


<b>Name:</b> Dr. N. Sivakumar	<b>Photo</b> 			
<b>Designation:</b>	Associate Professor in Physics			
<b>Qualification:</b>	M.Sc. PhD, Post doc. (UGC)			
<b>Area of specialization:</b>	Nanomaterials, Thermoelectrics, Solar cells, Single crystals			
<b>Experience:</b>	<b>Industrial Experience</b>		<b>Teaching Experience</b>	
	3 years of Postdoc. research		<i>10 Years 10 Months 10 days</i>	
<b>Number of workshops / FDP attended:</b>	<b>Number of Workshops</b>		<b>Number of FDPs</b>	
	<b>64</b>		<b>28</b>	
<b>Publications:</b>	<b>Conference</b>		<b>Journal</b>	
	<b>National</b>	<b>International</b>	<b>National</b>	<b>International</b>
	5	2	2	<b>54</b>
<b>Books / Book Chapters</b>	2			
<b>Patents:</b>	<b>National</b>		<b>International</b>	
			1	
<b>Professional Body Membership</b>	<ol style="list-style-type: none"> <li>1. Indian Association for Crystal Growth (No. 2015-31)</li> <li>2. Indian Association of Physics Teachers (No. 11981 L7944)</li> <li>3. The Institute of Electrical and Electronics Engineers (IEEE. No. 98102171)</li> <li>4. Member of IEEE Electron Devices Society</li> <li>5. Member of IEEE Photonics Society</li> <li>6. Member of IEEE Electronics Packaging Society</li> <li>7. Member of IEEE Dielectric and Electrical Insulation</li> </ol>			

	<p>Society</p> <p>8. Member of IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society</p>
<p><b>Staff Achievements</b></p>	<ul style="list-style-type: none"> <li>● Kalki krishnamurthy fellowship for UG,</li> <li>● Tamil Nadu Educational Trust fellowship for UG</li> <li>● Best student and University Rank Holder award-UG</li> <li>● Class Topper – PG, Presidency College (Autonomous), Chennai.</li> <li>● <b>UGC-Dr. S. Kothari Postdoctoral Fellowship (2017)</b></li> <li>● Certificate of reviewing from the Journal Spectrochimica acta A, 2018.</li> <li>● Certificate of outstanding contribution in reviewing from the Journal Materials Letters, 2018.</li> <li>● <b>National Award</b> for Best thesis in Crystal Growth during Jan. 29-31, 2018 from Indian Association for Crystal Growth (IACG).</li> <li>● Best Oral Presentation Award - NewPhy 2020, held at The New College, Chennai, India, during 21<sup>st</sup>, January, 2020.</li> <li>● <b>DST-TARE Faculty (2021)</b>, DST-SERB, New Delhi.</li> <li>● <b>Indian SpectroPhysics Association (ISPA) Award 2022</b>, During the International Virtual Conference on Materials Science and Technology (ICMAST –2022), 15<sup>th</sup> March 2022, Kandaswamy Kandari's College, Velur, Namakkal.</li> <li>● <b>Funded Projects Award</b>, During Teachers day, 5<sup>th</sup> September 2022 from Sri Sai Ram Engineering College, West Tambaram, Chennai.</li> <li>● <b>IEEE Best Researcher Award 2024</b>, IEEE Madras Section on 23rd Feb. 2024.</li> </ul>

## Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc	General Physics	2007	Arignar Anna Govt. College	Thiruvalluvar University	87.56%	I Class with Distinction
PG	M.Sc	General Physics	2009	Presidency College	University of Madras	86.46%	I Class with Distinction
PhD	Doctor of Philosophy	Physics-Materials Science	2015	Presidency College	University of Madras	By thesis	By thesis

## Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sai Ram Engineering College	Associate Professor	01.09.2022	Till Date	2	3	13
Sri Sai Ram Engineering College	Assistant Professor	02.11.2020	31.08.2022	1	9	29
Anna University	Postdoctoral Research Fellow	02.11.2017	01.11.2020	2	11	29
Saveetha School of Engineering	Assistant Professor (Senior)	04.06.2015	01.11.2017	2	4	28
VIT University, Vellore	Research Associate	01.08.2009	30.11.2010	1	3	31
<b>Total</b>				<b>10</b>	<b>10</b>	<b>10</b>

## Workshops/Seminars attended/Symposium Attended/ Conference Attended:

1. N. Sivakumar participated and presented the paper in the “30th International Conference on Amorphous and Nanoscale Semiconductors (ICANS 30)”, Conducted by University of Manchester, Manchester, United Kingdom during 5th – 8th August 2024.
2. N. Sivakumar participated and presented the paper in the EMRS Spring Meeting – 2024, Conducted by Exhibition & Convention, Center in Strasbourg, France during 27th - 31st May 2024. N. Sivakumar participated and presented the paper in the International Conference on Emerging Advanced Materials Conducted by Center for Nano Science and technology (CNST), Anna University, Chennai during 27th-28th March 2024.

3. N. Sivakumar participated and presented the paper in the International Conference on “Advances in Photovoltaic Materials and Devices (APMD 23)” Conducted by S&T Digital, IISER Pune, India, during 2-5 June, 2023
4. N. Sivakumar participated and presented the paper in the International Symposium on “Semiconductor Materials and Devices (ISSMD-2022)” held at Kalinga Institute of Industrial Technology (Deemed to be University), Bhubaneswar, India, during 16 th - 18th December, 2022
5. N. Sivakumar participated in the webinar on “Cryo and In-situ Electron Microscopy Diagnosis Guided Design of Rechargeable Battery Materials for Better Batteries” conducted by Materials Research Society (MRS), during 25th January 2022.
6. N. Sivakumar participated in the Indo-Japan workshop on “Silicon Crystal Growth for Photovoltaic Applications”, held at SSN College of Engineering, Chennai, Tamil Nadu, India, during 7 th January 2022.
7. N. Sivakumar participated in the “International Online School on Functional Advanced Materials For Emerging Applications-2021”, held at Institute of Materials Science of Barcelona (ICMAB-CSIC), Campus of the Autonomous University of Barcelona (UAB), 08193 Bellaterra, Spain, during 28-2, June-July 2021.
8. N. Sivakumar participated in the “International Virtual Conference on Thermoelectrics (VCT2021)” held at International Thermoelectric Society and Colorado School of Mines, Golden, CO 80401, United States, during 20-22, July 2021.
9. N. Sivakumar participated in the “International Summer Program 2021” held at Graduate School of Science, Osaka University, Japan, during 13-21, July 2021.
10. N. Sivakumar participated in the “International E-Conference on Solar Power Technologies” held at Institute for Solar Fuels at the Helmholtz-Zentrum Berlin, Germany, during 5-8, July 2021.
11. N. Sivakumar participated in the “International Online Conference on Electron Beam Spectroscopy for Nano Optics 2021” held at Institut de Physique Nucléaire Orsay, Georges Clemenceau - 91406, Orsay, France, during 14-15 June 2021.
12. N. Sivakumar participated in the Webinar on “Benchtop NMR analysis and the future” held at Oxford Instruments, Abingdon, United Kingdom, during 9 June 2021.
13. N. Sivakumar participated in the Webinar on “Solving challenges in green energy research with Raman spectroscopy” Organized by Renishaw, Wotton-Under-Edge, United Kingdom, during 8 June 2021.
14. N. Sivakumar participated in the Webinar on “Corrosion Science and Technology 2021” held at IGCAR The Indian Institute of Metals (IIM), Kalpakkam Chapter, India, during 12 May, 2021
15. N. Sivakumar participated in the AICTE-Workshop on “Effective Research Paper writing & Patent Filing” held at PSGCAS Intellectual Property Rights (IPR) cell, PSG College of Arts & Science, Coimbatore, India, during 26, December 2020.
16. N. Sivakumar participated in “Grant Writing under Physical Sciences domain” organized by MHRD-STARS, IISc, Bangalore, during 7 December, 2020.
17. N. Sivakumar participated in the Research Avenues in Alternate Energy Systems held at Government College of Technology, Coimbatore, India, during 23-27 November, 2020.
18. N. Sivakumar participated in the “IX International Scientific Conference “ Actual Problems of Solid State Physics” held at Scientific-Practical Materials Research Centre of National Academy of Science of Belarus Minsk 220072, Brovki 19, Belarus, during 22-26, November 2020.
19. N. Sivakumar participated in the “International Conference on ADVANCED MATERIALS SCIENCE AND GRAPHENE NANOTECHNOLOGY” held at The University of Manchester, United Kingdom, during 25-26, November 2020.
20. N. Sivakumar, participated and presented a research paper entitled “A thermal kinetic approach of an Organic single crystal: p-nitrobenzylidene-p phenylamineaniline” in the “Virtual International Transdisciplinary Conference” held at Department of Physics, VIT University, Vellore, Tamil Nadu, India, during 26 -28<sup>th</sup> August, 2020.

21. N. Sivakumar, participated in the “International Webinar on recent advances in materials science and technology” held at Department of Physics, Aditanar College of Arts and Science, Tiruchendur, Tamil Nadu, India, during 26<sup>th</sup> June, 2020.
22. N. Sivakumar, participated in the “Webinar Basic author workshop research article writing and reference management using mendeley” held at Annamalai University, Chidambaram, Tamil Nadu, India, during 22<sup>nd</sup> June, 2020.
23. N. Sivakumar, participated in the “Virtual symposium on multifunctional materials” held at Department of Physics, SRM Institute of Science and Technology, Chennai, Tamil Nadu, India, during 17<sup>th</sup> June, 2020.
24. N. Sivakumar, participated in the “Webinar on Graphene based Nanocomposites for Energy storage” held at Department of Physics, V.O. Chidambaram College, Thoothukudi, Tamil Nadu, India, during 1<sup>st</sup> June, 2020.
25. N. Sivakumar, participated in the “International Webinar on functional novel materials for electrochemical sensors and energy storage devices' ' held at Thiyagarajar College, Madurai, India, during 15<sup>th</sup> May, 2020.
26. N. Sivakumar, participated and presented a research paper entitled “Crystal structure and thermal kinetic approach on benzylideneaniline derivative:p-nitrobenzylidene-p-phenylamineaniline” in the “24<sup>th</sup> National seminar on crystal growth and applications (XXIV NSCGA-2020)” held at Department of Physics, Periyar University, Salem, India, during 3-5, February, 2020.
27. N. Sivakumar, participated and presented a research paper entitled “Synthesis, structure crystalline perfection and mechanical hardness of pure and strontium substituted LaFeO<sub>3</sub> single crystals” in the “International conference on Recent Advancements in Material Science (NewPhy 2020)” held at The New College, Chennai, India, during 21<sup>st</sup>, January, 2020.
28. N. Sivakumar, participated and presented a research paper entitled “Synthesis, structure and thermal kinetics of an organic crystalline material: p-dinitrobenzylidene-p-diethylamineaniline” in the “International conference on Advances in chemistry with specific reference to catalysis, sensors, drug delivery and energy materials” held at University of Madras, Chennai, India, during 9 -10, January, 2020.
29. N. Sivakumar, participated and presented a research paper entitled “Synthesis, structure and spectroscopic investigations of a metal-organic crystal: Thiourea silver nitrate for optical devices” in the “64<sup>th</sup> DAE-Solid State Physics Symposium” held at Indian Institute of Technology Jodhpur, Rajasthan, India, during 18 -22, December, 2019.
30. N. Sivakumar, participated and presented a research paper entitled “ Synthesis, structure and thermal decomposition behavior of an organic material: p-nitrobenzylidene-p-phenylamineaniline” in the “30<sup>th</sup> Annual General Meeting of MRSI” held at IISc, Bangalore, India, during 12-15, February, 2019.
31. N. Sivakumar, participated in “International Workshop on Crystalline Materials and Applications” held at Crystal Growth Centre, Anna University, Chennai, Tamil Nadu, India, during 03-05, January, 2019.
32. N. Sivakumar, participated in “Workshop on Research Methodology and Scientific Writing” held at Centre for Research, Anna University, Chennai, Tamil Nadu, India, during 11-12, July, 2018.
33. N. Sivakumar, participated in “Research for Resurgence” held at Centre for Research, Anna University, Chennai, Tamil Nadu, India, during 13, March, 2018.
34. N. Sivakumar, R. Jayavel and G. Anbalagan, participated and presented a research paper entitled “Nucleation studies and bulk growth of novel metal organic polymeric single crystal: thiourea silver nitrate  $\{7(\text{CH}_4\text{N}_2\text{S}).4(\text{AgNO}_3)\}_n$  for Nonlinear optical applications” in the “National Seminar on Crystal Growth and Applications” held at Sacred Heart College, Tirupattur, Vellore, Tamil Nadu, India, during 29-31, January, 2018.
35. N. Sivakumar, participated in the DST-PURSE and ANNA UNIVERSITY sponsored “International Workshop on recent materials for healthcare and industrial applications (IWRM-2018)” held at Anna University, Chennai, Tamil Nadu, India, during 22-23, January, 2018.

36. N. Sivakumar, participated in the “International Workshop on Advanced Materials and Device Technology (IWAMDT-2017)” held at Anna University, Chennai, Tamil Nadu, India, during 22-24, November, 2017.
37. N. Sivakumar participated in One day carrier oriented Workshop and Hands-on Training on ‘NON-DESTRUCTIVE TESTING METHODOLOGIES & TECHNIQUES’ Conducted by TWG GROUP, held at Saveetha University, Chennai, Tamil Nadu, India, During 25<sup>th</sup>, February, 2017.
38. N. Sivakumar participated and presented a Research Paper entitled ‘Structural and spectroscopic characterization studies of metal organic material: poly bis (thiourea) silver (I) nitrate (TUSN) single crystal’ in an International conference on recent advancements in materials chemistry (ICRAMC) held at SRM University, Chennai, Tamil Nadu, India, During 5-17, February, 2017.
39. N. Sivakumar participated and presented a Research Paper entitled ‘Assessment of optimal combination of operating parameters using graph theory matrix approach’ in an International conference on design, analysis, manufacturing and simulations (ICDAMS) held at Saveetha University, Chennai, Tamil Nadu, India, During 7-8, April, 2016.
40. N. Sivakumar participated and presented a Research Paper entitled ‘Mechanical studies on pure and Fe<sup>3+</sup> doped potassium hydrogen phthalate single crystals for device fabrications’ in an International conference on design, analysis, manufacturing and simulations (ICDAMS), held at Saveetha University, Chennai, Tamil Nadu, India, During 7-8, April, 2016.
41. N. Sivakumar participated in the “National Workshop on luminescence materials devices and applications (LMDA-15)” in the IGCAR, Kalpakkam, Tamil Nadu, India, during 19-20, August, 2015.
42. N. Sivakumar participated and presented a paper entitled “Third harmonic generation studies on glycine phosphite (GPI) single crystals for optical device fabrications” in the National conference on Advanced materials science (NCMAS-2015)” held at Jerusalem College of Engineering, Chennai, Tamil Nadu, India, during 22nd July, 2015.
43. N. Sivakumar participated in the “Science Academies’ Lecture workshop on Topics in Theoretical physics” in the Presidency College, Chennai, Tamil Nadu, India, during 10-11, March, 2014.
44. N. Sivakumar and G. Anbalagan, participated and presented the research work entitled “Growth, structural, optical, mechanical, laser damage threshold and SHG properties of  $\gamma$ -glycine single crystal” in the “National Seminar on Recent Advances in Physics-2014” held at Presidency College, Chennai, Tamil Nadu, India, during 7-8, March, 2014.
45. N. Sivakumar and G. Anbalagan, participated and presented a poster entitled “Structure, Crystal Growth and Characterization of LTPN crystal” in the “XVIII National Seminar on Crystal Growth” held at SSN College, Chennai, Tamil Nadu, India, during 24-26, February, 2014.
46. N. Sivakumar, N. Kanagathara, P. Krishnan, K. Gayathri, G. Anbalagan, participated and presented a paper entitled “Structural investigation on polymeric metal organic single crystal: poly bis(thiourea) silver nitrate” in the “International Conference on Advanced Materials and Manufacturing” held at Cape Institute of Technology, Levengipuram, Tirunelveli, Tamil Nadu, India, during 11-12, April, 2013.
47. N. Sivakumar, N. Kanagathara, P. Krishnan, K. Gayathri, G. Anbalagan, participated and presented a paper entitled “Synthesis, Growth and Characterization of pure and succinic acid mixed glycine phosphite (GPI) single crystals” in the “National Seminar on Recent Trends in Crystal Growth and Nano Materials (NSCGNM-2013)” held at National College, Tricity, Tamil Nadu, India, during 13-15, March, 2013.
48. N. Sivakumar, N. Kanagathara, P. Krishnan, K. Gayathri, G. Anbalagan, participated and presented a paper entitled “Structural and Non-linear optical studies of new polymeric single crystal: Poly bis thiourea silver (I) nitrate” in the “National Conference on Perspectives in Lasers and spectroscopy (NCPLAS-2013)” held at Dr. MGR University, Adayalampattu, Chennai, Tamil Nadu, India, during 15<sup>th</sup> February, 2013.
49. N. Sivakumar participated in the seminar on “Higgs Boson and Neutrino” held at University of Madras, Chennai, Tamil Nadu, India, during 7, December, 2012.
50. N. Sivakumar, N. Kanagathara, K. Gayathri, P. Krishnan, S. Joshna and G. Anbalagan, participated and presented a poster entitled “Synthesis, Growth and Characterization of Non-linear Optical Single Crystal:

- Glycine Succinate” in the “International Conference on Research: Perspectives and procedures” held at Vaishnav College, Chennai, Tamil Nadu, India, during 23-24, August, 2012.
51. N. Sivakumar, R. Mohan Kumar and G. Anbalagan, participated and presented a poster entitled “Effect of Glycine doping in Potassium Hydrogen Phthalate (KHP) crystals on structural and optical properties” in the “International Conference on Recent Trends in Advanced Materials (ICRAM-2012)” held at VIT University, Vellore, India, during 20-22, February, 2012.
  52. N. Sivakumar participated in the “National Conference on Green Chemistry” held at Presidency College, Chennai, Tamil Nadu, India, during 10<sup>th</sup> February, 2012.
  53. N. Sivakumar, R. Mohan Kumar and G. Anbalagan, participated and presented a poster entitled “Optical and its related parameters of Glycine Phosphite (GPI) single crystals for Optical Devices” in the “National Conference on Recent Advances in Materials and Technology” held at Sathyabama University, Chennai, Tamil Nadu, India, during 6-7, January, 2012.
  54. N. Sivakumar, N. Kanagathara, K. Gayathri, P. Krishnan and G. Anbalagan, participated and presented a paper entitled “Optical and its related parameters of pure and amino acid: Glycine doped Potassium Hydrogen Phthalate single crystals” in the “2<sup>nd</sup> International Conference on Science, Engineering and Technology” held at VIT University, Vellore, Tamil Nadu, India, during 20-21 April, 2011.
  55. N. Sivakumar participated in “One day seminar on 50 years of lasers” held at RKM Vivekananda College, Chennai, Tamil Nadu, India, during 19<sup>th</sup> February, 2011.
  56. N. Sivakumar participated in “National Workshop on Modern Techniques in Analytical Chemistry” held at SCSVM University, Enathur, Kanchipuram, Tamil Nadu, India, during 10-11, February, 2011.
  57. N. Sivakumar participated in “National level conference on the recent trends in the field of Nanoscience and Technology-NANOMEET-2010” held at Anna University, Chennai, Tamil Nadu, India, during 25-26, March, 2010.
  58. N. Sivakumar participated and presented a research paper in “Tamil conference on crystal growth” held at Anna University, Chennai, Tamil Nadu, India, during 18-19, October, 2010.
  59. N. Sivakumar participated in “One day seminar on Essentials of Good Research – Trends and techniques” held at VIT University, Vellore, Tamil Nadu, India, during 30<sup>th</sup> October, 2010.
  60. N. Sivakumar participated in “UGC sponsored workshop on Recent Trends in Crystal Growth” held at Anna University, Chennai, Tamil Nadu, India, during 30<sup>th</sup>, March, 2010.
  61. N. Sivakumar participated and presented a research paper entitled, “ Evaluation of the Physico-chemical parameters on the pollutant Migration and their relation with ultrasonic wave velocity in the groundwater of the polluted sites of Vellore district” in Eighteen National symposium on Ultrasonics, held at VIT University, Vellore, Tamil Nadu, India, during 21-23, December, 2009.
  62. N. Sivakumar participated in “Pre-Symposium workshop on Biomedical Applications of Ultrasonics/Ultrasonics in Materials Research” held at VIT University, Vellore, Tamil Nadu, India, during 19-20, December, 2009.
  63. N. Sivakumar participated in “The 6<sup>th</sup> National symposium and conference on solid state chemistry and allied areas” held at VIT University, Tamil Nadu, India, during 19-21, November, 2009.
  64. N. Sivakumar participated in “The state level seminar on Recent Advancements in solar energy applications” Presidency College, Chennai, Tamil Nadu, India, during 21-22, April, 2009.

### **FDP/STTP Attended**

1. N. Sivakumar participated in the FDP on “Two Weeks Online Faculty Development Program (FDP) on Frontiers in Materials Research, Innovations and Entrepreneurship (FMRIE’24)” held at Department of Humanities and Sciences (Physics), Sri Sairam Engineering college, Chennai-44, during 25<sup>th</sup> July 2024 to 8<sup>th</sup> August 2024.
2. **N. Sivakumar** participated in the FDP on “PH 3151 Engineering Physics”, held at Department of Physics, Anna University, Chennai, India, during 06-13, Aug. 2022.

3. **N. Sivakumar** participated in the “International Online School on Functional Advanced Materials For Emerging Applications-2021”, held at Institute of Materials Science of Barcelona (ICMAB-CSIC), Campus of the Autonomous University of Barcelona (UAB), 08193 Bellaterra, Spain, during 28-2, June-July 2021.
4. **N. Sivakumar** participated in the “International Virtual Conference on Thermoelectrics (VCT2021)” held at International Thermoelectric Society and Colorado School of Mines, Golden, CO 80401, United States, during 20-22, July 2021.
5. **N. Sivakumar** participated in the “International Summer Program 2021” held at Graduate School of Science, Osaka University, Japan, during 13-21, July 2021.
6. **N. Sivakumar** participated in the “International E-Conference on Solar Power Technologies” held at Institute for Solar Fuels at the Helmholtz-Zentrum Berlin, Germany, during 5-8, July 2021.
7. **N. Sivakumar** participated in the “IX International Scientific Conference “ Actual Problems of Solid State Physics” held at Scientific-Practical Materials Research Centre of National Academy of Science of Belarus Minsk 220072, Brovki 19, Belarus, during 22-26, November 2020.
8. **N. Sivakumar** participated in the “International Conference on ADVANCED MATERIALS SCIENCE AND GRAPHENE NANOTECHNOLOGY” held at The University of Manchester, United Kingdom, during 25-26, November 2020.
9. **N. Sivakumar** participated in the “International Online Conference on Electron Beam Spectroscopy for Nano Optics 2021” held at Institut de Physique Nucléaire Orsay, Georges Clemenceau - 91406, Orsay, France, during 14-15 June 2021.
10. **N. Sivakumar** participated in the Webinar on “Benchtop NMR analysis and the future” held at Oxford Instruments, Abingdon, United Kingdom, during 9 June 2021.
11. **N. Sivakumar** participated in the Webinar on “Solving challenges in green energy research with Raman spectroscopy” Organized by Renishaw, Wotton-Under-Edge, United Kingdom, during 8 June 2021.
12. **N. Sivakumar** participated in the Webinar on “Corrosion Science and Technology 2021” held at IGCAR The Indian Institute of Metals (IIM), Kalpakkam Chapter, India, during 12 May, 2021
13. **N. Sivakumar** participated in the AICTE-STC on “Advanced Materials Characterizations: From fundamentals towards applications: held at Department of Ceramic Engineering, IIT (BHU), And Department of Metallurgical Engineering, IIT (BHU) Varanasi-221005, during 22-26 Feb. 2021.
14. **N. Sivakumar** participated in the AICTE-STC on “Nanoelectronics Devices and Circuits” held at Indian Institute of Technology (BHU), Varanasi – 221005, (U.P.), during 4-9 January 2021.
15. **N. Sivakumar** participated in the AICTE-Workshop on “Effective Research Paper writing & Patent Filing” held at PSGCAS Intellectual Property Rights (IPR) cell, PSG College of Arts & Science, Coimbatore, India, during 26, December 2020.
16. **N. Sivakumar** participated in the ATAL FDP “Green Technology and Sustainability” held at Engineering Department of Mechanical Engineering, National Institute of Technology, Raipur, India, during 8-12 December, 2020
17. **N. Sivakumar** participated in “Grant Writing under Physical Sciences domain” organized by MHRD-STARS, IISc, Bangalore, during 7 December, 2020
18. **N. Sivakumar** participated in the Research Avenues in Alternate Energy Systems held at Government College of Technology, Coimbatore, India, during 23-27 November, 2020
19. **N. Sivakumar** participated in the FDP on “Astrophysics” JAMAL MOHAMED COLLEGE, Tiruchirappalli, India, during 11-12 November, 2020



20. **N. Sivakumar** participated in the FDP on “Advanced materials for energy storage applications” held at Department of Physics, Velammal Institute of Technology, Chennai 601204, Tamil Nadu, India, during 18-22, July, 2020.
21. **N. Sivakumar** participated in the FDP on “Evolution of functional materials and its effective characterization towards diverse engineering applications” held at Department of Physics, Kumaraguru Institute of Technology, Coimbatore, Tamil Nadu, India, during 22-29, June 2020.
22. **N. Sivakumar** participated in the FDP on “Smart materials sensor and energy devices” held at Department of ECE, SSN College of Engineering, Kalavakkam, 603 110, Tamil Nadu, India, during 25-30, May 2020.
23. **N. Sivakumar** participated in the DST-SERB school on “Photonics Phenomena, Materials and Devices” held at Crystal Growth Centre, Anna University, Chennai-25, Tamil Nadu, India, during 02-21, December, 2019.
24. **N. Sivakumar** participated in the Refresher course “Two-dimensional Materials: Physics and Applications” held at Department of Physics, IITM Chennai-36, Tamil Nadu, India, during 21-26, September, 2019.
25. **N. Sivakumar** participated in the GIAN course on “Scanning and Transmission Electron Microscopy: Basics and Applications to Low Dimensional Structures” held at Crystal Growth Centre, Anna University, Chennai -25, Tamil Nadu, India, during 03-07, December, 2018.
26. **N. Sivakumar** participated in the GIAN course on “Advanced X-ray diffraction techniques for the characterization of materials” held at Crystal Growth Centre, Anna University, Chennai -25, Tamil Nadu, India, during 17-25, January, 2018.
27. **N. Sivakumar** participated in the GIAN course on “Latest Methods in Protein Crystallization and Structural Biology” held at Crystal Growth Centre, Anna University, Chennai -25, Tamil Nadu, India, during 11-15, December, 2017.
28. **N. Sivakumar** participated in the summer school on “Atmospheric Sciences” Organized Jointly by ISRO, Bangalore and Department of Physics, IIT Madras, Chennai, Tamil Nadu, India, during 5-10, May, 2008.

**Completed / Ongoing Projects:****Sponsored Research Projects (Completed)**

Sl. No	Title of the project	Position	Funding Agency	Duration	Grant (Rs.)
1.	Growth of potential organic n-benzylideneaniline derivative single crystals for phase and polarization modulator applications	Principal Investigator	UGC	2017-2020	30,000,00
2.	Researchers Supporting Project (RSP-2021/78)	Principal Investigator	King Saud University (Rs. 50,000/-)	2021-2022	Supporting for chemicals and characterization
3.	Researchers Supporting Project (RSP-2023R78)	Principal Investigator	King Saud University (Rs. 50,000/-)	2022-2023	Supporting for chemicals and characterization

**Research Projects (Ongoing):**

Sl. No	Title of the project	Position	Funding Agency	Duration	Grant Applicable
1.	Development of novel 2D organic–inorganic hybrid halide perovskite materials for efficient Photovoltaic applications	Principal Investigator	DST-TARE, Delhi.  (Rs. 18,30,000/-)	3 Years (Dec.2021-Nov. 2024)	Synthesis and fabrication of solar cell
2	Investigation of novel ABC ternary polycrystalline materials for microwave dielectric applications	Principal Investigator	UGC-DAE CSR  (Rs. 1,35,000/-)	3 Years (April 2022-March 2025)	Synthesis and Characterization of microwave-dielectric properties
3	Researchers Supporting Project (RSP-2024R78)	Principal Investigator	King Saud University  (Rs. 50,000/-)	2023-2024	Supporting for chemicals and characterization

**Patent:**

Sl. No	Title of the patent	Candidates	Application No.	Publication No.	Date of Publication
1.	Growth Process of Melaminium Levulinate Monohydrate Crystal	Dr. N. Sivakumar	202141048795	48/2021	26/11/2021

### Journal Publications:

[1] N. Sivakumar, K. Sedumathavan, Ali Alsulmi, K. Yukesh Kumar, K. Settu “A comprehensive exploration of pure and Zn-doped LaFeO<sub>3</sub> nanoparticles synthesized by solid-state mechanism for charge storage devices” J Mater Sci: Mater Electron, Volume 35, article number 1791, (2024), 10.1007/s10854-024-13483-7, ISSN 1573-482X(Q2)

[2].V.Vijayalakshmi , N. Sivakumar , V.Alsulmi , S. Elangovan, N. Kanagathara, Jan Jancza k, M.K. Marchewka, M. Rowinska,“Exploring structure, molecular interactions, optical and thermal properties of Bis(2-Aminopyrimidinium) selenate monohydrate:A combined experimental and theoretical study” Optical Material Vol 152, June 2024, 115539. I.F. 3.9, ISSN: 0957-4522 (Q2). doi.org/10.1016/j.optmat.2024.115539.

[3] N. Sivakumar, Subhashis Saha, Narendra Bandaru, Jatindra Kumar Rath, Development of MAPbI<sub>3</sub>.H<sub>2</sub>O and MAPbI<sub>3</sub> perovskite solar cells using TiO<sub>2</sub> and P3HT as charge transport layers, J Mater Sci: Mater Electron 35 (2024)223, 10.1007/s10854-024-12010-y, I.F. 2.8, ISSN: 0957-4522 (Q2) .

[4] Subhashis Saha, N. Sivakumar, Narendra Bandaru, Rajesh Kanakala, Somnath Chanda Roy, Jatindra Kumar Rath, Development of SnS quantum dot hybrid solar cells on TiO<sub>2</sub> nanorods, J Mater Sci: Mater Electron 35 (2024)258, 10.1007/s10854-024-12012-w, I.F. 2.8, ISSN: 0957-4522 (Q2).

[5] N. Sivakumar, J. Venkatamuthukumar, A. Jagadesan, V. Yogaraj, E. Murugan “Effect of ferric (Fe<sup>3+</sup>) ion dopant on the dielectric properties of Potassium Hydrogen Phthalate Single crystals for electronic devices” Journal of Propulsion Technology, Volume No.6 (2023), I.F. 1, ISSN: 1001- 4055.

[6] N. Sivakumar, J. Venkatamuthukumar, A. Jagadesan, V. Yogaraj, E. Murugan “Hardness and its related constants of pure and Fe<sup>3+</sup> doped Potassium Hydrogen Phthalate Single crystals for optical device fabrications” Journal of Propulsion Technology, Volume No.6 (2023) I.F. 1, ISSN: 1001- 4055.

[7]. N. Sivakumar, K. Tashiro, Ali Alsulmi, R. Jayavel, Investigation on p-nitrobenzylidene p-phenylamineaniline: An organic optical single crystal developed by solution route for optoelectronic devices, Optical Materials, doi.org/10.1016/j.optmat.2023.114173, 143 (2023) 114173. I.F. 3.9, ISSN: 0957-4522 (Q2).

[8]. N. Kanagathara, N. Sivakumar, M. K. Marchewka, J. Janczak, Ali Alsulmi, V. Yogaraj, E. Murugan, Structure, spectroscopic, optical, photoluminescence, and thermal characterization of 2-amino 3-picolinium arsenate crystalline material, J Mater Sci: Mater Electron 34 (2023)1573, doi.org/10.1007/s10854-023-10974-x, I.F. 2.8, ISSN: 0957-4522 (Q2).

[9]. N. Sivakumar, Subhashis Saha, Ramakrishna Madaka, Narendra Bandaru, Jatindra Kumar Rath,

Investigation on the structural, spectral and optical properties of MAPbI<sub>3</sub>.H<sub>2</sub>O and MAPbI<sub>3</sub> perovskite crystals for photovoltaic cells, *J Mater Sci: Mater Electron.* 34, (2023) 1193. doi.org/10.1007/s10854-023-10607-3, I.F. 2.478, ISSN: 0957-4522 (Q2).

[10]. N. Sivakumar, P. Vijayakumar, R. Jayavel, Ali Alsalmeh, Abdullah S. Alsulami, Yuui Yokota, Crystal structure, dielectric and magnetic studies of pure and Sr substituted LaFeO<sub>3</sub> single crystal grown by optical zone technique, *J. Alloys Compd.* 943 (2023) 169161. doi.org /10.1016/j.jallcom.2023.169161, I.F. 6.371, ISSN: 0925-8388 (Q1) floating

[11]. N. Sivakumar, J. Gajendiran, Ali Alsalmeh, Kentaro Tashiro, Structural, morphological, optical, magnetic and electrochemical behavior of solid state synthesized pure and Sr-doped LaFeO<sub>3</sub> nanoparticles, *Physica B* 641 (2022) 414086. doi.org/10.1016/j.physb.2022.414086, I.F. 2.988, ISSN: 0921-4526 (Q3)

[12]. J. Venkatamuthukumar, Ali Alsalmeh, A. Jagadesan, A. Rajendira Prasad, N. Sivakumar, Dielectric studies of pure and ferric (Fe<sup>3+</sup>) ion doped potassium hydrogen phthalate single crystals for potential device performances, *AIP Conference Proceedings* 2464, 030005 (2022) 1-5. doi.org/10.1063/5.0082411, I.F. 0.4801, ISSN: 0094-243X

[13]. J. Gajendiran, S. Gnanam, V.P. Senthil, J. Ramana Ramya, K. Ramachandran, V. Vijayakumar, S. Gokul Raj, G. Ramesh Kumar, N. Sivakumar, Hydrothermal synthesis of undoped and inner transition metals (neodymium (Nd), gadolinium (Gd)) doped tin monosulfide (SnS) nanostructures: Comparative study of the morphological, opto-magnetic properties and antibacterial performance, *Chemical Physics Letters*, 796 (2022) 139569. doi.org/10.1016/j.cplett.2022.139569, I.F. 2.328, ISSN: 0009-2614 (Q3)

[14]. N. Sivakumar, J. Venkatamuthukumar, Magesh Murugesan, Ali Alsalmeh, Crystal structure, spectroscopic, crystalline perfection and optical studies of a potential optical material: Bis-glycine hydrobromide, *Opt. Mater.* 122 (2021) 111730 doi.org/10.1016/j.optmat.2021.111730, I.F. 3.08, ISSN: 0957-4522 (Q2).

[15]. N. Sivakumar, J. Venkatamuthukumar, Ali Alsalmeh, Growth, structural, spectroscopic, optical, and mechanical studies of potassium hydrogen phthalate single crystals with glycine as additive, *J Mater Sci: Mater Electron.* 32, (2021) 18978–18993. doi.org/10.1007/s10854 021-06413-4, I.F. 2.220, ISSN: 0957-4522 (Q2)

[16]. N. Sivakumar, P. Nagaraju, A. Alsalmeh, A. Alghamdi, R. Jayavel, Enhanced electrochemical performance of lanthanum ferrite decorated reduced graphene oxide nanocomposite electrodes prepared by in-situ microwave irradiation for energy storage applications, *Int J Energy Res.* 45 (2021) 5272-5282. doi.org/10.1002/er.6146, I.F. 3.74, ISSN: 1099-114X. (Q1)

[17]. N. Sivakumar, G. Anbalagan, R. Jayavel, Reply to the comments on the paper: Crystal design, thermal and dielectric behavior of novel silver (Ag) co-ordinated thiourea single crystals, *Mater. Lett.* 280 (2020) 128674. doi.org/10.1016/j.matlet.2020.128674 I.F. 3.019, ISSN: 0167-577X (Q2)

[18]. A. Jagadesan, N. Sivakumar, S. Arjunan, G. Parthipan, Growth, structural, optical, thermal and dielectric behaviour of a novel organic nonlinear optical (NLO) material: Benzimidazolium trichloroacetate monohydrate, *Optical Materials*, 109 (2020) 110285. doi.org/10.1016/j.optmat.2020.110285, I.F. 2.779, ISSN: 0925-3467 (Q2)

[19]. N. Sivakumar, J. Kanchanadevi, M. Govindarajan, R. Jayavel, G. Anbalagan, Theoretical investigation on the crystal structure, spectral and optical properties of a novel organic optical material: (Acetoxy) (2-methylphenyl) methylacetate, *Journal of Molecular Structure*, 1219 (2020) 128579. doi.org/10.1016/j.molstruc.2020.128579. ISSN: 0022-2860 (Q3) I.F. 2.120,

[20]. J. Venkatamuthukumar, N. Sivakumar, R. Jayavel, G. Anbalagan, Synthesis, structure and spectroscopic investigations of a metal-organic crystal: Thiourea silver nitrate for optical devices, *AIP Conference Proceedings* 2265, 030410 (2020) 1-4. doi.org/10.1063/5.0017262, I.F. 0.4801, ISSN: 0094-243X

- [21]. J. Gajendirana, V.P. Senthil, J. Ramana ramya, N. Sivakumar, T. Shanmugavel, S. Gokul raj, G. Ramesh kumar, The influence of temperature on the structural, morphological, optical, electrical, hemocompatibility and magnetic characterization of CoFe<sub>2</sub>O<sub>4</sub> nanostructures, *J. Optoelectron. Adv. Mater.* 22 (2020) 286 - 297. I.F. 0.588, ISSN: 1454 - 4164 (Q4)
- [22]. J. Gajendirana, S. Gnanam, V. Vijaya Kumar, K. Ramachandran, J. Ramana Ramya, S. Gokul Raj, N. Sivakumar, Structural, optical and photocatalytic properties of ZnS spherical/flake nanostructures by sugar-assisted hydrothermal process, *Chemical Physics Letters* 754 (2020) 137639. doi.org/10.1016/j.cplett.2020.137639 . I.F. 1.901, ISSN: 0009 2614 (Q3)
- [23]. N. Sivakumar, G. Anbalagan, R. Jayavel, Crystal design, thermal and dielectric behavior of novel silver (Ag) co-ordinated thiourea single crystals, *Mater. Lett.* 272 (2020) 127899. doi.org/10.1016/j.matlet.2020.127899 . I.F. 3.019, ISSN: 0167-577X (Q2)
- [24]. N. Sivakumar, J. Gajendirana, R. Jayavel, Microstructural, optical, electrochemical and magnetic properties of hydrothermal synthesized zincite/carbon (ZnO/C) composite, *Chem. Phys. Lett.* 745, (2020) 137262. doi.org/10.1016/j.cplett.2020.137262 . ISSN: 0009-2614 (Q3) I.F. 1.901,
- [25]. K. Krishnaraj, N. Sivakumar, P. Praveen Kumar, Growth, spectral, mechanical, electrical and optical characterization of guanidinium hydrogen succinate single crystal, *Bull. Mater. Sci.* 43 (2020) 1-7. doi.org/10.1007/s12034-019-2019-6. I.F. 1.260, ISSN: 0250-4707 (Q4)
- [26]. J. Gajendirana, N. Sivakumar, C. Parthasaradhi Reddy, J. Ramana Ramya, The effect of calcination's temperature on the structural, morphological, optical behaviour, hemocompatibility and antibacterial activity of nanocrystalline Co<sub>3</sub>O<sub>4</sub> powders, *Ceramics International*, 46 (2020) 5469-5476. doi.org. 10.1016/j.ceramint.2019.10.261 . I.F. 3.450. ISSN: 0272-8842 (Q1)
- [27]. M. Manonmani, V.P. Senthil, J. Gajendirana, J.R. Ramya, N. Sivakumar, V. Jaikumar, S. Gokul Raj, G. Ramesh Kumar, A study of the structural, magnetic, hemocompatibility and electrochemical properties of BiFeO<sub>3</sub> (BFO)/CoFe<sub>2</sub>O<sub>4</sub>– (CFO) nanocomposite, *J. Mater. Sci. Mater. Electron.* 30 (2019) 10934–10943. doi:10.1007/s10854-019-01437-3. I.F. 2.198, ISSN: 0957-4522 (Q2)
- [28] A. Jagadesan, N. Sivakumar, R. Mohan Kumar, G. Chakkaravarthi, S. Arjunan, Synthesis, crystal structure, growth and characterization of an optical organic material: 4 Aminopyridinium Trichloro acetate single crystal, *Opt. Mater. (Amst).* 84, (2018) 864–869. doi:10.1016/j.optmat.2018.08.025. I.F. 2.687, ISSN: 0925-3467 (Q2)
- [29]. N. Sivakumar, R. Jayavel, G. Anbalagan, R.R. Yadav, Synthesis, growth, spectral, electrical, mechanical and thermal characterization of a potential optical material:  $\gamma$ -glycine single crystal, *Opt. Mater. (Amst).* 80, (2018) 177-185. doi:10.1016/j.optmat.2018.04.051. I.F. 2.687, ISSN: 0925-3467 (Q2)
- [30]. N. Sivakumar, R. Jayavel, G. Anbalagan, N. Kanagathara, M. Drozd, M.K. Marchewka, The theoretical and experimental vibrational studies of thiourea and silver nitrate (2:1) complex, *Spectrochim. Acta Part A Mol. Biomol. Spectrosc.* 204 (2018) 717–725. doi:10.1016/j.saa.2018.06.035. I.F. 2.931, ISSN: 1386-1425. (Q1)
- [31]. R. Dhanjayan, N. Sivakumar, S. Gunasekaran, S. Srinivasan, Synthesis, crystal structure, optical and thermal studies of a potential novel organic material: L-Histidine-2 fluoro-4-nitrophenolate 2-fluoro-4-nitrophenol single crystal, *Mater. Lett.* 196 (2017) 74-77. doi:10.1016/j.matlet.2017.03.010. I.F. 3.019, ISSN: 0167-577X (Q2)
- [32]. N.K. Geetha, N. SivaKumar, P. Sekar, Assessment of optimal combination of operating parameters using graph theory matrix approach, *Indian J. Sci. Technol.* 9 , (2016) 1-7. doi:10.17485/ijst/2016/v9i36/100851. I.F. 0.8, ISSN : 0974-6846.
- [33] N. Sivakumar, N.K. Geetha, J. Venkatamuthukumar, V. Jayakumar, Mechanical studies on pure and Fe<sup>3+</sup> doped potassium hydrogen phthalate single crystals for device fabrications, *Indian J. Sci. Technol.* 9 (2016) 1-9. doi:10.17485/ijst/2016/v9i36/100852. I.F. 0.8, ISSN : 0974-6846.
- [34] N. Sivakumar, G. Anbalagan, Third order optical non-linear (Z-scan), birefringence, photoluminescence, mechanical and etching studies on melaminium levulinate monohydrate (MLM) single crystal for optical device applications, *Opt. Mater. (Amst).* 60 (2016) 533-540.

doi:10.1016/j.optmat.2016.09.010. I.F. 2.238, ISSN : 0925-3467 (Q2)

- [35] N. Sivakumar, N. Kanagathara, G. Bhagavannarayana, S. Kalainathan, G. Anbalagan, Growth, crystalline perfection, optical, thermal, laser damage threshold and electrical characterization of melaminium levulinate monohydrate single crystal, *J. Cryst. Growth.* 426 (2015) 86-94. doi:10.1016/j.jcrysgr.2015.05.025. I.F. 1.573, ISSN : 0022-0248 (Q3)
- [36] N. Sivakumar, V. Jaisankar, G. Chakkaravarthi, G. Anbalagan, Synthesis, crystal structure, optical, thermal and mechanical characterization of poly bis(thiourea) silver(I) nitrate single crystals synthesized at room temperature, *Mater. Lett.* 132 (2014) 298-301. doi:10.1016/j.matlet.2014.06.079. I.F. 2.489, ISSN : 0167-577X (Q2)
- [37] N. Sivakumar, S. Muralidharan, G. Chakkaravarthi, D. Velmurugan, G. Anbalagan, Crystal structure of bis[4-(dimethylamino)pyridinium] bis(2-nitrobenzoate) trihydrate, *Acta Crystallogr. Sect. E Struct. Reports Online.* 70 (2014) 221-223. doi:10.1107/S1600536814020583. I.F. 0.5, ISSN: 2056-9890 (Q4)
- [38] N. Sivakumar, V. Jayaramkrishnan, K. Baskar, G. Anbalagan, Synthesis, growth and characterization of  $\gamma$ -glycine - A promising material for optical applications, *Opt. Mater. (Amst).* 37 (2014) 780-787. doi:10.1016/j.optmat.2014.09.007. I.F. 2.238, ISSN : 0925-3467 (Q2)
- [39] K. Gayathri, P. Krishnan, N. Sivakumar, S. Kalainathan, G. Bhagavannarayana, G. Anbalagan, Growth, crystal perfection, optical and electrical properties of organic crystal: Brucinium 5-sulfosalicylate trihydrate, *Optik (Stuttg).* 125 (2014) 6881-6886. doi:10.1016/j.ijleo.2014.08.110. I.F. 1.914, ISSN : 0030-4026. (Q2)
- [40] V. Sangeetha, K. Gayathri, P. Krishnan, N. Sivakumar, N. Kanagathara, G. Anbalagan, Growth, structural, crystallisation, thermal decomposition and dielectric behaviour of melaminium bis(hydrogen oxalate) single crystal, *J. Therm. Anal. Calorim.* 117 (2014) 307-318. doi:10.1007/s10973-014-3723-5. I.F.2.042, ISSN : 1388-6150 (Q3)
- [41] N. Sivakumar, J. Srividya, J. Mohana, G. Anbalagan, Growth, crystalline perfection, spectral and optical characterization of a novel optical material: l-tryptophan p-nitrophenol trisolvate single crystal, *Spectrochim. Acta - Part A Mol. Biomol. Spectrosc.* 139 (2015) 156-164. doi:10.1016/j.saa.2014.12.044. I.F. 2.653, ISSN: 1386-1425 (Q1)
- [42] P. Krishnan, S. Gunasekaran, G. Anbalagan, N. Sivakumar, K. Gayathri, Nucleation kinetics, growth, crystalline perfection, mechanical, thermal, optical and electrical characterization of brucinium 2-carboxy-6-nitrophthalate dihydrate single crystal, *J. Cryst. Growth.* 396 (2014) 85-94. doi:10.1016/j.jcrysgr.2014.03.044. I.F. 1.515, ISSN : 0022 0248 (Q3)
- [43] N. Sivakumar, N. Kanagathara, B. Varghese, G. Bhagavannarayana, S. Gunasekaran, G. Anbalagan, Structure, crystal growth, optical and mechanical studies of poly bis (thiourea) silver (I) nitrate single crystal: A new semi organic NLO material, *Spectrochim. Acta - Part A Mol. Biomol. Spectrosc.* 118 (2014) 603-613. doi:10.1016/j.saa.2013.09.010. I.F. 2.653, ISSN: 1386-1425 (Q1)
- [44] N. Sivakumar, N. Kanagathara, K. Gayathri, P. Krishnan, G. Anbalagan, Synthesis, thermal decomposition and dielectric behavior of bis(thiourea)silver(I)nitrate: A new semi organic single crystal, *J. Therm. Anal. Calorim.* 115 (2014) 1295-1301. doi:10.1007/s10973 013-3430-7. I.F. 2.042, ISSN : 1388-6150. (Q3)
- [45] V. Sangeetha, K. Gayathri, P. Krishnan, N. Kanagathara, N. Sivakumar, G. Anbalagan, Growth, optical, thermal, dielectric and microhardness characterizations of melaminium bis (trifluoroacetate) trihydrate single crystal, *J. Cryst. Growth.* 389 (2014) 30-38. doi:10.1016/j.jcrysgr.2013.11.026. I.F. 1.515, ISSN : 0022-0248 (Q3)
- [46] V. Sangeetha, R. Sumathi, N. Kanagathara, N. Sivakumar, G. Anbalagan, Spectral and Thermal Degradation of Melamine Cyanurate, *J. Mater.* 2013, (2013) 262094. doi:10.1155/2013/262094. I.F. 0.84
- [47] K. Gayathri, P. Krishnan, N. Sivakumar, V. Sangeetha, G. Anbalagan, Growth, optical, thermal, mechanical and dielectric characterization of brucinium hydrogen maleate, *J. Cryst. Growth.* 380 (2013) 111-117. doi:10.1016/j.jcrysgr.2013.06.004 I.F. 1.515, ISSN : 0022 0248 (Q3)
- [48] P. Krishnan, K. Gayathri, N. Sivakumar, G. Chakkaravarthi, G. Anbalagan, 2,3 Dimethoxy-10-oxostyrychnidinium hydrogen oxalate dihydrate, *Acta Crystallogr. Sect. E Struct. Reports Online.* 69,

(2013) o659. doi:10.1107/s1600536813008623. I.F. 0.5, ISSN: 2056-9890 (Q4)

[49]. N. Kanagathara, M.K. Marchewka, N. Sivakumar, K. Gayathri, N.G. Renganathan, S. Gunasekaran, G. Anbalagan, A study of thermal and dielectric behavior of melaminium perchlorate monohydrate single crystals, *J. Therm. Anal. Calorim.* 112 (2013) 1317–1323. doi:10.1007/s10973-012-2713-8. I.F. 2.206, ISSN : 1388-6150. (Q3)

[50]. P. Krishnan, K. Gayathri, N. Sivakumar, B. Gunasekaran, G. Anbalagan, Bis(2,3 dimethoxy-10-oxostyrylnidinium) phthalate nonahydrate, *Acta Crystallogr. Sect. E Struct. Reports Online.* 69 (2013) o870. doi:10.1107/S160053681301204X. I.F. 0.5, ISSN: 2056 9890 (Q4)

[51]. N. Kanagathara, N. Sivakumar, K. Gayathri, P. Krishnan, N.G. Renganathan, S. Gunasekaran, G. Anbalagan, Growth and characterization of 2,4,6 triamino-1,3,5 triazine - An organic single crystal, *Proc. Indian Natl. Sci. Acad.* 79 (2013) 467-472. I.F. 0.5, ISSN: 2454-9983

[52] N. Sivakumar, R. Mohan Kumar, G. Anbalagan, Optical studies of Glycine Phosphite (GPI) single crystals for optical devices, *Proc. Indian Natl. Sci. Acad.* 79 (2013) 385-389. I.F. 0.5, ISSN: 2454-9983

[53]. N. Kanagathara, N.G. Renganathan, M.K. Marchewka, N. Sivakumar, K. Gayathri, P. Krishnan, S. Gunasekaran, G. Anbalagan, Growth and characterization of Melaminium bis (trichloroacetate) dihydrate, *Spectrochim. Acta Part A Mol. Biomol. Spectrosc.* 101 (2013) 112–118. doi:10.1016/j.saa.2012.09.057. I.F. 2.129, ISSN: 1386-1425 (Q1)

[54]. N. Sivakumar, R.M. Kumar, G. Anbalagan, Effect of Glycine Doping in Potassium Hydrogen Phthalate (KHP) Crystals on Structural and Optical Properties, *Adv. Mater. Res.* 584 (2012) 116-120. doi:10.4028/www.scientific.net/amr.584.116. I.F.0.5, ISSN: 1662-8985

[55]. R. Ashok Kumar, R. Ezhil Vizhi, N. Sivakumar, N. Vijayan, D. Rajan Babu, Crystal growth, optical and thermal studies of nonlinear optical  $\gamma$ -glycine single crystal grown from lithium nitrate, *Optik (Stuttg).* 123 (2012) 409-413. doi:10.1016/j.ijleo.2011.04.019, I.F. 0.8, ISSN : 0030-4026 (Q2)

[56]. R.A. Kumar, N. Sivakumar, R.E. Vizhi, D.R. Babu, The effect of Fe<sup>3+</sup> doping in Potassium Hydrogen Phthalate single crystals on structural and optical properties, *Phys. B Condens. Matter.* 406 (2011) 985–991. doi:10.1016/j.physb.2010.12.044. I.F. 1.063, ISSN : 0921-4526. (Q3)

## **LIST OF PUBLICATIONS IN INTERNATIONAL / NATIONAL CONFERENCES / UGC JOURNALS:**

[1]. P. Veeraragavan, S. Kumararaman, S. Kumaravel, P. Madhavasarma, N. Sivakumar, Studies on Hall effect and conductivity measurement of natural human bones, *IJRAR*, 6 (2019) 828–835. I.F. 0.44

[2]. P. Veeraragavan, S. Kumararaman, S. Kumaravel, P. Madhavasarma, N. Sivakumar, Effect of sintering on microstructure of human natural bone, *IJRAR*, 6 (2019) 495–503. I.F. 0.44

[3]. A. Jagadesan, N. Sivakumar, S. Arjunan, Growth, structure and spectroscopic studies of an organic optical material: 4-Aminopyridinium 4-nitrophenolate 4-nitrophenol single crystal, *J. Indian Chem. Soc.* 96 (2019) 61-62. I.F. 0.82

[4]. J. Venkatamuthukumar, N. Sivakumar, Growth, structural, spectral and nonlinear optical studies on potassium hydrogen phthalate single crystals with glycine as additive, *J. Indian Chem. Soc.* 96 (2019) 59-60. I.F. 0.82

[5]. A. Jagadesan, N. Sivakumar, R. Thinesh Kumar, S. Arjunan, Growth, , Structure and spectroscopic studies of an organic optical material: Benzimidazole, benzimidazolium pictrate crystal. *Adv. Mater. Proc.* 4 (2019) 122-124. I.F. 0.92

[6]. N. Sivakumar, J. Venkatamuthukumar, F. Mary Anjalini, G. Anbalagan, A. Jagadesan, Structural and spectroscopic characterization studies on metal - organic material: poly bis (thiourea) silver (I) nitrate (TUSN) single crystal, *IJACSA*, 5 (2017) 25-29. I.F. 0.92 (SRM University)

[7] V. Sangeetha, R. Sumathi, N. Kanagathara, N. Sivakumar, G. Anbalagan, Spectral and Thermal Degradation of Melamine Cyanurate, *J. Mater.* (2013). doi:10.1155/2013/262094. I.F. 0.84



### **Books / Book Chapters:**

[1] PROCEEDINGS OF INTERNATIONAL CONFERENCE ON MODERN FUNCTIONAL MATERIALS (ICMFM-2021) by Dr. N. Sivakumar , Dr. S. Srinivasan - Sri Sai Ram Engineering College, Edition 1, 2024 ISBN: 978-93-340-6088-1

[2] PROCEEDINGS OF NATIONAL CONFERENCE ON MODERN FUNCTIONAL MATERIALS (NCMFM-2023) by Dr. N. Sivakumar, Dr. P. Maheswari- Sri Sai Ram Engineering College, Edition 1, 2024 ISBN: 978-93-340-6308-0.

### **Awards:**

- Kalki krishnamurthy fellowship for UG,
- Tamil Nadu Educational Trust fellowship for UG
- Best student and University Rank Holder award-UG
- Class Topper – PG, Presidency College (Autonomous), Chennai.
- **UGC-Dr. S. Kothari Postdoctoral Fellowship (2017)**
- Certificate of reviewing from the Journal Spectrochimica acta A, 2018.
- Certificate of outstanding contribution in reviewing from the Journal Materials Letters, 2018.
- **National Award** for Best thesis in Crystal Growth during Jan. 29-31, 2018 from Indian Association for Crystal Growth (IACG).
- Best Oral Presentation Award - NewPhy 2020, held at The New College, Chennai, India, during 21<sup>st</sup>, January, 2020.
- **DST-TARE Faculty (2021)**, DST-SERB, New Delhi.
- **Indian SpectroPhysics Association (ISPA) Award 2022**, During the International Virtual Conference on Materials Science and Technology (ICMAST –2022), 15<sup>th</sup> March 2022, Kandaswamy Kandar's College, Velur, Namakkal.
- **Funded Projects Award**, During Teachers day, 5<sup>th</sup> September 2022 from Sri Sai Ram Engineering College, West Tambaram, Chennai.
- **IEEE Best Researcher Award 2024**, IEEE Madras Section on 23rd Feb. 2024.

### **Resource Person:**

1. N. Sivakumar delivered a guest lecture on “Spanning Dimensions in Physics for Translational Research” organized by AMET University on during 14th November 2024
2. N. Sivakumar delivered a guest lecture on “Advances in Optical Signal Communication” organized by Department of Physics, DMI College of Engineering during 12th November 2024
3. N. Sivakumar delivered a guest lecture on “High-Temperature Crystal Growth- Floating- Zone Technology” organized by Department of Physics, Vels School of Basic Sciences, Chennai during 30th September 2024.
4. N. Sivakumar delivered an invited talk held at “Materials Research Internship Training Program – MRITP- (Hybrid Mode)” organized by Centre for Materials Research, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi during 9th September 2024.
5. N. Sivakumar delivered an invited talk held at International Conference on Advance Materials and Computational Physics (ICAMCP-2024) Department of Physics, Institute of Science and Humanities, SIMATS Engineering, Saveetha Institute of Medical and Technical Sciences, Thandalam, Chennai, Tamil Nadu, during 25th - 26th April 2024.

6. N. Sivakumar acted as a faculty evaluator on “Tech Star Submit -2024” held at SIMATS Engineering, Saveetha Institute of Medical and Technical Sciences, Thandalam, Chennai, Tamil Nadu, during 1st May 2024.
7. N. Sivakumar chaired the session on “Role of Activated Carbon in Energy Storage Applications” held at 2nd International Hybrid Mode Conference on Renewable Energy Challenges and New Trends in Hybrid Solar Cell Technology (ICSCT’24), Sri Sairam College, West Tambaram, Chennai, India, during 22-23rd, Mar. 2024.
8. N. Sivakumar delivered a Guest lecture on “Advanced Materials for Biomedical and Electronics Applications” held at Department of Biomedical Engineering, AVIT College, Paiyanur, Chennai, India, during 16th, Feb. 2024.
9. N. Sivakumar delivered a Guest lecture on “Development of Sr substituted LaFeO<sub>3</sub> single crystal by optical floating zone technique” held at Department of Chemistry, B.K. Birla college of arts and commerce, Kalyan, Maharashtra, Mumbai, India, during 10th, Feb. 2024.
10. N. Sivakumar delivered a lecture on “Research Insights on Modern Functional Materials” held at Department of Physics, Sri Sairam Engineering College, West Tambaram, Chennai, Tamil Nadu, India, during 24th, Aug. 2023.
11. N. Sivakumar delivered a Guest lecture on “Recent trends in optical communication” held at Department of Physics, Rajalakshmi Engineering College, Thandalam, Chennai, Tamil Nadu, India, during 27th, Aprl. 2023.
12. N. Sivakumar delivered an invited talk on “Developments in optical communication” held at Agurchand Manmull Jain College, Department of Electronics and Communication Science and Physics with Computer Applications, Meenambakkam, Chennai-600 061, Tamil Nadu, India, during 7th, Oct. 2022.
13. N. Sivakumar delivered an invited talk on “Growth and characterization of Sr substituted LaFeO<sub>3</sub> single crystals by optical floating-zone technique” held at National Conference on Functional Materials and its Application Aspects (NCFMAA – 2021), Department of Materials Science, Saveetha University, Chennai-602 105, Tamil Nadu, India, during 11-12th, Aug. 2022.
14. N. Sivakumar delivered an invited talk on “Crystal growth and mechanical behavior of pure and strontium substituted LaFeO<sub>3</sub> single crystals grown from optical floating zone technique” held at Virtual International Conference on Functional Materials and its Application Aspects (ICFMAA – 2021), Department of Materials Science, Saveetha University, Chennai-602 105, Tamil Nadu, India, during 29-30th, Oct. 2021.
15. N. Sivakumar given a guest lecture on “Advanced developments in synthesis of Bio nano crystal structures” held at Department of Bio-Medical Engineering, AVIT, Paiyanoor, Chennai-603 104, Tamil Nadu, India, during 13, November, 2020.
16. N. Sivakumar delivered webinar talk on “Advancement of Thermal studies on Technologically important Materials” held at Saraswathi College of Engineering and Technology, Olakkur, Tindivanam-604 305, Tamil Nadu, India, during 14th, Sep., 2020.
17. N. Sivakumar delivered webinar talk on “Advancements in Optical Communication through Optical Fibres ” held at Department of Physics, V.V.Vanniaperumal College of Women, Virudhunagar-626 001, Tamil Nadu, India, during 27th, May, 2020.
18. N. Sivakumar delivered an Invited talk on “Crystal Structure and thermal kinetic approach benzylideneaniline derivative: p-nitrobenzylidene-p phenylamineaniline” held at National Conference on Functional Materials and its Application Aspects (NCFMAA-2020), Department of Materials Science, Saveetha University, Chennai-602 105, Tamil Nadu, India, during 6th, March, 2020.
19. N. Sivakumar given a guest lecture on “Modern cutting-Edge Research on Artificial emulation fo Human Bone for Bio-Medical Application” held at Department of Bio Medical Engineering, AVIT, Paiyanoor, Chennai-603 104, Tamil Nadu, India, during 27, February, 2020.

20. N. Sivakumar given a guest lecture on “Recent trends in Bio-Medical Research” held at Department of Bio-Medical Engineering, AVIT, Paiyanoor, Chennai -603 104, Tamil Nadu, India, during 28, August, 2019.