

STAFF PROFILE



1) Name: Dr.M.S.S.SARAVANAKUMAAR

2) Designation: Assistant Professor

3) Department: Physics

4) Qualifications:

Academic: M.Sc., B.Ed., PhD

Additional:

5) Experience (in years): Teaching: 15 years Research: 14 years

6) Area of Specialization: Semiconductor Nanostructures and Thin Films

7) Contact: E-mail: 2ssaravananakumar@gmail.com Mobile Number: 9585209748

8) Grants Received (Conference/Workshop/Seminar/any other):

Event Title	Agency	Fund Received	Date
-	-	-	-

9) Project Completed:

Project Title	Agency	Fund Received	Duration
-	-	-	-

10) Project ongoing :

Project Title	Agency	Fund Received	Duration
-	-	-	-

11) Research Guidance:

Programme	No. of Scholars	
	Completed	Pursuing
Ph. D.	-	One
M. Phil.	Two	-

12) Research Publications:

	International	National
Total Number of Publications	23	-

List of International Publications: 22 details as in bibliography

1. Two Interacting Electrons in Low lying states in a Spherical Quantum Dot , A. John Peter and **S.SaravanaKumar**, *Physica E* 41(2008) 138-141.
2. Effect of Electron-Electron interactions in a Parabolic Quantum Dot under the influence of Magneticfield, A.John Peter and **S.SaravanaKumar**, *Journal Of Computational and Theoretical Nanoscience* Vol 6, 1-5(2009).
3. Microscopic and Optical Characterization of Cd_{0.8}Zn_{0.2}S Thin Film, T.Prem Kumar , S.Rajasekar , **S.Saravanakumar** , P.S. Joseph And K.Sankaranarayanan, *Journal of Advanced Microscopy Research* Vol. 5,1-6(2010) .
4. Effect of annealing on the surface and band gap alignment of CdZnS thin films. T.Prem Kumar, **S.Saravanakumar** , And K. Sankaranarayanan, *Applied Surface Science* Vol 257, Issue 6, 1923-1927(2011)
5. Diamagnetic Susceptibility of Two Donors in a Quantum dot, **S.Saravanakumar** and A.John Peter. *Journal of Nanoelectronics and Optoelectronics* Vol 7.1-5(2012)
6. Polaron Effect of Two electron Parabolic Quantum dot, **S.Saravanakumar**, A.John Peter and Chang Kyoo Yoo, *Commun. Theor. Phys* Vol 59, 763(2013).
7. Synthesis of Manganese-Doped Zinc Sulfide and Zinc Sulfide Antioxidant Nanocomposites in Egg Albumin , **S. Saravanakumar** *Adv. Sci, Focus* Vol 1, No 3, 1-5 (2013)
8. "Effect of Capping Agent on Tin Sulphide (Sn_xS_{1-x}) Nanoparticles by Cost Effective Chemical Route" T. Mugesh, T.Prem kumar, **S.Saravanakumar** and T. Chitravel *Chalcogenide Letters* Vol 11, No .2 53-57(2014).
9. "Influence of Magnetic field on Energy Spectra of a Nano Dot" " T. Mugesh, T.Prem kumar, **S.Saravanakumar** and T. Chitravel , *International Journal of Scientific and Engineering Research* Vol 5, Issue 3, 122-124(2014).
10. Correlation Effect of Two Donors in a Nano Dot under the Influence of Magneticfield, **M.S.S. Saravanakumaar**, G.Gurubalan and K.Kalyanakumarsapandiyam, *Journal of Nano – And Electronic Physics* Vol 8, No 2, 02023(3pp)(2016).
11. Photo synthetic water splitting of highly ordered Titania nano porous , **M.S.S.Saravanakumaar** and P. Elangovan, *Nat.Sci. Mater.*, 2016 (1) 1-6.
12. "Non – Linear Optical properties of a two electron parabolic Quantum dot" **M.S.S.Saravanakumaar** , *J. Adv. Phys.*, 6, 259–263 (2017).

13. "Solid state synthesis and structural analysis of monoclinic tungsten trioxide hierarchical nanoflower" K. Kathiresan, P. Elangovan and **M.S.S.Saravanakumaar**, Nat.Sci. Mater., (4) 1-5(2017).
14. "Electron Pair in Low Lying Excited States in a Semimagnetic Quantum Dot", K. Mariraj , R. Muneesvaran, N.G. Prasanna and **M.S.S.Saravanakumaar**, IOSR J.Applied Physics,19-24(2017).
15. "Structural effects of tungsten oxide electro-catalyst towards high stable CO tolerance mechanism", K. Kathiresan, P.Elangovan and M.S.S.Saravanakumaar, Asian J. Chemistry Vol 30 No 3, 567-571(2018)
16. Spin Orbit coupling of a hydrogenic donor in zincblende GaN/Al_xGa_{1-x}N parabolic quantum dot, B.Prem Kumar , **M.S.S.Saravanakumaar** and P.Elangovan, International Journal of Emerging Technologies and Innovative Research, Vol 5, Issue 3, 1040-1045(2018)
17. Enhanced Solar Water Splitting Performance of 50-100 nm Pore Sized TiO₂ Nanotubes, K. Kathiresan, P. Elangovan and **M.S.S.Saravanakumaar**, Asian J. Chemistry Vol 31 No 3, 559-565(2019). DOI: [10.14233/ajchem.2019.21682](https://doi.org/10.14233/ajchem.2019.21682)
18. Facile synthesis of mixed solution electrospray to obtain Graphene-TiO₂ Janus Hollow Bucky bowls, M. Anto Milet Xavier, P. Elangovan and **M.S.S.Saravanakumaar**, Journal of Interdisciplinary Cycle Research, Vol XII (2020)1052, ISSN NO: 0022-1945.
[DOI:18.0002.JICR.2020.V12I12.008301.317122377](https://doi.org/10.18002/JICR.2020.V12I12.008301.317122377).
19. Synthesis and Structural Studies on Tungsten Oxide Nanoflakes, L. Stanly Kenin Xavier, P. Elangovan and **M.S.S.Saravanakumaar**, Journal of Interdisciplinary Cycle Research, Vol XII (2020)1081, ISSN NO: 0022-1945.
[DOI:18.0002.JICR.2020.V12I12.008301.317122380](https://doi.org/10.18002/JICR.2020.V12I12.008301.317122380)
20. Fabrication of Non-precious Vanadium Tungsten Nanocomposite for Enhanced Electrocatalytic Oxygen Reduction Reaction, L. Stanly Kenin Xavier, P. Elangovan and **M.S.S.Saravanakumaar**, Asian J. Chemistry Vol 33 No 4, 919-924(2021).<https://doi.org/10.14233/ajchem.2021.23097>
21. Enhanced electrocatalytic oxygen reduction performance of nonprecious V₂O₅-WO₃ nanocomposite, L. Stanly Kenin Xavier, P. Elangovan and **M.S.S.Saravanakumaar**, Mod. Phys. Lett. B 35(32) 2150431(2021) <https://doi.org/10.1142/S0217984921504315>
22. Structural, optical and electronic properties of copper doped TiO₂: Combined experimental and DFT study Anto M. Xavier , I. Davis Jacob , S. Surender , **M.S.S.Saravanakumaar** , P. Elangovan, Inorganic Chemistry Communications 146 (2022) 110168. <https://doi.org/10.1016/j.inoche.2022.110168>

List of National Publications: -

13) Chapters in Books: -

14) Other Publications (Proceedings): - 1

1. “Interband emission Energy in a Strained $Cd_xZn_{1-x}O$ Quantum dot”. **S.Saravanakumar** and A.John Peter, AIP Conference Proceedings,1447,245-246 (2012).

15) Books Published: Nil

16) Presentation in Seminar / Conference:

International: 3

1. Paper Presented, entitled on “Effect of annealing on the structural studies of SnS nanoparticles” **M.S.S. Saravanakumaar** and T,Sarveswaran in International Conference on Recent Advances in Materials Science ICRAMS 2019 conducted by National College, Trichy on 4th – 6 th February 2019.
2. Paper Presented, entitled on “Synthesis, structural,and Morphological analysis on Vanadium Oxide Nanoflakes” M.Anto Milet Xavier, P.Elangovan and **M.S.S. Saravanakumaar** in International Conference on Advances in Physical Sciences and Materials (ICAPSM-2021) organized by SNS College of Technology, Coimbatore, on 12 – 13 August2021.
3. Paper Presented, entitled on “Synthesis and structural studies on tungsten oxide nanoflakes” L. Stanly Kenin Xavier, P.Elangovan and **M.S.S. Saravanakumaar** in International Conference on Advances in Physical Sciences and Materials (ICAPSM-2021) organized by SNS College of Technology, Coimbatore, on 12 – 13 August2021.

National: -

17) Participation in Conference: -

18) Participation in Seminar: -

19) Participation in Workshop: 2

1. Participated in 5th INUP Familiarization Workshop on Nanofabrication Technologies, IIT Bombay, May 25-27, 2016.
2. Attended CSR Lecture Module 1st Order Magnetic Phase transitions and Some New Concepts during Jan 9-13,2017 at UGC-DAE, Consortium for Scientific Research, Indore, Mathya Pradesh.

20) Participation in Orientation Programme/ Induction Programme/ Short term Courses: 5

S.No	Program	Topic	Center	Period
1	UGC Sponsored 101 st	Orientation	Bharathidasan	18.05.2018

	Orientation Program	Program	University, Trichirappalli.	-14.06.2018
2	UGC Sponsored Online Refresher Course	Nano Science	Bharathidasan University, Trichirappalli.	25.11.2020 – 08.12.2020
3	Online Refresher Course on Science Academics	Physics & Chemistry	APA College of Arts & Culture, Palani.	24.06.2020 – 07.07.2020
4	Online Two Week Refresher Course	Physics	Ramanujan College, Delhi.	27.10.2021 – 10.11.2021
5	Online Refresher Course	Physics	University of Hyderabad	05.12.2022 – 17.12.2022

21) Participation in Faculty Development Programme: - 2

1	Online Faculty Development Program	“Advanced concepts of Developing MOOCS”	Ramanujan College, Delhi.	02.07.2020 – 17.07.2020
2	ATAL Faculty Training Program	“Fundamentals of Novel Materials”	Tripura University & AICTE, Delhi.	04.10.2021 – 08.10.2021

22) Conference/ Seminar/ Workshop Organized: -

23) Invited Speaker/ Session Chair – Conference/ Seminar/ Workshop: 09

1. Delivered a Research Lecture entitled on Perspectives of Low Dimensional Semiconductor Structures on 07.01.2017 at PG and Research Department of Physics, Pachaiyappas College, Chennai.

2. Delivered a Guest Lecture entitled on “Physics of Atoms” at Department of Physics, Sourashtra College, Madurai on 13.02.2017

3. Delivered a Guest Lecture entitled on “Materials Matter on Materialistic World” at Department of S & H, KLNCE Science and Humanities Association (KLNCESHA), Madurai on 21.03.2017.
4. Delivered a Guest Lecture entitled on “The next G-ST : Impact of Materials ” at Department of Physics, Thiravium College of Arts and Science For Women, Kailaspatti, Periyakulam on 26.07.2017.
5. Delivered a Guest Lecture entitled on “The new perspectives of Materials ” at Department of Physics, Senthamarai College of Arts and Science , Madurai on 6.10.2017.
6. Delivered a Guest Lecture entitled on “A treatise on Mesoscale Systems” at Department of Physics, A. K. D. Dharma Raja Women’s College, Rajaplayam on 13.02.2018.
7. Delivered a Guest Lecture entitled on “ Physics of Semiconductor Devices” at Department of Physics, Thiravium College of Arts and Science For Women, Kailaspatti, Periyakulam on 06.12.2021.
8. Acted as a Resource Person for Two days webinar on “Recent Trends in Nano Composites & Thin Film Technology” Organized by the Department of Physics, Jayaraj Annapackiam College for women (Autonomous), Periyakulam on 03.02.2022.
9. Acted as a Resource Person for State Level Seminar on “Emerging Technologies in Material Science” Organized by the Department of Physics, Mannar Thirumalai Naicker College, Madurai on 25.03.2022.

24) Other Co-curricular / Administrative Responsibilities:

1. Acting as Coordinator, Career Guidance and Counseling Cell in Our College since 11.07.2023
2. Acting as Coordinator, Scientific Designing and Modelling Club in our college since 09.06.2023
3. Acted Coordinator and Center in Charge for National Graduate Physics Examination (NGPE) in Saraswathi Narayanan College since 2016-2022.
4. Acted as a Subject Expert in Curriculum Review Committee, State Council of Educational Research & Training (SCERT), Govt. Of. Tamilnadu.

25) Member in Board of Studies:

1. Acting as Member, Research Advisory Committee (RAC) in Department of Physics, Arulmigu Palani Andavar College of Arts and Culture, Palani - 624601.

2. Acting as Member, Research Advisory Committee (RAC) in PG and Research Department of Physics, The American College, Madurai - 625002.

3. Acted as Doctoral Committee (DC) member in Department of Physics, Gandhigram Rural Institute (Deemed to be University), Dindigul - 624302.

26) Editorial/ Review Board Member:

Acting as Editorial Board Member of International Journal of Management, Sciences, Innovation and Technology [IJMIST]

27) Membership in Professional Bodies:

Life time Member in Indian Association of Physics Teachers (IAPT)

28) Awards received: -

29) Consultancy: -

30) Patents: -

31) Any other information: -