

## PUBLICATIONS

### Papers Published in Peer Reviewed International Journals:

#### 2019

53) **V. Mydhili and S. Manivannan**, “Electrochemical and dielectric behavior in poly(vinyl alcohol)/poly(3,4-ethylenedioxythiophene): poly(styrenesulfonate) blend for energy storage applications”

**Polymer Bulletin (2019) (in press)**

DOI:10.1007/s00289-018-2630-5

52) **V. Mydhili, T. Kavinkumar, B. Neppolian and S. Manivannan**, “Electrochemical behaviour and temperature dependent electrical transitions in graphene oxide incorporated poly(vinyl alcohol)/poly(3,4-ethylenedioxythiophene): poly(styrenesulfonate) composites for dielectric and supercapacitor applications”

**Mater. Chem. Phys., 225, 261-271 (2019)**

<https://www.sciencedirect.com/science/article/pii/S0254058418311246>

51) **T Kavinkumar, L R Shobin, S Manivannan**, “Effect of laser irradiation on electrical and gas sensing properties of reduced graphene oxide-graphene oxide heterostructure films”

**Journal of Alloys and Compounds, 784, 301-312 (2019)**

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50) **T Kavinkumar, P Kavitha, N Naresh, S Manivannan, M Muneeswaran, B Neppolian**, “High performance flexible solid-state symmetric supercapacitors based on laser induced porous reduced graphene oxide-graphene oxide hybrid nanostructure devices”

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#### 2018

49) **N. Ambikeswari, and S. Manivannan**, “Superior magnetodielectric properties of room temperature synthesized superparamagnetic cobalt ferrite e graphene oxide composite”

**Journal of Alloys and Compounds, 763 711-718 (2018).**

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48) **Mydhili V, Deepjyoti Das, L. R. Shobin, and S. Manivannan**, “Surface analysis and electrothermal performance of highly uniform PEDOT:PSS spin-coated films using infrared thermography”

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47) **N. Ambikeswari, and S. Manivannan**, “Effect of reaction time on the dielectric behaviour of reduced graphene oxide-layered cobalt hydroxide composite for high-k gate dielectrics”

**Materials Research Bulletin 100 7-14 (2018).**

46) **L.R. Shobin, and S. Manivannan**, “Enhancement of electrothermal performance in single-walled carbon nanotube transparent heaters by room temperature post-treatment”  
**Solar Energy and Solar Cells 174 469-477 (2018).**

45) **L.R. Shobin and S. Manivannan**, “Silver nanowires-single walled carbon nanotubes heterostructure chemiresistors”  
**Sensors and Actuators B: Chemical 256 7-17 (2018).**

44) **T. Kavinkumar and S. Manivannan**, “Improved dielectric behavior of graphene oxide-multiwalled carbon nanotube nanocomposite”  
**Vacuum 148 149-157 (2018)**

## **2017**

43) **T. Kavinkumar, K. Varunkumar, V. Ravikumar and S. Manivannan**, “Anti-cancer activity of graphene oxide-reduced graphene oxide-silver nanoparticles composite”  
**J. Colloid and Interface Science, 505 1125-1133 (2017).**

42) **Mydhili. V and S. Manivannan**, “Effect of microstructure on the dielectric properties of poly(vinyl alcohol)/poly(3,4-ethylenedioxythiophene) doped with poly(styrenesulfonate) composite films”  
**J. Appl. Polym. Sci. (2017) (in press)**  
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41) **T.Kavinkumar, P. Senthilkumar, S. Dhanuskodi and S.Manivannan**, “Dielectric transition and ferroelectric properties of graphene oxide-barium titanate nanocomposites”  
**J. Eur. Ceram. Soc. 37 4 1401-1409 (2017)**

40) **T. Kavinkumar and S. Manivannan**, “Thermal and Dielectric Properties of Multi-Walled Carbon Nanotube-Graphene Oxide Composite”  
**J. Mater Sci: Mater Electron., 28 1 344-353 (2017).**

## **2016**

39) **M. B. Sobhanan and S. Manivannan**, “Automation of Pulsed Thermography using Computer Numerical Controlled Manipulator for CFRP Circular Parabolic Honeycomb Structures”  
**International Journal of Scientific and Engineering Research 7 2 137-141 (2016).**

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38) **T. Kavinkumar and S. Manivannan**, “Synthesis, Characterization and Gas Sensing Properties of Graphene Oxide-Multi Walled Carbon Nanotube Composite”  
**Journal of Materials Science and Technology 32 626-632 (2016).**  
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37) **T. Kavinkumar and S. Manivannan**, “Uniform decoration of silver nanoparticle on exfoliated graphene oxide sheets and its ammonia gas detection”  
**Ceramics International** **42** 1769-1776 (2016).  
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## 2015

36) **L.R. Shobin and S. Manivannan**, “Optically Transparent, Electrically Conducting Single Walled Carbon Nanotubes Random Networks for Room Temperature Ammonia Vapor Sensing”  
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35) **L.R. Shobin and S. Manivannan**, “Carbon nanotubes on paper: Flexible and disposable chemiresistors”  
**Sensors and Actuators B: Chemical**, **220** 1178-1185 (2015).  
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34) **T. Kavinkumar, D. Sastikumar and S. Manivannan**, “Effect of functional groups on dielectric, optical gas sensing properties of graphene oxide and reduced graphene oxide at room temperature”  
**RSC Advances** **5**, 10816-25 (2015).  
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## 2014

33) **L.R.Shobin, S. Manivannan**, “Room temperature ammonia vapor sensing properties of transparent single walled carbon nanotube thin film”,  
**Proceedings of SPIE Vol.9270, 92701M** (2014).  
doi: 10.1117/12.2071830  
<http://spie.org/Publications/Proceedings/Paper/10.1117/12.2071830>

32) **T. Kavinkumar, D. Sastikumar, S. Manivannan**, “Reduced grapheme oxide coated optical fiber for methanol and ethanol vapor detection at room temperature”,  
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31) **L.R.Shobin, and S. Manivannan**, “One Pot Rapid Synthesis of Silver Nanowires Using NaCl Assisted Glycerol Mediated Polyol Process”  
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30) **S. Manikandan, T. C. Sabari Girisun, R. Mohandoss, S. Dhanuskodi, and S.Manivannan**, “Third\_Order NLO Properties of Solution Grown Methyl\_p\_Hydroxy Benzoate Single Crystals”  
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29) **L.R.Shobin, D.Sastikumar, S. Manivannan**, “Silver nanowires coated fiber optic sensors for ammonia sensing application”

**Sensors and Actuators A : Physical, 214, 74-80 (2014).**

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28) **L.R.Shobin, B.Renganathan, D.Sastikumar, Kyu Chang Park, S. Manivannan**, “Pure and Iso-butyl Methyl Ketone Treated Multi-walled Carbon Nanotubes Coated Fiber Optic Ethanol and Methanol Vapor Sensor”

**IEEE Sensors Journal, 14, 4 1238-1243 (2014).**

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### 2008-2013

27) **T.Seethalakshmi, S.Manivannan, S.Dhanuskodi, Daniel E Lynch, S. Thamotharan**, “4-Hydroxy-1,2,6-trimethylpyridinium bromide monohydrate”

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26) **T.Seethalakshmi, S.Manivannan, S.Dhanuskodi, Daniel E Lynch, S. Thamotharan**, “4-Hydroxy-1,2,6-trimethylpyridinium chloride monohydrate”

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25) **S. Manivannan, A.M. Saranya, B. Renganathan, D. Sastikumar, G. Gobi, Kyu Chang Park**, “Single-walled carbon nanotubes wrapped poly-methyl methacrylate fiber optic sensor for ammonia, ethanol and methanol vapors at room temperature”

**Sensors and Actuators B: Chemical, 171- 172 634- 638 (2012).**

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24) **S .Manivannan, L. R. Shobin; A. M. Saranya; B.Renganathan; D.Sastikumar; Kyu Chang Park**, “Carbon nanotubes coated fiber optic ammonia gas sensor”

**Proc. SPIE 7941, 79410M-1 (2011).**

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23) **S. Manivannan, Je Hwang Ryu, Jin Jang, Kyu Chang Park**, “Fabrication and effect of post treatment on flexible single-walled carbon nanotube films”

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21) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Chang Seok Lee, Ki Seo Kim, Jin Jang, Kyu Chang Park**, "Dispersion of single-walled carbon nanotubes in aqueous and organic solvents through a polymer wrapping functionalization"  
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20) **Chang Seok Lee, Je Hwang Ryu, Han Eol Lim, Kyung Woo Min, Il Ok Jeong, S. Manivannan, Ki Seo Kim, Jin Jang and Kyu ChangPark**, "Electron Emission from Robust CNTs Grown by Resist- Assisted Patterning"

**J. Korean Physical Society 53, 5, 2735-2738 (2008).**

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19) **S. Manivannan, Il Ok Jeong, Je Hwang Ryu, Chang Seok Lee, Ki Seo Kim, Jin Jang and Kyu Chang Park**, "Purification and Preparation of Single-Walled Carbon Nanotube Films"

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18) **S. Manivannan, S. Dhanuskodi, S.K. Tiwari, J. Philip**, "Laser induced surface damage, thermal transport and microhardness studies on certain organic and semiorganic NLO crystals"

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17) **S. Dhanuskodi, S. Manivannan, J. Philip**, "Synthesis, spectral, optical and thermal studies of 1-methyl-2,6-dimethyl-4-hydroxypyridinium chloride monohydrate and bromide monohydrate"

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## 2003-2007

16) **T. Seethalakshmi, S. Manivannan, Daniel E. Lynch, S. Dhanuskodi and P. Kaliannan**, "1-Ethyl-4-hydroxy-2,6-dimethylpyridinium bromide dihydrate"

**Acta Cryst. E63, o599-o601 (2007).**

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15) **A. Pricilla Jeyakumari, S. Manivannan, S. Dhanuskodi**, "Spectral and Optical Studies of 2-amino-5-nitropyridinium dihydrogen phosphate: A Semiorganic Nonlinear Optical Material"

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- 14) **S. Dhanuskodi, A. Pricilla Jeyakumari, S. Manivannan, J. Philip, S.K. Tiwari**, "Semiorganic nonlinear optical material for frequency doubling: Preparation and properties of sodium p-nitrophenolate dihydrate (SPNP)"  
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- 13) **S. Manivannan, S. Dhanuskodi, K. Kirschbaum, S.K. Tiwari**, "Role of anions in inducing noncentrosymmetry in 4-dimethylaminopyridinium salts for quadratic nonlinear optics"  
**Crystal Growth & Design 6 1285-1290 (2006).**  
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- 12) **S. Dhanuskodi, S. Manivannan, K. Kirschbaum**, "Synthesis, structural, thermal and optical studies of 1-ethyl-2,6-dimethyl-4-hydroxy pyridinium halides"  
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- 11) **S. Dhanuskodi, S. Manivannan, K. Kirschbaum, J. Philip, S. Selladurai**, "Structural, thermal and dielectric studies on a new solution grown 4-dimethylaminopyridinium dihydrogen phosphate crystal"  
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- 10) **A. Pricilla Jeyakumari, S. Dhanuskodi, S. Manivannan**, "Phase matchable semiorganic NLO material for frequency doubling L-arginine tetrafluoroborate"  
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- 09) **S. Dhanuskodi, A. Pricilla Jeyakumari, S. Manivannan**, "Semiorganic NLO material for short wavelength generation 2-amino-5-nitropyridinium bromide"  
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- 08) **S. Manivannan, S. Dhanuskodi, K. Kirschbaum, S.K. Tiwari**, "Design of an efficient solution grown semiorganic NLO crystal for short wavelength generation: 2-amino-5-nitropyridinium tetrafluoroborate"  
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- 07) **S. Manivannan, S.K. Tiwari, S. Dhanuskodi**, "Spectral, thermal and SHG studies on phase matchable organic NLO material EDMP for blue-green laser generation"  
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06) **S. Manivannan, S. Dhanuskodi**, "Synthesis, growth, structural, optical and thermal properties of a new semiorganic crystal: 4-dimethylaminopyridinium dihydrogen phosphate"

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05) **S. Dhanuskodi, S. Manivannan, J. Philip**, "Growth, structural, thermal and optical properties of organic NLO crystal: N-methylglutidone trihydrate"

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04) **S. Manivannan, S. Dhanuskodi**, "Synthesis, crystal growth, structural and optical properties of an organic NLO material"

**J. Crystal Growth 262 473-478 (2004).**

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03) **S. Dhanuskodi, S. Manivannan**, "Quadratic organic nonlinear optical material: bis-2,7- diethylaminohepta-2,5-dien-4-one"

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02) **S. Manivannan, S. Dhanuskodi**, "Growth and characterization of a new organic nonlinear optical crystal: semicarbazone of p-dimethylamino benzaldehyde"

**J. Crystal Growth 257 305-308 (2003).**

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01) **S. Dhanuskodi, S. Manivannan**, "Crystal growth and characterization of a novel organic nonlinear optical material: semicarbazone of p-dimethylamino benzaldehyde"

**Proceedings of SPIE Vol.4970, pp.137-149 (2003).**

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### **Book Proceedings**

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

### **Papers Presented in International/National Conferences**

67) **Prakash D and Manivannan S**, "Rapid Synthesis of Activated Carbon-Manganese Oxide Composite for Supercapacitor Applications", **International**



**Conference on Nanoscience and Nanotechnology (ICONN -2019), January 28-30, 2019, SRM University, Chennai.**

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

65) **Prakash D and Manivannan S**, “Superior Electrochemical Properties of Hausmannite - Mn<sub>3</sub>O<sub>4</sub> Nanocrystal for Supercapacitor Electrodes”, **International Conference on Nanoscience and Nanotechnology (ICONN -2017), August 09-11, 2017, SRM University, Chennai.**

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

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

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

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

60) **Mydhili.V and S.Manivannan**, “Dielectric properties of PVA/H<sub>3</sub>PO<sub>4</sub>, PVA/PEDOT:PSS and PVA/PEDOT:PSS/H<sub>3</sub>PO<sub>4</sub> gel electrolyte systems”, **International Conference of Young Researchers on Advanced Materials (IUMRS-ICYRAM 2016) , 11-15, December 2016, Indian Institute of Science, Bangalore, India (awarded for best poster).**

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

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

57) **Mydhili.V and S.Manivannan**, “Investigation on the dielectric properties of poly(vinyl alcohol)/boric acid gel electrolytes”, **International Conference on**



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

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

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

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

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

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

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

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

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

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