CURRICULUM VITAE

Dr.K. MOHANRAJ

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Academic Qualifications:

2009: ***Ph.D.*** **(Physics)**

Department of Physics, Annamalai University, Annamalai Nagar, Chidambaram – 608 002 Tamil Nadu, India.

Thesis Title: *"A study on the effect of some Indian Flyashes in blended cement paste"*

2003: ***M.Sc.*** **[Physics]**

Department of Physics, Annamalai University, Annamalai Nagar, Chidambaram – 608 002 Tamil Nadu, India.

Positions Held:

Associate Professor: (Form Nov. 4th2022)
Department of Physics, School of Basic and Applied Sciences, Central University of TamilNadu, Thiruvarur, Tamil Nadu.

Associate Professor: (Dec. 30th2021 – Nov. 3rd 2022)
Department of Physics, ManonmaniamSundaranar University, Tirunelveli-12TamilNadu, Tamil Nadu.

Assistant Professor: (Dec.30th2009 – Dec. 29th2021)
Department of Physics, ManonmaniamSundaranar University, Tirunelveli-12TamilNadu, Tamil Nadu.

Lecturer (Aug. 2008 – Dec. 2009)
Sakthi College of Engineering, Thiruninravur, Chennai.

Academic awards / Honors / Fellowships / Achievements:

Best Poster presentation award received from National Seminar on "Theoretical and chemical sciences" (TACS-2008, Feb 22-23, 2008) conducted by Department of Chemistry, Annamalai UniversityAnnamalai Nagar, entitled Molecular vibration and Microstructural development in hydration of Flyash - cement system.

Research Interest:

- Semiconductor Thinfilms and nanomaterials

Personal Profile:

Sex	Male	***Date of birth***	12thJuly, 1979
Marital Status/Family	Married /One Children	***Nationality***	Indian.

Conferences/Seminars/Workshops organized as:

1. **Convener**: Five days 5thInternational (Online) Conference on Recent Trends in Applied Science and Technology (ICRTAST-2021) to be held during November 25th to 28th November, 2021 Department of Physics, ManonmaniamSundaranar University, Tirunelveli-627 012.
2. **Convener**: Three days International E-Conference on Advances in Materials Science (ICAMS 2021) (Online mode)held on March 24-26, 2020 Department of Physics, ManonmaniamSundaranar University, Tirunelveli-627 012.
3. **Convener**: Two days National Conference on Energy Materials (NCEM2018) June 28th& 29th, 2018 Department of Physics, ManonmaniamSundaranar University, Tirunelveli-627 012.
4. **Secretary**Two days 6thNational seminar on Advances in Materials Science (NSAMS-2017) March 2 & 3, 2017, Department of Physics, ManonmaniamSundaranar University, Tirunelveli-627 012.
5. **Coordinator**: One-day Open House Day 3rd November 2016,Department of Physics, ManonmaniamSundaranar University, Tirunelveli- 12.
6. **Secretary**:One day National Seminar on Recent Trends in Physics- 2013 (NSRTP-2013)18th Mar, 2013, Department of Physics, ManonmaniamSundaranar University, Tirunelveli- 12.
7. **Coordinator**:One day awareness program on "Career Guidance & Empowerment of Differently Abled Presons (CGEDAP-2012) 30th Mar, 2012, ManonmaniamSundaranar University, Tirunelveli-627 012.
8. **Coordinator**:One day awareness programme on Higher Education system for Teachers and Differently Abled students (APHSTD-2011) 25th Mar, 2011, at ManonmaniamSundaranar University, Tirunelveli-627 012.
9. **Convener**: Two days National seminar on Advances in Physics (NSAP-2011) Mar 10-11h, 2011, Department of Physics, ManonmaniamSundaranar University, Tirunelveli-627 012.
10. **Secretary**: One day workshop on Advances in Physics-2010 5th Mar, 2010, Department of Physics, ManonmaniamSundaranar University, Tirunelveli -627 012.

Journal Publications:

Sl. No	Publication Details	E-ISSN
1.	Structural, optical, and surface modifications by varying precursor concentrations on spray deposition of In doped Co3O4 thin films for electro chemical application, S.K. Jasmin Vijitha, K. Mohanraj, R.P. Jebin, Chemical Physics Impact, 6, 1-9, 2023. Doi.org/10.1016/j.chphi.2022.100143.	2667-0224
2.	Magnetic and electrochemical application of Ru doped Co3O4 thin films, S.K. Jasmin Vijitha, K. Mohanraj, R.P. Jebin, Chemical Physics Impact, 6, 1-9, 2023. https://doi.org/10.1016/j.chphi.20223.100183	2667-0224
3.	Fabrication of Vacuum Evaporated $(Cu_{1-x}Ag_x)_2ZnSnSe_4$ Thin-film Photovoltaic Devices and its Photoconversion Efficiency, J. Henry, S. Nagarajan, G. Sivakumar, K. Mohanraj, Arabian Journal for Science and Engineering, 48, pages 291–309 (2023). 10.1007/s13369-022-06982-4	2191-4281
4.	Chemically deposited p-type MoBiCuS4 thin film for photoelectrochemical cell applications J. Henry, T. Daniel, V. Balasubramanian, K. Mohanraj& G. Sivakumar Phosphorus, Sulfur, and Silicon and the Related Elements, 197 (3), 2022, 152-157.	1563-5325
5.	Photoelectrochemical and photovoltaic cell performances of thermally evaporated Cu3BiS3 thin films, T. Daniel, V. Balasubramanian, J. Joy JebaVijila, S.T. Nishanthi, K. Amudhavalli, G. Sivakumar, T. Senthil Siva Subramanian, K. Mohanraj Vacuum, 195, 2022, 1-12. Doi.org/10.1016/j.vacuum.2021.110707	0042-207X
6.	Preparation of h-WO3/CuWO4 microsphere and single crystalline CuWO4 nanoparticles and their electrocatalytic activity S Kannan, V Balasubramanian, K Mohanraj, G Sivakumar, Vacuum, Volume 191, September 2021, 110381	0042-207X
7.	Optical and photovoltaic properties of vacuumevaporatedCZTSe, CAZTSe, and AZTSe thin films: a comparative study, J. Henry, G. Sivakumar, R. Vettumperumal, T. Senthil Siva Subramanian, K. Mohanraj, Journal of Materials Science: Materials in Electronics 32 (2021) 20259–20272	1573-482X
8.	Synthesis and characterization of Cu_2Se thin films doped with divalent cations (Cd^{2+}) by chemical bath deposition method J. Henry, T. Daniel, V. Balasubramanian, K. Mohanraj, G. Sivakumar Phase Transition Volume 94, 2021 - Issue 6-8, Pages 567-576	1029-0338
9.	Influence of pH of the electrolyte on the formation and properties of electrodeposited $ZrSe_2$ thin films A.P.V. Rakini, K. Mohanraj Inorganic and Nano-Metal Chemistry (Accepted)	2470-1564
10.	Fabrication of novel $CuAgZnSnSe_4$–$Cu_2ZnSnSe_4$thin film solar cells by the vacuum evaporation method J. Henry, K. Mohanraj, G. Sivakumar, New Journal of Chemistry, 44(2020) 15270-15280. doi.org/10.1039/D0NJ01841D (IF 3.288)	1144-0546
11.	Enhanced photosensitivity of Bi doped Cu_2Se thin films prepared by chemical synthesis for solar cell application J. Henry, T. Daniel, V. Balasubramanian, K. Mohanraj, G. Sivakumar Iranian Journal of Science and Technology, Transactions A: Science (Accepted) (IF 0.875)	2364-1819

12.	Role of W-Rich $CuWO_4$ and Doped Zn-$CuWO_4$ Ceramics and Its Improved Photoelectrochemical Cell Performances Synthesized by Solid State Reaction Method VenkatachalapathyBalasubramanian, Selvaraj Kannan, Nishanthi S. Thangaraj, GanesanSivakumar, KannusamyMohanraj Chemistry Select, 5(29),(2020) 8959-8968(IF 1.811)	2365-6549
13.	Electrical and optical properties of Sb-doped Cu_2Se thin films deposited by chemical bath deposition J. Henry, T. Daniel, V. Balasubramanian, K. Mohanraj, G. Sivakumar Phase Transitions, (2020)1-9, doi.org/10.1080/01411594.2020.1789918, (IF 1.004)	1029-0338
14.	Elucidate the pseudocapacitivebehaviour of $CuWO_4$ electrode synthesized by solid state reaction V. Balasubramanian, S. Kannan, S. T. Nishanthi, G. Sivakumar, K. Mohanraj Journal of Materials Science: Materials in Electronics, 31, 10142–10150 (2020) doi.org/10.1007/s10854-020-03559-5 (IF 2.220)	1573-482X
15.	Electrochemical performances of green stabilizer and biomolecule assisted $PbWO_4$ nanoparticles T. Daniel, V. Balasubramanian, J. Henry, G. Sivakumar, K. Mohanraj Journal of Electronic Materials, 46, 4680-4690 (2020) doi: 10.1007/s11664-020-08175-x (IF 1.774)	0361-5235
16.	Facile low temperature synthesis of W-rich $Cu_{1-x}Zn_xWO_4$ nanoparticles and the electrochemical performance V. Balasubramanian, T. Daniel, J. Henry, G. Sivakumar, K. Mohanraj Bulletin of Materials Science 43, 253 (2020) (IF 1.392)	0250-4707, 0973-7669
17.	Temperature dependent electrical and optical properties with higher photosensitivity of Cu_2Se absorber thin films for photo voltaic application J. Henry, T. Daniel, V. Balasubramanian, K. Mohanraj, G. Sivakumar Inorganic and Nano-Metal Chemistry, 51(1) (2020), 38-46, DOI: 10.1080/24701556.2020.1751199 (IF 0.839)	2470-1564
18.	Thermally evaporated CZTSe thin films for solar cell application: Study on the effect of annealing time J.Henry, K. Mohanraj, G. Sivakumar Particulate Science and Technology 38 (2020) 1-6, doi.org/10.1080/02726351.2018.1455783 (IF 1.619)	1548-0046
19.	Electrochemical performances of activated carbon prepared using eggshell waste V. Balasubramanian, T. Daniel, J. Henry, G. Sivakumar, K. Mohanraj SN Applied Sciences 2 (2020)127, doi.org/10.1007/s42452-019-1921-2	2523-3971
20.	Influence of substrates on the photoelectrochemical performances of $Ag_2ZnSnSe_4$ thin films J.Henry, K. Mohanraj, G. Sivakumar Journal of Physical Chemistry C 123 (2019) 2094-2104, DOI: 10.1021/acs.jpcc.8b11239 (IF 4.189)	1932-7447
21.	XRD, AFM, DRS and Photosensitivity of CZTSe Thin Films Prepared by Vacuum Evaporation Method J.Henry, K. Mohanraj, G. Sivakumar Iranian Journal of Science and Technology, Transactions A: Science 43 (2019) 1535–1544 DOI:10.1007/s40995-018-0628-3 (IF 0.875)	2364-1819

22.	Influence of film thickness variation on the photo electrochemical cell performances of Ag_3SbS_3 thin films T. Daniel, S.T. Nishanthi, K. Mohanraj, G. Sivakumar Vacuum 161 (2019) 138–142, doi.org/10.1016/j.vacuum.2018.12.031 (IF 2.906)	0042-207X
23.	Vacuum evaporated FTO/$(Cu, Ag)_2ZnSnSe_4$ thin films and its electrochemical analysis J.Henry, K. Mohanraj, G. Sivakumar Vacuum 160 (2019)347-354, doi.org/10.1016/j.vacuum.2018.11.055 (IF 2.906)	0042-207X
24.	Photoelectrochemical cell performances of $Cu_2ZnSnSe_4$ thin films deposited on various conductive substrates J.Henry, K. Mohanraj, G. Sivakumar Vacuum 156 (2018) 172-180 , doi.org/10.1016/j.vacuum.2018.07.031 (IF 2.906)	0042-207X
25.	Thermally Deposited Sb2S3: Bi Thin Films for Solar Cell Absorber DuraiChellaPriya, Thanabalan Daniel, Johnson Henry, KannusamyMohanraj, GanesanSivakumar, SethuramachandranThanikaikarasan, Pathiyamattom Joseph Sebastian Journal of New Materials for Electrochemical Systems 21 (2018) 037-042, DOI: 10.14447/jnmes.v21i1.520	1480-2422
26.	Synthesis and Characterization of $CuMS_2$ (M= Bi, Sb) thin films T. Daniel, K. Mohanraj, G. Sivakumar Jordan Journal of Physics 11 (2018) 137-139	1994-7615
27.	Photoluminescence behavior of $Cu_{2+x}Zn_{1-x}SnS_4$ thin films by SILAR method J. Henry, K. Mohanraj, G. Sivakumar Jordan Journal of Physics 11 (2018) 101-105	1994-7615
28.	Synthesis and characterization of Cu_2Se thin films with monovalent, divalent and trivalent cations via Chemical bath deoposition method A.P. Sudha, J. Henry, K. Mohanraj, G. Sivakumar Jordan Journal of Physics 11 (2018) 125-130	1994-7615
29.	Effect of Annealing Time on Cu2SnSe3 Thin Films Prepared by Successive Ionic Layer Adsorption and Reaction Method P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar Iranian Journal of Science and Technology, Transactions A: Science42 (2018) 1677-1682 doi.org/10.1007/s40995-017-0355-1 (IF 0.875)	2364-1819
30.	Effect of annealing temperature on thermally evaporated Cu_3SbS_3 thin films T. Daniel, K. Mohanraj, G. Sivakumar Journal of Materials Science: Materials in Electronics, 29 (2018) 9251–9257 doi.org/10.1007/s10854-018-8954-y (IF 2.220)	1573-482X
31.	Effect of different combinations of precursors of zirconium and selenium in the electrodeposited ZrSe2 thin films A. PanimayaValanRakkini, K. Mohanraj Ionics 24 (2018) 1243-1252, doi.org/10.1007/s11581-017-2265-9 (IF 2.394)	1862-0760
32.	Effect of Na doping on structural, optical, and electrical properties of Cu_2Se thin films prepared by chemical bath deposition method A. P. Sudha, J. Henry, K. Mohanraj, G. Sivakumar Applied Physics A 124 (2018) 164, doi.org/10.1007/s00339-018-1598-1 (IF 1.810)	1432-0630
33.	Antibacterial studies of novel Cu_2WS_4 ternary chalcogenide synthesized by hydrothermal process Selvaraj Kannan, PerumalVinitha, KannusamyMohanraj, GanesanSivakumarJournal of	0022-4596

	Solid State Chemistry 258 (2018) 367-382 doi.org/10.1016/j.jssc.2017.11.005 (IF 2.726).	
34.	A new approach for deposition of silver film from AgCl through Successive ionic layer adsorption and reaction technique Johnson Henry, ArockiasamyAjaypraveenkumar, GanesanSivakumar, KannusamyMohanraj Journal of Central South University 24 (2017) 2793-2798, doi.org/10.1007/s11771-017-3693-4 (IF 1.249)	2227-5223
35.	Synthesis of γ-Fe_2O_3, Fe_3O_4 and Copper Doped Fe_3O_4 Nanoparticles by sonochemical Method KannusamyMohanraj, GanesanSivakumarSainsMalaysiana 46 (2017) 1935-1942, dx.doi.org/10.17576/jsm-2017-4610-32 (IF 0.470)	0126-6039
36.	Preparation of Bifunctional CuWO4-Based Heterostructure Nanocomposites for Noble-Metal-Free Photocatalysts Selvaraj Kannan, KannusamyMohanraj, GanesanSivakumar Chemistry Select 2 (2017) 4484-4498, doi.org/10.1002/slct.201700877 (IF 1.811)	2365-6549
37.	Effect of Annealing on the Preparation of $CuWO_4$ Particles Selvaraj Kannan, KannusamyMohanraj, GanesanSivakumar Juniper Online Journal Material Science 2 (2017) 1-2	
38.	Photoresponse of novel mixed metal chalcogenide $MoSb_{2-x}Cu_xSe_4$/CdS thin film solar cells fabricated by CBD method using citric acid J. Joy JebaVijila, J. Henry , T. Daniel , K. Mohanraj, G. Sivakumar International Journal of Energy Research 41 (2017) 1295–1309 DOI: 10.1002/er.3713 (IF 3.741)	1099-114X
39.	Effect of pH induced on the photosensitivity of nontoxic Cu_2ZnSnS_4 thin film by chemical bath deposition J. Henry, K. Mohanraj, G. SivakumarOptik 141 (2017) 139-145, dx.doi.org/10.1016/j.ijleo.2017.03.121 (IF 2.187)	1618-1336
40.	Effect of annealing time on the optical properties of AZTSe thin films J.Henry, K. Mohanraj, G. Sivakumar Materials Letters 201 (2017) 105-108, dx.doi.org/10.1016/j.matlet.2017.04.149 (IF 3.204)	0167-577X
41.	Influence of trivalent (Bi, Sb) metal ions on the photosensitivity of doped Cu2Se thin films A. P. Sudha, P. Prema, J. Henry, K. Mohanraj, G. Sivakumar. Journal of Materials Science: Materials in Electronics 28 (2017) 6379–6387, DOI 10.1007/s10854-016-6322-3 (IF 2.220)	1573-482X
42.	Effect of copper concentration on the properties of chemically deposited $MoSb_{2-x}Cu_xSe_4$/CdS thin film absorbing layer for photovoltaic applications J. Joy JebaVijila, K. Mohanraj, G. Sivakumar Materials Research Bulletin 85 (2017) 188–195, doi.org/10.1016/j.materresbull.2016.09.019 (IF 4.019)	0025-5408
43.	Studies on structural, optical and electrical properties of electron beam evaporated Cu_2SnSe_3 thin films P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar Materials Science-Poland, 34 (2016) 703-707, doi.org/10.1515/msp-2016-0106 (IF 0.911)	2083-134X

44.	Fabrication of ITO/Ag3SbS3/CdX (X=S, Se) thin film heterojunctions for photo-sensing applications T. Daniel, J. Henry,K. Mohanraj, G. Sivakumar Materials Research Express 3 (2016) 116401, doi:10.1088/2053-1591/3/11/116401 (IF 1.929)	2053-1591
45.	Thermally evaporated AgyCu2-ySnSe3 metal chalcogenide thin films and its characterization P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar Optical Materials 62 (2016) 403-410, dx.doi.org/10.1016/j.optmat.2016.10.038 (IF 2.779)	0925-3467
46.	Photosensitivity of $CuBiSe_2$ thin film deposited by vacuum evaporation technique AbiramiMuthukannan, PasunkiliPrema, Johnson Henry, KannusamyMohanraj, GanesanSivakumar Journal of the Chinese chemical society 63(2016)841–846 DOI: 10.1002/jccs.201600189 (IF 1.554)	2192-6549
47.	Solvothermal-assisted synthesis of Cu_3XS_3 (X= Bi and Sb) chalcogenides nanoparticles R. SanthanaPriya, AbiramiMuthukannan, K. Mohanraj, G. Sivakumar Synthesis and Reactivity in Inorganic, Metal-Organic, andNano-Metal Chemistry 46 (2016) 1388-1394, dx.doi.org/10.1080/15533174.2015.1095768 (IF 0.839)	2470-1564
48.	The effect of postdeposition annealing on the structural and optoelectronic properties of copper bismuth selenide thin films by PVD AbiramiMuthukannan, J. Henry, K. Mohanraj, G. Sivakumar, S. Thanikaikarasan Journal of Materials Science: Materials in Electronics 27 (2016) 9947–9952, DOI 10.1007/s10854-016-5065-5 (IF 2.220)	1573-482X
49.	Photovoltaic p-n structure of $MoSb_{2-x}Cu_xSe_4$/CdS absorber films obtained via chemical bath deposition J.J.J. Vijila, K. Mohanraj, G. Sivakumar Materials Research Express 3 (2016) 076408, doi:10.1088/2053-1591/3/7/076408 (IF 1.929)	2053-1591
50.	$AgSbS_2$ and Ag_3SbS_3 absorber materials for photovoltaic applications T. Daniel, J. Henry, K. Mohanraj, G. Sivakumar Materials Chemistry and Physics 181 (2016) 415-421, dx.doi.org/10.1016/j.matchemphys.2016.06.077 (IF 3.408)	0254-0584
51.	Doping of Sn transition metal in $CuSe_2$ thin films and its effect on structural evolvement and opto-electrical properties P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar, Applied Physics A 122 (2016) 718, DOI 10.1007/s00339-016-0249-7 (IF: 1.810)	1432-0630
52.	Influence of copper concentration on the structural and optical properties of chemically deposited $CuSbS_2$ thin films Jebadurai Joy JebaVijila, KannusamyMohanraj, SethuramachandranThanikaikarasan, GanesanSivakumar, ThaiyanMahalingam, Luis Ixtlilco Journal of New Materials for Electrochemical Systems19 (2016) 15-19 DOI: 10.14447/jnmes.v19i1.342	1480-2422

53.	Ethylenediamine Processed Cu_2SnS_3 Nano Particles via Mild Solution Route Paul NesamonyPrathibaJeyaHelan, KannusamyMohanraj, SethuramachandranThanikaikarasan,ThaiyanMahalingam, GanesanSivakumar, P.J. Sebastian Journal of New Materials for Electrochemical Systems 19 (2016) 1-5 DOI: 10.14447/jnmes.v19i1.339	1480-2422
54.	Shape dependent optoelectrical investigation of $Cu_{2+x}Cd_{1-x}SnS_4$ thin films for solar cell applications J. Henry, P. Prema, D.PathinettamPadiyan, K.Mohanraj, G.Sivakumar New Journal of Chemistry 2016 (40) 2609-2618. DOI: 10.1039/c5nj03154k (IF 3.288)	1369-9261
55.	Electrical and optical properties of CZTS thin films prepared by SILAR method J. Henry, K. Mohanraj, G. Sivakumar Journal of Asian Ceramic Societies 4 (2016) 81-84, dx.doi.org/10.1016/j.jascer.2015.12.003 (IF 2.653)	2187-0764
56.	Influence of Cissusquadrangularis stabilized AgNPs and its structural, optical, antibacterial analysis: A comparative study J. Henry, K. Mohanraj, G. Sivakumar, Journal of Inorganic and Organometallic Polymers and Materials 26 (2016) 312-319, DOI 10.1007/s10904-015-0319-x (IF 1.941).	1574-1451
57.	Growth, optical, hardness and thermal aspects of TGSP single crystals J. Henry, G. Sivakumar, K. Mohanraj Optik 127 (2016) 3650-3654, dx.doi.org/10.1016/j.ijleo.2015.12.127 (IF 2.187)	1618-1336
58.	Influence of copper concentration on the opto-structural, morphological and electrical properties of novel $MoSb_{2-x}Cu_xSe_2$ thin films J. Joy JebaVijila, K. Mohanraj,G. Sivakumar Materials Science in Semiconductor Processing, 41 (2016) 398–403, dx.doi.org/10.1016/j.mssp.2015.09.028 (IF 3.085)	1369-8001
59.	Fabrication and characterization of vacuum evaporated Al:$CuSe_2$ thin films AbiramiMuthukannan, J. Henry, G. Sivakumar, K. Mohanraj Superlattices and Microstructures, 89 (2016) 83-88, dx.doi.org/10.1016/j.spmi.2015.11.002 (IF 2.120)	0749-6036
60.	Microwave-assisted Bi_2Se_3 nanoparticles using various organic solvents J. Joy JebaVijila, K. Mohanraj, J.Henry, G. Sivakumar SpectrochimicaActa Part A: Molecular and Biomolecular Spectroscopy, 153 (2016) 457–464, dx.doi.org/10.1016/j.saa.2015.08.041 (IF 3.232)	1386-1425
61.	Structural, optical and electrical characterization of nanostructured porous silicon:Effect of current density K. Kulathuraan,K. Mohanraj, B. Natarajan SpectrochimicaActa Part A: Molecular and Biomolecular Spectroscopy,152 (2016)51–57, doi.org/10.1016/j.saa.2015.07.055 (IF: 3.232)	1386-1425

62.	Characterization, luminescence and antibacterial properties of stable AgNPs synthesized from AgCl by precipitation method A. Ajaypraveenkumar, J. Henry, K. Mohanraj,G. Sivakumar , S. Umamaheswari Journal of Materials Science and Technology, 31 (2015) 1125–1132, dx.doi.org/10.1016/j.jmst.2015.08.005 (IF 6.155)	1005-0302
63.	Synthesis and characterization of β-Ag_2Se and β-AgCuSe nanoparticles starting from a novel inorganic Precursor P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar Transactions of Nonferrous Metals Society of China, 25:(7) (2015) 2241-2246, DOI: 10.1016/S1003-6326(15)63836-5 (IF 2.615)	1003-6326
64.	Electrochemical and fluorescence properties of SnO_2 thin films and its antibacterial activity J Henry, K. Mohanraj, G Sivakumar, S Umamaheswari SpectrochimicaActa Part A: Molecular and Biomolecular Spectroscopy, 143 (2015) 172-178, dx.doi.org/10.1016/j.saa.2015.02.034 (IF 3.232)	1386-1425
65.	Sonochemically prepared lead tungstate ($PbWO_4$) microcrystals and their photoluminescence S. Kannan, G. Sivakumar, K. Mohanraj SpectrochimicaActa Part A: Molecular and Biomolecular Spectroscopy, 138 (2015) 92-98, dx.doi.org/10.1016/j.saa.2014.11.017 (IF 3.232)	1386-1425
66.	On the optical properties of lead chalcogenide nanoparticles, nanoparticles E. Esakkiraj, K. Mohanraj, G. Sivakumar, J. Henry Optik 126 (2015) 2133–2137, dx.doi.org/10.1016/j.ijleo.2015.05.097 (IF 2.187)	1618-1336
67.	Structural and optical properties of SnS nanoparticles and Electron beam evaporated SnS thin films J. Henry, K. Mohanraj, S. Kannan, S. Barathan G. Sivakumar Journal of Experimental Nanoscience, 10:(2) (2015) 78-85, dx.doi.org/10.1080/17458080.2013.788226 (IF 2.169)	1745-8099
68.	Effect of pH- L-arginine concentration and aging time on Selenium nanostructures K. Prabu, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar Synthesis and Reactivity in Inorganic- Metal organic and Nano metal Chemistry, 44:(3) (2014) 383-388 doi.org/10.1080/15533174.2013.771666 (IF: 0.839)	2470-1564
69.	Undoped and doped ZnS nanoparticles by Precipitation method K. Prabhu, S. Kannan, J. Henry, G. Sivakumar,K. Mohanraj Walailak Journal of science and Technology (WJST), 11:(9) (2014) 795-801, DOI: 10.2004/wjst.v11i6.705	2228-835X
70.	Effect of butanol and propylene glycol on amorphous MnO_2 nanoparticles J. Henry, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar, Walailak Journal of science and Technology (WJST), 11:(5) (2014) 437-443, DOI: 10.2004/wjst.v11i5.590	2228-835X
71.	Synthesis of Selenium nanorods with assistance of biomolecule S. Kannan, K. Mohanraj, S. Barathan, G. Sivakumar, Bulletin of Material Science, 37:(7) (2014) 1631-1635, doi.org/10.1007/s12034-014-0712-z (IF 1.392)	0250-4707, 0973-7669

72.	Influence of equimolar concentration on structural and optical properties of binary selenides nanoparticles AbiramiMuthukannan, G. Sivakumar, K. Mohanraj Particulate Science and technology, 32:(4) (2014) 392-398, dx.doi.org/10.1080/02726351.2014.880978 (IF: 1.619)	1548-0046
73.	Fabrication and Properties of Bagasse Ash Blended Ceramic Tiles G.Sivakumar, V. Hariharan, M. Shanmugam, K.Mohanraj International Journal of ChemTech Research, 6:(12) (2014) 4991-499	0974-4290
74.	Morphological and Optostructural studies on hydrazine hydrate assisted $Zr(SeO_3)_2$ nanoparticles J. Henry, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar, Journal of Chilean Chemical society, 58: (2)(2013) 1759-1762, 10.4067/S0717-97072013000200026	0717-9707
75.	Influence of Zircomium Concentration on optical characteristics of nanostructured Zirconium diselenide inorganic cation exchanger J. Henry, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar Journal of Optoelectronics and advanced materials, 15 (2013) 1047-1051.	1454-4164
76.	Optostructural and vibrational characteristics of Cu:CdS nanoparticles by precipitation method E. Essakiraj, S.P.Sheik Abdul Kadar, J. Henry, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar Optik, 124 (2013) 5229-5237, dx.doi.org/10.1016/j.ijleo.2013.04.003 (IF: 2.187)	1618-1336
77.	Effect of Selenium doping on structural and optical properties of SnS:Se thin films by Electron beam evaporation method J. Henry, K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar The European Physical Journal of Applied Physics, 61 (2013) 10301, 10.1051/epjap/2012120359	1286-0050
78.	Preparation and characterization of nano SiO_2 from corn cob ash by precipitation method K. Mohanraj, S. Kannan, S. Barathan, G. Sivakumar Optoelectronics and Advanced Materials-Rapid Communications 6:(3-4) (2012) 394-397	1842-6573
79.	Synthesis and Characterization of the $Y_{1.5}Ca_{0.5}Bi_2Ba_3O_{9-y}$ Crystal G.Saravanan, K.Mohanraj, V.Anbarasu, K.Jayabalan International Journal of Chemical Sciences, 8:(1) (2010) 189-196	0972-768X
80.	Effect of flyash and water in hydrated blended-cement composites G.Sivakumar, K.Mohanraj, S.Barathan, Annamalai University Science Journal, 46 (2010) 1-4	
81.	Hydration process of flyash blended cement composite K.Mohanraj, G.Sivakumar, S.Barathan International Journal of Chemical Sciences, 8:(1) (2010) 589-601	0972-768X
82.	Dielectric study on flyash blended cement, G.Sivakumar, K.Mohanraj, S.Barathan E-Journal of chemistry, 6: (1) (2009) 231-236	20909063/ 2090-9071

83.	Hydration of flyash blended paste K.Mohanraj, G.Sivakumar Bulletin of Pure and Applied Sciences, 28F:(1-2) (2009) 7-16.	
84.	The Influence of chemical composition on Flyash-cement composite G.Sivakumar, K.Mohanraj, S.Senthilmurugan, R.Nithya, S.Barathan Eco-Chronicle, 3:(1) (2008) 37-42.	9734155
85.	FTIR Analysis of Flyashadmixtured Cement G.Sivakumar, K.Mohanraj, K.Thiruppathi, D.Govindarajan, K.Raghu, S.BarathanActaCienciaIndica, XXXIII:(1) (2007) 89-92	
86.	Scanning Electron microscopic study of solid waste flyash blended cement K.Mohanraj, R.Ravibaskar, B.Shanthi, G.Sivakumar Eco-Chronicle, 2:(2) (2007) 91-96.	9734155

Articles / Chapters Published in Books:

Title	Author's Name	Publisher	Year of Publication
Structural and mechanical properties of fly ash blended cement paste	KannusamyMohanraj and GanesanSivakumar	LAP Lambert Acadamic publishing, Germany, ISBN: 978-3-659-48906-8 First Edition	2013
Renewable Energy & Wastewater Treatment, Chapter 2:Review of chalcogenide based thin film solar cells (PP: 32-44	Ho Soon Min, Mohammad Junaebur Rashid , K. Mohanraj	Ideal International E – Publication Pvt. Ltd. ISBN: 978-93-86675-44-6 First Edition	2018
Metalchalcogenide thin films: Depositionand characterization, Chapter 1: Raman spectroscopy study of thin films: a review (PP:1-11)	Ho Soon Min, K. Mohanraj, Mohd Hafiz Dzarfan Othman, MohdRidhwan Adam	Albert Science International Organization, An International Publications House, Jaipur, India ISBN: 978-81-939231-1-5 First Edition	2018

Conference Proceedings:

1. Natural radioactivity concentration in soil samples of yelagiri hills, Tamilnadu, India, R. Ravisankar, A. Chandrasekaran, P. Eswaran, J. Jebasingh Kores, K. Mohanraj, P. Vijayagopal, B. Vekatraman, Proceedings of the nineteenth national symposium on

radiation physics: research and application of radiation physics, Dec 12-14, 2012, 434-436.

2. Zn doped CaSnO3 nanoparticles synthesis by Chemical method, V. Balasundaram, V. Balasubramanian, R. Nandhini, J. Henry, T.Daniel, K. Mohanraj and G. Sivakumar, International Conference on Advanced Materials Chemistry at the interfaces of Energy, Environment and Medicine – AMCI, January 30-31, 2020, Page No.46,ISBN: 978-93-81402-64-1.
3. Hydrothermally synthesised Copper based metal chalcogenide nanoparticles for energy applications, V.Balasubramanian, S. Kannan, K. Mohanraj and G. Sivakumar, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 38, ISBN: 978-93-81402-55-9.
4. Influence of film thickness on the optostructural properties of Ag3SbS3 thin films, T. Daniel, K. Mohanraj and G. Sivakumar, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 51, ISBN: 978-93-81402-55-9.
5. Comparison studies on opto-structural properties of vacuum evaporated (Cu, Ag)2ZnSnSe4 thin films, J. Henry, K. Mohanraj and G.Sivakumar, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 73, ISBN: 978-93-81402-55-9.
6. Photoresponse of Ammonia assisted MoSb2xCuxSe4 (x=0.3M) thin films by Chemical Bath Deposition method, J. Joy JebaVijila, K. Mohanraj, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 100, ISBN: 978-93-81402-55-9.
7. Structural and Electrical Characterization of Nanostructured Porous Silicon Fabricated for Different Etching Time, K. Kulathuraan and K. Mohanraj, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 114, ISBN: 978-93-81402-55-9.
8. Electrochemical performances of activated carbon prepared using egg shell waste, V.VaishnuBhagavathi, K.Mohanraj, G.Sivakumar, National Conference on Energy Materials-2018 (NCEM2018) organized by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during June 28 & 29, 2018, Page No. 254, ISBN: 978-93-81402-55-9.
9. Preparation of Bifunctional Cu –Rich $CuWO_4$ Nanocomposites for Noble-Metal-Free Photocatalysts, S. Kannan, K. Mohanraj and G. Sivakumar, 6^{th} National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 25, ISBN: 978-93-81402-40-5.

10. Synthesis and characterization of $CuMS_2$ (M= Bi, Sb) thin films prepared by CBD method, T.Daniel, K.Mohanraj and G.Sivakumar, 6th National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 45, ISBN: 978-93-81402-40-5.
11. Photoluminescence behavior of $Cu_{2+x}Zn_{1-x}SnS_4$ thin films by SILAR method, J. Henry, K.Mohanraj and G.Sivakumar, 6th National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 48, ISBN: 978-93-81402-40-5.
12. The effect of ph variation on the structural and optical properties of electrodeposited $ZrSe_2$ thin films, A.P.V. Rakkini and K. Mohanraj, 6th National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 113, ISBN: 978-93-81402-40-5.
13. Synthesis and characterization of Cu_2Se thin films with monovalent,divalent and trivalent cations via Chemical bath deposition method, A.P. Sudha, J.henry, K. Mohanraj, and G. Sivakumar, 6th National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 136, ISBN: 978-93-81402-40-5.
14. Hydrothermally Synthesized $CoSn(OH)_6$ Nanoparticles for Electrochemical Performance, V.K. Premkumar, K. Mohanraj, and G. Sivakumar, 6th National Seminar on Advances in Materials Science NSAMS2017, organised by the Department of Physics, Manonmaniam Sundaranar University, Tirunelveli during March 2 & 3, 2017 Page No. 156, ISBN: 978-93-81402-40-5.
15. Opto-electrical properties of ITO coated heterojunction thin films, T. Daniel, K. Mohanraj and G. Sivakumar, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of Physics & Chemistry during January 8 – 12, 2017, Page no. 48, ISBN 978-96-81402-38-2.
16. Photosensitivity analysis of vacuum evaporated CZTSe thin film, J. Henry, K. Mohanraj, and G.Sivakumar, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of Physics & Chemistry during January 8 – 12, 2017, Page no. 62, ISBN 978-96-81402-38-2.
17. Study of Concentration effect of complexing agent on Electrodeposited ZrSe thin films, A.PanimayaValanRakkini and K.Mohanraj, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of Physics & Chemistry during January 8 – 12, 2017, Page no. 91, ISBN 978-96-81402-38-2.
18. Application of (AgCu)SnSe thin film as photo cathode in 3 photoelectrochemical cells, P . PrathibaJeyaHelan, K. Mohanraj and G. Sivakumar, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of

Physics & Chemistry during January 8 – 12, 2017, Page no. 105, ISBN 978-96-81402-38-2.

19. Chemically deposited Cd^{2+} doped CuSe thin films, A.P .Sudha, J. Henry, K. Mohanraj and G. Sivakumar, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of Physics & Chemistry during January 8 – 12, 2017, Page no. 133, ISBN 978-96-81402-38-2.
20. One step preparation of Copper rich copper tungstate nanocomposites and their photoelectrochemical performance, S. Kannan, K. Mohanraj and G. Sivakumar, International Workshop on Advanced Functional Materials and Devices IWAFM-2017 organised by Department of Physics & Chemistry during January 8 – 12, 2017, Page no. 168, ISBN 978-96-81402-38-2.
21. Optostructural properties of thermally evaporated $CuBiSe_2$ thin films, AbiramiMuthukannan, K. Mohanraj, S. Barathan and G. Sivakumar, National Seminar on Advances in Materials Science, organised by Department of Physics during 29-30 September 2014, Page 12, ISBN 978-93-81402-16-0.
22. Cu induced structural modification of nanotubes to nanofibres, J. Joy JebaVijila, K. Mohanraj, S. Barathan and G. Sivakumar, National Seminar on Advances in Materials Science, organised by Department of Physics during 29-30 September 2014, Page 95, ISBN 978-93-81402-16-0.
23. Effect of Ethylenediamine on Mohite nanostructures via Solvothermal route, P. PrathibaJeyaHelan, K. Mohanraj, S. Barathan and G. Sivakumar, National Seminar on Advances in Materials Science, organised by Department of Physics during 29-30 September 2014, Page 111, ISBN 978-93-81402-16-0.
24. Effect of copper ions on structural, morphological, and optical properties of copper selenide thin films by CBD, J. Joy JebaVijila, G. Sivakumar, S. Thanikaikarasan and K. Mohanraj, 3rd National Seminar on Technologically important crystalline and amorphous solids (TICAS-2014) organised by Department of Physics, Kalasalingam University, Krishnankoil during 28th February & 1st March, 2014, page No. 133, ISBN No. 978-81-921319-4-8.
25. Facile Synthesis of CuSe2 and CuInSe2 nanoparticles and study of their thermal effect, P. PrathibaJeyaHelan, K. Mohanraj, G. Sivakumar and M. Raja, 3rd National Seminar on Technologically important crystalline and amorphous solids (TICAS-2014) organised by Department of Physics, Kalasalingam University, Krishnankoil during 28th February & 1st March, 2014, page No. 170, ISBN No. 978-81-921319-4-8.
26. Synthesis of Zeolite-X from class F Flyash by refluxing method and its characterisation, M. Noor Fathima, K. Mohanraj, S. Kannan, S. Barathan and G. Sivakumar, National Seminar on Advances in Materials Science, organised by Department of Physics during 23-24 January 2012, Page 183, ISBN 978-93-81402-22-1.

Conferences attended (selected):

Papers presented in the National Conferences

List of Conferences\Workshops attended in India

1. Participated and Presented a paper in Second International conference on Advanced Materials Chemistry at the Interfaces of Energy, Environment and Medicine (AMCI-2020) held during 30-31, January 2020 organised by Department of Chemistry, ManonmaniamSundaranar University, Tirunelveli.
   Title: Zn doped $CaSnO_3$ nanoparticles synthesis by chemical method.

2. Participated and Presented a paper in International conference on Applications of Smart Materials (ASM-2020) held during 05-07, February 2020 organised by Department of Physics & Chemistry, Annamalai University, Chidambaram.
   Title: Effect of doping divalent (Ce^{2+}) ions and its Opto-structural properties.

3. Participated and Presented a paper in International Workshop-cum-Conference on Smart Materials and their Applications in Recent Technologies (SMART 2020) held during March 4-5, 2020 organised by Department of Chemistry, Periyar University, Salem.
   Title: Photoelectochemical performance of $(Cu_{1-x}Ag_x)_2ZnSnSe_4$ for energy harvesting applications

4. Presented and presented a paper in International conference on Advanced Materials (ICAM-2019) held during 06th& 07th March 2019 organised by Centre for Nanoscience and Nanotechnology, JamiaMilliaIslamia University (A central University), New Delhi.
   Title: Fabrication of non-toxic $Cu_2ZnSnSe_4$-$(Cu_{1-x}Ag_x)_2ZnSnSe_4$ heterojunction photovoltaic devices

5. Presented and presented a paper inInternational conference on Advanced materials for Energy Science and Technology (AMEST-2019) held during 26th -28th February 2019 organised by Department of Energy Engineering, North Eastern Hill University, Shillong – 793 022, Meghalaya
   Title: Copper tungstate nanocomposites synthesised for electrochemical energy storage application

6. Participated and presented the paper in International Conference on Advances in Chemical Sciences 2018 (IC-ACS 2018) held during February 1-3, 2018 organized by Department of Chemistry, Shivaji University, Kolhapur 416004.
   Title: Photoelectrochemical cell performances of $Ag_2ZnSnSe_4$ thin films on various substrate.

7. Participated and presented a paper in International Conference on Recent Trends in Stochastic Modeling and its Applications (ICRTSMA 2018) held during 08 & 09 January 2018 organised by Department of Statistics, ManonmaniamSundaranar University, Tirunelveli-627 012
   Title: Analysis of photo conversion efficiencies of novel $MoSb_{2-x}Cu_xSe_4$/CdS heterojunction thin films fabricated by simple chemical bath deposition method

8. Participated and presented a paper in 2nd International Conference on Nanotechnology (ICNT 2015) and Indo-USA joint Symposium on New Approaches to Energy Harvesting: Alternative to fossil fuel held, Feb 19-22, 2015, Department of Chemical Engineering, Haldia Institute of technology, Hateribia, Haldia-721657, West Bengal.
   Title: Influence of the precursor AgCl concentration on the formation of silver nanoflower and its optical properties

9. Participated and presented a paper in National Conference on Physics of New Materials (NCPNM-2012) held during 20th& 21stApril 2012 organized by Department of Physics, Noorul Islam University, Kumaracoil, Thucklay-629 180, Tamil Nadu.
   Title: Influence of Cu ions doped on CdS thin films prepared by CBD technique

10. Participated and presented 2 paper in two days National conference on Exploring the Frontiers of Vibrational Spectroscopy (EXFOVIS-2011) held during 1st& 2nd September 2011organized by Department of Physics & Research Centre, Women's Christian College, Nagercoil-629 001
    Title 1: Preparation of Nano SiO_2 particles from Agro waste

    Title 2: Synthesis of Zeolite crystal from class F Fly ash

11. Participated and presented a paper in International symposium-cum-workshop on Laser induced Breakdown Spectroscopy held during 21-23rdDec 2010 organized by Department of Physics, University of Allahabad, Allahabad.
    Title: Synthesis and properties of nano-SiO_2 on Lignocellulosic waste blended cement composite

12. Participated and presented a paper in 10th Tamil Science Congress held during 21-23 September 2010 at ManonmaniamSundaranar University, Tirunelveli-627 012
    Title: Influence of seawater on flyash blended cement paste-Tamil

13. Participated and presented a paper in National Seminar on "Theoretical and chemical sciences" (TACS-2008, Feb 22-23, 2008) conducted by Dept. Chemistry, AnnamalaiUniversit, Annamalai Nagar-608 002.
    Title: Molecular vibration and Microstructural development in hydration of Flyash - cement system

14. Presented the paper entitled is "The influence of C and F type Flyash on composite materials" in National conference on "Recent advances in Physics (NCRAP-2008) on Feb 1-2, 2008, conducted by PG Dept. of Physics, Pachiappa's College, Chennai-600 030.
15. Presented the paper entitled is "Characterisation of flyash-cement system using FTIR and SEM with EDS" in 94th Indian Science Congress held at Annamalai University, Jan 3-7, 2007.
16. Presented the paper entitled is "Microstructral Development of Hydrated Flyash-Cement Paste" in National conference on "Recent advances in Materials science, (RAMS 2006) on Dec 29-30, 2006, conducted by Dept. of Physics, Ramakrishna Mission Vivekananda College, Mylapore, Chennai-4.
17. Presented the paper entitled is "FTIR analysis of flyashadmixtured cement" in National conference on "Recent advances in Materials science, (NCMS-2006) on Feb 16-17, 2006, conducted by Dept. of Physics, Periyar University, Salem-636 011.

Conferences/Seminars/Workshop Participated (without Paper)

1. Participated the webinar on Initiated Chemical Vapor Deposition (iCVD) of Functional Organic films organised by Academic open access publishing on 5th October 2021.
2. Attended a Webinar Series on Conceptual and Applied Physics, organised by School of Science, RK University and Department of Nanoscience and Advanced Materials, Saurashtra University, Rajkot held during 05.05.2020 to 08.05.2020.
3. Participated in National Conference on Advanced Materials for Energy Applications (NCAMEA 2020) held during 5th& 6th March 2020 organised by Department of Physics, Bharathiyar University, Coimbatore.
4. Participated in e-Faculty Development Program on Materials Science: Synthesis and Characterization held during 11-15 May, 2020 organised by Shri VaishnavVidyapeethVishwaVidyalayaUniverisity, Madhya Pradesh.
5. Participating in the three days International Workshop on Energy technologies (iWET-2019) during 24 – 26 September 2019 organised by Department of Renewable Energy Science, ManonmaniamSundaranar University, Tirunelveli – 627 012.
6. Participated in national Conference on Frontiers in Nanoscience (NCFNS-2018) held during04th& 05thOctober 2018 organized by Department of Physics, Annmalai University, Annamalainagar-608002, Tamilnadu, India
7. Participated in the One day sensitization program on revised NAAC accreditation framework held on 29th December 2018, at ManonmaniamSundaranar University, Tirunelveli – 627 012.
8. Participated in the One day workshop on MOOCs through SWAYAM held on 19th November 2018, at ManonmaniamSundaranar University, Tirunelveli – 627 012.
9. Participated in the National Seminar on Sustainable Development and Management of Ground water Resources held during 1st& 2nd February 2019 organized by Centre for Geotechnology, ManonmaniamSundaranar University, Tirunelveli-627012.

10. Participated in the three day National level Trainers of training on Social Entrepreneurship organised jointly by Rajiv Gandhi National Institute of Youth development under its Youth Led sustainable development programme in higher educations from 16.11.2018 to 18.11.2018 held at Department of Education (DD & CE), ManonmaniamSundaranar University, Tirunelveli – 627 012.
11. Served as coordinator for 6 day Student Induction Programme was held during 1st July 2019 to 8th July 2019 at ManonmaniamSundaranar University, Tirunelveli – 627 012.
12. Participated in the Five day capacity building programme on e-Content Development (CBP-eCD) conducted by Centre for teacher resource and academic support, School of Education, ManonmaniamSundaranar University, Tirunelveli – 627 012 on 15-19, July 2019.
13. Participated in 2nd International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2018) (in Tamil) held during 23-25 August 2018 organized by Department of Physics, Periyar University, Salem-636011, Tamilnadu, India
14. Participated and Session Chaired on International Conference on New Materials And Arid Land (ICNMAL-2018) held during15th& 16thMarch 2018, PG & Research Department of Physics, St. Joseph College of Arts and Science (Autonomous) Cuddalore-607001.
15. Participated in International Conference on Advances in Chemical Sciences 2018 (IC-ACS 2018) held during February 1-3, 2018 organized by Department of Chemistry, Shivaji University, Kolhapur 416004.
16. Participatedin Third International Conference on Recycling and Reuse of Materials (ICRM 2014) held during 11-13thApril 2014organised by Mahatma Gandhi University, Kottayam, Kerala- 686560.
17. Participated in Current Trends in Nanoscience and Nanotechnology held during 23rd& 24th December-2011 organised by Department of Chemistry, National Institute of Technology, Warangal-506 004, Andhra Pradesh.

(II) Research Projects:

Title	Cost in Lakhs (INR)	Duration	(PI/ Co-PI)	Funding Agency	Status
Influence of Agro Waste on light weight cement composite materials	0.4	2011-2012	PI	Project seed money from the M.S. University	Completed
Facile synthesis of Copper (I)/Copper (II) – based metal ternary oxide nanocomposites and their photoelectrochemical performance	16.665	Sept 2017-Oct 2020	PI	DST-SERB-EMR	Completed

(III). Research Supervisions:

Ph. D. Produced : Awarded: 8

(IV). Presently guiding:4 Students under full-time basis + 1 Co-Guide

(V). M. Phil. Produced: Awarded:20

(VI). M. Sc. Produced: Awarded: 52

(VII). Lectures delivered at other Institutions on invitation.

1. Talk on "PEC performance of CuAgZnSnSe4thin film by vacuum evaporation method" in International Conference on Advances in Nano-Optoelectronics and its Application (ICANOPA-2020) held during 12^{th}-14^{th} October 2020 organised by Department of Physics, Rajiv Gandhi central University, Arunachal Pradesh, India
2. Talk on "Quaternary thin films for Photoelectochemical applications" in Two day National Seminar on Emerging Trends in Physics held during 28^{th}& 29^{th} February 2020 organized by Department of Physics, SadakathullaAppa College, Rahmath Nagar, Tirunelveli.
   Title: Quaternary thin films for Photoelectrochemical applications
3. Talk in 2^{nd}International symposium-cum-workshop on Laser induced Breakdown Spectroscopy held during February 19-21, 2018 organized by Department of Physics, University of Allahabad, Allahabad.
   Title: Influence of hybrid microwave annealing on the preparation of h-WO_3/$CuWO_4$ microsphere and their electrocatalytic activity
4. Special lecture in cluster college meeting "Facile synthesis of solar absorber by chemical route: A SILAR method" on 23^{rd} September 2017 at Department of Physics, V.V.Vanniaperumal College for Women,Virudhunagar.
5. Talk in State Level Seminar on Progress in Material Science, organized Dept. Of Physics, Sri Parasakthi College for women, Courtallam on 28^{th} March 2017.
   Title: Thin films and its Characterization
6. Special lecture on "Synthesis of Low cost quaternary thin films by SILAR method" on 09^{th}March 2016 at Department of Physics, ArulmiguPalaniandavar College of Arts & Culture, Palani.
7. Talk in Recent Trends in Materials Science (RTMS-2016) held during January 11, 2016 at Department of Physics, SadakathullaAppa College, RahmathNagat, Tirunelveli
   Title :Preparation and characterisation of $Cu_{2+x}Cd_{1-x}SnS_4$ thin films
8. Talk in Semiconductor Materials and Device Processing for Energy Applications held during March 25^{th}, 2015 at Department of Physics, ArulmiguPalaniandavar Arts College for Women, Palani

Title :Chemically deposited novel $MoSb_{2-x}Cu_xSe_2$ thin films for solar cell applications

9. Talk in International Conference on Mathematical Chemistry (IC-MC13) held during October 03-05, 2013 at PG & Research Department of Mathematics, Loyala College, Chennai
   Title : Synthesis and Characterization of Nanoparticles.

10. Special address on Topics of Thin Films in the inaugural function of Physics association held at Department of Physics, ManonmaniamSundaranar University College, Govindaperi, Tirunelveli 627 414 on 21.08.2019.
11. Guest lecture on Synthesis and characterisation of nanoparticles held on 10.10.2018 organized by Department of Physics, Sri Sarada College for Women Tirunelveli.

Session chair:

1. Chaired a session entitled Frontiers for the development of quantum materials in the International conference on new materials & Arid land (ICNMAL-2018) held at St. Joseph's college of Arts & Science Cuddalore on 15th& 16th March 2018.
2. Chaired oral presentation session in the 4th International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2020) organised by Department of Physics, Bharathidasan University, Trichy During 26-29th December, 2020.
3. Chaired session for the Oral Presentation session in the National E-Conference on Advanced Research in Materials Science (NCARMS-2021) organized by Department of Physics, Kamaraj College, Thoothukudi during 22 – 23 February 2021.
4. Chaired oral presentation session in International Conference on Recent Trends in Multi Disciplinary Research (ICRTMDR)-2018) organised by V.O.Chidambaram College, Thoothukudi during 19-20 April, 2018.

(IX). <u>Faculty Improvement training undertaken</u>:

1. Successfully completed an NPTEL online certified course on Advanced Condensed Matter Physics during Jan-March 2021.
2. Participated six days online short-term training program on materials synthesis, characterization techniques and data analysis tools for research beginners, organized by centres of excellence-materials science/sensors & Nano electronics held during 3oth November to 5th December 2020.
3. Participated in the IIC Online sessions conducted by Institution Innovation Council of MHRD's Innovation cell, New Delhi to promote Innovations, +IPR, Entrepreneurship, and Start up among HEIs, organised by MHRD Institution Innovation Cell, MHRD under Ministry of Education, held during 28.04.2020 to 22.05.2020.
4. e-Faculty Development Programme on Materials Science: Synthesis and Characterization, organised by Shri VaishnavVidyapeethVishwaVidyalaya University held during 11.05.2020 to 15.05.2020

5. Participated five day capacity building programme on e-Content Development (CBP-eCD) organised by Centre for teacher resource and academic support, School of Education, ManonmaniamSundaranar University, Tirunelveli – 627 012 (PMMMNMTT), held during 15.07.2019 to 19.07.2019.
6. UGC-HRDC organised Refresher Course in Physics from 23.11.2018 to 13.12.2018 at Bharathiar University, Coimbatore- 46.
7. UGC sponsored Refresher Course in Physics from 11.09.2013 to 01.10.2013 at Academic Staff College, Bharathiar University, Coimbatore- 46.
8. UGC sponsored Orientation Course at Academic Staff College, Bharathiar University, Coimbatore- 46 during June 9th to July 6th, 2011.

(X). <u>Research Collaborators</u>:

S. No	Name	Institute
1.	Dr. Ho Soon Min.	INTI International University, MALAYSIA.
2.	Dr.FabianEzema	University of Nigeria, Nigeria.
3.	Dr. K. Prabakar	Pusan National University, Republic of Korea
4.	Dr. KI TAE NAM	Seoul National University (SNU), South Korea
5.	Prof. Emeritus Sebastian Lourdudoss	KTH-Royal Institute of Technology, Sweden
6.	Dr. A. Kathalingam,	Dongguk University, South Korea
7.	Dr. TheerthagiriJeyaraman	Gyeongsang National University, Republic of South Korea
8.	Dr. Raman Sankar	Institute of Physics, Taiwan
9.	Dr. AnantharajSengeni	Waseda University, Japan
10.	Dr. C. H. Joseph	UniversitaPolitecnicadelle Marche Ancona, Italy
11.	Dr. G. Bharath	Khalifa University of Science and Technology, Abu Dhabi
12	Prof. G. Sivakumar	CISL, Department of Physics, Annamalai University.
13	Prof. C.H. Bhosale	Shivaji University,Kolhapur
14	Prof. P. Elumalai	Green Energy Technology, Pondicherry.
15	Prof. N. Ponpandian	Nanoscience and Technology, Bharathiar University, Coimbatore.

16	Prof. R.T.Rajendrakumar	Nanoscience and Technology, Bharathiar University, Coimbatore.
17	Dr. N. Anandhan	Alagappa University, Karaikudi
17	Dr. J. Kalyanasundar	Department of Physics, Periyar University, Salem, India.
18	Dr. L. Kungumadevi	Mother Terasa University, Kodaikanal.

(XI). <u>Member in the Board of Studies/Examiners</u>

- ManonmaniumSundaranar University, Tirunelveli
- Periyar University, Salem
- Bharathidasan University, Tiruchirapalli
- Madurai Kamaraj University, Madurai
- Annamalai University, Annamalainagar
- Central University of Tamil Nadu, Thiruvarur
- Bharathiar University, Coimbatore.

(XII). <u>Active Reviewer for the following journals</u>

1. Chemosphere (Elsevier)
2. Journal of Alloys and Compounds (Elsevier)
3. Thin Solid Films (Elsevier)
4. Vacuum (Elsevier)
5. Chemistry Select (Wiley Online)
6. International Journal of Energy Research (Wiley Online)
7. Journal of Inorganic and Organometallic Polymers and Materials (Springer)
8. Journal of Materials Science: Materials in Electronics(Springer)
9. Journal of Nanoparticle Research(Springer)
10. Walailak Journal of science and Technology (WJST)
11. SpectrochimicaActa Part A: Molecular and Biomolecular Spectroscopy(Elsevier)
12. Asian-Pacific Journal of Chemical Engineering(Wiley Online)
13. Applied Nanoscience (Springer)
14. Journal of Molecular Liquids(Elsevier)
15. Net Journal of Agricultural Science
16. Metallurgical and Materials Transactions B (Springer)
17. Egyptian Journal of Basic & Applied Sciences(Elsevier)
18. Journal of Radiation Research and Applied Sciences(Elsevier)
19. Atmospheric Chemistry and Physics
20. Journal of Materials Engineering and Performance (Springer)
21. Journal of optoelectronics and advanced materials
22. International Journal of Frontiers in Science and Technology (IJFST)
23. Revista Mexicana de Física
24. Jordan Journal of Physics
25. Journal of Electronic Materials

Managing Guest Editor – Materials Today Proceedings

1. Managing Guest Editor in **Jordon Journal of Physics** (Scopus) for the special issue of National Seminar on Materials Science (NSAMS 2017).
2. Managing **Guest Editor** in **Vacuum journal** (Elsevier) for the special issue of National Conference on Energy materials (NCEM 2018).
3. Managing Guest Editor in **Phosphorus, Sulfur, and Silicon and the Related Elements** (Taylor & Francis) for the special issue of International Conference on Advances in materials (ICAMS 2021).

Membership in Professional bodies

1. Indian Science Congress ID – LSO (STM)021dt. 05.01.2007
2. Life time member in Neutron Scattering Society of India (For promotion of Neutron Scattering Research in India, Solid State Physics Division, BARC, Mumbai) with effect from 28.02.2014
3. Member in International Association of Advanced Materials-IAAM, Sweden with effect from 23.11. 2016 Membership Number: 79712191946

Administrative responsibilities held

1. President for Institution Innovation Council
2. IQAC Liaison officer
3. NIRF committee member
4. TANSCHE- Chairperson, Board of Studies, Electronics-PG-equivalence
5. Point Person for DST- PURSE 2020 proposed under the head of Smart Devices
6. AQAR - Committee- Criterion III Research, Innovations and Extension
7. Grant in-charge for UGC – XI plan Merged Scheme-Facilities for Differently abled persons.
8. Faculty in-charge for Smart class room with Video Conferencing, Foreign Language Laboratories
9. NAAC: Coordinator for criteria IV
10. Member of the Adhoc Board of Studies to start Renewable Energy Management and Auditing course.
11. Member of Expert & purchase Committee for Solar Photovoltaic Systems-commercial bit evaluation process.
12. Point person for purchase of Multichannel Photo electrochemical workstation with Accessories and Multiport Glove box with Accessories.
13. Co-coordinator for conduct of Directorate of Distance and Continuing Education (DD & CE) PCP classes, ManonmaniamSundaranar University, Tirunelveli-12.