


**Sri Sai Ram Engineering College**  
**Department Of Humanities And Sciences**

<p><i>Name : Dr. A. SATHIYA PRIYA</i></p>	
<p><i>Designation :</i></p>	<p><i>Assistant Professor</i></p>
<p><i>Qualification :</i></p>	<p><i>M.Sc., M.Phil., Ph.D., Post-Doc (PR China)</i></p>
<p><i>Area of Specialization :</i></p>	<p><i>Multiferroic, 2D materials, Solar cells, Photo-catalytic activity</i></p>
<p><i>Experience :</i></p>	<p><i>Teaching: UG : 7 years and 8 months</i> <i>PG : Nil</i> <i>Post Doctoral Fellow (PDF)- 2 years</i> <i>Industry : Nil</i></p>
<p><i>No. of Workshop / Conferences / FDP attended</i></p>	<p><i>Workshop – 3/ Conferences-12/FDP-5</i> <i>Event organized: 4 (International conference-1, Workshop-1, Seminar-1, Internship-1)</i></p>
<p><i>Publications :</i></p>	<p><i>Journals</i> <i>National : Nil</i> <i>International : 25</i> <i>Book chapter :1</i></p>
	<p><i>Conferences</i> <i>National : 4</i> <i>International : 8</i></p>
<p><i>Research Guidance :</i></p>	<p><i>Yes (4170069- Anna University Guideship)</i></p>
<p><i>General :</i></p>	<p><i>NITTTR-Module 2- Professional Ethics &amp; Sustainability</i></p>

	<p><i>NITTTR-Module 5- Technology Enabled Learning &amp; Life Long Self Learning Advanced Diploma in computer Hardware and Networking (ADHCN). Honours Diploma in Computer Application.</i></p>
<p><i>Staff Achievements:</i></p>	<p><i>International Centre for Diffraction Data (ICDD) has approved and certified the XRD PATTERNS of (La, Cu) co-doped BiFeO<sub>3</sub> materials reported by me. They were added in ICDD files (Powder Diffraction File -2020). File number: 690371, 690372, 690373.</i></p>

### **Educational Qualification:**

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.,	Physics	2009	Sri Paramakalyani College	M S University	71	First
PG	M.Sc.,	Physics	2011	Sri Paramakalyani College	M S University	73.18	First
Research	M.Phil.	Physics	2012	Ayya Nadar Janaki Ammal College	M K University	7.2 (CGPA)	First
Research	Ph.D	Physics	2018	B S Abdur Rahman Crescent Institute of Science and Technology Chennai	B S Abdur Rahman Crescent Institute of Science and Technology	NA	NA

### **Academic Experience: (as on 30.09.2022)**

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days

<i>Sri Sairam Engineering College</i>	<i>Assistant Professor</i>	<i>10.08.2022</i>	<i>Till date</i>	<i>1</i>	<i>5</i>	<i>8</i>
<i>Madras Institute of Technology, Chennai</i>	<i>Teaching Fellow</i>	<i>18.06.2014</i>	<i>30.04.2019</i>	<i>4</i>	<i>10</i>	<i>12</i>
<i>B S Abdur Rahman Crescent Institute of Science and Technology</i>	<i>Research Fellow</i>	<i>13.01.2013</i>	<i>17.06.2014</i>	<i>1</i>	<i>5</i>	<i>4</i>
<b>Total</b>				<b>7</b>	<b>8</b>	<b>24</b>

## PUBLICATIONS

### Journals:

1. **A. Sathiya Priya**, D.Geetha, D P Pabba, R Aepuru, Ştefan Ţălu, Varalakshmi, *Prominent ferroelectric properties in multi-layered TiO<sub>2</sub> Mn-doped BiFeO<sub>3</sub> spin-coated thin films, Ferroelectrics, Accepted (2024).*
2. **A. Sathiya Priya**, D.Geetha, Jesus M Siqueiros, Ştefan Ţălu, *Tunable optical and multiferroic properties of zirconium and dysprosium substituted bismuth ferrite thin films, Molecules, 27, 7565, (2022).*
3. B Shameem Banu, Rajesh Raman, Mohamad Hafiz Mamat, P Komalavalli, B. H Poornima, S Divyalakshmi, S Sathik Basha, **A Sathiya Priya**, S Hussain, *Strain-mediated electrical and optical properties of novel lead-free CuFe<sub>2</sub>O<sub>4</sub>-KNbO<sub>3</sub> nanocomposite solid solutions: A combined experimental and Density Functional Theory studies, Microsc. Res. Tech, DOI: 10.1002/jemt.24172 (2022).*
4. **A. Sathiya Priya**, D.Geetha, *Structural and frequency dependent dielectric properties of Ba doped Ni-Zn ferrite powders, Phosphorous, Sulfur Silicon Relat Elems. 197, 186-191, 2022.*
5. **A. Sathiya Priya**, D.Geetha, J.Henry, *Effect of Cu and Sm doping on the ferroelectric character of bismuth ferrite thin films, Phosphorous, Sulfur Silicon Relat Elems. 197, 158-163, 2022.*
6. **A. Sathiya Priya**, D.Geetha, Madhavan, *Synthesis, structural, dielectric, and photocatalytic properties of (Ti, La) co-doped calcium ferrite ceramic powders, Arab. J. Sci. Eng., Accepted (2021).*
7. **A. Sathiya Priya**, D. Geetha, I.B.Shameem Banu, *"Structural, dielectric and impedance analysis of (Dy, Cu) co-doped BiFeO<sub>3</sub>" Brazilian J Phys. DOI: 10.1007/s13538-021-00961-0 (2021).*
8. Ştefan Ţălu, **A. Sathiya Priya**, D.Geetha, *Topographic characterization of of (Zr, Mn) co-doped bismuth ferrite thin film surfaces, Microsc. Res. Tech, 84 (10), 2494-2500*

(2021).

9. **A. Sathiya Priya**, D. Geetha, *Studies on the multiferroic properties and impedance analysis of BiFeO<sub>3</sub> by (La, Cu) prepared by sol-gel method*, *Ferroelectrics*, 573, 104-116 (2021).
10. **A. Sathiya Priya**, D. Geetha, *Impact of (Zr, Cu) ions substitution on the optical, dielectric and impedance behavior of BiFeO<sub>3</sub>*, *Brazilian J phys.* 51, 175-181 (2020).
11. **A. Sathiya Priya**, D. Geetha, Ştefan Țălu, *Advanced micromorphology study of the Mn-doped bismuth ferrite thin films*, *Mater. Lett*, 281, 128615 (2020).
12. M. Rajamoorthy, D. Geetha, **A. Sathiya Priya**, "Synthesis of cobalt doped Bi<sub>12</sub>NiO<sub>19</sub>: structural, morphological, dielectric and magnetic properties", *Arab. J. Sci. Eng.*, 46, 737-744, 2020.
13. Jian Chen, **A. Sathiya Priya**, Di You, Weijie Pei, Qingfeng Zhang, Yinmei Lu, Mingkai li, Jinming Guo, Yunbin He, "Self-driven ultraviolet photodetectors based on ferroelectric depolarization field and interfacial potential", *Sens. Actuators, A: Physical*, 315, 112267, (2020).
14. **A. Sathiya Priya**, D. Geetha, K.Karthik, M.Rajamoorthy, "Investigations on the enhanced photocatalytic activity of (Ag, La) substituted nickel cobaltite spinels", *Solid State Sci.*, 98, 105992 (2019).
15. **A. Sathiya Priya**, I. B. Shameem Banu, D. Geetha, S. Sankar, "Investigations of the magnetic and dielectric behavior of (Zr, Cu) co-doped BiFeO<sub>3</sub>-BaTiO<sub>3</sub> composite", *Mater. Res. Express*, 6, 106116 (2019).
16. **A. Sathiya Priya**, D. Geetha and N. Kavitha, "Effect of Al substitution on the structural, electric and impedance behavior of cobalt ferrite", *Vacuum*, 160, 453-460 (2019).
17. **A. Sathiya Priya**, D. Geetha and N. Kavitha, "Evaluation of the structural and dielectric properties of Al, Ce co-doped Cobalt ferrites", *Mater. Research express*, 5, 066109 (2018).
18. **A. Sathiya Priya**, I. B. Shameem Banu and Zulaikha Mohammed "Effect of novel (Gd, Cu) substitution on the electrical properties and magnetoelectric coupling bismuth ferrite ceramics", *J. Mater. Sci: Mater. Electr.*, 28, 8467-8472 (2017).
19. **A. Sathiya Priya**, I. B. Shameem Banu, Shahid Anwar and Shamima Hussain, "Studies on the multiferroic properties of (Zr, Cu) co-doped BiFeO<sub>3</sub> prepared by sol-gel method", *J Sol-Gel Sci Technol.*, 80, 579-586, (2016).
20. **A. Sathiya Priya**, I. B. Shameem Banu and Shahid Anwar, "Influence of Dy, Cu doping on the room temperature multiferroic properties of BiFeO<sub>3</sub>", *J Magn. Magn. Mater.* 401, 333-338 (2016).
21. **A. Sathiya Priya**, I. B. Shameem Banu and Murthy Chavali, "Influence of (La, Cu)

doping on the room temperature multiferroic properties of BiFeO<sub>3</sub> ceramics”, Arab. J. Sci. Eng., 40, 2079-2084 (2015).

22. **A. Sathiya Priya**, I. B. Shameem Banu and Shahid Anwar, “Investigation of multiferroic properties of doped BiFeO<sub>3</sub>- BaTiO<sub>3</sub> composite ceramics”, Mater. Lett. 142, 42-44 (2015).
23. I. B. Shameem Banu, **A. Sathiya Priya**, P. Komalavalli, and Shanmuganathan, “Investigation of Structural and magnetic properties of doped BaFeO<sub>3</sub>- BaTiO<sub>3</sub> multiferroic composites”, J. Materials sci. Mater. Electron. 26, 98-102 (2014).
24. **A. Sathiya Priya**, I. B. Shameem Banu, “Effect of doping and annealing on the room temperature magnetic and dielectric properties of La modified BiFeO<sub>3</sub> multiferroic nanoparticles synthesized by sol-gel citrate combustion method”, Chemtech, 6 (11), 4643-4649 (2014).
25. **A. Sathiya Priya**, I. B. Shameem Banu, J. Thirumalai, A. Alagar, “Optical characterization of Mn doped CdS nanoparticles synthesized by simple chemical route”, Opt. Electron. Adv. Mater. – Rapid Comm., 7 (3-4), 191 – 195 (2013).

## BOOK CHAPTER PUBLICATIONS

1. R Aepuru, M Aleksandrova, V M Gaikwad, **A Sathiya Priya**, P K Sahoo, Krishnamoorthy Shanmugaraj and R V Mangalaraja, An introduction to the role of materials in the energy–environment nexus (Materials Technology for the Energy and Environmental Nexus, Volume 2), IOP Science (2023).

## Conference Presented

1. **A. Sathiya Priya**, D. Geetha, Enhancement of ferroelectric characteristics for BiFeO<sub>3</sub> by dual doping, International Virtual Conference on materials research (IVCMR-22), Easwari Engineering College, September 15-16, 2022.
2. **A. Sathiya Priya**, D. Geetha, “Effect of Co and Sm doping on the ferroelectric character of bismuth ferrite thin films”, International conference on novel engineering materials for biomedical, energy environment, sensing and other applications - 2021 (ICON-BEES'21), National Institute of Technology, Tiruchirappalli during 11-13 march 2021.
3. **A. Sathiya Priya**, D. Geetha, “Influence of Zr and Mn doping on the photovoltaic properties of bismuth ferrite thin films”, International conference on nanoscience and nanotechnology (ICONN 2021), SRM Institute of Science and Technology, Kattankulathur, during 01-03 February 2021.
4. **A. Sathiya Priya**, D. Geetha, “Greatly enhanced photocurrent in perovskite BiFeO<sub>3</sub> thin film solar cell”, Indo-UK International virtual conference on advanced nanomaterials for energy and environmental applications (ICANEE-2020), Alagappa University, 2020, ISBN: 978-93-5408-847-6.
5. **A. Sathiya Priya**, D. Geetha, “Photoluminescence properties of delofossite (Ag, Fe) doped CuAlO<sub>2</sub>-SnO<sub>2</sub> composite”, International conference on novel materials for

*evolving technological applications (ICNM-2020) by Holy Cross College, Nagercoil, 2020, ISBN- 978-81-941608-5-4.*

6. **A. Sathiya Priya, D. Geetha**, "Synthesis of mesoporous  $\text{NiCo}_2\text{O}_4$  nanomaterials and their photocatalytic on textile dye Evans blue", National conference on new generation materials for energy applications, B.S. Abdur Rahman University, Chennai, 2019.
7. **A. Sathiya Priya, D. Geetha**, "Structural and magnetic properties of transition metal doped  $\text{BiNiO}_3$ ", Recent trends in material science (RTMS-2018) Annamalai University, 2018.
8. **A. Sathiya Priya, D. Geetha**, "Synthesis and characterization of nickel ferrite nanoparticles prepared by auto-combustion method" National conference on functional materials and its applications (NCFMA 2018), Vels University, Chennai, 2018.
9. **A. Sathiya Priya, I. B Shameem Banu**, "Studies on the dielectric properties of  $\text{BiFeO}_3$ , Gd doped  $\text{BiFeO}_3$  and (Gd, Cu) doped  $\text{BiFeO}_3$ ", International conference on advances in functional material (ICAFM2017) by Anna University, Guindy, 2017.
10. **A. Sathiya Priya, I.B Shameem Banu**, "Structural and magnetic properties of rare earth and transition metal doped  $\text{BiFeO}_3$  nanoparticles", International conference on emerging trends in nanoworld (ICETN2017) by Vels University, Chennai, 2017.
11. **A. Sathiya Priya, I. B. Shameem Banu**, "Structural and Magnetic properties of multiferroic  $\text{BiFeO}_3$  nanoparticles prepared by sol-gel method" was presented in a 3-days international level conference on ICNM'13 at B.S. Abdur Rahman University, Chennai (2013).

## **PROGRAM ORGANIZED**

1. **A.Sathiya Priya (Convenor)**, One day National level Internship Program to Explore New Research Insights, Sri Sai Ram Engineering College, 24<sup>th</sup> August 2023.
2. **A.Sathiya Priya (Convenor)**, SERB sponsored 2 days International Hybrid mode conference on challenges & New trends in Solar cell technology (ICSCT'23), Sri Sai Ram Engineering College, 8<sup>th</sup> January to 9<sup>th</sup> June 2023.
3. **A.Sathiya Priya (Convenor)**, 5 days Academic Guest Lecture and Faculty interaction program on higher Studies Planning and International Research Collaboration, Sri Sai Ram Engineering College, 30<sup>th</sup> January to 3<sup>rd</sup> February 2023.
4. **A.Sathiya Priya (Convenor)**, Invited talk by international research collaborators, Sri Sai Ram Engineering College, 26<sup>th</sup> September 2022.

## **Faculty Development Programme (FDP)**

1. Participated 7 days virtual faculty development programme on "Recent Advances in Chemical Sciences", Department of Chemistry, K S R College of Arts and Science for Women, Tiruchegode during 27<sup>th</sup> Nov – 1<sup>st</sup> Dec 2023.
2. Participated 7 days National level online faculty development programme on "Advanced Research Methodology in Physical Sciences, Department of Physics & IQAC, Rajapalayam Raju's College, Rajapalayam from 3<sup>rd</sup> -09<sup>th</sup> October 2023.

3. Participated 5 days faculty development program on “Recent Advances, Trends, and Challenges in Nanomaterials Characterization and Techniques (RCNMCT-2023), Department of Physics, Koneru Lakshmaiah Education Foundation, Guntur, Andhra Pradesh from 25<sup>th</sup> -29<sup>th</sup> September 2023.
4. Participated in 5 days online faculty development program on Current Scenario in Advanced Materials Research and Nanotechnology, Department of Physics & IQAC, Rajapalayam Raju’s College, Rajapalayam from 14<sup>th</sup> -18<sup>th</sup> November 2022.
5. Participated in two weeks (40 hours) online faculty development program on MATLAB programming, Electronics, and ICT Academies at MNIT Jaipur, NIT Patna, and PDPM IITDM Jabalpur from August 22-September 02, 2022 (recognized by AICTE/UGC).

#### **Conference Attended:**

1. Attended one-day international conference on Functional Nanomaterials and Nanodevices (ICFNN 2023), Chettinad Academy of Research and Education, Chennai (26<sup>th</sup> Sep 2023)
2. Attended a two-day national-level conference on “**NCAMA 2013**” at the National Institute of Technology, Trichy.

#### **Workshops Attended**

1. Attended two days International level workshop on “**IWAM - 2014**” at Alagappa University, Karaikudi.

#### **Training Program Attended**

1. Attended 3days Training Program on Thin Film Synthesis and Characterization Techniques conducted by the Center for Nanoscience and Nanotechnology, Sathyabama University (2013).

#### **Invited Talk**

1. **A.Sathiya Priya**, “Research Interactive talk on Research opportunities for Sathyabama Institute of Science and Technology, 5th Jan 2024.
2. **A.Sathiya Priya**, Bureau of Energy Efficiency, National Energy Conservation Day, Annai Violet Arts & Science College, 20th December 2023.
3. **A.Sathiya Priya**, Bio-solar cell: current scenario and future Trends”, Virtuthunagar District Cluster of Colleges Joint Faculty Program in Physics, A. K. D. Dharamaraja Women’s College, 7<sup>th</sup> October 2023.
4. **A.Sathiya Priya**, Perovskite solar cell, Research Internship Training Program (RITP), Sri Sai Ram Engineering College, 23<sup>rd</sup> December 2022.
5. **A.Sathiya Priya**, “Ferroelectric multilayer films based high efficiency, low cost solar cell fabrication”, International Conference on Novel Materials for Evolving technological applications (ICNM-2020) by Holy Cross College, Nagercoil, 2020.

#### **Webinar attended**

1. *Attended two day international level webinar on “Crystal Engineering: From Molecule to Crystal” at IIT Madras, Chennai, 2020.*
2. *Attended one day international level webinar on “Nanotechnology in Aerospace” at Auxilium College, Vellore, 2020.*
3. *Attended one day international level webinar on “Century of Quantum Mechanics and Still Going Strong” at Maharaja Sayajirao University of Baroda, Gujarat, 2020.*
4. *Attended two days international level webinar on “Nanomagnetism” at Vel Tech High Tech, Chennai, 2020.*
5. *Attended one day international level webinar on “Future generation solar cell - 2020” at Nehru Institute of Technology, Coimbatore, 2020.*
6. *Attended one day international level webinar on “RTAMS-2020” at The American College, Madurai, 2020.*
7. *Attended three days international level webinar on “RAMS-2020” at Government Arts College for Women, Salem, 2020.*
8. *Attended one day national level webinar on “Importance of Precise Measurements in Science & Technology and Advances in Material Science” at B S Abdur Rahman Crescent Institute of Science & Technology, Chennai, 2020.*
9. *Attended One day international level webinar on “Advanced Materials for Biomedical, Energy & Environmental Applications” at PSG College of Arts & Science, Coimbatore, 2020.*
10. *Attended three days national level webinar on “Recent trends in Material Science and Training on Related Software tools” at Stella Maris College, Chennai, 2020.*
11. *Attended One day international level webinar on “Solid State Laser” at Pope’s College, Sawyerpuram, 2020.*
12. *Attended One day national level webinar on “Societal Applications of ionizing and nonionizing radiation” at St. Joseph College of Engineering, Chennai, 2020.*

## **Membership**

- *IEEE*
- *IEEE Photonics Society*
- *IEEE Power & Energy Society*
- *IEEE SIGHT*
- *IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society*
- *IEEE Dielectrics and Electrical Insulation Society*
- *IEEE Magnetic Society*

## **Technical skills**

- *Languages – C, C++, Java*



· *Web Technologies – HTML, CSS, JavaScript*

**Reviewer in the following Journals:**

1. *Molecules*
2. *Materials*
3. *Materials Letters*
4. *Solid State Science*
5. *Phosphorous, Sulfur Silicon Related Elements*