

Dr. K. Kesavan

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Research Experience and Interests:

Apart from researches carried out in M. Phil and Ph. D courses, I am presently involving in various research projects in my department guiding the B. Tech. M.Phil. and Ph. D. students. I am also collaborating with various researchers in and out of the institution.

My research interests include synthesis of various technologically important nanomaterials, characterization and application in energy and environment related fields.

As part of my research work I have established research facilities such as **Wet-Chemical Synthesis and Spray Deposition Unit** in my department. Using this home built spray pyrolysis system I am carrying out research on various thin films along with my students.

This method is a cost effective and high reproducible method for the fabrication of various thin films.

1. Educational/Professional Qualifications:

Qualifications	Year of Passing	University/Institution	Class	Subjects
Ph.D.	August- 2014	PRIST University, Thanjavur.	Commended	Physics / Thin films
<i>Ph.D. Title</i>	<i>Characterization of Spray Deposited Nano Crystalline CdO Thin Films</i>			
M.Phil.	April -2005	Ururu Dhanalakshmi college, Bharathidasan University	Distinction	Physics
M.Ed.	April -1999	Centre for Distance Education, Bharathidasan University	II	Education
B.Ed.	April -1993	Institute of correspondence education, Madras University	II	Physical science
M.Sc.	April -1992	A.V.V.M. Sri Pushpam College, Bharathidasan University	I	Physics
B.Sc.	March -1990	National College, Bharathidasan University	I	Physics

2. Detail of Experience: 21 years

Sl. No.	Name of the institution	Post held / Department	Period of Service	Nature of service
1.	Ponnaiyah Ramajayam College, Thanjavur.	Lecturer/ Assistant Professor	23.07.01-07.07.10	Teaching UG/PG/M.Phil.
2.	PRIST University, Thanjavur, India			
3.	Periyar Maniammai Institute of Science & Technology, Thanjavur, India	Assistant Professor	26.07.10- till date	BSc.Ed., B.Sc., M.Sc., (Physics) B. Tech. & M.Tech. programmes

3. Subject Handled

Properties of Matter	Heat and thermodynamics
Electricity and Magnetism	Optics and Spectroscopy
Applied Physics	Advanced Electronics
Nuclear Physics	Nano Science and Technology
Mathematical Physics	Material Science
Engineering Physics	Engineering Mechanics

4. Research Guidance :

M.Phil : 2007 (1 candidate), 2008 (2 candidates), 2009 (2 candidates), 2017 (1 candidate), 2018 (1 candidate).

Ph.D. (5 candidates 2018, 2020 batch)

5. National/International Publications:

1. V.MARY PRADEEPA, **K. KESAVAN**, Preparation & Characterization Of CuS Thin Films Via Spray Pyrolysis Technique For Photovoltaic Applications. IOP Conference Series: Materials Science and Engineering.[VOL 1070](ICRIET 2020), FEBRUARY-2021.
2. A. S. Kizhakke Puliyakote, E. M. Stapleton, M. Bilas, N. Metwali, M. Jeronimo, I.M. Thornell, R. B. Manges, S. Suresh, K. Durairaj, K. Karuppusamy, K. Geetha, A. Sirajunnisa, K. Shanmugam, P. S. Thorne, T. M. Peters, Image registration based QCT characterization of the lungs of biomass cooks, European Respiratory Journal 2020 56: 1306; DOI: 10.1183/13993003.congress-2020.1306

3. Emma M. Stapletona,*, Abhilash Kizhakke Puliyakotee, Nervana Metwalib, Matthew Jeronimof, Ian M. Thornella, Robert B. Mangesa, Monalisa Bilasc, Mohamed Ali Kamal Batchag, Mangaleswari Seeniappan Kumaravelg, Kumar Durairajh, Kesavan Karuppusamyi, Geetha Kathiresanj, Sirajunnisa Abdul Rahimk, Kumaran Shanmugaml, Peter S. Thorneb, Thomas M. Petersb, Eric A. Hoffmana,c,d, Alejandro P. Comellas, Lung function of primary cooks using LPG or biomass and the effect of particulate matter on airway epithelial barrier integrity, *Environmental Research* 189(2020)109888
4. V.MARY PRADEEPA, **K.KESAVAN**, Synthesis And Characterizations of Cadmium Sulphide (CdS) Thin Films By Chemical Spray Deposition Technique. *International Journal of Engineering Research And Applications*.(VOL.10.Issue 1), January 2020.
5. A. Kathalingam, **K. Kesavan**, V. Mary Pradeepa, Hyun-Seok Kim, Fabrication and characterization of CuO/CdS heterostructure for optoelectronic applications, *Journal of Sol-Gel Science and Technology, Springer* 96 (17), October 2020.
6. Adaikalam Kathalingam, **K Kesavan**, Abu ul Hassan Sarwar Rana, Joon-Hyeon Jeon, Hyun-Seok Kim (2018) In-depth morphological, optical, electrical, and photonic response analyses of concentration-dependent spray-coated Sn-doped CdO thin films. *Coating*, 8, 167 (2018).
7. D. Kumaresan, R.Ramprasanth, E. Veeramani Priya and **K. Kesavan**, Structural and Optical Characteristics of nano-Scale Fluorine Doped CdO Thin Films using Spray Pyrolysis Method, *International Journal of Advanced Research in Computing and Information Technology*, Vol.4, No. 1, June 2017, pp 1-6.
8. **K. Kesavan**, A. Kathalingam, Hyun-Seok Kim and A.R. Umayal Sundari (2016) Effects of fluorine doping on structural, optical and electrical properties of spray deposited CdO thin films. *Superlattices and Microstructures*. 100, 76-88 (**IF-2.12**).
9. **K. Kesavan**, V. Manivannan, S. Krishnaraj and R. Ashok Kumar (2014) Structural and Optical Characterization of Nanostructured CdO:Sn Thin Films Prepared by Chemical Spray Pyrolysis Technique. *International Journal of Pure and Applied Physics*. 4:2, 20-26.
10. R. Ramadas, **K. Kesavan**, R. Murugasami and D. Kumar (2013) Physical Properties of Nano-Scale Zinc Oxide Thin films using Chemical Spray Pyrolysis Method. *Nano Vision*. 3:3, 203-208.
11. **K. Kesavan**, V. Manivannan and R. Ramadas (2013) Structural and Optical Characterization of Nanoscale CdO:Mn Thin Films prepared by Chemical Spray Pyrolysis Technique. *Nano Vision*. 3:3, 209-214.
12. B.G. Jeyaprakash, **K. Kesavan**, R. Ashok kumar, S.Mohan and A.Amalarani (2011) Temperature dependent grain size and micro strain of CdO Thin films prepared by spray pyrolysis method. *Bulletin of Material Science*. 34:601. (**IF-0.899**).

13. B.G. Jeyaprakash, **K. Kesavan**, R. Ashok kumar, S.Mohan and A.Amalarani (2010) Analysis of Precursor Decomposition temperature in the Formation of CdO thin films prepared by Spray Pyrolysis Method. *Journal of American Science*. 6:2, 75 - 79.
14. B.G. Jeyaprakash, **K. Kesavan**, R. Ashok kumar, S.Mohan and A.Amalarani (2010) Structural and Optical Characterization of Spray Deposited SnS Thin film. *Journal of American Science*. 6: 3, 22-26
15. B.G. Jeyaprakash, A. Amalarani, **K. Kesavan** and S. Mohan (2009) Characterization of Microwave assisted chemically deposited SnS Thin Film. *Chalcogenide Letters*, 6:9, 455-461. **(IF-0.73)**.

6. Invited lecture (Resource person):

Refresher course in Nano Science organized by UGC-Human Resource Development Centre, Title Handled “Thin film Technology”(11th march, 2017) Kannur University, Kerala.

Intensive Training Programme for Tribal Students on Basic Science and Mathematics (26.07.2017 – 31.07.2017) organized by Vigyan Prasar, Department of Science and Technology, Govt. of India and Centre for Rural Development, PMU, vallam.

7. National/ International conferences paper presented

1. V.MARY PRADEEPA, **K.KESAVAN**, Study on structural and optical properties of CuS thin films for solar cell applications, International conference on Applications of Smart Materials(ASM-2020), 05-07 February 2020 [Annamali university].
2. V.MARY PRADEEPA, **K.KESAVAN**, V.MANIVANNAN, Synthesis of Cadmium Sulfide (CdS)Thin Films by Chemical Spray Deposition Technique and Its Characterization. National Conference On Emerging Trends in Material Science (NCETMS-2019) 26th &27th September 2019 [Government Arts College,Thiruvanamalai].
3. Stapleton, EM; Kizhakke Puliyakote, A; Shanmugam, **K; Kesavan**, K; Sirajunnisa, A; Geetha, K; Kumar, D; Hoffman, EA; Peters, TM; Comellas, AP, Indoor air quality in Thanjavur, India: Preliminary findings, Presented as poster at ISES/ISIAQ in University of Iowa Lithuania on 20th August 2019
4. E.M. Stapleton, A.S. KizhakkePuliyakote, K. Shanmugam, **K. Kesavan**, A. Sirajunnisa, K. Geetha, D. Kumar, N. Metwali, M. Jeronimo, M. Brauer, P.S. Thorne, T.M. Peters, E.A. Hoffman, A.P Comellas, Comparing wood and LPG cook-stove bioaerosol and particulate matter exposures in Tamil Nadu, India, Presented as poster at ISES/ISIAQ in Lithuania on 20th August 2019.

5. **K. Kesavan**, Optimization and Characterization of Spray Deposited Tin Sulfide thin films for Solar Cell Applications. ICEGT-2011 Periyar Maniammai University, Vallam, Thanjavur. 27-30.07.11

8. National/ International conferences/workshops attended/ paper presented:

Sl. No	Title/Name	Venue	Date	Place
1.	Short course on Photonics (SCP 2006)	PREC	09.12.06	Vallam, Thanjavur
2.	Workshop on Rural Development Role of Renewable energy Services	NIT	09.06.08	Trichy
3.	National Seminar on Crystal Growth of Non-linear optical Materials	National College	3,4.03.08	Trichy
4.	International Conference on Photonics, Nanotechnology and Computer Applications	PRIST University	25-28.02.09	Vallam, Thanjavur
5.	National Workshop on Theory and Practice of X-ray Diffraction Techniques	Alagappa University	13-17.07.09	Karaikudi
6.	Development for Technology Transfer On Climate Change Adaptation and Mitigation.	Periyar Maniammai University	19-20.04.11	Vallam, Thanjavur.
7.	International Conference on Emerging Green Technologies-2011	PMU	27-30.07.11	Vallam, Thanjavur
8.	2-WEEK ISTE WORKSHOP on Solar Photovoltaics: Fundamentals, Technologies and Applications.	NIT	12-22.12.11	Trichy
9.	Applications of Matlab softwae in Mathematical Field.	Periyar Maniammai University	25.02.12	Vallam Thanjavur.
10.	2 nd National Symposium on Shock waves	Periyar Maniniammai University	27,28.02.12	Vallam, Thanjavur.
11.	Aero Space festival 2013	Periyar Maniammai University	21-23.01.13	Vallam, Thanjavur
12.	2 nd National arivial Tamil karutharangam	Periyar Maniammai University	28.02.13	Vallam, Thanjavur
13.	Two days - Theme meeting on plutonium and transplutonium elements (TeMPT)-itinerary	Indira Gandhi Centre for Atomic Research,	4,05.04.13	Kalpakkam 603102, Tamil Nadu India
14.	One day work shop on Scanning Electron Microscope	Periyar Maniammai University	20.04.13	Vallam, Thanjavur

15.	World Astronomy day function	Periyar Maniammai University	22.04.14	Vallam, Thanjavur
16.	Workshop on “Elemental, compound and phase analysis by powder X-ray diffraction”	Department of Physics, NIT	19,20.09.14	Trichy
17.	Faculty Development programme on Beyond syllabus	Centre of University Industry interaction	16.05.2015	PMU
18.	Promoting Research to Global standards: Perceptions and challenges	Department of Social work	12.09.2015	PMU
19.	Two week ISTE short term Training Programme on Engineering Physics conducted	IIT Bombay under National Mission on Education through ICT (MHRD, Govt of India)	08-18 December 2015	PMU Thanjavur
20.	Two day faculty Development Programme	Controller of Examination	28&29 December 2015	PMU, Thanjavur
21.	Workshop cum Hands on training on Material Synthesis & Characterization	Karunya University	16.03.16	Coimbatore
22.	Refresher course on Instrumental Method of Analysis – AFM & SEM	Bio-Tech & Chemical Engg.	17-22 May 2016	PMU
24.	National level workshop on Quantumwise Atomistix Tool Kit with Virtual Nano Lab	Nano tech	October 2016	PMU
25.	Faculty Development program on Business English Communication	Dept. of English & Foreign language	12- 17 June 2017	PMIST
26.	Advanced Experimental Techniques [AET-2018]	Central University of Tamil Nadu	15 – 16 March 2018	Thiruvarur
27.	Basic Concepts of Effective Research Planning, Scientific Writing & Successful Communication	Dean Research	19 & 20 July 2019	PMIST
28.	Basic Training program in Nano Science and Technology	InuP IISc	14 – 16 October 2019	Bangalore
29.	National Science Day Celebrations 2019	FHSM	28 February 2019	PMIST

30.	One Day Workshop on Curricular Aspects	IQAC	7 March 2019	PMIST
31	Two Day International Conference on Innovative Technologies in Electronics and Health Care	ECE	12 & 13 March 2019	PMIST
32.	Technology enabled Teaching Learning Strategies towards Quality Enhancement in Higher Education	IQAC	11 & 12 April 2019	PMIST
33	National conference on Advanced Materials and Applications (NCAMA	Urumu Dhanalakshmi College	27 & 28 th February 2020	Trichy
34.	Contribution and efforts for the admission of students	PMIST	27.2.21	PMIST
35.	National Science Day 2021	FHSM	28 th February 2021	PMIST
36.	Recent Innovations in Engineering and Technology (ICTIET 2020)	Nandha Engg. College	4 – 5 December 2020	Erode

Personal Details

1. Name - K. KESAVAN
2. Educational Qualification - M.Sc., M.Ed., M.Phil., Ph.D.,
3. Date of Birth and Age - 25-07-1967/46 Yrs.
4. Gender/Marital Status - Male/Married
5. Language Known - English/Tamil
6. Nationality/Religion - Indian/ Hindu
7. Father's Name/Occupation - M. Karuppusamy/ Farmer
8. Address for correspondence - North Budalur
Budalur Post
Thanjavur District
Tamil Nadu – 613 602, India
9. Passport Number - N1351127
10. Contact Phone Number - Mobile : 94438-66566 / 7708108734
Email: kk7blr@gmail.com

DECLARATION

I hereby certify that the above information is correct to the best of my knowledge and belief and in case they are found false, my candidature shall be liable to be rejected.

Date : 22.10.2021

Signature

Place: Thanjavur

(Dr. K. Kesavan)