

PROFILE

Name: Dr.S.SIVARANJANI, M.Sc.,Ph.D.,

Designation: Head and Assistant Professor

Specialization: Thin Film Physics & Nano Technology

EDUCATIONAL QUALIFICATION:

- Ph.D (Regular)- Thin Film Physics from Bharathidasan University, Trichy.
- M.Sc-Physics from Lady Doak College (An Autonomous Institution) Affiliated to Madurai Kamaraj University, Madurai
- P.G.D.C.A, from G.T.N Arts College, Dindigul, Affiliated to Madurai Kamaraj University.
- B.Sc-Physics from G.T.N Arts College (Autonomous), Dindigul, Affiliated to Madurai Kamaraj University.

RESEARCH EXPERIENCE:

- ✓ Technical Assistant under DAE-BRNS Project in Department of Physics, Alagappa University, Karaikudi from July-2006 to July-2008.
- ✓ Project Fellow under UGC-DAE CSR Project in Department of Physics, Alagappa University, Karaikudi from August-2008 to March-2009.

HANDS-ON EXPERIENCE IN OPERATING SOPHISTICATED INSTRUMENTS:

- Sputtering (HindHivac-Planar Magnetron RF/DC Sputtering) Unit.
- Stylus Profilometer (Mitutoyo SJ-301).
- XRD Unit (X'pert PRO PANalytical).
- UV-Vis-NIR (HR-2000, M/S Ocean Optics, USA) spectrophotometer.

Title of Ph.D. Thesis : *STUDIES ON POROUS SILICON BASED OXIDE SOLAR CELLS*

Guideship :

- Approved Research Supervisor under Mother Teresa Women's University, Kodaikanal from January 2023.
- Approved Research Supervisor (Part - Time Ph.D. Category - B) in Bharathiar University, Coimbatore - 641 046.

No. of Students Guided:

- Two Students registered and pursuing Ph.D under Mother Teresa Women's University, Kodaikanal.
- One M.Phil (Part-Time) Student completed under Mother Teresa Women's University, Kodaikanal.
- Two Students Completed Ph.D under Bharathiar University, Coimbatore and were awarded.

Academic Experience as on JUNE 2024:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
SBM COLLEGE OF ENGINEERING AND TECHNOLOGY, DINDIGUL	ASSISTANT PROFESSOR	03/09/2012	24/04/2019	6	7	22
St.ANTONY'S COLLEGE OF ARTS AND SCIENCES FOR WOMEN, DINDIGUL	ASSISTANT PROFESSOR	03/09/2019	TILL DATE	4	9	23
TOTAL TEACHING EXPERIENCE				11	5	15

ADDITIONAL PORT FOLIOS @ St.Antony's College of Arts and Sciences for Women:

- ✓ Student Council Co-ordinator.
- ✓ Anto-Stephen Hawking Science Club Co-ordinator under VIPNET Club ID-TN0144.
- ✓ Ministry of Education Certified Innovation Ambassador.

Papers Published:

Sl. No	Author Name	Title of The Paper	Name of The Journal	Volume	Page No	Year
1.	G. Karthikaselvi, S. Sivaranjani , S.R. M. Jony, S. Muruganantham, N.N.Shafeera, A. Ayeshamariam and M. Ismail Fathima	Cyclic Voltammetric studies of Mg ₂ SnO ₄ nanoparticles and its Energy harvesting Applications	European Chemical Bulletin	12	1876-1890	2023
2.	A. Sudha, A. Afroos Banu, N. M. I. Alhaji, D. Saravanakkumar and S. Sivaranjani and A. Ayeshamariam	Aero Gel Method for the Preparation and Characterizations of Cobalt oxide Nanoparticles with its Antibacterial Studies	Research Journal of Agricultural Sciences An International Journal	13	322-328	2022
3.	P. Nancy Dayana, M. John Abel, P. Fermi Hilbert Inbaraj, S. Sivaranjani , R. Thiruneelakandan, J. Joseph Prince	Zirconium Doped Copper Ferrite (CuFe ₂ O ₄) Nanoparticles for the Enhancement of Visible Light-Responsive Photocatalytic Degradation of Rose Bengal and Indigo Carmine Dyes	Journal of Cluster Science	32	7	2021
4.	D. Deivatamil, M. John Abel, S. Sivaranjani , Raghavan Thiruneelakandan, J. Joseph Prince	Effect of Cu ²⁺ concentration on MnFe ₂ O ₄ nano-crystals in its NH ₃ Sensing property	Inorganic Chemistry Communications	127	108546	2020
5.	D. Saravanakkumar, Hicham Abou Oualid, Younes Brahmi, A. Ayeshamariam M. Karunanaithy, A. Mohamed Saleem, K. Kaviyarasu, S. Sivaranjani , M. Jayachandran.	Synthesis and characterization of CuO/ZnO/CNTs thin films on copper substrate and its photocatalytic applications.	Open Nano	4	1-16	2019
6.	N. Geetha, S. Sivaranjani , A. Ayeshamariam M. Siva Bharathy, S. Nivetha, K. Kaviyarasu and M. Jayachandran	High Performance Photo-Catalyst Based on Nanosized ZnO-TiO ₂ Nanoplatelets for Removal of RhB Under Visible Light Irradiation	Journal of Advanced Microscopy Research	13	1-8	2018
7.	N. Geetha, S. Sivaranjani , A. Ayeshamariam M. Kavin Micheal, D. Saravanakkumar, S. A. Fowziya, A. M. Uduman Mohideen and M. Jayachandran	ZnO/TiO ₂ Nanocomposites Semiconductor for Bacterial Applications and Dye-Sensitized Solar Cell Solar Applications	Journal of Advanced Microscopy Research	13	1-9	2018

8.	N.Geetha,, A. Ayeshamariam S. Sivaranjani , N.Nagarani, G.Prabhavathi, M.P.Srinivasan, N.Punithavelan, Horacio Perez-Sanchez and M. Jayachandran	Comparative Study of ZnO.Tio ₂ , ZnO-Doped TiO ₂ and TiO ₂ - Doped ZnO Nanocomposites and Their Biological Applications	Journal of Bionanosci ence	12	1-6	2018
9.	D. Saravanakkumar, S. Sivaranjani , K. Kaviyarasu, A. Ayeshamariam, B. Ravikumar, S. Pandiarajan, C. Veeralakshmi, M. Jayachandran, and M. Maaza	Synthesis and characterization of ZnO–CuO nanocomposites powder by modified perfume spray pyrolysis method and its antimicrobial investigation	Journal of Semiconduct ors	39	3	2018
10	D. Saravanakkumar, S.Uma Devi, S. Sivaranjani , S.Ganasaravanan A. Ayeshamariam, B. Ravikumar, S. Pandiarajan,	Structural Investigation on Synthesized Ag Doped ZnO- MWCNT and Its Applications	Journal of Nanoscience, Nanoenginee ring & Applications	8	49-59	2018
11	D. Saravanakkumar, R.Karthika, S.Ganasaravanan, S. Sivaranjani , S.Pandiarajan, B.Ravikumar, A. Ayeshamariam	Synthesis of NiO Doped ZnO/Mwcnt Nanocomposite and Is Characterization for Photocatalytic & Anti Microbial Applications	IOSR Journal of Applied Physics	10	73-83	2018
12	Saravanakkumar D, Sivaranjani S , Ayeshamariam A, Ravikumar B, Pandiarajan S	Perfume Spray Analysis of Sn Doped ZnO- CNT NPs and its Morphological Characterizations	Journal of Powder Metallurgy & Mining	6	1-4	2017
13	K. Kaviyarasu , N. Geetha , K. Kanimozhi,, C. Maria Magdalane, , S. Sivaranjani , A. Ayeshamariam, J. Kennedy, M. Maaza	In vitro cytotoxicity effect and antibacterial performance of human lung epithelial cells A549 activity of Zinc oxide doped TiO ₂ nanocrystals: Investigation of bio- medical application by chemical method	Materials Science & Engineering C	74	325- 333	2017
14	Ayeshamariam.A, D.Saravanakkumar, M. Kashif, S. Sivaranjani and B. Ravikumar	Analysis on the effect of ZnO on Carbon nanotube by spray pyrolysis method	Mechanics of Advanced Materials and Modern Processes	2:3	1-8	2016
15	N. Geetha, S. Sivaranjani , A. Ayeshamariam, J. Suthan Kissinger, Mariadhas Valan Arasu and M. Jayachandran	ZnO doped Oxide Materials: Mini Review	Fluid Mechanics: Open Access	3	1-6	2016

16	D.Saravanakkumar, S.Sivaranjani , S.Karthi, S.Pandiarajan, B.Ravikumar	Synthesis and Antibacterial Investigation of ZnO/CNPs Nanocomposite Powder by Hot Nickel Plate Assisted Cost Effective Spray Pyrolysis Method and its Characterizations	IOSR Journal of Applied Physics	8	16-22	2016
17	D.Saravanakkumar, S.Sivaranjani , M.Umamahswari, S.Pandiarajan, A.Ayeshamariam	Green Synthesis of ZnO Nanoparticles using Trachyspermum ammi Seed Extract for Antibacterial Investigation	Der Pharma Chemica	8	173-180	2016
18	D.Saravanakkumar, S.Sivaranjani , T.Velammal, S.Pandiarajan, A.Ayeshamariam	Hot Copper Plate Assisted Synthesis of ZnO Nanoflakes by Cost Effective Modified Spray Pyrolysis Method and its Structural, Morphological & Optical Studies	International Journal of Science and Research	5	620-623	2016
19	P.Ponsurya, B.H.Abbas Shahul Hameed, D.Saravanakkumar, M.Kashif, S.Sivaranjani , R.Perumalsamy, A.Ayeshamariam	Studies on CNT, ZnO-CNT and undoped ZnO and their gas sensor results	International Journal of ChemTech Research	7, No.2	917-920	2014-2015
20	D.Saravanakkumar, M. Kashif, V.Rethinasami, B.Ravikumar , S.Pandiarajan, A.Ayeshamariam, S.Sivaranjani , M.Bououdina, S.Ramalingam	Synthesis and Characterization of Zinc Selenide (ZnSe) Thin Films Electrodeposited on ITO and SnO ₂ Substrates	Journal of Ovonic Research	10	175 - 184	2014
21	A.Ayeshamariam, M.Kashif, S.Muthuraja, S.Sivaranjani , C.Sanjeeviraja, M.Bououdina	Synthesis and Characterization of In ₂ O ₃ Nanoparticles	Journal of the Korean Physical Society	64	254-262	2014
22	A.Ayeshamariam, V.S.Vidhya, S.Sivaranjani , M.Bououdina, R.PerumalSamy, M.Jayachandran	Synthesis and Characterization of SnO ₂ Nanoparticle	Journal of Nanoelectronics and Optoelectronics	8	1-8	2013
23	S.Sivaranjani , V.Malathy, V.Swaminathan, J.Joseph Prince, T.Balasubramanian, C.Sanjeeviraja, M.Jayachandran	Thickness dependence of structural, electrical and optical properties of sputter deposited indium tin oxide films	Advanced Science Letters	3	1-8	2010

24	V.Malathy, S.Sivaranjani , V.S.Vidhya, J.Joseph Prince, T.Balasubramanian, C.Sanjeeviraja, M.Jayachandran	Role of substrate temperature on the structural, optoelectronic and morphological properties of (400) oriented indium tin oxide thin films deposited using rf sputtering technique	Journal of Materials Science: Materials in Electronics	21	1299-1307	2010
25	V.Malathy, S.Sivaranjani , V.S.Vidhya, J.Joseph Prince, T.Balasubramanian, C.Sanjeeviraja, M.Jayachandran	Amorphous to crystalline transition and optoelectronic properties of nanocrystalline indium tin oxide (ITO) films sputtered with high rf power at room temperature	Journal of non-crystalline solids	355	1508-1516	2009

Book Chapter Edited:

- **Book Name-Nanomaterials for Energy Conversion, Biomedical and Environmental Applications-Springer, Singapore**

ISBN:978-981-19-2639-6

“Effect of Mg₂Sn Alloy on Silicon Substrate and Its Mechanical Properties with Its Resistivity Measurement”

A.Ayeshamariam, S. Sivaranjani, S. Beer Mohamed, M. Ismail Fathima, M. Sivabharathy, M. Jayachandran, and K. Kaviyarasu.

- **Book Name- Emerging Research in Engineering and Management published by ANVI BOOKS & PUBLISHERS DELHI-110053 (INDIA)**

ISBN: 978-93-90856-12-1

“Investigation of Avocado Extract as Reducing Agent in TiO₂ Doped with Ag₂O and Cu₂O Nanoparticles for Antimicrobial Applications”

G. Selvan, D. Saravanakkumar, S. Sivaranjani, A. Ayeshamariam, K. Kaviyarasu and M. Jayachandran.

Reviewer:

- Reviewer of **“Opto-Electronics Review”**-a peer reviewed Journal.
- Reviewer of **“Advances in Materials Physics and Chemistry (AMPC)”**.

NPTEL and Coursera Courses Completed:

1. “Electronic Theory of Solids”- NPTEL Course-2024.
2. “Solar Photovoltaics Fundamentals, Technology and Applications”- with ELITE-NPTEL Course-2022.
3. “Introduction to Classical Mechanics”-NPTEL Course-2021.
4. “Physics of Silicon Solar Cells”- Coursera Course-2021.
5. “Solid State Physics” with ELITE – NPTEL Course-2018.

Trainer:

- Certified Trainer under NSDC-Skill India from 30.03.2024 to 30.03.2026

Awards Received:

1. “HIGHEST RESEARCH PAPER PUBLICATION” received from IWRCA ARUNAI-2018 (NGO), Tiruvanamalai on 08.03.2018.
2. “KALAI RATHNA AWARD” received from Tamilnadu Arts and Literary Association, Kottaram along with Kavingan Pathipagam, Mukilai on 28.02.2020.
3. “INDO ASIAN RESEARCH EXCELLENCE AWARD 2022” received from RATNA PRASAD MULTIDISCIPLINARY RESEARCH & EDUCATIONAL SOCIETY, Regd with Govt of India NITI Aayog NGO Darpan, Govt. of A.P, India on 28.02.2022.

Acted as Resource Person:

S. No.	Title of The Talk	Nature	Title of the Seminar/Conf/Ws	Institution & Place	Date
1.	Synthesis And Characterization of Nanomaterials	State	Webinar	Sri Subramanya College of Engineering And Technology, Palani	24.07.2020
2	Design Thinking And NEP	Seminar-National Level	Entrepreneurship Development Programme	Vivekananda College, Thiruvudagam.	29.11.2021
3	Design Thinking And NEP	Seminar-National Level	IIC Orientation	V.V.Vaniaperumal College For Women, Virudhunagar.	10.12.2021
4	Judge	District	Intercollegiate Science Exhibition	G.T.N. Arts College, Dindigul	25.03.2022

Conferences:

- Papers Presented in International Conferences:15
- Book Name-Materials Today: Proceedings
“Influences of nano-green lubricants in the friction-stir process of TiAlN coated alloys”
S.A. Fowziya , S. Sivaranjani , N.S.M.P. Latha Devi , Sampath Boopathi , Shobha Thakur , Jampana Madhuri Sailaja.
- Papers Presented in National Conference: 08

Seminar and Webinar/Workshop/FDP:

- Number of Seminar and Webinar attended:17
- Number of Workshop attended:09
- Number of FDP Attended:10
- Number of FDP Attended through NPTEL:03

Conference, Seminar and FDP Participated:

https://drive.google.com/drive/folders/1x1uBGwD_xHpA_x74QhhcmAsvbOVB6psr?usp=sharing

Vidwan Profile URL: <https://vidwan.inflibnet.ac.in/profile/495957/NDk1OTU3>

Google Scholar Link: <https://scholar.google.com/citations?user=-8WAxXgAAAAJ&hl=en>

Research Gate Link: <https://www.researchgate.net/>

Publons Link: <https://publons.com/researcher/1355021/sivaranjanis/>