CURRICULUM-VITAE OF Dr.S. MANIVANNAN

Qualification

Degree	Major/Specialization	Institute/University	Year of Passing
B.Sc.	PHYSICS	BHARATHIDASAN UNIVERSITY	1997
M.Sc.	PHYSICS	BHARATHIDASAN UNIVERSITY	1999
B.Ed.	PHYSICAL SCIENCE	UNIVERSITY OF MADRAS	2000
M.Phil.	PHYSICS	BHARATHIDASAN UNIVERSITY	2001
Ph.D.*	PHYSICS	BHARATHIDASAN UNIVERSITY	2006
* Title of Ph.D. Thesis: *Design, Synthesis, Growth and Characterization of Certain Pyridine Based Nonlinear Optical Crystals*			

Additional Qualification:

Training	Major/Specialization	Institute/University	Year
Post Doctoral Research	Carbon Nanotubes, Conducting materials, Thin films	Kyung Hee University, Seoul, South Korea	January 2007-December 2008
Professional Training	ASNT – Level-2 on Ultrasonic Testing	Ministry of Micro, Small & Medium Enterprises, Chennai, Govt. of India	2009

Experience

Experience **(as on March 2024)** : Research : 22 Years 06 Months
: Teaching : 15 Years 03 Months @ NIT-T

Organization	Designation	From	To	Nature of Job
Bharathidasan University, Tiruchirappalli, India	DST-Junior Research Fellow	October 2001	March 2003	Research
Bharathidasan University, Tiruchirappalli, India	DST-Senior Research Fellow	April 2003	March 2004	Research
Bharathidasan University, Tiruchirappalli, India	CSIR-Senior Research Fellow	April 2004	December 2006	Research
Kyung Hee University, Seoul, South Korea	Postdoctoral Researcher	January 2007	December 2008	Research

National Institute of Technology, Tiruchirappalli, India	Assistant Professor	Decembe r 2008	11 March, 2018	Teaching and Research
National Institute of Technology, Tiruchirappalli, India	Associate Professor	12, March 2018	10 March, 2024	Teaching and Research
National Institute of Technology, Tiruchirappalli, India	Professor	11 March, 2024	Till date	Teaching and Research

Professional/Research Interests

Carbon nanotubes *(purification, functionalization, dispersion)*, fabrication of transparent conducting films for display, optoelectronics and energy storage/conversion, graphene, graphene oxide, organic and semiorganic nonlinear optical *(NLO)* materials, display materials, sensors and polymer nanocomposites.

PUBLICATIONS (until March 2024)

Papers Published in Peer Reviewed International Journals:

76) R. Roshan Chandrapal, K. Bharathi, G. Bakiyaraj, S. Bharathkumar, Y. Priyajanani, S. Manivannan, J. Archana, M. Navaneethan, "Harnessing $ZnCr_2O_4$/g-C_3N_4 nanosheet heterojunction for enhanced photocatalytic degradation of rhodamine B and ciprofloxacin**"**
Chemosphere 350, 141094 (2024).
https://doi.org/10.1016/j.chemosphere.2023.141094

75) K. Lakshmanamoorthy, S. Manivannan, "Synthesis of few-layer graphene through simultaneous ultrasonication and electrochemical exfoliation in a Bronsted acidic ionic liquid [NMP] [HSO_4] aqueous electrolyte for NH_3 vapor sensing"
Carbon Letters 34 141-151 (2024)
https://doi.org/10.1007/s42823-023-00627-8

74) H J Trinity Rabecca, Y Priyajanani, S Manivannan, A J Clement Lourduraj, "Investigation of electrochemical behavior of Co_3O_4-Mn_2O_3/rGO nanocomposite for supercapacitor applications"
Journal of Materials Science: Materials in Electronics 34, 1390, 1-11 (2023).
https://doi.org/10.1007/s10854-023-10810-2

73) Lakshmanamoorthy K, Manivannan S, "Ionic liquids assist synthesis of Ag/AgX (X = Cl, Br, & F)-decorated rGO for visible light photocatalytic applications"
***J Mater Sci: Mater Electron* 33, 8724–8733 (2022).**
https://doi.org/10.1007/s10854-021-06774-w

72) Krupa Maria Kuruvila, D. Dhayanithi, S. Manivannan, N.V. Giridharan, P. Vijayakumar, C. Manikandan, R.M. Sarguna, Edward Prabu Amaladass, S. Ganesamoorthy, E. Varadarajan and V. Natarajan, "A study on the electrical properties of flux grown 0.91PZN-0.09PT single crystals for high-performance piezoelectric and pyroelectric device applications"

Journal of Crystal Growth, 598, 126875 (2022)
https://doi.org/10.1016/j.jcrysgro.2022.126875

71) K. Lakshmanamoorthy, S. Manivannan, "NMP-HSO_4 ionic liquid assist preparation of Ag/AgCl decorated rGO for visible light photocatalytic degradation of methylene blue"
Materials Today: Proceedings 68, 573-578 (2022)
https://doi.org/10.1016/j.matpr.2022.08.300

70) K. Lakshmanamoorthy, S. Prabhu, V. Ravikumar, S. Manivannan, "Effect of Ionic Liquid Anions in Tunning the Morphology and Size of Ag in rGO-Ag Nanocomposites: Anticancer Activity of the Composites Against A549 Lung Cancer Cells"
Journal of Inorganic and Organometallic Polymers and Materials, 32 (9), 3417-3428 (2022)
https://doi.org/10.1007/s10904-022-02453-3

69) E.G. Amrutha, K. Lakshamanmoorthy and S. Manivannan, "Carbon dots decorated graphene oxide: Structure and Properties"
Materials Today: Proceedings, 68, 124-127 (2022)
https://doi.org/10.1016/j.matpr.2022.07.009

68) K.Lakshmanamoorthy, S Manivannan, "Silver microrods decorated reduced graphene oxide based flexible film for room temperature NH_3 vapor sensing"
Materials Today: Proceedings, 68, 105-109 (2022)
https://doi.org/10.1016/j.matpr.2022.06.180

67) Edassery Gopalan Amrutha, Sellaperumal Manivannan, "Carbon Dots-Based Ratiometric Fluorescence Sensor for Hippuric Acid"
Phys. Status Solidi A, 219 (13), 2200076 (2022)
https://DOI: 10.1002/pssa.202200076

66) K.Lakshmanamoorthy, S Manivannan, "Role of surfactants on the synthesis of copper (II) oxide nanosheets-rGO composites"
Materials Today: Proceedings, 49, 2584-2587 (2022)
https://doi.org/10.1016/j.matpr.2021.06.198

65) K.Lakshmanamoorthy, S Manivannan, "Ionic liquids assist synthesis of Ag/AgX (X = Cl, Br, & F)-decorated rGO for visible light photocatalytic applications"
J. Mater Sci: Mater Electron., 33, 8724-8733 (2022)
https://doi.org/10.1007/s10854-021-06774-w

64) N. Ambikeswari, and S. Manivannan, "Structural, Magnetic, and Dielectric Properties of Ultrafine Nickel-Substituted Cobalt Ferrite-Reduced Graphene Oxide Nanocomposites"
Journal of Electronic Materials, 50, 6135-6148 (2021)
https://doi.org/10.1007/s11664-021-09130-0

63) **Amreetha S, Manikandan K, S Manivannan, K. Jothivenkatachalam, Kaipannan S, Alagarsamy P, M Sathish, Venugopal Rao Soma, Dhanuskodi S, B Chakraborty,** "TiO2/Carbon allotrope nanohybrids for supercapacitor application with theoretical insights from density functional theory"
Applied Surface Science, 563, 150259 (2021)

https://doi.org/10.1016/j.apsusc.2021.150259

62) **D. Prakash, S. Manivannan**, "N, B co-doped and Crumpled Graphene Oxide Pseudocapacitive Electrode for High Energy Supercapacitor"
Surfaces and Interfaces, 23, 101025 (2021)
https://doi.org/10.1016/j.surfin.2021.101025

61) **V. Mydhili, T. Kavinkumar, S. Manivannan, "**Poly(3,4-ethylenedioxythiophene): Poly(styrenesulfonate) coated three layer graphene-graphene oxide heterostructure for UV and IR detection"
Materials Science and Engineering B, 264, 114932 (2021)
https://doi.org/10.1016/j.mseb.2020.114932

60) **D. Prakash, S.Manivannan,** "Unusual battery type pseudocapacitive behaviour of graphene oxynitride electrode: High energy solid-state asymmetric supercapacitor"
Journal of Alloys and Compounds, 854, 156853 (2021)
https://doi.org/10.1016/j.jallcom.2020.156853

59) **R. Dhayalan, S. Saravanan, S. Manivannan, B.Purna Chandra Rao,** "Development of ultrasonic waveguide sensor for liquid level measurement in loop system"
Electronics Letters, 56 (21), 1120-1122 (2020)
https://doi.org/10.1049/el.2020.1678

58) **K.Lakshmanamoorthy, S Manivannan, "**Microwave assisted covalent functionalization of ionic liquids on reduced graphene oxide"
AIP Conference Proceedings, 2265 (1), 030710 (2020)
https://doi.org/10.1063/5.0017708

57) **K. Balamurugan, P.S. Siva Sankaran, S. Manivannan,** "Magnetic vortex states in chromium (IV) oxide (CrO2)"
J. Magnetism and Magnetic Materials, 494, 165845 (2020)
https://doi.org/10.1016/j.jmmm.2019.165845

56) **P. Senthilkumar, D. Arockiya Jency, T. Kavinkumar, D. Dhayanithi, S. Dhanuskodi, M. Umadevi, S. Manivannan, N. V. Giridharan, V. Thiagarajan, M. Sriramkumar,and K. Jothivenkatachalam,** "Built-in Electric Field Assisted Photocatalytic Dye Degradation and Photoelectrochemical Water Splitting of Ferroelectric Ce Doped BaTiO3 Nanoassemblies"
ACS Sustainable Chem. Eng. 7 (14) 12032-12043 (2019)
https://doi.org/10.1021/acssuschemeng.9b00679

55) **D. Prakash, S. Manivannan,** "Defect induced RGO-MnO_x hybrid electrodes for supercapacitor applications"
AIP Conference Proceedings, 2115, 030581 (2019)
https://doi.org/10.1063/1.5113420

54) **S. Manikandan, A. Sundari, S. Manivannan.** "Effect of Cu^{2+} ion on single crystal of nonlinear optical material (glycinium oxalate)"
J. Mater Sci: Mater Electron., 30, 10711-10721 (2019)
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53) **V. Mydhili and S. Manivannan, "**Electrochemical and dielectric behavior in poly(vinyl alcohol)/poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) blend for energy storage applications"
Polymer Bulletin, 76(9), 4735-4752 (2019)
https://doi.org/10.1007/s00289-018-2630-5

52) **V. Mydhili, T. Kavinkumar, B. Neppolian and S. Manivannan, "**Electrochemical behaviour and temperature dependent electrical transitions in graphene oxide incorporated poly(vinyl alcohol)/poly(3,4-ethylenedioxythiophene): poly(styrenesulfonate) composites for dielectric and supercapacitor applications"
Mater. Chem. Phys., 225, 261-271 (2019)
https://doi.org/10.1016/j.matchemphys.2018.12.080

51) **T Kavinkumar, L R Shobin, S Manivannan, "**Effect of laser irradiation on electrical and gas sensing properties of reduced graphene oxide-graphene oxide heterostructure films"
Journal of Alloys and Compounds, 784, 301-312 (2019)
https://doi.org/10.1016/j.jallcom.2018.12.376

50) **T Kavinkumar, P Kavitha, N Naresh, S Manivannan, M Muneeswaran, B Neppolian, "**High performance flexible solid-state symmetric supercapacitors based on laser induced porous reduced graphene oxide-graphene oxide hybrid nanostructure devices"
Applied Surface Science, 480, 671-679 (2019).
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49) **N. Ambikeswari, and S. Manivannan, "**Superior magnetodielectric properties of room temperature synthesized superparamagnetic cobalt ferrite – graphene oxide composite"
Journal of Alloys and Compounds, 763, 711-718 (2018).
https://doi.org/10.1016/j.jallcom.2018.05.275

48) **Mydhili V, Deepjyoti Das, L. R. Shobin, and S. Manivannan,** "Surface analysis and electrothermal performance of highly uniform PEDOT:PSS spin-coated films using infrared thermography"
AIP Conference Proceedings, 1942, 080024 (2018).
https://doi.org/10.1063/1.5028858

47) **N. Ambikeswari, and S. Manivannan, "**Effect of reaction time on the dielectric behaviour of reduced graphene oxide–layered cobalt hydroxide composite for high-k gate dielectrics"
Materials Research Bulletin, 100, 7-14 (2018).
https://doi.org/10.1016/j.materresbull.2017.11.050

46) **L.R. Shobin, and S. Manivannan,** "Enhancement of electrothermal performance in single-walled carbon nanotube transparent heaters by room temperature post-treatment"
Solar Energy Materials and Solar Cells, 174, 469-477 (2018).
https://doi.org/10.1016/j.solmat.2017.09.041

45) **L.R. Shobin and S. Manivannan,** "Silver nanowires-single walled carbon nanotubes heterostructure chemiresistors"
Sensors and Actuators B: Chemical, 256, 7-17 (2018).
https://doi.org/10.1016/j.snb.2017.10.056

44) **T. Kavinkumar and S. Manivannan,** "Improved dielectric behavior of graphene oxide-multiwalled carbon nanotube nanocomposite"
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43) **T. Kavinkumar, K. Varunkumar, V. Ravikumar and S. Manivannan,** "Anticancer activity of graphene oxide-reduced graphene oxide-silver nanoparticle composites", **J. Colloid and Interface Science, 505 1125-1133 (2017).**
https://doi.org/10.1016/j.jcis.2017.07.002

42) **V. Mydhili and S. Manivannan,** "Effect of microstructure on the dielectric properties of poly(vinyl alcohol)–poly(3,4-ethylenedioxythiophene) doped with poly(styrenesulfonate) composite films"
J. Appl. Polym. Sci. 45079 (2017).
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41) **T.Kavinkumar, P. Senthilkumar, S. Dhanuskodi and S.Manivannan,** "Dielectric transition and ferroelectric properties of graphene oxide-barium titanate nanocomposites"
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40) **T. Kavinkumar and S. Manivannan,** "Thermal and dielectric properties of multi-walled carbon nanotube–graphene oxide composite"
J. Mater Sci: Mater Electron., 28 1 344-353 (2017).
https://doi.org/10.1007/s10854-016-5529-7

39) **M. B. Sobhanan and S. Manivannan,** "Automation of Pulsed Thermography using Computer Numerical Controlled Manipulator for CFRP Circular Parabolic Honeycomb Structures"
International Journal of Scientific and Engineering Research, 7, 2, 137-141 (2016).
http://www.ijser.org/onlineResearchPaperViewer.aspx?Automation-of-Pulsed-Thermography-using-Computer-Numerical-Controlled-Manipulator-for-CFRP-Circular-Parabolic-Honeycomb-Structures.pdf

38) **T. Kavinkumar and S. Manivannan,** "Synthesis, Characterization and Gas Sensing Properties of Graphene Oxide-Multiwalled Carbon Nanotube Composite"
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https://doi.org/10.1016/j.jmst.2016.03.017

37) **T. Kavinkumar and S. Manivannan,** "Uniform decoration of silver nanoparticle on exfoliated graphene oxide sheets and its ammonia gas detection"
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36) **L.R. Shobin and S. Manivannan**, "Optically Transparent, Electrically Conducting Single Walled Carbon Nanotubes Random Networks for Room Temperature Ammonia Vapor Sensing"
Materials Science in Semiconducting Processing, 40 931-938 (2015).
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35) **L.R. Shobin and S. Manivannan**, "Carbon nanotubes on paper: Flexible and disposable chemiresistors"
Sensors and Actuators B: Chemical, 220 1178-1185 (2015).
https://doi.org/10.1016/j.snb.2015.06.030

34) **T. Kavinkumar, D. Sastikumar and S. Manivannan**, "Effect of functional groups on dielectric, optical gas sensing properties of graphene oxide and reduced graphene oxide at room temperature"
RSC Advances 5, 10816-25 (2015).
https://doi.org/10.1039/C4RA12766H

33) **L.R.Shobin, S. Manivannan**, "Room temperature ammonia vapor sensing properties of transparent single walled carbon nanotube thin film",
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Proceedings of SPIE Vol.9270, 92700U (2014).
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31) **L.R.Shobin, and S. Manivannan**, "One Pot Rapid Synthesis of Silver Nanowires Using NaCl Assisted Glycerol Mediated Polyol Process"
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30) **S. Manikandan, T. C. Sabari Girisun, R. Mohandoss, S. Dhanuskodi, and S.Manivannan,** "Third-order NLO properties of solution grown methyl-p-hydroxy benzoate single crystals"
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29) **L.R.Shobin, D.Sastikumar, S. Manivannan**, "Glycerol mediated synthesis of silver nanowires for room temperature ammonia vapor sensing"
Sensors and Actuators A: Physical, 214, 74-80 (2014).
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28) **L.R.Shobin, B.Renganathan, D.Sastikumar, Kyu Chang Park, S. Manivannan**, "Pure and Iso-Butyl Methyl Ketone Treated Multi-Walled Carbon Nanotubes for Ethanol and Methanol Vapor Sensing"
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27) **T.Seethalakshmi, S.Manivannan, S.Dhanuskodi, Daniel E Lynch, S. Thamotharan**, "4-Hy-droxy-1,2,6-tri-methyl-pyridinium bromide monohydrate"
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21) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Chang Seok Lee, Ki Seo Kim, Jin Jang, Kyu Chang Park,** "Dispersion of single-walled carbon nanotubes in aqueous and organic solvents through a polymer wrapping functionalization"
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15) **A. Pricilla Jeyakumari, S. Manivannan, S. Dhanuskodi,** "Spectral and Optical Studies of 2-amino-5-nitropyridinium dihydrogen phosphate: A Semiorganic Nonlinear Optical Material"
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11) **S. Dhanuskodi, S. Manivannan, K. Kirschbaum, J. Philip, S. Selladurai,** "Structural, thermal and dielectric studies on a new solution grown 4-dimethylaminopyridinium dihydrogen phosphate crystal"
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03) **S. Dhanuskodi, S. Manivannan,** "Quadratic organic nonlinear optical material: bis-2,7- diethylaminohepta-2,5-dien-4-one"
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Book Proceedings

01) Chang-Seok Lee, Je-Hwang Ryu, Han-Eol Im, S. Manivannan, Didier Pribat, Jin Jang, Kyu-Chang Park, "Growth Mechanism of Nitrogen Incorporated Carbon Nanotubes with RAP Process", **EKC2008 Proceedings of the EU-Korea Conference on Science and Technology, Springer Proceedings in Physics, 2008, Vol.124, Part 2, 249-257.**

Papers Presented in International/National Conferences (till June 2023)

78) **K. Lakshmanamoorthy and S. Manivannan, "**Role of Br^-, Cl^- and [BMIM][$MeSO_4$] ionic liquid in microwave assisted rapid synthesis of Ag-nanowires", **7th International Conference on Nanoscience and Nanotechnology (ICONN-2023) (Virtual Conference), March 27-29, 2023, SRMIST, Chennai, Tamil Nadu, India.**

77) **Amrutha E G and S. Manivannan, "**Dual-emissive carbon dots based ratiometric fluorescence probe for hippuric acid sensing", **International Union of Materials Research Societies – International Conference in Asia – 2022 (IUMRS-ICA-2022), December 19-23, 2022, Indian Institute of Technology (IIT) Jodhpur, Jodhpur, India.**

76) **Amrutha E G, K. Lakshmanamoorthy, S. Manivannan, "**Carbon dots decorated graphene oxide: Structure and Properties", **6th International Conference on Recent Advances in Material Chemistry (ICRAMC-2022), February 17-19, 2022, SRMIST, SRM University, Chennai, Tamil Nadu, India.**

75) **K. Lakshmanamoorthy, S. Manivannan, "**Silver Microrods Decorated Reduced Graphene Oxide Based Flexible Film for Room Temperature NH_3 Vapor Sensing", **6th International Conference on Recent Advances in Material Chemistry (ICRAMC-2022), February 17-19, 2022, SRMIST, SRM University, Channai, Tamil Nadu, India. (awarded as the best oral presentation)**

74) **K. Lakshmanamoorthy, S. Manivannan, "**NMP-HSO_4 Ionic Liquid Assist Preparation of Ag/AgCl Decorated rGO for Visible Light Photocatalytic Degradation of Methylene Blue", **International Conference on Advanced Materials-2022 (ICAM-2022), 11-12th February 2022, Department of Physics, St. Joseph's College, Tiruchirappalli, Tamil Nadu, India.**

73) **K. Lakshmanamoorthy, S. Manivannan, "**Ionic Liquids Assist Synthesized Ag/AgX (X=Cl, Br& F) Decorated rGO for Visible Light Photocatalytic Applications", **6th International Conference on Nanoscience and Nanotechnology (ICONN-2021), February 01-03, 2021, Department of Physics and Nanotechnology, SRMIST, Tamil Nadu, India,**

72) **K. Lakshmanamoorthy, S. Manivannan, "**Role of Surfactants on the Synthesis of Copper (II) Oxide Nanosheets- rGO Composites", **International Virtual Conference on Advanced Nanomaterials for Energy and Environment Applications (ICANEE-2020), September 16-18 2020, Alagappa University & Brunel University Jointly Organizes India– UK.**

71) **N. Ambikeswari** and **S. Manivannan,** "Enhanced dielectric response from superparamagnetic reduced graphene oxide- nickel ferrite composite", **International conference on Materials of Emerging Energies (ICMEE 2020), 20-22 February 2020, Loyola College, Chennai, India.**

70) **K. Lakshmanamoorthy** and **S. Manivannan,** "Microwave assisted covalent functionalization of ionic liquids on reduced graphene oxide", **64th DAE Solid State Physics Symposium (DAE-SSPS 2019), December 18-22, 2019, IIT Jodhpur, Rajasthan, India.**

69) **Krupa Maria Kuruvilaa, D. Dhayanithi, S. Manivannan, N.V. Giridharan, P. Vijayakumar, S. Ganesamoorthy, E. Varadarajan, and V. Natarajan,** "Growth and Characterization of 0.91PZN-0.09PT Single Crystals for Naval Transducer Applications" **International Conference on Advanced Materials and Processes for Defence Applications (ADMAT 2019), September 23-25, 2019, Courtyard by Marriott, Defence Metallurgical Research Laboratory, Hyderabad, India. (awarded as the best poster)**

68) **Prakash D and Manivannan S**, "Rapid Synthesis of Activated Carbon-Manganese Oxide Composite for Supercapacitor Applications", **International Conference on Nanoscience and Nanotechnology (ICONN -2019), January 28-30, 2019, SRM University, Chennai.**

67) **Prakash D and Manivannan S**, "Defect Induced RGO-MnOx Hybrid Electrodes for Supercapacitor Applications" **63rd DAE Solid State Physics Symposium (DAE-SSPS 2018), December 18-22, 2018, Guru Jambheshwar University of Science and Technology, Hisar, Haryana.**

66) **Prakash D and S. Manivannan,** "Simultaneous oxidation and reduction of GO and $KMnO_4$ for synthesis of RGO-Mn_3O_4 hybrid electrode material for supercapacitor application", **MRSI-National Symposium on Advances in Functional and Exotic Materials, 14-16 February 2018, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India**.

65) **Prakash D and Manivannan S**, "Superior Electrochemical Properties of Hausmannite - Mn_3O_4 Nanocrystal for Supercapacitor Electrodes", **International Conference on Nanoscience and Nanotechnology (ICONN -2017), August 09-11, 2017, SRM University, Chennai.**

64). **Ambikeswari N. and Manivannan S**, Magnetodielectric properties of superparamagnetic cobalt ferrite – graphene oxide nanocomposite, **International Conference on Nanoscience and Nanotechnology (ICONN -2017), Aug 09-11, 2017, SRM University, Chennai.**

63) **Mydhili. V, Deepjyoti Das, L.R. Shobin and S. Manivannan,** "Surface Analysis and Electrothermal Performance of Highly Uniform PEDOT:PSS Spin-coated Films using Infrared Thermography", **62nd DAE Solid State Physics Symposium (DAE-SSPS 2017), December 26-30, 2017, BARC , Mumbai.**

62) **L.R. Shobin, M. Nivedha and S. Manivannan**, "Fabrication of Transparent Heaters using Silver Nanowires", **3rd International Conference on Nanoscience and Nanotechnology (ICNSNT 2016), 15-16 December, Colombo, Srilanka (awarded for best oral).**

61) **N. Ambikeswari and S.Manivannan,** "Investigation on the Dielectric and Magnetic Properties of Facile Synthesized Reduced Graphene Oxide-Cobalt Ferrite Nanocomposite", **International Conference on Material Processing and Applications.(ICMPA-2016), 14-16, December 2016, Center for Crystal Growth, School of Advance Sciences, VIT University, Vellore, Tamilnadu, India.**

60) **Mydhili.V and S.Manivannan,** "Dielectric properties of PVA/H_3PO_4, PVA/PEDOT:PSS and PVA/PEDOT:PSS/H_3PO_4 gel electrolyte systems", **International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM 2016) , 11-15, December 2016, Indian Institute of Science, Bangalore, India (awarded for best poster).**

59) **N. Ambikeswari and S.Manivannan,** "Rapid Synthesis of Reduced Graphene Oxide-Cobalt Hydroxide Composite and their Dielectric Properties**", National Conference on Advanced Materials-2016 (NCAM-2016) 7, October 2016, Department of Physics, St. Joseph's College, Tiruchirappalli, India.**

58) **T. Kavinkumar and S. Manivannan,** "Improved dielectric behaviours of graphene oxide-multiwalled carbon nanotube nanocomposite", **International Conference on Functional Materials (ICFM-2016), 07-10 September 2016**, **PSN College of Engineering and Technology, Tirunelveli, Tamilnadu, India (awarded for best poster).**

57) **Mydhili.V and S.Manivannan,** "Investigation on the dielectric properties of poly(vinyl alcohol)/boric acid gel electrolytes", **International Conference on Functional Materials (ICFM-2016), 07-10 September 2016**, **PSN College of Engineering and Technology, Tirunelveli, Tamilnadu, India.**

56) **Mydhili.V and S.Manivannan,** "Temperature dependent dielectric behavior of Poly(vinyl alcohol)/Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) freestanding films", **Second International Conference on Material Science and Technology (ICMST-2016), 05-08 June 2016, St. Thomas College, Pala, Kottayam, Kerala, India.**

55) **L.R.Shobin, M.Nivedha and S. Manivannan,** "Fabrication of Silver Nanowire Transparent Conducting Electrodes by Spin Coating for Optoelectronics", **International Conference on Frontiers in Nanoscience & Nanotechnology (ICFNN-2016), February 26-28, 2016, Sastra University, Thanjavur, Tamil Nadu, India.**

54) **M.B. Sobhanan and S. Manivannan,** "Automation of Pulsed Thermography using Computer Numerical Controlled Manipulator for CFRP Circular Parabolic Honeycomb Structures", **International Conference on Modern Engineering, Science & Technology-2016 (IER-ICMEST'16), February 05, 2016, Institute of Engineering Research, Trivandrum, Kerala, India.**

53) **Mydhili.V and S.Manivannan**, "Dielectric and optical studies on Poly(vinyl alcohol)/Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) transparent freestanding films", **International Conference on Recent Advances in Material and Chemical Sciences (ICRAMCS-2015), 14-15 December 2015, Gandhigram Rural Institute, Gandhigram, Tamilnadu, India.**

52) **N.Ambikeswari and S.Manivannan,** "Rapid synthesis of reduced graphene oxide-cobalt hydroxide composite and their dielectric properties"**, International Conference on Recent Advances in Material and Chemical Sciences (ICRAMCS-2015), 14-15 December 2015, Gandhigram Rural Institute, Gandhigram, Tamilnadu, India.**

51) **T. Kavinkumar and S. Manivannan**, "Dielectric and ammonia vapor sensing properties of partially reduced graphene oxide-multi walled carbon nanotube composite", **International Conference on Recent Advances in Materials and Chemical Sciences (ICRAMCS-2015), 14-15 December 2015, Department of Chemistry, Gandhigram Rural Institute (Deemed University) Gandhigram, Dindigul District, Tamil Nadu, India (awarded for best oral presentation).**

50) **Karthik Kumar, C.K. Mukopadhyay, TK Haneef, B. Purnachandra Rao, Rishi Pamnani, Manivannan S,** "Study on Tensile Behaviour of HSLA Steel Using Acoustic Emission Technique", **National Seminar & International Exhibition on Non-Destructive Evaluation, November 26-28, 2015, Hyderabad, India.**

49) **M.B. Sobhanan, S. Manivannan, S. Harikrishna,** "Automation of Pulsed Thermography Using Computer Numerical Controlled Manipulator for CFRP Honeycomb Structures", **National Seminar & International Exhibition on Non-Destructive Evaluation, November 26-28, 2015, Hyderabad, India.**

48) **T. Kavinkumar, D. Sastikumar and S. Manivannan,** "Reduced Graphene Oxide Coated Optical Fiber for Methanol and Ethanol Vapor Detection at Room Temperature", **SPIE Photonics Asia, October 9-11, 2014, Beijing, China (oral).**

47) **L.R. Shobin and S. Manivannan**, "Room Temperature Ammonia Vapor Sensing Properties of Transparent Single Walled Carbon Nanotube Thin Films", **SPIE Photonics Asia, October 9-11, 2014, Beijing, China.**

46) **L.R. Shobin and S. Manivannan**, "Role of NaCl and Temperature in Glycerol Mediated Rapid Growth of Silver Nanostructures", **"International Conference on Nanotechnology (ICN – 2014)", July 6-7, 2014, Singapore (oral).**

45) **L.R.Shobin, Kyu Chang Park, S.Manivannan**, "Fabrication of Transparent Single Walled Carbon Nanotube sensor for Room Temperature Ammonia Vapor Sensing", **"National Conference on Nanophotonics (NCNP – 2014)", March 6-7, 2014, , Bharathidasan University Tiruchirappalli, India (oral).**

44) **J. Bharathidason, L.R. Shobin, S. Manivannan**, "Fabrication of Semi-Transparent Silver Nanoparticles/PVA Composite Free Standing Films",**"National Conference on Nanophotonics (NCNP – 2014)", March 6-7, 2014, Bharathidasan University Tiruchirappalli, India.**

43) **U. Nithyanantham, T. Boopalan, L.R. Shobin, S. Manivannan,** "Synthesis and Characterization of Copper Nanostructures for Optoelectronics", **"National Conference on Nanophotonics (NCNP – 2014)", March 6-7, 2014, Bharathidasan University Tiruchirappalli, India (awarded as the best paper).**

42) **T. Kavinkumar and S. Manivannan,** "Highly Exfoliated Few Layers of Graphene Oxide Thin Films using Spin Coating Technique", **"National Conference on Advanced Functional Materials (NCAFM-2014) 30-31, January 2014, Bharathiar University, Coimbatore, India.**

41) **L.R.Shobin, T. Kavinkumar, Kyu Chang Park, S.Manivannan**, "Effect of Post Treatment on Spray Coated Transparent Conducting Single Walled Carbon Nanotube Films", **"International Union of Materials Research Societies – International Conference in Asia – 2013 (IUMRS-ICA-2013)", December 16-20, 2013, Indian Institute Of Science, Bangalore, India.**

40) **L.R. Shobin, D. Sastikumar and S. Manivannan**, "Synthesis, Purification, Dispersion and Room Temperature Ammonia Vapor Sensing Properties of Silver Nanowires", **"International Union of Materials Research Societies – International Conference in Asia – 2013 (IUMRS-ICA-2013)", December 16-20, 2013, Indian Institute of Science, Bangalore, India (awarded as the best paper).**

39) **L.R.Shobin, T. Kavinkumar, Kyu Chang Park and S. Manivannan**, "Fabrication of Single Walled Carbon Nanotubes Transparent Conducting Films by Spray Coating", **"National Seminar on New Materials Research and Nanotechnology" (MSNMRN2013), September 25-27, 2013, Govt. Arts College, Ooty, India (oral).**

38) **T.Kavinkumar, L.R.Shobin, S.Manivannan**, "Synthesis and Characterization of Expanded Graphene Oxide Thin Films", **"National Seminar on New Materials Research and Nanotechnology" (MSNMRN2013), September 25-27, 2013, Govt. Arts College, Ooty, India (awarded as the best paper).**

37) **L.R.Shobin, Kyu Chang Park, S. Manivannan**, "Fabrication of Single-Walled Carbon Nanotube Transparent Conducting Electrodes by Spray Coating for Optoelectronics", **"National Conference on Frontier Topics In Advanced Materials" (NCFTAM-2013), March 11, 2013, Bishop Heber College, Tiruchirappalli India (awarded as the best paper).**

36) **L.R.Shobin, B.Renganathan, D.Sastikumar, Kyu Chang Park, S. Manivannan**, "HNO_3 Treated Multi-Walled Carbon Nanotubes Coated Intensity Modulated Fiber Optic Sensors for Ammonia Vapor", **"Optoelectronic Materials and Thin Films for Advanced Technology" (OMTAT 2013, January 2-5, 2013, Cochin University of Science and Technology Cochin, India.**

35) **S.Mohanapriya, L.R.Shobin, S. Manivannan**, "Fabrication of Single Walled Carbon Nanotube Transparent Conducting Films by Dip Coating Technique", **National Seminar on Advances in Materials Science (NSAMS-2012), January 23-24, 2012, Tirunelveli, India (oral).**

34) **L. R. Shobin, B. Renganathan, D. Sastikumar, Kyu Chang Park, S. Manivannan,** "Multi-Walled Carbon Nanotubes Coated Intensity Modulated Fiber Optic Sensors for Ammonia Vapor Detection", **Annual Photonics Workshop 2012 (APW2012), February 27-28, 2012, Cochin, India.**

33) **S.Mohanapriya, L.R.Shobin, Kyu Chang Park, S.Manivannan,** "Fabrication of Single Walled Carbon Nanotube Transparent Conducting Films by Dip Coating Technique" **National Seminar on Advances in Materials Science, January 23-24, 2012, Tirunelveli, India (oral).**

32) **R. Sambhu, G.V.S. Murthy, S. Manivannan**, "Characterization of Precipatation Behaviour in Nimonic-263 Using Ultrasonics", **National Seminar & Exhibition on Non-Destructive Evaluation (NDE 2011), December 7-10, 2011, Chennai Convention Centre, Chennai, India.**

31) **K. Somakirankumar, K. Balasubramaniam, S. Manivannan**, "Higher Order Guided Waves for Detection and Characterization of Defects in Aluminium Plates", **National Seminar & Exhibition on Non-Destructive Evaluation (NDE 2011), December 7-10, 2011, Chennai Convention Centre, Chennai, India.**

30) **S. Manikandan, S. Manivannan, T.C. Sabari Girisun, R. Mohandoss, S. Dhanuskodi,** "Optical Properties of Methyl P-hydroxy Benzoate Single Crystals" **International Conference on Materials for Advanced Technologies" (ICMAT), 26 June to 01 July 2011, Suntec, Singapore.**

29) **L.R.Shobin, B.Renganathan, D.Sastikumar, Kyu Chang Park, S. Manivannan**, "Pure and Iso-butyl Methyl Ketone Treated Multi-walled Carbon Nanotubes Coated Fiber Optic Ethanol and Methanol Vapor Sensor", **International Conference on Materials for Advanced Technologies" (ICMAT), 26 June to 01 July 2011, Suntec, Singapore.**

28) **S. Manivannan, L. Shobin, A.M. Saranya, B. Renganathan, D. Sastikumar and Kyu Chang Park,** "Carbon Nanotubes Coated Fiber Optic Ammonia Gas Sensor", **"SPIE-Photonics West 2011, OPTO – Integrated Optics: Devices, Materials, and Technologies XV", San Francisco, California, USA, to be held January 22-27, 2011 (oral).**

27) **T. Naganjaneyulu, Arun, A. Vinay Kumar, R. Dhayalan, K. Balasubramaniam, C.V. Krishnamurthy and S. Manivannan,** "Development of Impedance Matching Transformers (IMT) for EMAT Applications", **National Seminar & Exhibition on Non-Destructive Evaluation (NDE 2009), BHEL & NIT, Tiruchirappalli, India, December 10-12, 2009.**

26) **Il Ok Jeong, Je Hwang Ryu, S. Manivannan, Han Eol Lim, Joon Won Lim, Byung Taek Son, Kyu Chang Park and Jin Jang,** "Selective Growth of Vertically Aligned Carbon Nanotubes on Metal Foil", **The 15th International Display Workwhops (IDW'08), Niigata, Japan, December 3-5, 2008 (oral).**

25) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Jin Jang and Kyu Chang Park, "**Solution Processed Single Walled Carbon Nanotubes Transparent Conducting Films"**, The Korean Institute of Electrical and Electronic Material Engineers (KIEEME) Annual Autumn Conference 2008, South Korea, November 6-8, 2008 (oral).**

24) **S. Manivannan, Je Hwang Ryu, Il Ok Jeong, Jin Jang and Kyu Chang Park,** "Improved Conductivity by Effective Wetting of Single Walled Carbon Nanotubes Film", **8th International Meeting on Information Display (IMID 2008), South Korea, October 13-17, 2008 (oral).**

23) **S. Manivannan, Je Hwang Ryu, Il Ok Jeong, Jin Jang and Kyu Chang Park,** "Fabrication of Single Walled Carbon Nanotubes Flexible Transparent Conducting Films", **The 2008 E-MRS Fall Meeting (E-MRS), Poland, September 15-19, 2008 (awarded as the best paper).**

22) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Jin Jang and Kyu Chang Park,** "Carbon Nanotube Dispersed Solution for Transparent Conducting Films", 11th **Field Emission Workshop '08 (FEW 2008), Seokcho, South Korea, August 11-13, 2008 (invited paper).**

21) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Han Eol Lim, Jin Jang and Kyu Chang Park,** "Spin Coated Transparent Electrodes from Dispersed Single-Walled Carbon Nanotubes Solution for Display and Optoelectronics", **Third International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA08), Edmonton, Canada, July, 20-25, 2008 (oral).**

20) **Je Hwang Ryu, Chang Seok Lee, Ki Seo Kim, Han Eol Lim, Kyung Woo Min, Il Ok Jeong, S. Manivannan, Jin Jang and Kyu Chang Park,** "Enhanced Electron Emission with Robust CNTs Grown by Resist-Assisted Patterning Process", **Society for Information Display (SID'08), Los Angeles, California, USA, May 18-23, 2008.**

19) **Chang Seok Lee, Je Hwang Ryu, Han Eol Im, Il Ok Jeong, S. Manivannan, Jin Jang and Kyu Chang Park,** "Electron Emission from Robust Carbon Nanotubes Grown by Resist- Assisted Patterning Process", **International Conference on Advanced Materials (ICAM 2008), Kottayam, India, February 18-21, 2008.**

18) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Chang Seok Lee, Jin Jang and Kyu Chang Park,** "Conducting and Transparent Electrodes from Single-Walled Carbon Nanotubes", **International Conference on Advanced Materials (ICAM 2008), Kottayam, India, February 18-21, 2008 (oral).**

17) **Chang Seok Lee, Je Hwang Ryu, Ki Seo Kim, Kyung Woo Min, Il Ok Jeong, S. Manivannan, Jin Jang and Kyu Chang Park,** "Electron emission from robust CNT grown by resist-assisted patterning process" **The 5th International Conference on Advanced Materials and Devices (ICAMD 2007), Jeju, Korea, December 12-14, 2007.**

16) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Chang Seok Lee, Ki Seo Kim, Jin Jang and Kyu Chang Park,** "Purification and Preparation of Single-Wall Carbon Nanotube Films" **The 5th International Conference on Advanced Materials and Devices (ICAMD 2007), Jeju, Korea, December 12-14, 2007.**

15) **Ki Seo Kim, Je Hwang Ryu, Chang Seok Lee, S. Manivannan, Jong Hyun Moon, Jung Sun Ahn, Jin Jang and Kyu Chang Park,**"Enhanced electron emission properties of carbon nanotube by post growth treatment", **The 14th International Display Workshops (IDW '07), Sapporo, Japan, December 5-7, 2007 (oral).**

14) **S. Manivannan, Je Hwang Ryu, Il Ok Jeong, Chang Seok Lee, Ki Seo Kim, Jin Jang, Kyu Chang Park,** "Dispersion and Preparation of Transparent Conductive Carbon Nanotube Films", **The 14th International Display Workshops (IDW '07), Sapporo, Japan, December 5-7, 2007.**

13) **Ki Seo Kim, Je Hwang Ryu, Chang Seok Lee, S. Manivannan, Jong Hyun Moon, Jung Sun Ahn, Jin Jang and Kyu Chang Park,** "Effect of Current-Aging on Field Emission from Carbon Nanotube Field Emitter Arrays", **7th International Meeting on Information Display (IMID 2007), EXCO, Daegu, Korea, August 27-31, 2007.**

12) **Je Hwang Ryu, Ki Seo Kim, Chang Seok Lee, Kyung Woo Min, Na Young Song, Il Ok Jeong, S. Manivannan, Jong Hyun Moon, Kyu Chang Park and Jin Jang,** "Growth of carbon nanotubes on metal substrate for electronic devices", **7th International Meeting on Information Display (IMID 2007), EXCO, Daegu, Korea, August 27-31, 2007.**

11) **S. Manivannan, Je Hwang Ryu, Il Ok Jeong, Chang Seok Lee, Ki Seo Kim, Jin Jang, Kyu Chang Park,** "Dispersion of Single-Walled Carbon Nanotubes for Display Applications", **7th International Meeting on Information Display (IMID 2007), EXCO, Daegu, Korea, August 27-31, 2007.**

10) **Ki Seo Kim, Je Hwang Ryu, Chang Seok Lee, Kyung Woo Min, Il Ok Jeong, S. Manivannan, Jin Jang and Kyu Chang Park,** "Stable electron emission of carbon nanotubes grown by RAP process" **The 10th Field Emission Workshop (FEW 07), Gwanju, Korea, August 09-11, 2007.**

09) **S. Manivannan, S. Dhanuskodi, S.K. Tiwari, T.C. Sabari Girisun,** "Nonlinear Optical Materials for Short Wavelength Generation", **National Seminar on Materials for Advanced Technologies (NASMAT-2006), Shivaji University, Kolhapur (MS), India, January 23-25, 2006.**

08) **S. Manivannan, S. Dhanuskodi, S.K. Tiwari,** "Nonlinear Optical Materials for Short Wavelength Laser Generation", **Fourth DAE-BRNS National Laser Symposium (NLS-4), Bhabha Atomic Research Centre (BARC), Mumbai, India, January 10-13, 2005.**

07) **S. Dhanuskodi, S. Manivannan, J. Philip,** "Thermal properties of the NLO crystal N- methyllutidone trihydrate measured by photopyroelectric technique", **International Conference on Photoacoustic & Photothermal Phenomena, Rio de Janeiro, Brazil, July 05-08, 2004.**

06) **S. Manivannan, S. Dhanuskodi,** "Studies on organic nonlinear optical material: semicarbazone of p-dimethylamino benzaldehyde", **Regional Conference on Photoacoustics in Condensed Matter Physics and NDT (PAC 2004), School of Physics, Madurai Kamaraj University, Madurai, India, March 8 – 9, 2004 (oral).**

05) **S. Manivannan, S. Dhanuskodi,** "New organic material for second order nonlinear optics", **DAE–BRNS National Laser Symposium–2003 (NLS- 2003), IIT, Kharagpur, India, December 22 –24, 2003.**

04) **S. Manivannan, S. Dhanuskodi,** "New Semiorganic Nonlinear Optical Material for Short Wavelength Generation", **International Conference on Materials for Advanced Technologies (ICMAT-2003), Materials Research Society, Singapore, 7-12 December 2003.**

03) **S. Dhanuskodi, S. Manivannan, S. Selladurai,** "Dielectric Studies on Phosphate Salt of a Pyridinium Derivative", **International Conference on Ionic Devices, Anna University, Chennai, India, November 28-30, 2003.**

02) **S. Manivannan, S. Dhanuskodi,** "Crystal Growth and Characterization of a Novel Nonlinear Optical Material Semicarbazone of p-dimethylamino benzaldehyde", **International Conference on Laser Crystals, Glasses and Nonlinear Materials Growth and Characterization (LASE 2003), San Jose, California, USA, January 25-31, 2003.**

01) **J. Ramajothi, S. Manivannan, S. Dhanuskodi,** "FT-IR and FT-Raman studies in semiorganic nonlinear optical material: L-Histidine Tetrafluoroborate", **DAE-BRNS National Laser Symposium (NLS-2002), Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India, November 14-16, 2002.**

AWARDS/CREDITS/FELLOWSHIPS/RECOGNITION

Awards/Fellowships/ Credits/Distinctions/ Honors	**Institute/Organization**	**Year/Period**
Junior Research Fellowship	Department of Science & Technology, New Delhi, India	2001-2003
Senior Research Fellowship	Department of Science & Technology, New Delhi, India	2003-2004
Senior Research Fellowship	Council of Scientific & Industrial Research, New Delhi, India	2004-2006
Brain Korea 21 – Postdoctoral Research Fellowship	Govt. of South Korea	2007
Best Paper Award	European-Materials Research Society, Warsaw, Poland	2008

Young Scientist Research Grant of Rs.20.00 lakhs	Department of Science & Technology, New Delhi, India	2010
International Travel Grant	Department of Science & Technology, New Delhi, India	2011
Best Presentation Award	ICNSNT 2016, Colombo, Srilanka	2016
Best Poster Award	IUMRS-ICYRAM 2016, IIsc, Bangalore	2016
Faculty Achiever's Award	National Institute of Technology, Tiruchirappalli	2017
Outstanding Faculty Award	Venus International Foundation, Chennai	2017
Tamil Nadu Young Scientist Award- 2016	Science City, Government of Tamil Nadu, Chennai	2018
Faculty Award (Sponsored Research Projects)	National Institute of Technology, Tiruchirappalli	2017-18
Best Performer Award 2021 (Teaching, Research & Institutional Development)	National Institute of Technology, Tiruchirappalli	2020-21
Distinguished Alumnus Award	Jamal Mohamed College, Tiruchirappalli	14th August 2021
Reviewer in International Journals	Journals from RSC, Elsevier, Springer, etc.	From 2008 onwards

INVITED LECTURES/TALKS (till March 2024)

Sl. No.	Topic	Programme	Place & Date
01	World of Carbon Nanotubes - Lecture – II	UGC sponsored (Autonomous grant) special lecture series	Jamal Mohamed College, 11th March, 2009
02	World of Carbon Nanotubes - Lecture – I	UGC sponsored (Autonomous grant) special lecture series	Jamal Mohamed College, 11th March, 2009
03	Carbon Nanotubes and Applications	National Seminar on Advanced Materials	Sacred Heart College, Tiruppattur, 11th September 2009
04	Carbon Nanotubes	National seminar on Insights in Nonlinear Dynamics & Nanoscience	Department of Physics, Sarah Tucker College, Tirunelveli, 18th February, 2011
05	Carbon Nanotubes	TNSCST Sponsored One Day Seminar on Nanoscience and Nanotechnology	Department of Physics, Urumu Dhanalakshmi College, February, 2012

06	Research Opportunities in Carbon	Symposium on National Science Day	Muthayammal Engineering College, Rasipuram, 28th February, 2012.
07	Incredible Carbon	National Science Day Celebration	Arignar Anna Government Arts College, Musiri, 28th February, 2013
08	Carbon Nanomaterials	National level seminar on Nanoscience and Laser Material Processing	Jamal Mohamed College, Tiruchirappalli, 9th March, 2013
09	Carbon Nanomaterials in Photonics	UGC Sponsored Lecture Series on Photonics	Bharathidasan University, Tiruchirappalli, 11th March, 2013
10	Trends in Carbon Research	AICTE Sponsored Faculty Development Programme on Recent Developments in Nanomaterials and Nanotechnology	Muthayammal Engineering College, Rasipuram, 4th July 2013.
11	Wonders in Carbon	Physics Learners Association	M.A.M School of Engineering, Tiruchirappalli, 21st September, 2013
12	Carbon Nanomaterials	Seminar on Emerging Trends in Physics	Seethalakshmi Ramaswami College, Tiruchirappalli, 8th October, 2013
13	Carbon Nanomaterials	Special Lecture	Selvam Arts and Science College, Namakkal, 10th January 2014.
14	Materials for Future Technology	National Workshop on Advanced Materials for Science and Technology	Government Arts College, Karur, Tamilnadu, 10th February, 2014
15	Materials for Flexible Transparent Conducting Coatings	National Conference on Nanophotonics (NCNP – 2014)	Bharathidasan University Tiruchirappalli, India, March 6th – 7th , 2014
16	Carbon Nanomaterials-Lecture I	UGC Sponsored Refresher Course in Physics	UGC-Academic Staff College, Bharathidasan University Tiruchirappalli-23, 21st November 2014
17	Carbon Nanomaterials-Lecture II	UGC sponsored Refresher Course	UGC-Academic Staff College, Bharathidasan University, Tiruchirappalli, India, 21 November 2014.

18	Carbon Nanomaterials	National Level Seminar on Recent Trends in Materials Science (NSMS)	Vivekanandha College of Arts & Science for Women, Thiruchencode, Namakkal, Tamil Nadu, India, 24 January 2015.
19	Carbon Nanomaterials Research	National Conference on Advanced Materials (NCAM 2015)	St.Joseph's College, Tiruchirappalli, 6th February, 2015.
20	Flexible Electronics: Materials and Applications	Summer Research Training Programme (SRTP-2015)	Bishop Heber College, Tiruchirappalli, 11-18 May, 2015.
21	Recent Developments in the Field of Nanotechnology	National Level Technical Symposium-GNANCHEMP'2K16	Gnanamani College of Technology, A.K.Samuthiram Namakkal, 24th March, 2016.
22	Carbon Materials and Applications	Physics Association Meeting	Holy Cross College, Tiruchirappalli, 03 August, 2016.
23.	The Progress of Carbon Nanomaterials Research	National Seminar on Materials	Thiruvalluvar Govt. Arts College, Rasipuram, 20 Oct. 2016
24.	Carbon Nanomaterials	Chemistry Association Seminar	Nehru Memorial College, Puthanampatti, 16 March 2017.
25.	Materials for Future Technology	Physics Association-Special Lecture	Selvamm Arts and Science College, Namakkal, 10th August 2017.
26.	Applications of Nanomaterials and Carbon Nanotubes	Workshop on Nanomaterials and its Applications	Muthayammal Engineering College, Rasipuram, 27 October 2017.
27.	Carbon Materials & Their Applications	UGC-Sponsored Refresher Course in Nano Sciences	UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli, 22nd December 2017.
28.	Introduction to Nanomaterials and their Application	NANO-Small Wonders Endless Frontiers	Holy Cross College (Autonomous), Tiruchirappalli, 24th January 2018.
29.	Nanomaterials & Carbon Nanotubes	National Seminar-Recent trends in Advanced Engineering Materials	K. Ramakrishnan college of Technology, Tiruchirappalli, 7th March 2018
30.	Developments in Nanocarbon	UGC-Sponsored Summer School in Material Science	UGC-Human Resource Development Centre, Bharathidasan University,

			Tiruchirappalli, 14th March 2018
31.	Opportunities in Carbon	Physics Association - Guest Lecture	Srimad Andavan Arts & Science College, Tiruchirappalli, 20th September 2018.
32.	Research Opportunities in Carbon	Physics Association - Guest Lecture	Vivekanandha College of Arts and Science for Women, Tiruchengode, 29th September 2018.
33.	Advances in Carbon Materials	National Workshop on Advanced Materials and their Applications	The Gandhigram Rural Institute, Gandhigram, 4th Feb. 2020.
34.	Introduction to Carbon Nanomaterials	International Conference on Emerging Trends in Physics	Madurai Sivakasi Nadars Pioneer Meenakshi Women's College, Poovanthi, 08th Feb, 2020.
35.	Nano Carbon	Special Lecture	Jamal Mohamed College, Tiruchirappalli, 20th Feb. 2020.
36.	Carbon Nanomaterials	Faculty Development Programme	C.Abdul Hakeem College of Engineering & Technology, Melvisharam, 27th June, 2020.
37.	Elemental Carbon for New Generation Devices	Webinar on Elemental Carbon for New Generation Devices	SRM TRP Engineering College, Trichy, 29th June 2020.
38.	Nanocarbon Molecules	Webinar on Nanocarbon Molecules	Perunthalaivar Kamarajar Institute of Engineering and Technology (PKIET), Karaikal, 04th July 2020.
39.	Carbon Nanomaterials	UGC-sponsored online refresher course in Nanoscience	Bharathidasan University, Tiruchirappalli, 5th Dec.2020.
40	Carbon Nanomaterials	UGC-sponsored online refresher course in Nanoscience	Bharathidasan University, Tiruchirappalli, 8th Dec.2020.
41	Carbon Nanomaterials and their Applications	AICTE- sponsored Faculty Development Programme	Coimbatore Institute of Technology, Coimbatore, 29th April, 2021.
42	Nano Applications in Hardware Design	Online short-term Certificate Programme on Nanotechnology and its Applications	Rajiv Gandhi National Institute of Youth Development (RGNIYD), Sriperumbudur, 30th April, 2021.
43	Carbon Nanostructures and Applications	Faculty Development Programme	Karpagam Academy of Higher Education,

			Coimbatore, 23rd June, 2021.
44	Carbon Nanomaterials and their Applications	Workshop "Nanomaterials for Emerging Applications"	National Institute of Technology, Tiruchirappalli, 26th February, 2022.
45	Wonders in Carbon	National Science Day celebrations	Thanthai Periyar Government Arts and Science College, Tiruchirappalli, 28th February, 2022.
46	Low Dimensional Carbon Materials and Their Applications	International Conference on Advanced Materials and its Applications	Srinivasan College of Arts and Science, Perambalur, 25 March, 2022.
47	Nanocarbon Materials and Devices	One day guest lecture	NPR College of Engineering & Technology, Dindigul, 17th June, 2022.
48	Carbon Nanostructures	Special Lecture	National College, Tiruchirappalli, 25th Jan, 2023.
49	Nanocarbon Materials and their Applications	UGC-sponsored online refresher course in Physical Science	Bharathidasan University, Tiruchirappalli, 02nd Aug. 2023.

Workshops/Training Programmes/Conferences Organized

Sl. No.	**Programme**	**Date and Venue**	**Role**
01	National Seminar on Non-destructive Evaluation (NDE)	December 10-12, 2009, National Institute of Technology, Tiruchirappalli.	One of the organizing committee members
02	Workshop on Electron Microscopy (WEM)	3-5 November, 2011, National Institute of Technology, Tiruchirappalli.	One of the Technical Co-ordinators
03	National Level Technical Symposium –Quality 2012	13 March, 2012, National Institute of Technology, Tiruchirappalli.	One of the Co-ordinators
04	National Level Technical Symposium –Quality 2013	19-20 March, 2013, National Institute of Technology, Tiruchirappalli.	One of the Co-ordinators
05	National Level Technical Symposium –Quality 2014	26 March, 2014, National Institute of Technology, Tiruchirappalli.	One of the Co-ordinators

06	Course on Carbon Nanotubes (under self-finance)	06-07 November, 2014, National Institute of Technology, Tiruchirappalli.	Sole Teacher & Co-ordinator
07	TEQUIP- II Sponsored National Conference on Advanced Materials:Processing and Characterization	27-28 February, 2017 National Institute of Technology, Tiruchirappalli.	Organizing Committee Member

Membership in Professional Societies & Countries Visited

Sl.No.	Type of membership	Organization	Year of Induction & Membership Number
01	Life Member	Photonics Society of India	2004
02	Life Member	Indian Society for Non-Destructive Testing (ISNT)	October 2009 & LM-8452-TC
03	Regular Member (annual)	SPIE, USA	January 2005 & ID No.789628
04	Five-Year	International Association of Advanced Materials (IAAM)	January 2017 & 777301912125
05	Life Member	Materials Research Society of India (MRSI)	12th March 2021 & LMB 3332

COUNTRIES VISITED

South Korea, Japan, Poland, United States of America, Singapore, China & Sri Lanka.

SPONSORED & CONSULTANCY PROJECTS

Sl. No.	Name of the Project	Sponsoring Agency	Role	Amount (Rs. in Lakhs)	Period
01	Fabrication of Single-Walled Carbon Nanotube Transparent Conducting Electrodes for Display, Solar Cells and Optoelectronics	DST, New Delhi, India	PI	20.00	2010-2013
02	Single-Walled Carbon Nanotube-Reduced Graphene Oxide-Metal Oxide Nanowires Hybrid Electrode for Supercapacitor Applications	CSIR, New Delhi	PI	17.71	2016-2019
03	Development of PZN-PT Single Crystal Technology for Naval Transducer Applications	DRDO, New Delhi, India	Co-PI	99.382	2017-2021
04	Pfizer –instrumentation facility	Pfizer, India	PI	~50.00	2022

PATENTS

S. No.	Title of the patent	Name of Inventors	Granted/Filed
1	Gas Sensor Based on Nanowires and Carbon Nanotubes Hetrostructure	L.R Shobin and S. Manivannan	App. No.201741000938 Awarded on 13 January 2023 (Patent No.417943)
2	A Method of Fabricating Transparent Electrothermal Device	L.R Shobin and S. Manivannan	App. No.201741001065 Awarded on 11 January 2024 (Patent No.497810)

Details of Students Projects Guided

Ph.D. Guidance (till March 2024)

Sl. No.	Name of the Student	Year of Joining	Area of research	Status & Present Position
01	L.R. SHOBIN	2011	Carbon Nanotubes and Silver Nanowires for Gas Sensors and Transparent Devices	Completed on 22 Jan. 2016 & Working as Faculty in SRM Inst. Trichy
02	*T. KAVINKUMAR*	*2012*	Electrical, Gas Sensing, Biomedical Applications of Graphene Oxide and Reduced Graphene Oxide Composites	Completed on 04 Sep. 2017 & Working as a Postdoctoral Fellow
03	V. MYDHILI	2013	Poly(3,4-ethylenedioxythiophene): poly(styrenesulfate) composites, blends and heterostructure for dielectric, supercapacitor and photodetector applications.	Completed on 04th Sep. 2020 working as RA in DUK, India
04	N. AMBIKESWARI	2014	Dielectric, magnetodielectric and electrochemical properties of reduced graphene oxide - cobalt hydroxide/ferrite composites	Completed on 17th March 2021 Working as Faculty in Panimalar Engg. College, Chennai
05	D. PRAKASH	2015	Heteroatoms doped reduced graphene oxide as a tunable pseudocapacitive electrode for supercapacitors	Completed on 25th July, 2022
06	K. LAKSHMANAM OORTHY	2016	Ionic liquids assisted synthesis of graphene and reduced graphene oxide composites for gas sensing,	Completed on 2023 working as Faculty in Central

			anticancer and photocatalytic applications	University of Tamil Nadu.
07	E. G. AMRUTHA	2018	Nano-carbon and their applications	Doing
08	M.DIVYA MEENAKSHI	2019	Carbon nanofibers and their applications in gas sensors	Doing
09	PRIYAJANANI Y	2019	Carbon nanocomposites for energy storage divices	Doing
10	POORNIDEVI T	2020	Nanocomposites and devices	Doing
11	ASHU KUMARI	2021	Two dimensional carbon structures	Doing

M. Tech. (Non-destructive Testing) (till March 2024)

Sl. No.	Name of the Student	Year	Title of the project/dissertation
01	T.NAGANJANEYULU	2009 (Phase I)	Electromagnetic acoustic transducers (EMATs) for various applications
02	T.NAGANJANEYULU	2010 (Phase II)	Electromagnetic acoustic transducers (EMATs) for aerospace applications
03	P.RAJENDHER	2010 (Phase I)	Defect characterization of AISI 304L stainless steel and AISI 1080 carbon steel weldments using ultrasonic signal processing
04	GORLA VENKATESWARLU	2010 (Phase I)	Honeycomb sandwich structures inspection using air coupled ultrasonics
05	P.RAJENDHER	2011 (PhaseII)	Characterization of weld defects using ultrasonic signal processing technique
06	GORLA VENKATESWARLU	2011 (PhaseII)	Lamb wave excitation in sandwich structure using PZT and debond detection by shearography
07	KATTA SOMAKIRANKUMAR	2011 (Phase I)	Higher Order Guided Waves for Inspection of Air Craft Structure
08	SAMBHU R	2011 (Phase I)	Study of Precipitation Behaviour of Materials for Ultra Super Critical Boilers Using Ultrasonics
09	SAMBHU R	2012 (PhaseII)	Study of Precipitation Behaviour of Materials for Ultra Super Critical Boilers Using Ultrasonics
10	KATTA SOMAKIRANKUMAR	2012 (PhaseII)	Study on Higher Guided Waves in Aluminum Plates
11	PRAVEEN S	2012 (Phase I)	Imaging of Inclined Defects Using Ultrasonic Immersion Techniques

12	NIKHIL	2012 (Phase I)	Inspection of Weld in Hexcan Using Phased Array Ultrasonic Testing
13	PRAVEEN S	2013 (PhaseII)	Imaging of Inclined Defects Using Immersion Synthetic Aperture Technique
14	NIKHIL	2013 (PhaseII)	Inspection of Seal Weld in Hexagonal Wrapper Tube Using Phased Array Ultrasonic Testing
15	SHABEER ALI M K	2013 (Phase I)	Defect Depth Prediction in Aluminium Plates by Pulsed Thermography
16	ARUN S	2013 (Phase I)	Acoustic Emission and Infrared Thermography Studies During Tensile Deformation of Pure Copper
17	SHABEER ALI M K	2014 (PhaseII)	Defect Characterization by Pulsed Thermography
18	ARUN S	2014 (PhaseII)	Characterization of Tensile Deformation of 2.25Cr-1Mo Steel and Pure Copper Using Acoustic Emission and Infrared Thermography Techniques
19	DEEPAK KUMAR MORWAL	Dec - 2014 (Phase I)	Quantification of Inclusion and Pitting Corrosion of Micro and Semimicro size using Ultrasonic Immersion Imaging Technique
20	K. NATRAJ	Dec - 2014 (Phase I)	Non-Destructive Evaluation of Residual Stresses in Carbon Steel Weld Joints made by Sequential Welding Passes
21	DEEPAK KUMAR MORWAL	May 2015 (Phase-II)	Quantification of Inclusion and Pitting Corrosion of Micro and Semimicro size using Ultrasonic Immersion Imaging Technique
22	K. NATRAJ	May 2015 (Phase-II)	Development of 3D Ultrasonic Ray Tracing Tool for Weld Inspection
23	S. KARTHIK KUMAR	Dec - 2015 (Phase I)	Study on Tensile Behavior of HSLA Steel Using Acoustic Emission Technique
24	S. KARTHIK KUMAR	May 2016 (Phase-II)	Study on Tensile Behavior of HSLA Steel Using Infrared Thermography Technique
25	S. SARAVANAN	Dec - 2016 (Phase I)	Ultrasonic Waveguide Sensor for Liquid Level Measurement
26	DEEPJYOTI DAS	Dec - 2016 (Phase I)	Determination of the Best Parameter to Detect any form of Defects Present in a Grinding Wheel using Ultrasonic Testing
27	S. SARAVANAN	May 2017 (Phase-II)	Defect Detection in Hybrid Composite using Split Spectrum Processing
28	DEEPJYOTI DAS	May 2017 (Phase-II)	Quality Inspection of Thin Conducting Films Using Infrared Thermography

29	TANUJ KUMAR	Dec - 2017 (Phase I)	Non-Destructive Evaluation of Austenitic SS 304L Weld Joint by Ultrasonic Testing and C-Scan Method
30	TANUJ KUMAR	May 2018 (Phase-II)	Defect Sizing and Material Characterization of Nylon 12 by Thermography Testing
31	KULDEEP	Dec - 2018 (Phase I)	Non Destructive Testing of Aluminium-5052 and Pure Copper Welds
32	KULDEEP	May-2019 (Phase II)	Thermal Diffusivity and Defect Analysis of PEDOT:PSS-AgNW-PEDOT:PSS Electrothermal Heaters Using Lock-in Thermography
33	ADITYA KUMAR	Dec - 2019 (Phase I)	Weld Inspection by Using Phased Array Ultrasonic Testing
34	ADITYA KUMAR	May-2020 (Phase II)	Comparison Between Phased Array Ultrasonic Testing and Total Focusing Method
35	SAGNIK CHAKRABORTY	Dec - 2020 (Phase I)	Data Analysis of Guided Wave for Temperature Measurement of Furnace
36	SAGNIK CHAKRABORTY	May-2021 (Phase II)	Data Analysis of Guided Wave for Temperature Measurement of Furnace
37	RAHUL R	Dec-2021 (Phase I)	Study of Reliability of a Manual and Automatic Inspection System for Detecting Defect in the Aerospace Composites
38.	RAHUL R	May-2022 (Phase II)	Study of Reliability of a Manual and Automatic Inspection System for Detecting Defect in the Aerospace Composites
39	SURAJ BALKRISHNA SHIRKULE	Dec-2022 (Phase I)	Multi-point Temperature Sensing of U-pipe Using Waveguide and Deep Learning Model for Temperature Prediction
40	SURAJ BALKRISHNA SHIRKULE	May 2023 (Phase II)	Multi-point Temperature Sensing of U-pipe Using Waveguide and Developing IOT Model for Live Display of Temperature
41	RAJESH LAYEK	Dec-2023 (Phase-I)	PAUT in Lieu of Radiography for Thick Ferritic & Austenitic Steel Welds

M.Sc. (Physics) Projects (till March 2024)

Sl. No.	**Name of the Student**	**Year**	**Title of the project/dissertation**
01	J. NITHYA DEVI	May 2010	Multiwalled carbon nanotubes for fiber optic gas sensor
02	A.M. SARANYA	May 2010	Single walled carbon nanotubes for gas sensing applications
03	S. MOHANAPRIYA	May 2011	Fabrication of single walled and multiwalled carbon nanotube films by dip coating technique

04	K.K.JAGADESH	May 2012	Fabrication of Transparent Conductive Films Using Multi-walled Carbon Nanotubes
05	U. NITHIYANANTHAM	May 2012	Synthesis and Characterization of Copper Nanowires
06	PERLA SREEKOTI SUBHA PUJITHA	May 2013	Fabrication of Multi-Walled Carbon Nanotube Incorporated Polymer Free Standing Films
07	T. RAJAGURU	May 2013	Fabrication of Multi-walled Carbon Nanotubes Transparent Conductive Films
08	BOOPALAN. T	May 2014	Synthesis and Characterization of Copper Nanostructure
09	BHARATHIDASON. J	May 2014	Fabrication of Silver Nanoparticles Incorporated Polymer Free Standing Films
10	GOWTHAM. E	May 2015	Synthesis and Characterization of Nickel Oxide Nanowires
11	VIBHU DARSHAN	May 2015	Synthesis and Characterization of Silver Sulfide Nanoparticles
12	NIVEDHA.M	May 2016	Electrical and Optical Properties of Silver Nanowires Thin Films
13	RAMEEZ.P.P	May 2016	Investigation on Dielectric Properties of Photo-Irradiated Graphene Oxide
14	SHEENA RASHEED	May 2017	Synthesis and Characterization of Porous Hydroxyapatite Based Metal-Carbon Nanocomposites
15	SINDHU S	May 2017	Microwave Assisted Synthesis of Silver Nanostructures for Anticorrosion Applications
16	ALICE NOBLE A	May 2018	Microwave Assisted Synthesis and Characterization of Porous Copper-Reduced Graphene Oxide Nanocomposite
17	AKHIL RAJ T	May 2018	Synthesis and Characterization of Reduced Graphene Oxide-Copper Composite using L-Ascorbic Acid
18	P S SIVA SANKARAN	May 2019	Micromagnetic Simulations on Formation and Control of Magnetic Vortex States in CrO_2
19	KASTHURI E	May 2019	Investigation on Mechanical Properties of Graphene Oxide and its Composites
20	CHINMAYEE CHANDRIKA PATI	May 2020	Multi walled Carbon Nanotubes-Poly (3,4-Ethylenedioxythiophene): Poly(Styrenesulfonate) for Infrared Sensor
21	VIJAY YADAV	May 2020	Copper Sulfide- RGO Nanocomposites for Gas Sensing Applications
22	GOWRI S	May 2021	Analysis of Electrical Behavior of Supercapacitor Using Transport Phenomena
23	NIKITA GUPTA	May 2022	MoS_2-PEDOT:PSS-AgNWs Composite Flexible Films for UV and IR Detector Applications
24	MD MOBARAK HOSSAIN	May 2023	Synthesis and Characterization of Melamine Derived Graphitic Carbon Nitride Nanosheets as a Fluorescent Sensor for Glucose Detection
25	SUHAS P	Dec-2023	Synthesis of V_2O_5-rGO and its Electrochemical Performance for Supercapacitor Applications

M.S. (by Research)

Sl. No.	Name of the Student	Year	Title of the project
01	Sobhanan M B	Completed on 29 Nov. 2017 (final GTC)	Code Generation Towards Automation of Pulsed Thermography Using Computer Numerical Controlled Manipulator for CFRP Honecomb Structures

B. Tech.

Sl. No.	Name of the Students	Year	Title of the project/dissertation
01	N.Dilip Krishna Karthik.R R.Uppiliappan	May 2013	Fabrication of Nanoparticle Based Dye-Sensitized Solar Cells
02	Lakshmi Narayanan M.S and V. Hemanth Shankar	May 2015	Fabrication and Optical Analysis of Cobalt Doped Zinc Oxide/Polyvinylpyrolidone Nanocomposite Free Standing Films

Teaching Contributions

(i) Courses Offered at NIT

Sl. No.	Course	Paper & code	Academic Year/ Session
01	M.Tech.	Ultrasonic Testing & PH602	2008-09
02	B.Tech.	Physics –I & PH101	2009-10
03	M.Tech.	Surface NDE Methods & PH605	2009-10
04	B.Tech.	Physics –II & PH102	2009-10
05	M.Tech.	Ultrasonic Testing & PH602	2009-10
06	M.Tech.	Practicals -II & PH606	2009-10
07	M.Sc.	Physics Laboratory –I & PH659	2009-10
08	M.Tech.	Practicals –I & PH607	2009-10
09	B.Tech.	Physics –I & PH101	2010-11
10	M.Tech.	Surface NDE Methods & PH605	2010-11
11	B.Tech.	Physics –II & PH102	2010-11
12	M.Tech.	Practicals -II & PH606	2010-11
13	M.Tech.	Practicals -I & PH607	2010-11
14	B.Tech.	Physics –I & PH101	2011-12
15	M.Tech. & M.S.	Surface NDE Methods & PH605	2011-12
16	M.Tech.	Practicals –II & PH606	2011-12
17	Ph.D.	Electrical, magnetic and optical properties of materials & PH610 (shared by two faculty members)	July 2011
18	M.Tech.	Surface NDE Methods & PH605	July 2012
19	M.Tech.	Practical -I & PH607	July 2012
20	B.Tech.	Physics –I & PH101	July 2012
21	M.Tech.	Practicals –II PH 606	Jan. 2013
22	M.Tech.	Field Work & PH604	Jan. 2013

23	B.Tech.	Physics –II & PH102	Jan. 2013
24	M.Tech.	Practicals –I PH 607	July 2013
25	M.Tech.	Basic Metallurgy & Fracture Mechanics	July 2013
26	B.Tech.	Physics – I & PH101	July 2013
27	B.Tech.	Physics – II & PH102	Jan. 2014
28	M.Tech.	Practicals –II & PH606	Jan. 2014
29	M.Tech.	Field Work & PH604	Jan. 2014
30	M.Tech.	Basics of Engineering Materials & PH613	July 2014
31	M.Sc.	Basics of Engineering Materials & PH613	July 2014
32	B.Tech.	Physics –I & PH101	July 2014
33	B.Tech.	Physics- II & PH102	Jan. 2015
34	Ph.D.	Carbon Nanomaterials and Their Applications & PH812	Jan. 2015
35	M.Tech.	Basics of Engineering Materials & PH613	July 2015
36	M.Sc.	Basics of Engineering Materials & PH613	July 2015
37	B.Tech.	Physics –I & PHIR11	July 2015
38	B.Tech.	Physics- II & PHIR12	Jan. 2016
39	M.Tech.	Basics of Engineering Materials & PH613	July 2016
40	M.Sc.	Basics of Engineering Materials & PH613	July 2016
41	B.Tech.	Physics –I & PHIR11	July 2016
42	B.Tech.	Physics- II & PHIR12	Jan. 2017
43	Ph.D	Carbon Nanomaterials and Their Applications & PH812	Jan. 2017
44	B.Tech.	Physics –I & PHIR11	July 2017
45	M.Tech.	Basics of Engineering Materials & PH613	July 2017
46	M.Sc.	Basics of Engineering Materials & PH613	July 2017
47	B.Tech.	Physics- II & PHIR12	Jan. 2018
48	B.Tech.	Physics –I & PHIR11	July 2018
49	M.Tech.	Basics of Engineering Materials & PH613	July 2018
50	M.Sc.	Basics of Engineering Materials & PH613	July 2018
51	Ph.D	Carbon Nanomaterials and Their Applications & PH812	July 2018
52	B.Tech.	Physics- II & PHIR12	Jan. 2019
53	B.Tech.	Physics –II & PHIR12	July 2019
54	M.Tech.	Basics of Engineering Materials & PH613	July 2019
55	M.Sc.	Basics of Engineering Materials & PH613	July 2019
56	B.Tech	Physics-I & PHIR11	Jan. 2020
57	B.Tech	Physics-II & PHIR12	July 2020
58	M.Tech.	Basics of Engineering Materials & PH613	July 2020
59	M.Sc.& Ph.D	Basics of Engineering Materials & PH613	July 2020
60	B.Tech	Physics-I & PHIR11	Jan. 2021
61	B.Tech	Physics-II & PHIR12	July 2021
62	M.Tech.	Basics of Engineering Materials & PH613	July 2021
63	M.Sc.& Ph.D	Basics of Engineering Materials & PH613	July 2021
64	B.Tech	Physics-I & PHIR11	Jan.2022
65	M.Tech	Basics of Engineering Materials & PH613	July 2022
66	M.Sc.& Ph.D	Basics of Engineering Materials & PH613	July 2022
67	B.Tech	Physics-I & PHIR11	Jan.2023

68	M.Tech, /M.Sc./ M.S/Ph. D	Basics of Engineering Materials & PH613	July 2023
69	B.Tech	Physics-I & PHIR11	Jan. 2024
70	B.Tech	Physics-II & PHIR12	Jan. 2024

(ii) Involvement in Laboratory Development

Sl. No.	**Course**	**Paper & code**	**Year**
01	M.Tech.	Practicals & PH606	2009, 2010 & 2011
02	M.Tech.	Practicals & PH607	2009, 2010 & 2011
03	M.Tech.	Practicals & PH606	2011
04	Ph.D.	Research Laboratory	2011
05	M.Tech.	Practicals & PH607	2012 & 2013
06	M.Sc./ M.Tech./ Ph.D.	Practicals & Research	2013-2014
07	B.Tech./ M.Tech./	Laboratories	2014
08	B.Tech./ Ph.D	PH101, PH102A & PH102B	2015
09	B.Tech.	PHIR11, PHIR12 & PHIR13	2015- Dec. 2019

(iii) Involvement in Development of Experiments

Sl. No.	**Course**	**Paper & code**	**Year**	**Role**
01	M.Tech.	Practicals & PH606	2009, 2010 & 2011	Introduced liquid penetrant testing and magnetic particle inspection experiments using standard specimens.
02	M.Sc.	Physics Laboratory –I	2009	Introduced analysis of powder X-ray diffraction pattern and FT-IR spectrum of materials.
03	M.Tech.	Practicals & PH607	2009, 2010 & 2011	Introduced more than five fundamental experiments using ultrasonic flaw detector .
04	Ph.D.	Research Laboratory	2010, 2011	Purification and dispersion of carbon nanotubes. Fabrication of transparent conducting films.
05	B.Tech.	Physics I & II, PH 101 & 102	2013 & 2014	Demonstration of Laser based refractive index measurement set up,

				electrical measurement set up, nanomaterials synthesis.
06	M.Sc.& Ph.D.	Project and Research	2015	Electrical property measurement of thin materials
07	Ph.D.	Research Laboratory	2017	High Temperature Heating Unit for Sample Preparation
08	Ph.D.	Research Laboratory	2018	Electrochemical Workstation
09	M.Sc. & Ph.D.	Teaching & Research Laboratory	2020	Gas sensing experimental facility
10	M.Sc./M.Tech & Ph.D.	Teaching & Research Laboratory	2021	IR and UV photodetector experimental facility
11	M.Sc. & Ph.D.	Teaching & Research Laboratory	2022	Pfizer donated instrument facility

ADMINISTRATIVE ACTIVITIES

Department Level Responsibility (Till June 2022)

Sl. No.	Post Held	Function	Duration
01	Ph.D.Admission co-ordinator	Setting up of question papers, conducting entrance examination, Interviews and admission related activities	2008-2009
02	Ph.D. Admission co-ordinator	Setting up of question papers, conducting entrance examination, Interviews and admission related activities	2009-2010
03	M.Sc., M.Tech. and Ph.D. Department weekly seminar (FRIDAY PHYSICS) co-ordinator	Organizing seminars and arrangements related activities	2009-2010
04	M.Tech.Admission co-ordinator	Admission related activities	2011-2012
05	M.Tech.Course co-ordinator	Preparation of time table, class and invited lectures arrangements, conducting practicals, field work at BHEL and NITT, project review meetings, purchase of equipments, consumables, results and related activities.	2011-2012
06	M.Tech.Course co-ordinator	-do-	2012-2013
07	M.Tech.Course co-ordinator	-do-	2013-2014

08	B.Tech Course Co-ordinator (with Dr.N.V.Giridharan)	Preparation of time table, class and lectures arrangements, laboratory maintenance, conducting practicals, purchase of equipments, consumables, results and related activities.	December 2015-December 2019
09	M.Tech (NDT) NBA-internal committee member	Website updating and purchase of items related to laboratory	March 2020-July 2020
10	DPEC member (M.Sc. Project)	Review & evaluation of projects	Feb. 2020-June 2022 (till date)
11	COVID-19 SoP co-ordinator	Creating awareness and insisting SoP among staff and students	July 2020-Sep. 2021 (till date)
12	M.Tech syllabus revision committee	Curriculum development, revision, related work	23 June, 2022 – till date
Institute Level Responsibility			
09	Member in Academic Interface Cell	Identification of experts/faculty from reputed institutes/industry for special lectures and related activities	2012 onwards
10	All-India Inter-NIT Sports Meet'14 - Committee Member	Registration related activities	2013
11	Stock Verification Officer	Verification of library book bank	2013
12	All-India Inter-NIT Sports Meet'14 - Committee Member	Registration related activities	2014
13	Stock Verification Officer	Verification of Stock in Estate Management Department	2014
14	Stock Verification Officer	Verification of Stock in Civil Engineering Department	2016
15	Member in Hospital Committee	Creation of facility, induction of visiting consultants, etc.	2016
16	13th Convocation Committee Member	Seating & logistics arrangements	2017
17	Stock Verification Officer	Verification of Stock in Civil Engineering Department	2018
18	14th Convocation Committee Member	Seating & logistics arrangements	2018
19	15th Convocation Committee Member	Seating & logistics arrangements	2019
20	Stock Verification Officer	Verification of Stock in Engligh/Humanities Department	2020-21, 2021-22

21	COVID-19 SoP co-ordinator	Implementation of SOPs for the student in the academic and shopping complex zone in NITT	11 Oct. 2021 to 13 Oct. 2021

Contact Address

Dr.S.MANIVANNAN
PROFESSOR
ROOM NO.PH315, DEPARTMENT OF PHYSICS
NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI- 620 015, TAMIL NADU.
TEL: 0431-2503616 (off)
FAX: 0431-2500133
Mobile: 9629505060
e-mail: ksmani@nitt.edu, ksmaniphysics@yahoo.com

Online links for the publication details of Dr. S. Manivannan are given below,

1. Sopus link: https://www.scopus.com/authid/detail.uri?authorId=7004630184

2. Web of Science link: https://www.webofscience.com/wos/author/record/2372325

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