

# National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

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## Brief Curriculum Vitae



Dr. S. Manivannan received Ph.D., from Bharathidasan University, Tiruchirappalli, India in the year 2006. He completed postdoctoral research in the Department of Information Display & Advanced Display Research Center, Kyung Hee University, Seoul, South Korea. His research area of interest includes on carbon nanomaterials (CNT, graphene oxides, carbon dots), gas sensors, transparent films and devices, organic and semi-organic nonlinear optical (NLO) materials and polymer nanocomposites. He is serving as a faculty in Department of Physics, National Institute of Technology, Tiruchirappalli from 2008.

To his credit, Dr. Manivannan published about 69 papers in peer reviewed international journals, more than 76 papers in national/international conference proceedings/abstracts, successfully completed three sponsored research projects for about Rs.1.5 crores funding from DST, CSIR and DRDO as PI and CO-PI, and filed two Indian patents.

He acquired American Society for Non-destructive Testing (ASNT)- Level -2 certification in Ultrasonic Testing. Dr.Manivannan guided 05 Ph.D., 01 M.S., 38 M.Tech. and 23 M.Sc. students for their projects. Currently 06 Ph.D students are working under his guidance. He has organized around 07 conferences/workshops/courses at NIT Trichy. He is the member of Indian Society for Non-destructive Testing, Photonics Society of India, SPIE-USA, International Association of Advanced Materials and Materials Research Society of India. Dr.Manivannan travelled extensively, interacted with experts, and participated in various academic programmes in South Korea, Japan, Poland, United States of America, Singapore, China, Sri Lanka and delivered more than 47 invited talks. He is also serving as a reviewer in many international journals.

He also received Junior and Senior Research Fellowships from DST and CSIR. He is the recipient of Brain Korea 21 postdoctoral fellowship during the year 2007-2008. He received Young Scientist Research Grant of Rs.20.00 lakhs from DST, India in the year 2010. He won many best paper awards, notably from European Materials Research Society in the year 2008, session's best presentation award from International Conference on Nanoscience and Nanotechnology 2016 at Colombo, Sri Lanka, IUMRS-ICYRAM 2016 at IISc, Bangalore. He has been honoured with faculty achiever's award at NIT, Tiruchirappalli in the year 2017, 2018 and 2021. He has been awarded Tamil Nadu Young Scientist Award for the year 2016 in the discipline of Physical Sciences. Dr. S. Manivannan has also been awarded as Outstanding Faculty in Science -2017 by Venus International Foundation, Chennai. Recently, he received the Distinguished Alumnus Award (2021) from Jamal Mohamed College, Tiruchirappalli.

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2. Designation: Associate Professor
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5. Email (Primary): ksmani@nitt.edu  
Email (Secondary): ksmaniphysics@yahoo.com
6. Field(s) of Specialization: Carbon nanotubes (*purification, functionalization, dispersion*), fabrication of transparent conducting films for display, optoelectronics, energy storage/conversion, graphene, graphene oxide, organic and semi organic nonlinear optical (*NLO*) materials, display materials, sensors and polymer nanocomposites.

### 7. Employment Profile

| Job Title                                | Employer   | From           | To             |
|--|--|----------------|----------------|
| Associate Professor                      | National Institute of Technology, Tiruchirappalli, India | 12 March, 2018 | Till date      |
| Assistant Professor                      | National Institute of Technology, Tiruchirappalli, India | December 2008  | 11 March, 2008 |
| Kyung Hee University, Seoul, South Korea | Postdoctoral Researcher                                  | January 2007   | December 2008  |

### 8. Academic Qualifications (From Highest Degree to High School):

| Examination | Board / University       | Year | Division/ Grade | Subjects         |
|-------------|--------------------------|------|-----------------|------------------|
| Ph.D.       | Bharathidasan University | 2006 |                 | Physics          |
| M.Phil.     | Bharathidasan University | 2001 |                 | Physics          |
| B.Ed.       | University of Madras     | 2000 |                 | Physical Science |
| M.Sc.       | Bharathidasan University | 1999 |                 | Physics          |
| B.Sc.       | Bharathidasan University | 1997 |                 | Physics          |

### 9. Academic/Administrative Responsibilities within the University

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**Department Level Responsibility**

| <b>Position</b>  | <b>Faculty/Department/Centre/Institution</b>  | <b>From</b>   | <b>To</b>             |
|--|---|---------------|-----------------------|
| Ph.D.Admission co-ordinator  | Setting up of question papers, conducting entrance examination, Interviews and admission related activities   | 2008          | 2010                  |
| M.Sc., M.Tech. and Ph.D. Department weekly seminar (FRIDAY PHYSICS) co-ordinator | Organizing seminars and arrangements related activities   | 2009          | 2010                  |
| M.Tech.Admission co-ordinator  | Admission related activities  | 2011          | 2012                  |
| 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          | 2014                  |
| B.Tech Course Co-ordinator (shared 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         |
| M.Tech (NDT) NBA- internal committee member                                      | Website updating and purchase of items related to laboratory  | March 2020    | July 2020             |
| DPEC member (M.Sc. Project)  | Review & evaluation of projects   | Feb. 2020     | June 2022 (till date) |
| COVID-19 SoP co-ordinator  | Creating awareness and insisting SoP among staff and students   | July 2020     | Sep 2021 (till date)  |
| M.Tech syllabus revision committee   | Curriculum development, revision, related work  | 23 June, 2022 | Till date             |

**Institute Level Responsibility**

| <b>Position</b>                   | <b>Faculty/Department/Centre/Institution</b>   | <b>From</b>  | <b>To</b> |
|-----------------------------------|--|--------------|-----------|
| Member in Academic Interface Cell | Identification of experts/faculty from reputed institutes/industry for special lectures and related activities | 2012 onwards |           |

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|  |  |                 |                       |
|--|--|-----------------|-----------------------|
| All-India Inter-NIT Sports Meet' 14 - Committee Member | Registration related activities  | 2013            |                       |
| Stock Verification Officer                             | Verification of library book bank  | 2013            |                       |
| All-India Inter-NIT Sports Meet' 14 - Committee Member | Registration related activities  | 2014            |                       |
| Stock Verification Officer                             | Verification of Stock in Estate Management Department                                    | 2014            |                       |
| Stock Verification Officer                             | Verification of Stock in Civil Engineering Department                                    | 2016            |                       |
| Member in Hospital Committee                           | Creation of facility, induction of visiting consultants, etc.                            | 2016            |                       |
| 13 <sup>th</sup> Convocation Committee Member          | Seating & logistics arrangements   | 2017            |                       |
| Stock Verification Officer                             | Verification of Stock in Civil Engineering Department                                    | 2018            |                       |
| 14 <sup>th</sup> Convocation Committee Member          | Seating & logistics arrangements   | 2018            |                       |
| 15 <sup>th</sup> Convocation Committee Member          | Seating & logistics arrangements   | 2019            |                       |
| Stock Verification Officer                             | Verification of Stock in English/Humanities Department                                   | 2020<br>2021    | 2021<br>2022          |
| COVID-19 SoP co-ordinator                              | Implementation of SOPs for the student in the academic and shopping complex zone in NITT | 11 Oct.<br>2021 | 13<br>October<br>2021 |

10. Academic/Administrative Responsibilities outside the University

| <b>Position</b>                       | <b>Institution</b>                        | <b>From</b>  | <b>To</b> |
|---------------------------------------|---|--------------|-----------|
| Member in Research Advisory Committee | Jamal Mohammed College, Tiruchirappalli.  | 2021         | Till date |
| Member in Doctoral Committee          | Engineering/Arts and Science Institutions | 2009 onwards | Till date |
| Member in Board of Studies            | Engineering/Arts and Science Institutions | 2009 onwards | Till date |

11. Awards, Associateships etc.

| <b>Year of Award</b>         | <b>Name of the Award</b>    | <b>Awarding Organization</b>                      |
|------------------------------|-----------------------------|---|
| 14 <sup>th</sup> August 2021 | Distinguished Alumnus Award | Jamal Mohamed College, Tiruchirappalli            |
| 2020-21                      | Best Performer Award 2021   | National Institute of Technology, Tiruchirappalli |

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|                   |  |   |
|-------------------|--|---|
|                   | (Teaching, Research & Institutional Development) |   |
| 2017-18           | Faculty Award (Sponsored Research Projects)      | National Institute of Technology, Tiruchirappalli   |
| 2018              | Tamil Nadu Young Scientist Award- 2016           | Science City, Government of Tamil Nadu, Chennai     |
| 2017              | Outstanding Faculty Award                        | Venus International Foundation, Chennai             |
| 2017              | Faculty Achiever's Award                         | National Institute of Technology, Tiruchirappalli   |
| 2016              | Best Poster Award                                | IUMRS-ICYRAM 2016, Iisc, Bangalore                  |
| 2016              | Best Presentation Award                          | ICNSNT 2016, Colombo, Sri Lanka                     |
| 2008              | Best Paper Award                                 | European-Materials Research Society, Warsaw, Poland |
| From 2008 onwards | Reviewer in International Journals               | Journals from RSC, Elsevier, Springer, etc.         |

12. Fellowships

| <b>Year of Award</b> | <b>Name of the Fellowship</b>                     | <b>Awarding Organization</b>                                  | <b>From (Month/Year)</b> | <b>To (Month/Year)</b> |
|----------------------|---|---|--------------------------|------------------------|
| 2011                 | International Travel Grant                        | Department of Science & Technology, New Delhi, India          | 2011                     | 2011                   |
| 2010                 | Young Scientist Research Grant of Rs.20.00 lakhs  | Department of Science & Technology, New Delhi, India          | 2010                     | 2013                   |
| 2007                 | Brain Korea 21 – Postdoctoral Research Fellowship | Govt. of South Korea  | January 2007             | December 2008          |
| 2004                 | Senior Research Fellowship                        | Council of Scientific & Industrial Research, New Delhi, India | April 2004               | December 2006          |
| 2003                 | Senior Research Fellowship                        | Department of Science & Technology, New Delhi, India          | April 2003               | March 2004             |

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|      |                            |  |              |            |
|------|----------------------------|--|--------------|------------|
| 2001 | Junior Research Fellowship | Department of Science & Technology, New Delhi, India | October 2001 | March 2003 |
|------|----------------------------|--|--------------|------------|

13. Details of Academic Work

(i) Curriculum Development

**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./<br>M.Tech./<br>Ph.D. | Practicals & Research   | 2013-2014         |
| 07      | B.Tech./<br>M.Tech./        | Laboratories            | 2014              |
| 08      | B.Tech./<br>Ph.D            | PH101, PH102A & PH102B  | 2015              |
| 09      | B.Tech.                     | PHIR11, PHIR12 & PHIR13 | 2015- Dec. 2019   |

**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.   |

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|    |                      |                                 |             |   |
|----|----------------------|---------------------------------|-------------|---|
|    |                      |                                 |             | Fabrication of transparent conducting films.  |
| 05 | B.Tech.              | Physics I & II,<br>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   |

(ii) Courses taught at Postgraduate and Undergraduate levels

| 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              |

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|    |                |   |           |
|----|----------------|---|-----------|
| 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.&<br>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 |



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|    |                |   |           |
|----|----------------|---|-----------|
| 63 | M.Sc.&<br>Ph.D | Basics of Engineering Materials & PH613 | July 2021 |
| 64 | B.Tech         | Physics-I & PHIR11                      | Jan.2022  |

(iii) Projects guided at Postgraduate level

**M. Tech. (Non-destructive Testing)**

| Sl. No. | Name of the Student     | Year               | Title of the project/dissertation  |
|---------|-------------------------|--------------------|--|
| 01      | T.NAGANJANEYULU         | 2009<br>(Phase I)  | Electromagnetic acoustic transducers (EMATs) for various applications  |
| 02      | T.NAGANJANEYULU         | 2010<br>(Phase II) | Electromagnetic acoustic transducers (EMATs) for aerospace applications  |
| 03      | P.RAJENDHER             | 2010<br>(Phase I)  | Defect characterization of AISI 304L stainless steel and AISI 1080 carbon steel weldments using ultrasonic signal processing |
| 04      | GORLA<br>VENKATESWARLU  | 2010<br>(Phase I)  | Honeycomb sandwich structures inspection using air coupled ultrasonics   |
| 05      | P.RAJENDHER             | 2011<br>(PhaseII)  | Characterization of weld defects using ultrasonic signal processing technique  |
| 06      | GORLA<br>VENKATESWARLU  | 2011<br>(PhaseII)  | Lamb wave excitation in sandwich structure using PZT and debond detection by shearography                                    |
| 07      | KATTA<br>SOMAKIRANKUMAR | 2011<br>(Phase I)  | Higher Order Guided Waves for Inspection of Air Craft Structure  |
| 08      | SAMBHU R                | 2011<br>(Phase I)  | Study of Precipitation Behaviour of Materials for Ultra Super Critical Boilers Using Ultrasonics                             |
| 09      | SAMBHU R                | 2012<br>(PhaseII)  | Study of Precipitation Behaviour of Materials for Ultra Super Critical Boilers Using Ultrasonics                             |
| 10      | KATTA<br>SOMAKIRANKUMAR | 2012<br>(PhaseII)  | Study on Higher Guided Waves in Aluminum Plates  |
| 11      | PRAVEEN S               | 2012<br>(Phase I)  | Imaging of Inclined Defects Using Ultrasonic Immersion Techniques  |
| 12      | NIKHIL                  | 2012<br>(Phase I)  | Inspection of Weld in Hexcan Using Phased Array Ultrasonic Testing   |
| 13      | PRAVEEN S               | 2013<br>(PhaseII)  | Imaging of Inclined Defects Using Immersion Synthetic Aperture Technique   |
| 14      | NIKHIL                  | 2013<br>(PhaseII)  | Inspection of Seal Weld in Hexagonal Wrapper Tube Using Phased Array Ultrasonic Testing                                      |

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|    |                     |                         |  |
|----|---------------------|-------------------------|--|
| 15 | SHABEER ALI M K     | 2013<br>(Phase I)       | Defect Depth Prediction in Aluminium Plates by Pulsed Thermography   |
| 16 | ARUN S              | 2013<br>(Phase I)       | Acoustic Emission and Infrared Thermography Studies During Tensile Deformation of Pure Copper  |
| 17 | SHABEER ALI M K     | 2014<br>(PhaseII)       | Defect Characterization by Pulsed Thermography   |
| 18 | ARUN S              | 2014<br>(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<br>(Phase I)  | Quantification of Inclusion and Pitting Corrosion of Micro and Semimicro size using Ultrasonic Immersion Imaging Technique               |
| 20 | K. NATRAJ           | Dec -2014<br>(Phase I)  | Non-Destructive Evaluation of Residual Stresses in Carbon Steel Weld Joints made by Sequential Welding Passes                            |
| 21 | DEEPAK KUMAR MORWAL | May 2015<br>(Phase-II)  | Quantification of Inclusion and Pitting Corrosion of Micro and Semimicro size using Ultrasonic Immersion Imaging Technique               |
| 22 | K. NATRAJ           | May 2015<br>(Phase-II)  | Development of 3D Ultrasonic Ray Tracing Tool for Weld Inspection  |
| 23 | S. KARTHIK KUMAR    | Dec -2015<br>(Phase I)  | Study on Tensile Behavior of HSLA Steel Using Acoustic Emission Technique  |
| 24 | S. KARTHIK KUMAR    | May 2016<br>(Phase-II)  | Study on Tensile Behavior of HSLA Steel Using Infrared Thermography Technique  |
| 25 | S. SARAVANAN        | Dec -2016<br>(Phase I)  | Ultrasonic Waveguide Sensor for Liquid Level Measurement   |
| 26 | DEEPIYOTI DAS       | Dec -2016<br>(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<br>(Phase-II)  | Defect Detection in Hybrid Composite using Split Spectrum Processing   |
| 28 | DEEPIYOTI DAS       | May 2017<br>(Phase-II)  | Quality Inspection of Thin Conducting Films Using Infrared Thermography  |
| 29 | TANUJ KUMAR         | Dec -2017<br>(Phase I)  | Non-Destructive Evaluation of Austenitic SS 304L Weld Joint by Ultrasonic Testing and C-Scan Method                                      |
| 30 | TANUJ KUMAR         | May 2018<br>(Phase-II)  | Defect Sizing and Material Characterization of Nylon 12 by Thermography Testing  |
| 31 | KULDEEP             | Dec -2018<br>(Phase I)  | Non Destructive Testing of Aluminium-5052 and Pure Copper Welds  |
| 32 | KULDEEP             | May- 2019<br>(Phase II) | Thermal Diffusivity and Defect Analysis of PEDOT:PSS-AgNW-PEDOT:PSS Electrothermal Heaters Using Lock-in Thermography                    |

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|-----|-----------------------|-------------------------|---|
| 33  | ADITYA KUMAR          | Dec -2019<br>(Phase I)  | Weld Inspection by Using Phased Array Ultrasonic Testing  |
| 34  | ADITYA KUMAR          | May- 2020<br>(Phase II) | Comparison Between Phased Array Ultrasonic Testing and Total Focusing Method                                      |
| 35  | SAGNIK<br>CHAKRABORTY | Dec -2020<br>(Phase I)  | Data Analysis of Guided Wave for Temperature Measurement of Furnace   |
| 36  | SAGNIK<br>CHAKRABORTY | May- 2021<br>(Phase II) | Data Analysis of Guided Wave for Temperature Measurement of Furnace   |
| 37  | RAHUL R               | Dec-2021<br>(Phase I)   | Study of Reliability of a Manual and Automatic Inspection System for Detecting Defect in the Aerospace Composites |
| 38. | RAHUL R               | May- 2022<br>(Phase II) | Study of Reliability of a Manual and Automatic Inspection System for Detecting Defect in the Aerospace Composites |

**M.Sc. (Physics) Projects**

| 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<br>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                              |

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|    |                             |          |   |
|----|-----------------------------|----------|---|
| 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 <sub>2</sub>            |
| 19 | KASTHURI E                  | May 2019 | Investigation on Mechanical Properties of Graphene Oxide and its Composites                                 |
| 20 | CHINMAYEE<br>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 <sub>2</sub> -PEDOT:PSS-AgNWs Composite Flexible Films for UV and IR Detector Applications              |

(iv) Other contribution(s)

**B. Tech. Projects Guided**

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

**M.S. (by Research) Guided**

| Sl. No. | Name of the Student | Year | Title of the project |
|---------|---------------------|------|----------------------|
|---------|---------------------|------|----------------------|

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|    |              |                                       |   |
|----|--------------|---------------------------------------|---|
| 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 Honeycomb Structures |
|----|--------------|---------------------------------------|---|

14. Details of Major R&D Projects

| Title of Project  | Funding Agency         | Duration |      | Status (role)         |
|---|------------------------|----------|------|-----------------------|
|   |                        | From     | To   | Ongoing/<br>Completed |
| Development of PZN-PT Single Crystal Technology for Naval Transducer Applications   | DRDO, New Delhi, India | 2017     | 2021 | Completed (co-PI)     |
| Single-Walled Carbon Nanotube-Reduced Graphene Oxide-Metal Oxide Nanowires Hybrid Electrode for Supercapacitor Applications | CSIR, New Delhi        | 2016     | 2019 | Completed (PI)        |
| Fabrication of Single-Walled Carbon Nanotube Transparent Conducting Electrodes for Display, Solar Cells and Optoelectronics | DST, New Delhi, India  | 2010     | 2013 | Completed (PI)        |

15. Number of PhDs guided

| Name of the PhD Scholar | Title of PhD Thesis  | Role (Supervisor/ Co-Supervisor) | Year of Award |
|-------------------------|--|----------------------------------|---------------|
| L.R. SHOBIN             | Carbon Nanotubes and Silver Nanowires for Gas Sensors and Transparent Devices  | Supervisor                       | 2016          |
| T. KAVINKUMAR           | Electrical, Gas Sensing, Biomedical Applications of Graphene Oxide and Reduced Graphene Oxide Composites   | Supervisor                       | 2017          |
| V. MYDHILI              | Poly(3,4-ethylenedioxythiophene): poly(styrenesulfonate) composites, blends and heterostructure for dielectric, supercapacitor and photodetector applications. | Supervisor                       | 2020          |
| N. AMBIKESWARI          | Dielectric, magnetodielectric and  | Supervisor                       | 2021          |

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|                    |  |            |                  |
|--------------------|--|------------|------------------|
|                    | electrochemical properties of reduced graphene oxide - cobalt hydroxide/ferrite composites |            |                  |
| D. PRAKASH         | Nanomaterials and their Energy Storage Applications  | Supervisor | Thesis Submitted |
| K.LAKSHMANAMOORTHY | Carbon nanomaterials for gas sensors   | Supervisor | Doing            |
| E. G. AMRUTHA      | Nano-carbon and their applications   | Supervisor | Doing            |
| M.DIVYA MEENAKSHI  | Carbon nanofibers  | Supervisor | Doing            |
| PRIYAJANANI Y      | Carbon nanocomposites  | Supervisor | Doing            |
| POORNIDEVI T       | Nanocomposites and devices   | Supervisor | Doing            |
| ASHU KUMARI        | Two-dimensional carbon structures  | Supervisor | Doing            |

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

| <b>Date (s)</b>      | <b>Title of Activity</b>  | <b>Level of Event (International/ National/ Local)</b> | <b>Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)</b> | <b>Event Organized by</b>  | <b>Venue</b> |
|----------------------|---|--|---|--|--------------|
| February 17-19, 2022 | 6th International Conference on Recent Advances in Material Chemistry (ICRAMC-2022) | International  | Paper presenter/ Author   | SRMIST, SRM University, Tamil Nadu, India  | Online mode  |
| February 17-19, 2022 | 6th International Conference on Recent Advances in Material Chemistry (ICRAMC-2022) | International  | Paper presenter/ Author   | SRMIST, SRM University, Tamil Nadu, India  | Online mode  |
| February 11-12, 2022 | International Conference on Advanced Materials-2022 (ICAM-2022)                     | International  | Paper presenter/ Author   | Department of Physics, St. Joseph's College, Tiruchirappalli, Tamil Nadu, India. | Online mode  |

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|                             |  |               |                               |  |  |
|-----------------------------|--|---------------|-------------------------------|--|--|
| February<br>01-03,<br>2021  | 6th International<br>Conference on<br>Nanoscience and<br>Nanotechnology<br>(ICONN-2021)  | International | Paper<br>presenter/<br>Author | Department of<br>Physics and<br>Nanotechnology,<br>SRMIST                              | Tamil Nadu,<br>India   |
| September<br>16-18<br>2020  | International<br>Virtual<br>Conference on<br>Advanced<br>Nanomaterials<br>for Energy and<br>Environment<br>Applications<br>(ICANEE-2020) | International | Paper<br>presenter/<br>Author | Alagappa<br>University &<br>Brunel<br>University<br>Jointly<br>Organizes India–<br>UK. | Online mode  |
| February<br>20-22,<br>2020  | International<br>conference on<br>Materials of<br>Emerging<br>Energies<br>(ICMEE 2020)   | International | Paper<br>presenter/<br>Author | Loyola College   | Chennai, India   |
| December<br>18-22,<br>2019  | 64th DAE Solid<br>State Physics<br>Symposium<br>(DAE-SSPS<br>2019)   | National      | Paper<br>presenter/<br>Author | Bhabha Atomic<br>Research Centre,<br>Mumbai, India                                     | IIT Jodhpur,<br>Rajasthan,<br>India.   |
| September<br>23-25,<br>2019 | International<br>Conference on<br>Advanced<br>Materials and<br>Processes for<br>Defence<br>Applications<br>(ADMAT 2019)                  | International | Paper<br>presenter/<br>Author | Defence<br>Metallurgical<br>Research<br>Laboratory,<br>Hyderabad,<br>India.            | Courtyard by<br>Marriott   |
| January<br>28-30,<br>2019   | International<br>Conference on<br>Nanoscience and<br>Nanotechnology<br>(ICONN -2019)   | International | Paper<br>presenter/<br>Author | SRM University   | Chennai, India.  |
| December<br>18-22,<br>2018  | 63rd DAE Solid<br>State Physics<br>Symposium<br>(DAE-SSPS<br>2018)   | National      | Paper<br>presenter/<br>Author | Bhabha Atomic<br>Research Centre,<br>Mumbai, India                                     | Guru<br>Jambheshwar<br>University of<br>Science and<br>Technology,<br>Hisar, Haryana |

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|----------------------|---|---------------|----------------------------|--|--|
| February 14-16, 2018 | MRSI-National Symposium on Advances in Functional and Exotic Materials                  | National      | Paper presenter/<br>Author | Bharathidasan University                               | Tiruchirappalli, Tamil Nadu, India.        |
| August 09-11, 2017   | International Conference on Nanoscience and Nanotechnology (ICONN -2017)                | International | Paper presenter/<br>Author | SRM University   | Chennai, India.                            |
| August 09-11, 2017   | International Conference on Nanoscience and Nanotechnology (ICONN -2017)                | International | Paper presenter/<br>Author | SRM University.  | Chennai, India.                            |
| December 26-30, 2017 | 62nd DAE Solid State Physics Symposium (DAE-SSPS 2017)                                  | National      | Paper presenter/<br>Author | Bhabha Atomic Research Centre                          | Mumbai, India                              |
| December 15-16, 2016 | 3rd International Conference on Nanoscience and Nanotechnology (ICNSNT 2016),           | International | Paper presenter/<br>Author | The International Institute of Knowledge Management    | Colombo, Srilanka                          |
| December 14-16, 2016 | International Conference on Material Processing and Applications. (ICMPA-2016), ,       | International | Paper presenter/<br>Author | Center for Crystal Growth, School of Advance Sciences. | VIT University, Vellore, Tamilnadu, India. |
| December 11-15, 2016 | International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM 2016) | International | Paper presenter/<br>Author | Indian Institute of Science                            | Bangalore, India                           |
| October 7, 2016      | National Conference on Advanced Materials-2016 (NCAM-2016)                              | National      | Paper presenter/<br>Author | Department of Physics, St. Joseph's College            | Tiruchirappalli, India.                    |



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|-----------------------|--|---------------|-------------------------|---|--------------------------------|
| September 07-10, 2016 | International Conference on Functional Materials (ICFM-2016)                                 | International | Paper presenter/ Author | PSN College of Engineering and Technology | Tirunelveli, Tamilnadu, India  |
| September 07-10, 2016 | International Conference on Functional Materials (ICFM-2016)                                 | International | Paper presenter/ Author | PSN College of Engineering and Technology | Tirunelveli, Tamilnadu, India  |
| June 05-08, 2016      | Second International Conference on Material Science and Technology (ICMST-2016)              | International | Paper presenter/ Author | St. Thomas College                        | Pala, Kottayam, Kerala, India. |
| February 26-28, 2016  | International Conference on Frontiers in Nanoscience & Nanotechnology (ICFNN-2016)           | International | Paper presenter/ Author | Sastra University                         | Thanjavur, Tamil Nadu, India   |
| February 05, 2016     | International Conference on Modern Engineering, Science & Technology-2016 (IER-ICMEST'16)    | International | Paper presenter/ Author | Institute of Engineering Research         | Trivandrum, Kerala, India.     |
| December 14-15, 2015  | International Conference on Recent Advances in Material and Chemical Sciences (ICRAMCS-2015) | International | Paper presenter/ Author | Gandhigram Rural Institute                | Gandhigram, Tamilnadu, India   |
| December 14-15, 2015  | International Conference on Recent Advances in Material and Chemical Sciences                | International | Paper presenter/ Author | Gandhigram Rural Institute                | Gandhigram, Tamilnadu, India   |

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|----------------------|--|---------------|----------------------------|--|------------------------------|
|                      | (ICRAMCS-2015)   |               |                            |  |                              |
| December 14-15, 2015 | International Conference on Recent Advances in Material and Chemical Sciences (ICRAMCS-2015) | International | Paper presenter/<br>Author | Gandhigram Rural Institute                           | Gandhigram, Tamilnadu, India |
| November 26-28, 2015 | National Seminar & International Exhibition on Non-Destructive Evaluation, ,                 | National      | Paper presenter/<br>Author |  | Hyderabad, India             |
| October 9-11, 2014   | SPIE Photonics Asia  | International | Paper presenter/<br>Author | SPIE   | Beijing, China               |
| October 9-11, 2014   | SPIE Photonics Asia  | International | Paper presenter/<br>Author | SPIE   | Beijing, China               |
| July 6-7, 2014       | International Conference on Nanotechnology (ICN – 2014)                                      | International | Paper presenter/<br>Author | World Academy of Science, Engineering and Technology | Singapore                    |
| March 6-7, 2014      | National Conference on Nanophotonics (NCNP – 2014)   | National      | Paper presenter/<br>Author | Bharathidasan University                             | Tiruchirappalli, India       |
| March 6-7, 2014      | National Conference on Nanophotonics (NCNP – 2014),  | National      | Paper presenter/<br>Author | Bharathidasan University                             | Tiruchirappalli, India       |
| March 6-7, 2014      | National Conference on Nanophotonics (NCNP – 2014)   | National      | Paper presenter/<br>Author | Bharathidasan University                             | Tiruchirappalli, India       |
| January 30-31, 2014  | National Conference on Advanced Functional Materials (NCAFM-2014)                            | National      | Paper presenter/<br>Author | Bharathiar University                                | Coimbatore, India.           |
| December 16-20, 2013 | International Union of Materials   | International | Paper presenter/<br>Author | Indian Institute Of Science                          | Bangalore, India.            |

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|                       |  |               |                         |   |                                 |
|-----------------------|--|---------------|-------------------------|---|---------------------------------|
|                       | Research Societies – International Conference in Asia – 2013 (IUMRS-ICA-2013)                                  |               |                         |   |                                 |
| December 16-20, 2013  | International Union of Materials Research Societies – International Conference in Asia – 2013 (IUMRS-ICA-2013) | International | Paper presenter/ Author | Indian Institute of Science                 | Bangalore, India.               |
| September 25-27, 2013 | National Seminar on New Materials Research and Nanotechnology” (MSNMRN2013)                                    | National      | Paper presenter/ Author | Govt. Arts College                          | Ooty, India                     |
| September 25-27, 2013 | National Seminar on New Materials Research and Nanotechnology” (MSNMRN2013)                                    | National      | Paper presenter/ Author | Govt. Arts College, Ooty, India             | Govt. Arts College, Ooty, India |
| March 11, 2013        | National Conference on Frontier Topics In Advanced Materials” (NCFTAM-2013), ,                                 | National      | Paper presenter/ Author | Bishop Heber College                        | Tiruchirappalli India           |
| January 2-5, 2013     | Optoelectronic Materials and Thin Films for Advanced Technology” (OMTAT 2013,                                  |               | Paper presenter/ Author | Cochin University of Science and Technology | Cochin, India.                  |
| January 23-24, 2012,  | National Seminar on Advances in Materials  | National      | Paper presenter/ Author | Manonmaniam Sundaranar University           | Tirunelveli, India              |

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|-----------------------------|---|---------------|----------------------------|---|--|
|                             | Science (NSAMS-2012),   |               |                            |   |  |
| February 27-28, 2012        | Annual Photonics Workshop 2012 (APW2012), Cochin, India.                                    |               | Paper presenter/<br>Author | Cochin University of Science and Technology | Cochin, India.                             |
| January 23-24, 2012,        | National Seminar on Advances in Materials Science (NSAMS-2012),                             | National      | Paper presenter/<br>Author | Manonmaniam Sundaranar University           | Tirunelveli, India                         |
| December 7-10, 2011         | National Seminar & Exhibition on Non-Destructive Evaluation (NDE 2011)                      | National      | Paper presenter/<br>Author | --  | Chennai Convention Centre, Chennai, India. |
| December 7-10, 2011         | National Seminar & Exhibition on Non-Destructive Evaluation (NDE 2011)                      | National      | Paper presenter/<br>Author | --  | Chennai Convention Centre, Chennai, India. |
| 26th June to 01st July 2011 | International Conference on Materials for Advanced Technologies” (ICMAT)                    | International | Paper presenter/<br>Author | Suntec, Singapore                           | Suntec, Singapore                          |
| 26th June to 01st July 2011 | International Conference on Materials for Advanced Technologies” (ICMAT)                    | International | Paper presenter/<br>Author | Suntec, Singapore                           | Suntec, Singapore                          |
| January 22-27, 2011         | SPIE-Photonics West 2011, OPTO – Integrated Optics: Devices, Materials, and Technologies XV | International | Paper presenter/<br>Author | San Francisco, California, USA              | San Francisco, California, USA             |
| December 10-12, 2009        | National Seminar & Exhibition on Non-Destructive  | National      | Paper presenter/<br>Author | BHEL & NIT, Tiruchirappalli, India          | BHEL & NIT, Tiruchirappalli, India         |

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|-----------------------|---|---------------|-------------------------|-------------------------------|-------------------------------|
|                       | Evaluation (NDE 2009),  |               |                         |                               |                               |
| December 3-5, 2008    | The 15th International Display Workshops (IDW'08),  | International | Paper presenter/ Author | Niigata, Japan                | Niigata, Japan                |
| November 6-8, 2008    | The Korean Institute of Electrical and Electronic Material Engineers (KIEEME) Annual Autumn Conference 2008,  | International | Paper presenter/ Author | South Korea                   | South Korea                   |
| October 13-17, 2008   | 8th International Meeting on Information Display (IMID 2008),   | International | Paper presenter/ Author | South Korea                   | South Korea                   |
| September 15-19, 2008 | The 2008 E-MRS Fall Meeting (E-MRS),  | International | Paper presenter/ Author | Poland                        | Poland                        |
| August 11-13, 2008    | 11th Field Emission Workshop '08 (FEW 2008),  | International | Paper presenter/ Author | Seokcho, South Korea          | Seokcho, South Korea          |
| July, 20-25, 2008     | Third International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA08) | International | Paper presenter/ Author | Edmonton, Canada,             | Edmonton, Canada              |
| May 18-23, 2008       | Society for Information Display (SID'08)  | International | Paper presenter/ Author | Los Angeles, California, USA, | Los Angeles, California, USA, |
| February 18-21, 2008  | International Conference on Advanced  | International | Paper presenter/ Author | Kottayam, India               | Kottayam, India               |

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|----------------------|---|---------------|-------------------------|--------------------|--------------------|
|                      | Materials (ICAM 2008)   |               |                         |                    |                    |
| February 18-21, 2008 | International Conference on Advanced Materials (ICAM 2008)                                  | International | Paper presenter/ Author | Kottayam, India    | Kottayam, India    |
| December 12-14, 2007 | The 5 <sup>th</sup> International Conference on Advanced Materials and Devices (ICAMD 2007) | International | Paper presenter/ Author | Jeju, Korea        | Jeju, Korea        |
| December 12-14, 2007 | The 5 <sup>th</sup> International Conference on Advanced Materials and Devices (ICAMD 2007) | International | Paper presenter/ Author | Jeju, Korea        | Jeju, Korea        |
| December 5-7, 2007   | The 14 <sup>th</sup> International Display Workshops (IDW '07),                             | International | Paper presenter/ Author | Sapporo, Japan,    | Sapporo, Japan,    |
| December 5-7, 2007   | The 14 <sup>th</sup> International Display Workshops (IDW '07),                             | International | Paper presenter/ Author | Sapporo, Japan,    | Sapporo, Japan,    |
| August 27-31, 2007   | 7 <sup>th</sup> International Meeting on Information Display (IMID 2007)                    | International | Paper presenter/ Author | EXCO, Daegu, Korea | EXCO, Daegu, Korea |
| August 27-31, 2007   | 7 <sup>th</sup> International Meeting on Information Display (IMID 2007)                    | International | Paper presenter/ Author | EXCO, Daegu, Korea | EXCO, Daegu, Korea |
| August 27-31, 2007   | 7 <sup>th</sup> International Meeting on Information Display (IMID 2007)                    | International | Paper presenter/ Author | EXCO, Daegu, Korea | EXCO, Daegu, Korea |

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|-----------------------|--|---------------|-------------------------|---|---|
| August 09-11, 2007    | The 10 <sup>th</sup> Field Emission Workshop (FEW 07),                               | International | Paper presenter/ Author | Gwanju, Korea,                                      | Gwanju, Korea,                                      |
| January 23-25, 2006   | National Seminar on Materials for Advanced Technologies (NASMAT-2006),               | National      | Paper presenter/ Author | Shivaji University, Kolhapur (MS), India            | Shivaji University, Kolhapur (MS), India            |
| January 10-13, 2005   | Fourth DAE-BRNS National Laser Symposium (NLS-4)                                     | National      | Paper presenter/ Author | Bhabha Atomic Research Centre (BARC), Mumbai, India | Bhabha Atomic Research Centre (BARC), Mumbai, India |
| July 05-08, 2004      | International Conference on Photoacoustic & Photothermal Phenomena,                  | International | Paper presenter/ Author | Rio de Janeiro, Brazil                              | Rio de Janeiro, Brazil                              |
| March 8 – 9, 2004     | Regional Conference on Photoacoustics in Condensed Matter Physics and NDT (PAC 2004) | Regional      | Paper presenter/ Author | School of Physics, Madurai Kamaraj University       | Madurai, India                                      |
| December 22 –24, 2003 | DAE–BRNS National Laser Symposium–2003 (NLS-2003)                                    | National      | Paper presenter/ Author | IIT, Kharagpur, India,                              | IIT, Kharagpur, India,                              |

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|----------------------|---|---------------|-------------------------|---------------------------------|---------------------------------|
| December 7-12, 2003  | International Conference on Materials for Advanced Technologies (ICMAT-2003), Materials Research Society,           | International | Paper presenter/ Author | Singapore                       | Singapore                       |
| November 28-30, 2003 | International Conference on Ionic Devices   | International | Paper presenter/ Author | Anna University, Chennai, India | Anna University, Chennai, India |
| January 25-31, 2003  | International Conference on Laser Crystals, Glasses and Nonlinear Materials Growth and Characterization (LASE 2003) | International | Paper presenter/ Author | San Jose, California, USA       | San Jose, California, USA       |
| November 14-16, 2002 | Sree Chitra Tirunal Institute for Medical Sciences and Technology,  |               | Paper presenter/ Author | Trivandrum, India               | Trivandrum, India               |

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

| <b>Title of Activity</b>  | <b>Level of Event (International/ National/ Local)</b> | <b>Date (s)</b>      | <b>Role</b>                 | <b>Venue</b>                                       |
|---|--|----------------------|-----------------------------|--|
| TEQUIP- II Sponsored National Conference on Advanced Materials: Processing and Characterization | National   | 27-28 February, 2017 | Organizing Committee Member | National Institute of Technology, Tiruchirappalli. |
| Course on Carbon Nanotubes (under self-finance)   | National   | 06-07 November, 2014 | Sole Teacher & Co-Ordinator | National Institute of Technology, Tiruchirappalli. |



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|--|----------|------------------------------|---|--|
| National Level Technical Symposium – Quality 2014    | National | 26 <sup>th</sup> March, 2014 | Co-Ordinator                            | National Institute of Technology, Tiruchirappalli. |
| National Level Technical Symposium – Quality 2013    | National | 19-20 March, 2013            | Co-Ordinator                            | National Institute of Technology, Tiruchirappalli. |
| National Level Technical Symposium – Quality 2012    | National | 13 <sup>th</sup> March, 2012 | Co-Ordinator                            | National Institute of Technology, Tiruchirappalli  |
| Workshop on Electron Microscopy (WEM)                | National | 3-5 November, 2011           | Co-Ordinator                            | National Institute of Technology, Tiruchirappalli. |
| National Seminar on Non-destructive Evaluation (NDE) | National | December 10-12, 2009         | One of the organizing committee members | National Institute of Technology, Tiruchirappalli. |

18. Invited Talks delivered

| <b>Topic</b>   | <b>Date</b>                                    | <b>Inviting Organization</b>   |
|--|--|--|
| World of Carbon Nanotubes - Lecture – II               | 11 <sup>th</sup> March, 2009                   | Jamal Mohamed College, Trichy  |
| World of Carbon Nanotubes Lecture – I                  | 11 <sup>th</sup> March, 2009                   | Jamal Mohamed College, Trichy  |
| <del>Carbon Nanotubes and Applications</del>           | <del>11<sup>th</sup> September 2009</del>      | <del>Sacred Heart College, Tiruppattur</del>   |
| Carbon Nanotubes                                       | 18 <sup>th</sup> February, 2011                | Department of Physics, Sarah Tucker College, Tirunelveli                                     |
| Carbon Nanotubes                                       | February, 2012                                 | Department of Physics, Urumu Dhanalakshmi College, Trichy                                    |
| Research Opportunities in Carbon                       | 28 <sup>th</sup> February, 2012                | Muthayammal Engineering College, Rasipuram   |
| Incredible Carbon                                      | 28 <sup>th</sup> February, 2013                | Arignar Anna Government Arts College, Musiri   |
| Carbon Nanomaterials                                   | 9 <sup>th</sup> March, 2013                    | Jamal Mohamed College, Tiruchirappalli   |
| Carbon Nanomaterials in Photonics                      | 11 <sup>th</sup> March, 2013                   | Bharathidasan University, Tiruchirappalli  |
| Trends in Carbon Research                              | 4 <sup>th</sup> July 2013                      | Muthayammal Engineering College, Rasipuram   |
| Wonders in Carbon                                      | 21 <sup>st</sup> September, 2013               | M.A.M School of Engineering, Tiruchirappalli   |
| Carbon Nanomaterials                                   | 8 <sup>th</sup> October, 2013                  | Seethalakshmi Ramaswami College, Tiruchirappalli   |
| Carbon Nanomaterials                                   | 10 <sup>th</sup> January 2014                  | Selvam Arts and Science College, Namakkal  |
| Materials for Future Technology                        | 10 <sup>th</sup> February, 2014                | Government Arts College, Karur, Tamilnadu  |
| Materials for Flexible Transparent Conducting Coatings | March 6 <sup>th</sup> – 7 <sup>th</sup> , 2014 | Bharathidasan University Tiruchirappalli, India  |
| Carbon Nanomaterials- Lecture I                        | 21 November 2014                               | UGC-Academic Staff College, Bharathidasan University Tiruchirappalli-23                      |
| Carbon Nanomaterials- Lecture II                       | 21 November 2014                               | UGC-Academic Staff College, Bharathidasan University, Tiruchirappalli, India                 |
| Carbon Nanomaterials                                   | 24 January 2015                                | Vivekanandha College of Arts & Science for Women, Thiruchencode, Namakkal, Tamil Nadu, India |
| Carbon Nanomaterials Research                          | 6 <sup>th</sup> February, 2015                 | St.Joseph's College, Tiruchirappalli   |
| Flexible Electronics: Materials and Applications       | 11-18 May, 2015                                | Bishop Heber College, Tiruchirappalli  |
| Recent Developments in the Field of Nanotechnology     | 24 <sup>th</sup> March, 2016                   | Gnanamani College of Technology, A.K.Samuthiram Namakkal                                     |
| Carbon Materials and Applications                      | 03 August, 2016                                | Holy Cross College, Tiruchirappalli  |
| The Progress of Carbon Nanomaterials Research          | 20 Oct. 2016                                   | Thiruvalluvar Govt. Arts College, Rasipuram  |
| Carbon Nanomaterials                                   | 16 March 2017                                  | Nehru Memorial College, Puthanampatti  |

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|---|---------------------------------|--|
| Materials for Future Technology                         | 10 <sup>th</sup> August 2017    | Selvamm Arts and Science College, Namakkal   |
| Applications of Nanomaterials and Carbon Nanotubes      | 27 October 2017                 | Muthayammal Engineering College, Rasipuram   |
| Carbon Materials & Their Applications                   | 22 <sup>nd</sup> December 2017  | UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli   |
| Introduction to Nanomaterials and their Application     | 24 <sup>th</sup> January 2018   | Holy Cross College (Autonomous), Tiruchirappalli                                   |
| Nanomaterials & Carbon Nanotubes                        | 7 <sup>th</sup> March 2018      | K. Ramakrishnan college of Technology, Tiruchirappalli                             |
| Developments in Nanocarbon                              | 14 <sup>th</sup> March 2018     | UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli   |
| Opportunities in Carbon                                 | 20 <sup>th</sup> September 2018 | Srimad Andavan Arts & Science College, Tiruchirappalli                             |
| Research Opportunities in Carbon                        | 29 <sup>th</sup> September 2018 | Vivekanandha College of Arts and Science for Women, Tiruchengode                   |
| Advances in Carbon Materials                            | 4 <sup>th</sup> Feb. 2020       | The Gandhigram Rural Institute, Gandhigram   |
| Introduction to Carbon Nanomaterials                    | 08 <sup>th</sup> Feb, 2020      | Madurai Sivakasi Nadars Pioneer Meenakshi Women's College, Poovanthi               |
| Nano Carbon   | 20 <sup>th</sup> Feb. 2020      | Jamal Mohamed College, Tiruchirappalli   |
| Carbon Nanomaterials                                    | 27 <sup>th</sup> June, 2020     | C.Abdul Hakeem College of Engineering & Technology, Melvisharam                    |
| Elemental Carbon for New Generation Devices             | 29 <sup>th</sup> June 2020      | SRM TRP Engineering College, Trichy  |
| Nanocarbon Molecules                                    | 04 <sup>th</sup> July 2020      | Perunthalaivar Kamarajar Institute of Engineering and Technology (PKIET), Karaikal |
| Carbon Nanomaterials                                    | 5 <sup>th</sup> Dec.2020        | Bharathidasan University, Tiruchirappalli  |
| Carbon Nanomaterials                                    | 8 <sup>th</sup> Dec.2020        | Bharathidasan University, Tiruchirappalli  |
| Carbon Nanomaterials and their Applications             | 29 <sup>th</sup> April, 2021    | Coimbatore Institute of Technology, Coimbatore                                     |
| Nano Applications in Hardware Design                    | 30 <sup>th</sup> April, 2021    | Rajiv Gandhi National Institute of Youth Development (RGNIYD), Sriperumbudur       |
| Carbon Nanostructures and Applications                  | 23 <sup>rd</sup> June, 2021     | Karpagam Academy of Higher Education, Coimbatore                                   |
| Carbon Nanomaterials and their Applications             | 26 <sup>th</sup> February, 2022 | National Institute of Technology, Tiruchirappalli                                  |
| Wonders in Carbon                                       | 28 <sup>th</sup> February, 2022 | Thanthai Periyar Government Arts and Science College, Tiruchirappalli              |
| Low Dimensional Carbon Materials and Their Applications | 25 March, 2022                  | Srinivasan College of Arts and Science, Perambalur                                 |

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|----------------------------------|-----------------------------|---|
| Nanocarbon Materials and Devices | 17 <sup>th</sup> June, 2022 | NPR College of Engineering & Technology, Dindigul |
|----------------------------------|-----------------------------|---|

19. Membership of Learned Societies

| <b>Type of Membership (Ordinary Member/ Honorary Member / Life Member)</b> | <b>Organization</b>                                    | <b>Membership No. with date</b>        |
|--|--|--|
| Life Member  | Photonics Society of India                             | 2004                                   |
| Life Member  | Indian Society for Non-Destructive Testing (ISNT)      | October 2009 & LM-8452-TC              |
| Regular Member (annual)  | SPIE, USA  | January 2005 & ID No.789628            |
| Five-Year  | International Association of Advanced Materials (IAAM) | January 2017 & 777301912125            |
| Life Member  | Materials Research Society of India (MRSI)             | 12 <sup>th</sup> March 2021 & LMB 3332 |

20. Academic Foreign Visits

| <b>Country</b>           | <b>Duration of Visit</b> | <b>Programme</b>                  |
|--------------------------|--------------------------|-----------------------------------|
| South Korea              | 2007-2008                | PostDoctoral Research             |
| Japan                    | 2007/ 2008               | Conference/Collaborative Research |
| Poland                   | 2008                     | Conference/Collaborative Research |
| United States of America | 2011                     | Conference/Collaborative Research |
| Singapore                | 2011/2014                | Conference/Collaborative Research |
| China                    | 2014                     | Conference/Collaborative Research |
| Sri Lanka                | 2016                     | Conference/Collaborative Research |

21. Publications

(A) Refereed Research Journals:

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| Author(s)  | Title of Paper   | Journal                         | Volume No. | Page No.(s) | Year | Impact Factor of the Journal (Optional) |
|--|--|---------------------------------|------------|-------------|------|---|
|  |  |                                 |            |             |      |   |
| E. G. Amrutha, K. Lakshmanamoorthy and <b>S. Manivannan</b>  | Carbon dots decorated graphene oxide: Structure and Properties   | Materials Today: Proceedings    | Accepted   |             | 2022 |   |
| K. Lakshmanamoorthy, <b>S. Manivannan</b>  | Silver Microrods Decorated Reduced Graphene Oxide Based Flexible Film for Room Temperature NH <sub>3</sub> Vapor Sensing               | Materials Today: Proceedings    | In press   |             | 2022 |   |
| E. G. Amrutha and <b>S. Manivannan</b>   | Carbon Dots-Based Ratiometric Fluorescence Sensor for Hippuric Acid  | Phys. Status Solidi A           | In press   |             | 2022 |   |
| K. Lakshmanamoorthy, <b>S. Manivannan</b>  | Role of surfactants on the synthesis of copper (II) oxide nanosheets-rGO composites  | Materials Today: Proceedings    | 49,        | 2584-2587   | 2020 |   |
| K. Lakshmanamoorthy <b>S Manivannan</b>  | 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 |   |
| N. Ambikeswari, and <b>S. Manivannan</b>   | Structural, Magnetic, and Dielectric Properties of Ultrafine Nickel-Substituted Cobalt Ferrite-Reduced Graphene Oxide Nanocomposites   | Journal of Electronic Materials | 50         | 6135-6148   | 2021 |   |
| Amreetha S, Manikandan K, <b>S Manivannan</b> , K. Jothivenkatachalam, Kaipannan S, Alagarsamy P, M Sathish, Venugopal Rao Soma, Dhanuskodi S, B Chakraborty | TiO <sub>2</sub> /Carbon allotrope nanohybrids for supercapacitor application with theoretical insights from density functional theory | Applied Surface Science         | 563        | 150259      | 2021 |   |
| D. Prakash, <b>S. Manivannan</b>   | N, B co-doped and Crumpled Graphene Oxide Pseudocapacitive Electrode for High Energy Supercapacitor                                    | Surfaces and Interfaces         | 23         | 101025      | 2021 |   |

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|   |  |                                     |          |                     |      |  |
|---|--|-------------------------------------|----------|---------------------|------|--|
| V. Mydhili,<br>T. Kavinkumar,<br><b>S. Manivannan</b>   | Poly(3,4-ethylenedioxythiophene): Poly(styrenesulfonate) coated three layer graphene-graphene oxide heterostructure for UV and IR detection                          | Materials Science and Engineering B | 264      | 11493<br>2          | 2021 |  |
| D. Prakash,<br><b>S. Manivannan</b>   | Unusual battery type pseudocapacitive behaviour of graphene oxynitride electrode: High energy solid-state asymmetric supercapacitor                                  | Journal of Alloys and Compounds     | 854      | 15685<br>3          | 2021 |  |
| R. Dhayalan,<br>S. Saravanan,<br><b>S. Manivannan</b> ,<br>B.Purna Chandra Rao  | Development of ultrasonic waveguide sensor for liquid level measurement in loop system   | Electronics Letters                 | 56       | 1120-<br>1122       | 2020 |  |
| K. Lakshmanamoorthy,<br><b>S. Manivannan</b>  | Microwave assisted covalent functionalization of ionic liquids on reduced graphene oxide   | AIP Conference Proceedings          | 2265 (1) | 03071<br>0          | 2019 |  |
| K. Balamurugan,<br>P.S. Siva Sankaran,<br><b>S. Manivannan</b>  | Magnetic vortex states in chromium (IV) oxide (CrO <sub>2</sub> )  | J. Magnetism and Magnetic Materials | 494      | 16584<br>5          | 2020 |  |
| P. Senthilkumar,<br>D. Arockiya Jency,<br>T. Kavinkumar,<br>D. Dhayanithi,<br>S. Dhanuskodi,<br>M. Umadevi,<br><b>S. Manivannan</b> ,<br>N. V. Giridharan,<br>V. Thiagarajan,<br>M. Sriramkumar, and<br>K. Jothivenkatachalam | Built-in Electric Field Assisted Photocatalytic Dye Degradation and Photoelectrochemical Water Splitting of Ferroelectric Ce Doped BaTiO <sub>3</sub> Nanoassemblies | ACS Sustainable Chem. Eng.          | 7        | 12032<br>-<br>12043 | 2019 |  |

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|   |   |                                 |      |               |      |  |
|---|---|---------------------------------|------|---------------|------|--|
| D. Prakash,<br><b>S. Manivannan</b>   | “Defect induced RGO-MnOx hybrid electrodes for supercapacitor applications  | AIP Conference Proceedings      | 2115 | 030581        | 2018 |  |
| S. Manikandan,<br>A. Sundari,<br><b>S. Manivannan</b>   | Effect of Cu <sup>2+</sup> ion on single crystal of nonlinear optical material (glycinium oxalate)  | J. Mater Sci: Mater Electron.   | 30   | 10711 - 10721 | 2019 |  |
| V. Mydhili and<br><b>S. Manivannan</b>  | Electrochemical and dielectric behavior in poly(vinyl alcohol)/ poly(3,4-ethylenedioxy-thiophene): poly(styrenesulf-onate) blend for energy storage applications  | Polymer Bulletin                | 76   | 4735-4752     | 2019 |  |
| V. Mydhili,<br>T. Kavinkumar,<br>B. Neppolian and<br><b>S. Manivannan</b>                       | Electrochemical behaviour and temperature dependent electrical transitions in graphene oxide incorporated poly(vinyl alcohol)/ poly(3,4-ethylenedioxy-thiophene): poly(styrenesulf-onate) composites for dielectric and supercapacitor applications | Mater. Chem. Phys.              | 225  | 261-271       | 2019 |  |
| T Kavinkumar,<br>L R Shobin,<br><b>S. Manivannan</b>  | 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 |  |
| T Kavinkumar,<br>P Kavitha, N Naresh,<br><b>S Manivannan</b> ,<br>M Muneeswaran,<br>B Neppolian | High performance flexible solid-state symmetric supercapacitors based on laser induced porous   | Applied Surface Science         | 489  | 671-679       | 2019 |  |

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|  |  |  |       |           |      |  |
|--|--|--|-------|-----------|------|--|
|  | reduced graphene oxide-graphene oxide hybrid nanostructure devices   |  |       |           |      |  |
| N. Ambikeswari, and<br><b>S. Manivannan</b>                                  | Superior magnetodielectric properties of room temperature synthesized superparamagnetic cobalt ferrite – graphene oxide composite            | Journal of Alloys and Compounds        | 763   | 711-718   | 2018 |  |
| Mydhili V,<br>Deepjyoti Das,<br>L. R. Shobin, and<br><b>S. Manivannan</b>    | Surface analysis and electrothermal performance of highly uniform PEDOT:PSS spin-coated films using infrared thermography                    | AIP Conference Proceedings             | 1942, | 080024    | 2018 |  |
| N. Ambikeswari, and<br><b>S. Manivannan</b>                                  | 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 |  |
| L.R. Shobin, and<br><b>S. Manivannan</b>                                     | 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 |  |
| L.R. Shobin and<br><b>S. Manivannan</b>                                      | Silver nanowires-single walled carbon nanotubes heterostructure chemiresistors   | Sensors and Actuators B: Chemical      | 256   | 7-17      | 2018 |  |
| T. Kavinkumar and<br><b>S. Manivannan</b>                                    | Improved dielectric behavior of graphene oxide-multiwalled carbon nanotube nanocomposite   | Vacuum                                 | 148   | 149-157   | 2018 |  |
| T. Kavinkumar,<br>K. Varunkumar,<br>V. Ravikumar and<br><b>S. Manivannan</b> | Anticancer activity of graphene oxide-reduced graphene oxide-silver nanoparticle composites  | J. Colloid and Interface Science       | 505   | 1125-1133 | 2017 |  |
| V. Mydhili and<br><b>S. Manivannan</b>                                       | Effect of microstructure on the dielectric properties of poly (vinyl alcohol)/ poly (3,4-ethylenedioxy-thiophene doped with                  | J. Appl. Polym. Sci                    | 45079 | 45079     | 2017 |  |



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|---|--|--|-----|---------------|------|--|
|   | poly(styrenesulf-onate) composite films  |  |     |               |      |  |
| T.Kavinkumar,<br>P. Senthilkumar,<br>S. Dhanuskodi and<br><b>S.Manivannan</b> | Dielectric transition and ferroelectric properties of graphene oxide-barium titanate nanocomposites  | J. Eur. Ceram. Soc.  | 37  | 1401-1409     | 2017 |  |
| T. Kavinkumar and<br><b>S. Manivannan</b>                                     | Thermal and dielectric properties of multi-walled carbon nanotube–graphene oxide composite   | J. Mater Sci: Mater Electron.                                | 28  | 344-353       | 2017 |  |
| M. B. Sobhanan and<br><b>S. Manivannan</b>                                    | Automation of Pulsed Thermography using Computer Numerical Controlled Manipulator for CFRP Circular Parabolic Honeycomb Structures         | International Journal of Scientific and Engineering Research | 7   | 137-141       | 2016 |  |
| T. Kavinkumar and<br><b>S. Manivannan</b>                                     | Synthesis, Characterization and Gas Sensing Properties of Graphene Oxide-Multiwalled Carbon Nanotube Composite                             | Journal of Materials Science and Technology                  | 32  | 626-632       | 2016 |  |
| T. Kavinkumar and<br><b>S. Manivannan</b>                                     | Uniform decoration of silver nanoparticle on exfoliated graphene oxide sheets and its ammonia gas detection                                | Ceramics International                                       | 42  | 1769-1776     | 2016 |  |
| L.R. Shobin and<br><b>S. Manivannan</b>                                       | 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 |  |
| L.R. Shobin and<br><b>S. Manivannan</b>                                       | Carbon nanotubes on paper: Flexible and disposable chemiresistors  | Sensors and Actuators B: Chemical                            | 220 | 1178-1185     | 2015 |  |
| T. Kavinkumar,<br>D. Sastikumar and<br><b>S. Manivannan</b>                   | Effect of functional groups on dielectric, optical gas sensing properties of graphene oxide and reduced graphene oxide at room temperature | RSC Advances   | 5   | 10816 - 10825 | 2015 |  |

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|  |   |                                   |          |           |      |  |
|--|---|-----------------------------------|----------|-----------|------|--|
| L.R.Shobin,<br><b>S. Manivannan</b>  | Room temperature ammonia vapor sensing properties of transparent single walled carbon nanotube thin film      | Proceedings of SPIE               | 9270,    | 92701 M   | 2014 |  |
| T. Kavinkumar,<br>D. Sastikumar,<br><b>S. Manivannan</b>   | Reduced grapheme oxide coated optical fiber for methanol and ethanol vapor detection at room temperature      | Proceedings of SPIE               | 9270,    | 92700 U   | 2014 |  |
| L.R.Shobin, and<br><b>S. Manivannan</b>  | One Pot Rapid Synthesis of Silver Nanowires Using NaCl Assisted Glycerol Mediated Polyol Process              | Electronic Materials Letters      | 10       | 1019-1023 | 2014 |  |
| S. Manikandan,<br>T. C. Sabari Girisun,<br>R. Mohandoss, S. Dhanuskodi, and<br><b>S.Manivannan</b>         | Third-order NLO properties of solution grown methyl-p-hydroxy benzoate single crystals                        | Optics and Spectroscopy           | 117      | 469–473   | 2014 |  |
| L.R.Shobin,<br>D.Sastikumar,<br><b>S. Manivannan</b>   | Glycerol mediated synthesis of silver nanowires for room temperature ammonia vapor sensing                    | Sensors and Actuators A: Physical | 214      | 74-80     | 2014 |  |
| L.R.Shobin,<br>B.Renganathan,<br>D.Sastikumar,<br>Kyu Chang Park,<br><b>S. Manivannan</b>                  | Pure and Iso-Butyl Methyl Ketone Treated Multi-Walled Carbon Nanotubes for Ethanol and Methanol Vapor Sensing | IEEE Sensors Journal              | 14       | 1238-1243 | 2014 |  |
| T.Seethalakshmi,<br><b>S. Manivannan</b> ,<br>S.Dhanuskodi,<br>Daniel E Lynch,<br>S. Thamocharan           | 4-Hy-droxy-1,2,6-trimethyl-pyridinium bromide monohydrate   | Acta Crystallogr Sect E           | E69      | 941-942   | 2013 |  |
| T.Seethalakshmi,<br><b>S.Manivannan</b> ,<br>S.Dhanuskodi,<br>Daniel E Lynch,<br>S. Thamocharan            | 4-Hydroxy-1,2,6-trimethylpyridinium chloride monohydrate  | Acta Crystallogr Sect E           | E69      | o835-o836 | 2013 |  |
| <b>S. Manivannan</b> ,<br>A.M. Saranya,<br>B. Renganathan,<br>D. Sastikumar,<br>G. Gobi,<br>Kyu Chang Park | Single-walled carbon nanotubes wrapped poly-methyl methacrylate fiber optic sensor for ammonia, ethanol and   | Sensors and Actuators B: Chemical | 171– 172 | 634–638   | 2012 |  |

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|--|---|-------------------------------|-------|-----------|------|--|
|  | methanol vapors at room temperature   |                               |       |           |      |  |
| <b>S. Manivannan,</b><br>L. R. Shobin;<br>A. M. Saranya;<br>B.Renganathan;<br>D.Sastikumar;<br>Kyu Chang Park  | Carbon nanotubes coated fiber optic ammonia gas sensor  | Proceedings of SPIE           | 7941, | 79410 M-1 | 2011 |  |
| <b>S. Manivannan,</b><br>Je Hwang Ryu,<br>Jin Jang,<br>Kyu Chang Park  | Fabrication and effect of post treatment on flexible single-walled carbon nanotube films                                  | J. Mater Sci: Mater Electron. | 21    | 595-602   | 2010 |  |
| <b>S. Manivannan,</b><br>Je Hwang Ryu,<br>Han Eol Lim,<br>M. Nakamoto,<br>Jin Jang,<br>Kyu Chang Park  | Properties of surface treated transparent conducting single walled carbon nanotube films                                  | J. Mater Sci: Mater Electron. | 21    | 72-77     | 2010 |  |
| <b>S. Manivannan,</b><br>Il Ok Jeong,<br>Je Hwang Ryu,<br>Chang Seok Lee,<br>Ki Seo Kim,<br>Jin Jang,<br>Kyu Chang Park                                      | Dispersion of single-walled carbon nanotubes in aqueous and organic solvents through a polymer wrapping functionalization | J. Mater Sci: Mater Electron. | 20    | 223–229   | 2009 |  |
| Chang Seok Lee,<br>Je Hwang Ryu,<br>Han Eol Lim,<br>Kyung Woo Min,<br>Il Ok Jeong,<br><b>S. Manivannan,</b><br>Ki Seo Kim,<br>Jin Jang and<br>Kyu Chang Park | Electron Emission from Robust CNTs Grown by Resist-Assisted Patterning  | J. Korean Physical Society    | 53    | 2735-2738 | 2008 |  |
| <b>S. Manivannan,</b><br>Il Ok Jeong,<br>Je Hwang Ryu,<br>Chang Seok Lee,<br>Ki Seo Kim,<br>Jin Jang and<br>Kyu Chang Park                                   | Purification and Preparation of Single-Walled Carbon Nanotube Films   | J. Korean Physical Society    | 53    | 2549-2553 | 2008 |  |
| <b>S. Manivannan,</b><br>S. Dhanuskodi,<br>S.K. Tiwari, J. Philip  | Laser induced surface damage, thermal transport and microhardness studies on certain organic and                          | Appl. Phys. B                 | 90    | 489-496   | 2008 |  |

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|--|--|----------------------------|-----|-----------|------|--|
|  | semiorganic nonlinear optical crystals   |                            |     |           |      |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b> ,<br>J. Philip  | Synthesis, spectral, optical and thermal studies of 1-methyl-2,6-dimethyl-4-hydroxypyridinium chloride monohydrate and bromide monohydrate | Spectrochimica Acta Part A | 69  | 1207-1212 | 2008 |  |
| T. Seethalakshmi,<br><b>S. Manivannan</b> ,<br>Daniel E. Lynch,<br>S. Dhanuskodi and<br>P. Kaliannan | 1-Ethyl-4-hydroxy-2,6-dimethyl-pyridinium bromide dihydrate  | Acta Crystallogr Sect E    | E63 | o599–o601 | 2007 |  |
| A. Pricilla Jeyakumari,<br><b>S. Manivannan</b> ,<br>S. Dhanuskodi                                   | Spectral and Optical Studies of 2-amino-5-nitropyridinium dihydrogen phosphate: A Semiorganic Nonlinear Optical Material                   | Spectrochimica Acta Part A | 67  | 83-86     | 2007 |  |
| S. Dhanuskodi,<br>A. Pricilla Jeyakumari,<br><b>S. Manivannan</b> ,<br>J. Philip, S.K. Tiwari        | Semiorganic nonlinear optical material for frequency doubling: Preparation and properties of sodium p-nitrophenolate dihydrate (SPNP)      | Spectrochimica Acta Part A | 66  | 318-322   | 2007 |  |
| <b>S. Manivannan</b> ,<br>S. Dhanuskodi,<br>K. Kirschbaum,<br>S.K. Tiwari                            | Role of anions in inducing noncentrosymmetry in 4-dimethylaminopyridinium salts for quadratic nonlinear optics                             | Crystal Growth & Design    | 6   | 1285-1290 | 2006 |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b> ,<br>K. Kirschbaum  | Synthesis, structural, thermal and optical studies of 1-ethyl-2,6-dimethyl-4-hydroxy pyridinium halides                                    | Spectrochimica Acta Part A | 64  | 504-511   | 2006 |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b> ,<br>K. Kirschbaum,<br>J. Philip, S. Selladurai               | Structural, thermal and dielectric studies on a new solution grown 4-dimethylaminopyridinium dihydrogen phosphate crystal                  | J. Crystal Growth          | 290 | 548-553   | 2006 |  |

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|---|--|----------------------------|-----|-----------|------|--|
| A. Pricilla Jeyakumari,<br>S. Dhanuskodi,<br><b>S. Manivannan</b>         | Phase matchable semiorganic NLO material for frequency doubling: l-Arginine tetrafluoroborate  | Spectrochimica Acta Part A | 63  | 91-95     | 2006 |  |
| S. Dhanuskodi,<br>A. Pricilla Jeyakumari,<br><b>S. Manivannan</b>         | Semiorganic NLO material for short wavelength generation 2-amino-5-nitropyridinium bromide   | J. Crystal Growth          | 282 | 72-78     | 2005 |  |
| <b>S. Manivannan</b> ,<br>S. Dhanuskodi,<br>K. Kirschbaum,<br>S.K. Tiwari | Design of an efficient solution grown semiorganic NLO crystal for short wavelength generation: 2-amino-5-nitropyridinium tetrafluoroborate | Crystal Growth & Design    | 5   | 1463-1468 | 2005 |  |
| <b>S. Manivannan</b> ,<br>S.K. Tiwari,<br>S. Dhanuskodi                   | Spectral, thermal and SHG studies on phase matchable organic NLO material EDMP for blue-green laser generation                             | Solid State Communications | 132 | 123-127   | 2004 |  |
| <b>S. Manivannan</b> ,<br>S. Dhanuskodi                                   | Synthesis, growth, structural, optical and thermal properties of a new semiorganic crystal: 4-dimethylaminopyridinium dihydrogen phosphate | Crystal Growth & Design    | 4   | 845-850   | 2004 |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b> ,<br>J. Philip                     | Growth, structural, thermal and optical properties of organic NLO crystal: N-methyllutidone trihydrate"                                    | J. Crystal Growth          | 265 | 284-289   | 2004 |  |
| <b>S. Manivannan</b> ,<br>S. Dhanuskodi                                   | Synthesis, crystal growth, structural and optical properties of an organic NLO material  | J. Crystal Growth          | 262 | 473-478   | 2004 |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b>                                    | Quadratic organic nonlinear optical material: bis-2,7-diethylaminohepta-2,5-dien-4-one   | J. Crystal Growth          | 262 | 395-398   | 2004 |  |
| <b>S. Manivannan</b> ,<br>S. Dhanuskodi                                   | Growth and characterization of a new   | J. Crystal Growth          | 257 | 305 - 308 | 2003 |  |

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|--|--|---------------------|-------|---------|------|--|
|  | organic nonlinear optical crystal: semicarbazone of p-dimethylamino benzaldehyde   |                     |       |         |      |  |
| S. Dhanuskodi,<br><b>S. Manivannan</b> | Crystal growth and characterization of a novel organic nonlinear optical material: semicarbozone of p-dimethylamino benzaldehyde | Proceedings of SPIE | 4970. | 137-149 | 2003 |  |

(B) Conferences/Workshops/Symposia Proceedings

| Author(s)   | Title of Abstract/<br>Paper  | Title of the Proceedings     | Page numbers | Conference Theme  | Venue                                      | Year |
|---|--|------------------------------|--------------|---|--|------|
| E. G. Amrutha, K. Lakshmanamoorthy and <b>S. Manivannan</b> | Carbon dots decorated graphene oxide: Structure and Properties   | Materials Today: Proceedings | Accepted     | 6th International Conference on Recent Advances in Material Chemistry | SRMIST, SRM University, Tamil Nadu, India. | 2022 |
| K. Lakshmanamoorthy, <b>S. Manivannan</b>                   | Silver Microrods Decorated Reduced Graphene Oxide Based Flexible Film for Room Temperature NH <sub>3</sub> Vapor Sensing | Materials Today: Proceedings | In press     | 6th International Conference on Recent Advances in Material Chemistry | SRMIST, SRM University, Tamil Nadu, India. | 2022 |

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| K. Lakshmanamoorthy,<br><b>S. Manivannan</b>                        | Role of surfactants on the synthesis of copper (II) oxide nanosheets-rGO composites                                       | Materials Today: Proceedings | 49, 2584-2587    | International Virtual Conference on Advanced Nanomaterials for Energy and Environment Applications (ICANEE-2020) | Alagappa University & Brunel University Jointly Organizes India-UK.   | 2020 |
| K. Lakshmanamoorthy,<br><b>S. Manivannan</b>                        | Microwave assisted covalent functionalization of ionic liquids on reduced graphene oxide                                  | AIP Conference Proceedings   | 2265 (1), 030710 | 64th DAE Solid State Physics Symposium (DAE-SSPS 2019)   | IIT Jodhpur, Rajasthan, India.  | 2019 |
| D. Prakash,<br><b>S. Manivannan</b>                                 | “Defect induced RGO-MnOx hybrid electrodes for supercapacitor applications  | AIP Conference Proceedings   | 2115, 030581     | 63rd DAE Solid State Physics Symposium (DAE-SSPS 2018)   | Guru Jambheshwar University of Science and Technology, Hisar, Haryana | 2018 |
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| T. Kavinkumar, D. Sastikumar,<br><b>S. Manivannan</b>               | Reduced grapheme oxide coated optical fiber for methanol and ethanol vapor detection at room temperature                  | Proceedings of SPIE          | 9270, 92700U     | SPIE Photonics Asia  | Beijing, China  | 2014 |

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| Chang-Seok Lee,<br>Je-Hwang Ryu,<br>Han-Eol Im,<br><b>S. Manivannan</b> ,<br>Didier Pribat, Jin Jang,<br>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. |

D) Patents

| S. No. | Title of the patent  | Name of Inventors                   | Granted/Filed                                |
|--------|--|-------------------------------------|--|
| 1      | Gas Sensor Based on Nanowires and Carbon Nanotubes Heterostructure | L.R Shobin and <b>S. Manivannan</b> | Filed on 10 Jan. 2017 (App. No.201741000938) |
| 2      | An Improved Transparent Electrothermal Device                      | L.R Shobin and <b>S. Manivannan</b> | Filed on 11 Jan. 2017 (App. No.201741001065) |