



SAI RAM ENGINEERING COLLEGE

An Autonomous Institution | Affiliated to Anna University & Approved by AICTE, New Delhi
Accredited by NBA and NAAC "A+" | BIS/EOMS ISO 21001 : 2018 Certified and NIRF ranked institution

Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairam.edu.in



DEPARTMENT OF HUMANITIES AND SCIENCE

PHYSICS

Name	: Dr. K. Saravanan	
Designation	: Assistant Professor	
Email	: Saravanan.phy@sairamit.edu.in	
Qualification	: M.Sc. Ph.D.	
Specialization	: Physics	
Research Interest	: Energy conversion and storage devices, Semiconductors	

	Teaching	Research	
Experience in Years	5	6	
No. of Workshop/Conferences/ FDP attended	Workshop: 3	Conferences: 4	FDP: 4
Organized	Workshop: 0	Conferences: 0	FDP: 1

Professional Membership	IEEE Electronics and packaging society IEEE Power and Energy society IEEE microwave theory and technology society
Publications	International: 7
	National : 0
	Book chapters: 3
Research Funded Projects	Nil
Patents	Nil
Ph.D. Supervisor Recognition	Anna University 4170118

List of Publications:-

1. 'Synergistic effect of Li, La co-doping on photocatalytic activity of BaTiO₃ ferroelectric material for effective degradation of toxic NO_x for environmental remediation', Madhan Kuppusamy, Manjusha Passi, Saravanan Krishna Sundaram, Govindan Vadivel, Murugaraj Rathinasamy, Kwang-Pill Lee, Wha-Jung Kim, Journal of Environmental Chemical Engineering, June 2024, vol. 12(3), pp. 112801.
2. 'Controlled growth of 2D structured Cu₂WS₄ nanoflakes for high-performance all-solid-state supercapacitors' Ranjith Balu, Saravanan K, Sundaramurthy Rameshkumar, Karuppannan Aravindh, Perumalsamy Ramasamy, Journal of Electroanalytical Chemistry, pp. 116718.
3. '*Thermoelectric transport properties in ternary chalcogenide (CuBiSe₂) crystal grown by Bridgman-Stockbarger method for thermo-electric applications*' RO. MU. Jauhar, A. Raja, R. Rajkumar, K. Ramachandran, V. Viswanathan, K. Saravanan, Paavai Era V. Malarvizhi, G. Anbalagan, Muthu Senthil Pandian, P. Ramasamy, Journal of Crystal Growth, January 2022, vol. 578, pp. 126427.
4. '*Temperature dependent phase transition on CuZnS thin films and its effects on morphological, optical and electrical properties*', Saravanan K, Selladurai S, Vengatesh P, Shyju TS, Thin solid Films, 2021, vol. 733, pp. 138810.
5. '*Solvothermal synthesis of copper cadmium sulphide (CuCdS₂) nanoparticles and its structural, optical and morphological properties*', Saravanan K, Selladurai S, Ananthakumar S, Moorthy Babu S, Suriakarthick R, Materials science in semiconductor processing, 2019, vol. 93, pp. 345 – 356.
6. '*Preferentially oriented CuCdS₂ thin films and thickness effects on structural, optical and electrical properties*', Saravanan K, Selladurai S, Vengatesh P, Shyju TS, Applied Physics A, 2019, vol. 125, issue no. 356, pp. 1 – 12.
7. '*Colloidal synthesis of copper cadmium sulphide (CuCdS₂) nanoparticles and its structural, optical and morphological properties*', Saravanan K, Suriakarthick R, Ananthakumar S, Moorthy Babu S, Selladurai S, Materials science in semiconductor processing, 2017, vol. 66, pp. 123-130.

Book Chapters

1. Ananthakumar Soosaimanickam, Paulraj Manidurai, Saravanan Krishna Sundaram & Moorthy Babu Sridharan, 'Advancements and Challenges in Synthesizing Colloidal Semiconductor Nanocrystals by Hot-Injection Method', Nanomaterials: The Building Blocks of Modern Technology, Springer Singapore, August 2023, pp. 143–179. eBook ISBN: 978-981-99-4149-0

2. 'Sensor materials for Environmental monitoring' Novel materials for Emerging Applications, Shanlax publications, October 2021.
3. 'Hybrid Perovskite Solar cells: Principle, processing and perspectives' Nanotechnology Device Design and Applications, CRC press: Taylor and Francis, Chapter No.: 17, February 2022. PP: 315.

List of Patent : NIL

Workshop / Conferences / FDP Attended:-

Invited Talks at workshops/ Seminars/ Faculty Development Programs

1. 'Energy conversion through solar cells', One week international faculty development program on frontiers in physics research, Department of Physics, Easwari Engineering college (Autonomous), Ramapuram, Chennai, 25.07.2023.
2. 'Six-Day Online International Faculty Development Program on Recent Trends in Applied Physics' Department of Physics, Easwari Engineering College (Autonomous), Ramapuram, Chennai, 25 - 30.07.2022.

Paper presentation

1. Oral presentation at National Conference on Advanced materials (NCAM - 2014), St. Joseph's arts and science college, Trichy, 'Preparation and characterization of CuSbSe₂ thin films deposited by Chemical spray pyrolysis method', Feb 2014.
2. Oral presentation at SCINO'13, Department of nanoscience and technology, Bharathiar University, Coimbatore, 'Deposition of CuSbS₂ thin films via chemical spray pyrolysis method', December 2013.
3. Oral presentation at International conference on Advances in Functional materials (ICAFM-2017), Department of medical physics, Anna University, Chennai, 'Deposition and characterization of CZTS thin film on porous silicon for energy applications', January 2017.
4. Poster presented at Chennai nanogathering, National conference on Nanomaterials and nanobiotechnology (CNG-NCNN), National centre for nanoscience and nanotechnology, University of Madras, 'Synthesis of ternary CuCdS₂ nanoparticles via chemical method and its structural, optical and morphological properties', February 2017.

Workshop/Symposium participation

1. Participated at 'National level physics symposium (INPHYNIT -13)', Department of Physics, National institute of technology, Trichy, March 2013.

2. Participated at Workshop on '*Preparation, Characterization of crystalline materials and their applications (WPCCMA – 2015)*', Department of Physics, Anna University, Chennai, November 2015.
3. Participated at '*Two Advanced Tools of Characterizations*', Division of Physics, School of Advanced Sciences, Vellore Institute of Technology, Chennai on 20th June, 2020.
4. Participated at AICTE Training And Learning (ATAL) Academy Faculty Development Program on Theoretical and Experimental Approaches on Materials (TEAM2025) at ANNA UNIVERSITY REGIONAL CAMPUS TIRUNELVELI from 27/01/2025 to 01/02/2025.

Workshop / Conferences / FDP Organized:-

1. Coordinator for Guest lecture on "*Sensor technology in Engineering*" at Sri Sai Ram institute of technology on 20 February 2023.
2. Coordinator for a Two days online Faculty development program on "*Advances in Materials science*" at Sri Sai Ram institute of technology on 04 and 05th April 2024.
3. Coordinator for a Research Internship program at Sri Sai Ram institute of technology on 26th December 2024 to 07th January 2025.