching (ASET)” organized by Saveetha Teaching Learning Centre from 25.05.2018 to 06.06.2018
- Attended One-week National Faculty Development Program “Art of writing Research Paper in Scopus Journals” (5th-11th April. 2018), organized by the Department of Basic Sciences and Humanities, GMR Institute of Technology, Rajam, Andhra Pradesh, India.
- Attended 10-day free online workshop for “Teachers” from 21st April 2020 to 30th April 2020 organized by universal teacher’s academy, Puducherry, India.
- Attended participated in the one-day 1st International Online Conference On “Material Science and Nanotechnology (ICMSN -2022)” organized by Department of Physics, held on 28th February 2022.

- Attended “AN INTERNATIONAL ONLINE WORKSHOP ON MATERIALS SCIENCE AND COMPUTATIONAL METHODS” organized by PG and Research Department of Physics, Jamal Mohamed College (Autonomous), Tiruchirappalli under DBT Star College Scheme from 15-02-2022 to 16-02-2022.
- Attended “IP Awareness/Training program” under National intellectual property awareness mission organized by Department of promotion of industry and internal trade office of the controller general of patents, designs and trade marks on march 08,2022.
- Attended TWO DAY ONLINE FACULTY DEVELOPMENT PROGRAMME ON CONDENSED MATTER PHYSICS" jointly organized by PG and Research Department of Physics and Internal Quality Assurance Cell, Jamal Mohamed College (Autonomous), Tiruchirappalli-620020 in collaboration with Indian Spectro Physica Association (ISPA-Chennai) under DBT Star College Scheme during the period 24.01.2022 to 25.01.2022.
- Attended National e-Seminar on "Application of Computational Quantum Chemistry and Molecular Docking" Organized by Department of Chemistry, IQAC in association with BoS Chemistry, MGV, Nashik & Centre for Advanced Computational Chemistry Studies, New Delhi on 16th April 2022.
- Attended “TWO-DAY WORKSHOP ON ADVANCED XRD AND ELECTRON MICROSCOPY CHARACTERIZATION FOR THE DEVELOPMENT OF NOVEL MATERIALS” Organized by the Department of Physics, Mepco Schlenk Engineering College, Sivakasi between 4th and 5th January, 2023.
- Attended Two days up-skilling workshop on “THE ART OF EFFECTIVE MENTORING: A SUSTAINED MODEL” organized by Directorate of Alumni Affairs, SRM Institute of Science and Technology during 19th & 20th January 2023.
- Attended TWO days International Conference on “Condensed Matter Physics and Materials (ICMPM 2023)” organized by the Department of Physics, Ethiraj College for Women (Autonomous) in association with Indian Science congress association, Chennai Chapter on 28th February & 1st March 2023.
- Attended one-week International Faculty Development Programme on “Advanced Functional Materials: Energy, Environment and Sustainable Development” from 28th

February to 9th March, 2023 organized by the Department of Physics, SRM TRP Engineering College, Tiruchirappalli, Tamilnadu, India.

- Attended National Level Seminar on "High Pressure Techniques for Structural, Magnetic And Electrical Characterizations" organized by Department of Physics, Kongunadu College of Engineering and Technology (Autonomous), Trichy on 14th March 2023.
- Attended "National Level Workshop on DFT Calculation and Nanomaterial Characterization Techniques", organized by Post Graduate Department of Physics on 24th February 2023.
- Attended "Two Day Online International Workshop on Nanomaterials for Clean Energy and Space Astronomy (IWNCEA-2022)" organized by the Department of Physics and Astronomy club of Ethiraj College for Women in association with Indian Science Congress Association on 22 & 23 February 2022.

Membership in Professional Bodies

- Member of Indian Science Congress Association (ISCA)
- Associate Member of Technologist (AMTIE), Institution of Engineers, Kolkata, India.

Achievement and Awards

- Achieved Best Kaizen Award in ISO Audit (3 times).
- Winner of Chess, Carom & cricket in Resplendence events.
- B.sc (Physics)-Outstanding Academic Performance- Certificate of Appreciation and Efficiency in Studies.
- Appreciation for Publication of Research papers in SCI-indexed journals.
- Received Faculty Excellence Award for Teaching, Research Paper Publications and Projects in Annual Day 2023.

Scopus:

<https://www.scopus.com/authid/detail.uri?authorId=57200996062>

Orcid Id: <https://orcid.org/0000-0003-0275-7368>

Google Scholar:

<https://scholar.google.com/citations?hl=en&authuser=2&user=KGEINjIAAAAJ>