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SAI RAM INSTITUTE OF TECHNOLOGY

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Sai Leo Nagar, West Tambaram, Chennai - 44. www.sairamit.edu.in

DEPARTMENT OF PHYSICS

Name : Dr. K. Saravanan

Designation : Assistant Professor

Email : [Saravanan.phy@sairamit.edu.in](mailto: Saravanan.phy@sairamit.edu.in)

Qualification : Ph.D

Specialization : Physics

Research Interest : Energy conversion and storage devices, Semiconductors

Experience in years : **Teaching** UG PG **Industry**

No. of Workshop/Conferences/
FDP attended : Workshop Conferences FDP

No. of Workshop/Conferences/
FDP Organized : Workshop Conferences FDP



Professional Membership	IEEE photonics society IEEE Electronics and packaging society IEEE Power and Energy society IEEE magnetics society
Publications	International: 6
	National : 0
	Book chapters: 2
Research Funded Projects	Nil
Patents	Nil

Achievements	Nil
Any Other Information	Nil

List of Publications:-

1. 'Controlled growth of 2D structured Cu_2WS_4 nanoflakes for high-performance all-solid-state supercapacitors' Ranjith Balu, Saravanan K, Sundaramurthy Rameshkumar, Karuppanan Aravinth, Perumalsamy Ramasamy, Journal of Electroanalytical Chemistry, pp. 116718.
2. '*Thermoelectric transport properties in ternary chalcogenide (CuBiSe_2) 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.
3. '*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.
4. '*Solvothermal synthesis of copper cadmium sulphide (CuCdS_2) nanoparticles and its structural, optical and morphological properties*', Saravanan K, Selladurai S, Ananthakumar S, Moorthy Babu S, Suriakarthish R, Materials science in semiconductor processing, 2019, vol. 93, pp. 345 – 356.
5. '*Preferentially oriented CuCdS_2 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.
6. '*Colloidal synthesis of copper cadmium sulphide (CuCdS_2) nanoparticles and its structural, optical and morphological properties*', Saravanan K, Suriakarthish R, Ananthakumar S, Moorthy Babu S, Selladurai S, Materials science in semiconductor processing, 2017, vol. 66, pp. 123-130.

Book Chapters

1. 'Sensor materials for Environmental monitoring' Novel materials for Emerging Applications, Shanlax publications, October 2021.
2. '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:-

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.

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.