Dr.R. Jayavel

1. M. Karl Chinnu, K. Vijai Anand, R. Mohan Kumar, T. Alagesan and R. Jayavel“Synthesis and Electrochemical Behavior of Ceria based Bi-layer Films by Dip coating Technique”, J. Nanosci. andNanotech., Vol. 15 (2015)360-367.
2. Karl Chinnu. M, Vijai Anand. K, Mohan Kumar. R, Alagesan. T and Jayavel R,“Formation and characterization of CeO2 and Gd:CeO2 nano-wires/ rods for fuelcell applications” J. Expt. Nanoscience, Vol. 10 (2015)520-531.
3. Raja, R.,Sudhagar, P.,Devadoss, A.,Terashima, C.,Shrestha, L.K.,Nakata,K.,Jayavel, R., Ariga,K,Fujishima, A, Pt-free solar driven photoelectrochemical hydrogen fuel generation using 1T MoS2 co-catalyst assembled CdS QDs/TiO2photoelectrode", Chem. Commun. 51 (2015)522-525.
4. D Dinesh Kumar, N Kumar, S Kalaiselvam, S Dash, R. Jayavel, "Micro-tribomechanical properties of nanocrystalline TiN thin films for small scale device applications, Tribology International, Vol. 88 (2015)25-30.
5. R Siddheswaran, Marie Netrvalová, Jarmila Savková, Petr Novák, Jan Očenášek,Pavol Šutta, Jaroslav Kováč, R. Jayavel, Reactive magnetron sputtering of Nidoped ZnO thin film: Investigation of optical, structural, mechanical and magnetic properties", Journal of Alloys and Compounds 636 (2015)85-92.
6. T Saravanan, SG Raj, NRK Chandar, R. Jayavel, "Synthesis, Optical and Electrochemical Properties of Y2O3 Nanoparticles Prepared by Co-Precipitation Method" J. Nanosci. and Nanotech. Vol. 15 (2015)4353-4357.
7. G Murugadoss, R Jayavel, M Rajesh Kumar, Structural and optical properties of highly crystalline Ce, Eu and co-doped ZnO nanorods", Superlattices & Microstructure, Vol. 82 (2015)538-550.
8. C Esther Jeyanthi, R Siddheswaran, Pushpendra Kumar, M Karl Chinnu, KRajarajan, R Jayavel, "Investigation on synthesis, structure, morphology,spectroscopic and electrochemical studies of praseodymium-dopedceria nanoparticles by combustion method", Mater. Chem. &Phys. 151 (2015)22-28.
9. N Rajeswari Yogamalar, K Sadhanandam, A Chandra Bose, R.Jayavel,"Quantum confined CdS inclusion in graphene oxide for improved electrical conductivity and facile charge transfer in hetero-junction solar cell”,RSC Advances 5 (2015) 16856- 16869.
10. A. Venkatesan, N. Krishna Chandar, A. Kandasamy, M. Karl Chinnu, K. N.Marimuthu, R. Mohan Kumar, R. Jayavel, " Luminescence and electrochemical properties of rare earth (Gd, Nd) doped V 2 O 5 nanostructures synthesized by a non-aqueous sol–gel route", RSC Advances 5 (2015)21778-21785.
11. M. Shanmugam, R. Jayavel, “Synthesize grapheme-tin oxide nanocomposite and its photocatalytic properties for the degradation of organic pollutants under visible light”, J. Nanosci. and Nanotech. Vol. 15 (2015)7195–7201.
12. G Poongodi, P Anandan, R Mohan Kumar, R Jayavel, "Studies on visible light photocatalytic and antibacterial activities of nanostructured cobalt doped Zn2016,45, 2637-2646 O thin films prepared by sol-gel spin coating method",Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 148(2015) 237-243.
13. G Murugadoss, R Thangamuthu, R Jayavel, MR Kumar, "Narrow with Tunable optical band gap of CdS based core shell nanoparticles: Applications in pollutant degradation and solar cells" Journal of Luminescence, Vol. 165 (2015)30-39.
14. Thulasingam Saravanan, Mahalingam Shanmugam, Pandurangan Anandan, M Azhagurajan, Kaliyaperumal Pazhanivel, M Arivanandhan, Y Hayakawa, R.Jayavel, Facile Synthesis of graphene-CeO2 Nanocomposites with enhanced electrochemical properties for Supercapacitors", Dalton Trans., 44 (2015) 9901.

15. M. Shanmugam, Ali Alsalme, Abdulaziz Alghamdi, and R. Jayavel,"Photocatalytic properties of Graphene-SnO2-PMMA nanocomposite in the degradation of methylene blue dye under direct sunlight irradiation" Mater.Express, Vol. 5, (2015)319-326.
16. G Poongodi, RM Kumar, R Jayavel, "Structural, optical and visible light photocatalytic properties of nanocrystalline Nd doped ZnO thin films prepared byspin coating method" Ceramic International, Vol. 41 (2015)4169-4175.
17. Raja Rajendran, Lok Kumar Shrestha, R. Mohan Kumar, R. Jayavel, Jonathan P.Hill, Katsuhiko Ariga, "Composite Nanoarchitectonics for Ternary Systems of Reduced Graphene Oxide/Carbon Nanotubes/Nickel Oxide with Enhanced Electrochemical Capacitor Performance", J. Inorg Organomet. Poly. & Mater.Vol.25 (2015)267-274.
18. S. Reghuram, A. Arivarasan, R. Kalpana &R. Jayavel, “Cd Se and CdSe/ZnS quantum dots for the detection of C-reactive protein", J. Expt. Nanoscience.Vol.10 (2015)787.
19. V Thirumal, A Pandurangan, R Jayavel, KS Venkatesh, NS Palani, R Ragavan, R Ilangovan, Single pot electrochemical synthesis of functionalized and phosphorus doped graphene nanosheets for supercapacitor applications, Journal of Materials Science: Materials in Electronics, Vol. 26 (2015)6319-6328.
20. K Vijai Anand, G Vinitha, M Karl Chinnu, R Mohan, R Jayavel, Enhanced thirdorder nonlinear optical properties of high purity ZnS nanoparticles, Journal of Nonlinear Optical Physics & Materials, Vol. 24 (2015)1550016.
21. Vellaikasi Venkatachalam, Ali Alsalme, Abdulaziz Alghamdi, R. Jayavel, High performance electrochemical capacitor based on MnCo2O4 nanostructured electrode, Journal of Electroanalytical Chemistry, Vol. 756 (2015)94-100.
22. Mahalingam Shanmugam, Ali Alsalme, Abdulaziz Alghamdi, R. Jayavel,“Enhanced Photocatalytic Performance of the Graphene-V2O5 Nanocomposite in the Degradation of Methylene Blue Dye under Direct Sunlight, ACS Applied Materials & Interfaces, Vol. 7 (2015)14905-14911.
23. D Dinesh Kumar, N Kumar, S Kalaiselvam, R Radhika, S Dash, AK Tyagi, R Jayavel, Reactive magnetron sputtered wear resistant multilayer transition metal carbide coatings: microstructure and tribo-mechanical properties, RSC Advances,Vol. 5 (2015)81790-81801.
24. A Ayyaswamy, S Ganapathy, A Alsalme, A Alghamdi, R. Jayavel, “Structural,optical and photovoltaic properties of co-doped CdTe QDs for quantum dots sensitized solar cells, Superlattices and Microstructures Vol. 88, (2015)634-644.
25. Ragunathan Yuvarajan, Devarajan Natarajan, Chinnasamy Ragavendren, R.Jayavel, "Photoscopic characterization of green synthesized silver nanoparticles from Trichosanthes tricuspidata and its antibacterial potential, J. Photochemistry & Photobiology B: Biology, Vol. 149 (2015)300-307.
26. DD Kumar, N Kumar, S Kalaiselvam, S Dash, R Jayavel, "Substrate effect on wear resistant transition metal nitride hard coatings: microstructure and tribomechanical properties", Ceramic International, Vol. 41 (2015)9849-9861.
27. R Sankar, M Neupane, S-Y Xu, CJ Butler, I Zeljkovic, I Panneer Muthuselvam,F-T Huang, S-T Guo, Sunil K Karna, M-W Chu, WL Lee, M-T Lin, R Jayavel, V Madhavan, MZ Hasan, FC Chou, “Large single crystal growth, transport property, and spectroscopic characterizations of a three-dimensional Dirac semimetal Cd3As2”, Scientific Reports, Vol. 5 (2015)12966.
28. A Anbarasi, R Kalpana, A Arivarasan, R Jayavel, B Venkataraman, “Detection of UV Rays Using CdTe Quantum Dots”, Intl. J. Measure. Technol. & Instr. Engg.Vol.5, (2015) pp. 15-27.
29. N Mohamed Basith, J Judith Vijaya, L John Kennedy, M Bououdina, R Jayavel“Influence of Fe-Doping on the Structural, Morphological, Optical, Magnetic and Antibacterial Effect of ZnO Nanostructures, J. Nanosci. & Nanotech Vol.16 (2016) 1567-1577.

30. D Selvakumar, AN Thenammai, NR Yogamalar, R Hemamalini, R Jayavel,“Enriched adhesion of talc/ZnO nanocomposites on cotton fabric assisted by aloevera for bio-medical application” AIP Proc., Vol. 1665 (2015) 050162
31. G Murugadoss, R Jayavel, R Thangamuthu, MR Kumar, “PbO/CdO/ZnO and PbS/CdS/ZnS nanocomposites: Studies on optical, electrochemical and thermal properties”, Journal of Luminescence Vol. 170 (2016)78-89.
32. M Murugan, R Mohan Kumar, Ali Alsalme, Abdulaziz Alghamdi, R Jayavel, In Situ Hydrothermal Synthesis of Graphene–CuO Nanocomposites for Lithium Battery Applications”, J. Nanosci. & Nanotech. Vol. 16 (2016)317-320.
33. P Vinothkumar, RM Kumar, R Jayavel, A Bhaskaran, “Synthesis, growth,structural, optical, thermal and mechanical properties of an organic Urea maleicacid single crystals for nonlinear optical applications, Optics & Laser Technol. 81(2016) 145-152.
34. G Murugadoss, R Jayavel, MR Kumar, Structural, optical and thermal properties CdS/Bi2S3nanocomposites,Ind. J.Phys.,Vol.90(2016)173-178.
35. R.Thangappan, S Kalaiselvam, A Elayaperumal, R Jayavel, M Arivanandhan, R Karthikeyan, Y Hayakawa, Graphene decorated withMoS2nanosheets: a synergistic energy storage composite electrode for supercapacitor applications,Dalton Trans., Vol.45 (2016)2637-2646.
36. M Murugan, RM Kumar, A Alsalme, A Alghamdi, R Jayavel, Facile hydrothermal preparation of niobium pentaoxide decorated reduced graphene oxide nanocomposites for supercapacitor applications, Chem. Phys. Lett. Vol. 650(2016) 35-40.
37. P Vigneshwaran, M Kandiban, N Senthil Kumar, V Venkatachalam, R Jayavel, I Vetha Potheher, “A study on the synthesis and characterization of CoMn2O4 electrode material for supercapacitor applications, J. Mat. Sci.: Mater. Electron.,Vol. 27(2016)4653-4658.
38. Duraisamy Selvakumar, Hari Sivaram, Ali Alsalme, Abdulaziz Alghamdi, R.Jayavel, Facile synthesize of free standing highly conducting flexible Reduced graphene oxide paper, , J. Mat. Sci.: Mater. Electron., 27(2016) 6232-6241.
39. G Murugadoss, R Jayavel, MR Kumar, R Thangamuthu, “Synthesis, optical,photocatalytic, and electrochemical studies on Ag2S/ZnS and ZnS/Ag2S nanocomposites”, Appl. Nanosci. Vol. 6 (2016)503-510.
40. V Thirumal, A Pandurangan, R Jayavel, R Ilangovan, “Synthesis and characterization of boron doped graphene nanosheets for supercapacitor applications”, Synthetic Metals Vol. 220 (2016)524-532.
41. S. Dorothy, T. Lavanya, K Punithamurthy, R. Jayavel, K. Satheesh, “Optical Characterization and Electrochemical Properties of Cd(1− x)Cu(x)S/rGO Composites Synthesized Through Reflux Method”, J. Nanosci. & Nanotech. Vol,16 (2016)9716.
42. V Thirumal, A Pandurangan, R Jayavel, SR Krishnamoorthi, R Ilangovan,“Synthesis of nitrogen doped coiled double walled carbon nanotubes by chemical vapor deposition method for supercapacitor applications”, Current Appl. Phys.Vol. 16 (2016)816-825.
43. M Shanmugam, A Alsalme, A Alghamdi, R Jayavel, “In-situ microwave synthesis of graphene–TiO2 nanocomposites with enhanced photocatalytic properties for the degradation of organic pollutants”, J. Photochem. Photobio.B,163(2016)216-223.
44. T Saravanan, P Anandan, M Azhagurajan, M Arivanandhan, K Pazhanivel, Y Hayakawa, R Jayavel, “Synthesis and characterization of Y2O3-reduced graphene oxide nanocomposites for photocatalytic applications”, Mater. Res. Exp. Vol.3(2016) 075502.
45. V Venkatachalam, R Jayavel, Synthesis of Pristine Cobalt oxide (Co3O4)Nanostructured Electrode Material for Supercapacitor Applications”, Invertis J.Sci. & Technol., Vol 9 (2016)6-10.
46. G Dharunya, N Duraipandy, Rachita Lakra, Purna Sai Korapatti, R Jayavel,Manikantan Syamala Kiran,“Curcumin cross-linked collagen aerogels with controlled anti-proteolytic and pro-angiogenic efficacy,” Biomed. Mater. Vol. 11(2016) 045011.

47. Kothandam, R., Pandurangan, M., R. Jayavel, Gupta, S., “A Novel Nano-finish Formulations for Enhancing Performance Properties in Leather Finishing Applications”, J. Cluster Sci., Vol. 27(2016)1263-1272.
48. NR Yogamalar, K Sadhanandham, AC Bose, R. Jayavel, “Band alignment and depletion zone at ZnO/CdS and ZnO/CdSe hetero-structures for temperature independent ammonia vapor sensing”, Phys. Chem. Chem. Phy. Vol. 18 (2016),32057-32071.
49. Vijai Anand, K., Mohan, R., Jayavel, R., '' Facile one-pot hydrothermal synthesis and structural characterization of transition metals (Cu, Co and Mn) doped ZnS nanoparticles in HMTA matrix '', Journal of Materials and Environmental Science, Vol.7, (2016) 679-684.
50. Saravanan, T., Anandan, P., Azhagurajan, M., Arivanandhan, M., Pazhanivel, K., Hayakawa, Y., Jayavel, R., '' Synthesis and characterization of Y2O3 -reduced graphene oxide nanocomposites for photocatalytic applications '',Mater. Res. Exp., Vol.3, (2016).
51. K Ramalingam, T Devasena, B Senthil, R Kalpana, R. Jayavel, “Silver nanoparticles for melamine detection in milk based on transmitted light intensity,IET Science, Measurement & Technol. Vol. 11 (2017)171-178.
52. V Venkatachalam, A Alsalme, A Alghamdi, R. Jayavel, “Hexagonal-like NiCo2O4 nanostructure based high-performance supercapacitor electrodes”, Ioncs, Vol. 23 (2017)977-984.
53. D. Selvakumar, A Alsalme, A Alghamdi, R. Jayavel, Reduced graphene oxide paper as bimorphic electrical actuators, Mater. Lett. Vol. 191 (2017)182-185.
54. RD Kumar, R Thangappan, R. Jayavel, “Synthesis and characterization of LaFeO 3/TiO2 nanocomposites for visible light photocatalytic activity, J. Phy. & Chem.Solids, Vol.101 (2017)25-33.
55. AK Manoharan, S Chinnathambi, R. Jayavel, N Hanagata, “Simplified detection of the hybridized DNA using a graphene field effect transistor, Science and Technology of Advanced Materials, Vol. 18 (2017)43-50.
56. G. Krithika, R. Saraswathy, M. Muralidhar, D. Thulasi, N. Lalitha, P.Kumararaja,A. Nagavel, Arun Balaji, and R. Jayavel, “Zinc Oxide Nanoparticles—Synthesis,Characterization and Antibacterial Activity”, J. Nanosci. & Nanotech. Vol. 17(2017)5209–5216.
57. C Sengottaiyan, R Jayavel, R.G. Shrestha, J.P. Hill, K Ariga, L.K. Shrestha,“Electrochemical Supercapacitance Properties of Reduced Graphene Oxide/Mn2O3: Co3O4 Nanocomposite”, J.Inor. andOrganomet. Poly. Mater.,Vol.27 (2017),576- 585.
58. P Seenuvasaperumal, A Elayaperumal, R. Jayavel, “Influence of calciumhexaboride reinforced magnesium composite for the mechanical and tribological behviour”, Triboloy Intl. Vol. 111 (2017)18-25.
59. DD Kumar, N Kumar, S Kalaiselvam, S Dash, R. Jayavel, “Wear resistant superhard multilayer transition metal-nitride coatings”, Surfaces & Interfaces, Vol.7(2017)74-82.
60. M. Murugan, R. Mohan Kumar, Ali Alsalme, Abdulaziz Alghamdi, and R.Jayavel, “Synthesis and Property Studies of Molybdenum Disulfide Modified Reduced Graphene Oxide (MoS2–rGO) Nanocomposites for Supercapacitor Applications, J. Nanosci. & Nanotech. Vol. 17 (2017)5469–5474.
61. R Dhinesh Kumar, R Thangappan, R Jayavel, “Study on the effect of annealing temperature and photocatalytic properties of TbMnO3 nanoparticles”, OptikInternational Journal for Light and Electron Optics, Vol. 138 (2017)365-371.
62. V. Venkatachalam, A. Alsalme, A. Alswieleh, R. Jayavel, “Double hydroxide mediated synthesis of nanostructured ZnCo2O4 as high performance electrode material for supercapacitor applications”, Chem. Engg. J., Vol. 321 (2017)474-483.
63. R Dhinesh Kumar, R Thangappan, R Jayavel, “Facile Preparation of LaFeO3/rGO Nanocomposites with Enhanced Visible Light Photocatalytic Activity”, J. Inor. and Organomet. Poly. Mater., Vol. 27 (2017)892–900.

64. DD Kumar, N Kumar, S Kalaiselvam, R Radhika, AM Rabel, R Jayavel, “Tribomechanical properties of reactive magnetron sputtered transition metal carbide coatings”, Tribol. Int. Vol. 114 (2017)234-244.
65. M Shanmugam, R Jayavel, Young-Ho Ahn, “Synthesis and application of graphene-αMoO3 nanocomposite for improving visible light irradiated photocatalytic decolorization of methylene blue dye”, J. Taiwan Inst. Chem. Eng.,Vol. 80 (2017)276-285.
66. D Selvakumar, A Alsalme, A Alswieleh, R Jayavel, “Freestanding flexible nitrogen doped-reduced graphene oxide film as an efficient electrode material for solid-state supercapacitors”, J. Alloys Compd., Vol.723 (2017)995-1000.
67. P Rajasekaran, AS Alagar Nedunchezhian, N Yalini Devi, D Sidharth, M Arivanandhan, R Jayavel, “The effect of rare earth ionsonstructural,morphological and thermoelectric properties of nanostructured tinoxide based perovskite materials”, (2017), Mater. Res. Express,Vol. 4 (2017)115024.
68. C Sengottaiyan, R Jayavel, Partha Bairi, R Goswami Shrestha, K Ariga, Lok K Shrestha, “Cobalt Oxide/Reduced Graphene Oxide Composite with Enhanced Electrochemical Supercapacitance Performance”, Bull. Chem. Soc. Jpn., Vol. 90(2017)955-962.
69. AK Noordeen, Sankar S, C Sengottaiyan, R Jayavel, S Thiyagu, “Hierarchical Flower Structured Bi2S3/Reduced Graphene Oxide Nanocomposite for High Electrochemical Performance”, J. Inor. And Organomet. Poly. Mater., Vol. 28(2018)73-83.
70. R Thangappan, M Arivanandhan, S Kalaiselvam, R Jayavel, Y Hayakawa,“Molybdenum Oxide/Graphene Nanocomposite Electrodes with Enhanced Capacitive Performance for Supercapacitor Applications”, J. Inor. andOrganomet.Poly. Mater., Vol. 28, (2017)50-62.
71. S Sathyajothi, R Jayavel, AC Dhanemozhi, “The Fabrication of Natural Dye Sensitized Solar Cell (Dssc) based on TiO2 Using Henna And Beetroot Dye Extracts”, Mater. Today:. Proc., Vol. 4 (2017)668-676.
72. G Dasi, R Ramarajan, R Thangappan, R Jayavel, K Thangaraju, “Improved electroluminescence in organic light emitting diodes by thermal annealing of indium tinoxideanode,”AIPConferenceProceedings,Vol.1832(2017)060017.
73. V Rajeswari, R Jayavel, AC Dhanemozhi, “Synthesis and Characterization of Graphene-Zinc Oxide Nanocomposite Electrode Material For Supercapacitor Applications”, Mater. Today:. Proc., Vol. 4 (2017)645-652.
74. D Govindarajan, N Duraipandy, K Vinjimur Srivatsan, R Lakra, Purna Sai Korrapati, R Jayavel, M Syamala Kiran “Fabrication of Hybrid Collagen Aerogels Reinforced with Wheat Grass Bioactives as Instructive Scaffolds for Collagen Turnover and Angiogenesis for Wound Healing Applications”, ACS Appl. Mater. Interfaces, Vol. 9 (2017)16939–16950.
75. R Kothandam, R Jayavel, S Gupta, “Zinc oxide (ZnO) nanoparticles for enhancement of fastness properties in cationic finishing”, J. Am. Leather Chem.Assoc., Vol. 112 (2017)162-167.
76. R Kannadasan, P Valsalal, R Jayavel, “Performance improvement of metal-oxide arrester for VFTs”, IET Sci. Meas. Technol., Vol. 11 (2017)438-444.
77. Raju K, Prasad V, Ramasamy J, Development of metal oxide arrester block using a rare earth element for very fast transient overvoltage applications, Turkish Journal of Electrical Engineering and Computer Sciences, Vol. 25 (2017) 4893-4900.
78. J Jayachandiran, A Raja, M Arivanandhan, R. Jayavel, D Nedumaran, “A facile synthesis of hybrid nanocomposites of reduced graphene oxide/ZnO and its surface modification characteristics for ozone sensing”, J. Mater. Sci. - Mater.Electron., Vol. 29 (2017)3074-3086.
79. Kannadasan, R., Valsalal, P., Jayavel, R., '' High gradient metal oxide surge arrester block for VFTO applications '', Journal of Electrical Engineering,Vol.17, (2017) 401-410.
80. Raju, K., Prasad, V., Ramasamy, J., '' Development of metal oxide arrester block using a rare earth element for very fast transient overvoltage applications'', Turkish Journal of Electrical Engineering and Computer Sciences, Vol.25,(2017) 4893-4900.

81. Mahalingam, S., R. Jayavel, Ahn, Y.-H., “Enhanced Photocatalytic Degradation of Synthetic Dyes and Industrial Dye Wastewater by Hydrothermally Synthesized G– CuO–Co3O4Hybrid Nanocomposites Under Visible Light Irradiation”,Journal of Cluster Science, Vol. 29 (2018)235-250.
82. M Jayanthi, T Lavanya, N Anbil Saradha, K Satheesh, S Chenthamarai, RJayavel, “Superior Photocatalytic Performance of CeO2 Nanoparticles and Reduced Graphene Oxide Nanocomposite Prepared by Low Cost CoPrecipitation Method”, (2018), J. Nanosci. Nanotechnol., Vol. 18 (2018)3257-3265.
83. P Nagaraju, A Alsalme, A Alswieleh, R Jayavel, “Facile in-situ microwave irradiation synthesis of TiO2/graphene nanocomposite for high-performance supercapacitor applications”, J. Electroanal. Chem., Vol. 808(2018) 90–100.
84. P.S.M. Kumar, T. Sivakumar, T. Fujita, R. Jayavel, H. Abe, “Synthesis of metastable Au-Fe alloy using ordered nanoporous silica as a hard template”,Metals, Vol. 8(2018).
85. D Mani, N Tsunoji, Y Yumauchi, M Arivanandhan, R Jayavel, Y Ide, Templated synthesis of atomically thin platy hematite nanoparticles within a layered silicate exhibiting efficient photocatalytic activity, Journal of Materials Chemistry A, Vol.6 (2018),5166-5171.
86. D Selvakumar, G Murugadoss, A Alsalme, AM Alkathiri, R Jayavel, Heteroatom doped reduced graphene oxide paper for large area perovskite solar cells, Solar Energy 163, (2018)564-569.
87. Selvakumar D, Vasudevan R, Jayavel R, “Formation of PbSe - ZnO Thin Film Based Heterostructure for Solar Cell Applications” Mater. Today Proc. Vol.5(2018) 14468.
88. V Venkatachalam, A Alsalme, A Alswieleh, R Jayavel, Shape controlled synthesis of rod-like Co3O4 nanostructures as high-performance electrodes for supercapacitor applications, Journal of Materials Science: Materials in Electronics, Vol. 29 (2018) 6059-6067.
89. S Pugazhendhi, PK Palanisamy, R Jayavel, Synthesis of highly stable silver nanoparticles through a novel green method using Mirabillis jalapa for antibacterial, nonlinear optical applications, Optical Mater., 79 (2018)457-463
90. N Sivakumar, R Jayavel, G Anbalagan, RR Yadav, Synthesis, growth, spectral,electrical, mechanical and thermal characterization of a potential optical material:γ- glycine single crystal, Optical Materials 80, (2018)177-185
91. D Dinesh Kumar, N Kumar, S Kalaiselvam, R Thangappan, R Jayavel, Filmthickness effect and substrate dependent tribo-mechanical characteristics ofTitanium Nitride films, Surfaces and Interfaces, Vol. 12, (2018)78-85.
92. Selvakumar, D., Nagaraju, P., Jayavel, R., '' Graphene-metal oxide based nanocomposites for supercapacitor applications'', TechConnect 2018 -Advanced Materials, Vol.1, (2018) 70-73.
93. P Nagaraju, A Alsalme, AM Alkathiri, R Jayavel, Rapid synthesis of WO 3/graphene nanocomposite via insitu microwave method with improved electrochemical properties, Journal of Physics and Chemistry of Solids, Vol. 120,(2018)250-260.
94. H Sivaram, D Selvakumar, A Alsalme, A Alswieleh, R Jayavel, Enhanced performance of PbO nanoparticles and PbO-CdO and PbO-ZnO nanocomposites for supercapacitor application, J. Alloys andCompounds, Vol. 731, (2018)55-53.
95. T Tsuchiya, M Jayabalan, K Kawamura, M Takayanagi, T Higuchi, R Jayavel, KTerabe, Neuromorphic transistor achieved by redox reaction of WO3 thin film,Japanese Journal of Applied Physics, 57, (2018)04FK01.
96. S Nagarani, G Sasikala, K Satheesh, M Yuvaraj, R Jayavel, Synthesis and characterization of binary transition metal oxide/reduced graphene oxide nanocomposites and its enhanced electrochemical properties for supercapacitor applications, J. Mater. Sci.: Mater. in Electronics, Vol. 29, (2018)11738-11748.

97. R Dhinesh Kumar, R Thangappan, R Jayavel, Enhanced visible light photocatalytic activity of LaMnO3 nanostructures for water purification, Research on Chemical Intermediates, Vol. 44 (2018)4323-4337.
98. S Paulraj, R Jayavel, "Microwave-assisted synthesis of Ru and Ce doped tungsten oxide for supercapacitor electrodes", J.Mater. Sci.: Mater. in Electron., Vol. 29 (2018)13794-13802.
99. S Felix, A.N Grace, R Jayavel, Sensitive electrochemical detection of glucose based on Au-CuO nanocomposites, J. Phys. and Chem. of Solids, Vol. 122(2018)255-260.
100. R Thangappan, M Arivanandhan, R Dhinesh Kumar, R Jayavel, Facile synthesis of RuO2 nanoparticles anchored on graphene nanosheets for high performance composite electrode for supercapacitor applications, Journal of Physics and Chemistry of Solids, Vol. 121, (2018)339-349.
101. N Sivakumar, N Kanagathara, M.K Marchewka, M Drozd, R Jayavel, G Anbalagan, The theoretical and experimental vibrational studies of thiourea and silver nitrate (2:1) complex, Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, Vol. 204, (2018)717-725.
102. Chinnu, M.K., Anandan, P., Arivanandhan, M. Kumar, R.M., Jayavel, R., Effect of rare earth doping on the enhancement of photocatalytic performance of ceria nanocrystals under natural sunlight, Journal of Materials Science: Materials in Electronics, Vol. 29 (2018) 9564-9572.
103. Ashwin Karthick N. R. Thangappan, M. Arivanandhan, A. Gnanamani, R.Jayavel, "A Facile Synthesis of Ferrocene Functionalized Graphene Oxide Nanocomposite for Electrochemical Sensing of Lead" J. Inor. And Organomet.Poly. & Mater., Vol. 28 (2018) 1021-1028.
104. Ayyaswamy Arivarasan, Sambandam Bharathi, Vijayaraj, Ganapathy Sasikala, R. Jayavel, Evaluationof Reaction Parameters Dependent Optical Properties and Its Photovoltaics Performances of CdTe QDs, J. Inor. And Organomet. Poly. & Mater., Vol. 28 (2018)1263–1275.
105. J Jayachandiran, J Yesuraj, M Arivanandhan,A Raja, S.A. Suthanthiraraj, R Jayavel, D Nedumaran, Synthesis and Electrochemical Studies of rGO/ZnO Nanocomposite for Supercapacitor Application, J. Inor.and Organomet. Poly.&Mater., Vol. 28 (2018) 2046-2055.
106. K.V Anand, G Vinitha, S Gautam, K.H Chae, R Mohan, K Asokan, T.R Ravindran, R Jayavel, Enhancement of third-order nonlinear optical properties of HMTA stabilized pure and doped ZnS nanoparticles and their electronic structures, J. Nonlinear Opt. Phy. &Mater.,Vol. 27(2018) 1850016.
107. Manibalan, G, Murugadoss, G, Thangamuthu, R, Mohan Kumar, R, Rajesh Kumar, M, Jayavel, R, Enhanced photocatalytic activity of CeO2@α-MoO3 heterostructure, J. Mater. Sci.: Mater.in Elect., Vol. 29 (2018) 13692-13702.
108. Manibalan, G, Murugadoss, G, Thangamuthu, R, Ragupathy, P, Mohan Kumar, R,Jayavel, R, Enhanced electrochemical supercapacitor and excellent amperometric sensor performance of heterostructure CeO2-CuO nanocomposites via chemical route, Appl. Surf. Sci., Vol. 456 (2018) 104-113.
109. Saravanan T, Anandan P, Shanmugam M, Jayakumari T, Arivanandhan M, Azhagurajan M, Hayakawa Y, Jayavel R, "Impact of graphene on the enhancement of electrochemical and photocatalytic performance of Gd2O3-Graphene nanocomposites", Solid State Sciences, Vol. 83 (2018) 171-180.
110. Noordeen Abdul Kalam, Chinnasamy Sengottaiyan, R. Jayavel, Katsuhiko Ariga,Rekha Goswami Shrestha, Thiyagu Subramani, Sambasivam Sankar, Lok Kumar Shrestha, "Vanadium sulfide/reduced graphene oxide composite with enhanced supercapacitance performance", Journal of the Taiwan Institute of Chemical Engineers, Vol. 92 (2018) 72-79.
111. Chinnasamy Sengottaiyan, Noordeen Abdul Kalam, Ramasamy Jayavel,Rekha Goswami Shrestha, Thiyagu Subramani, SambasivamSankar, Jonathan P.Hill, Lok Kumar Shrestha and Katsuhiko Ariga, BiVO4/RGO Hybrid Nanostructure for High Performance Electrochemical Supercapacitor, J. ofSolid State Chemistry, Vol. 269 (2019) 409-418.

112. Manibalan, G., Murugadoss, G., Thangamuthu, R., Mohan Kumar, R., Jayavel,R., Facile synthesis of heterostructure CeO2 -TiO2 nanocomposites for enhanced electrochemical sensor and solar cell applications, J. Alloys & Compound., Vol.773 (2019) 449-461.
113. Senthilkumar N, Venkatachalam V, Kandiban M, Vigneshwaran P, Jayavel R,Vetha Potheher I, "Studies on Electrochemical Properties of Hetarolite(ZnMn2O4) Nanostructure for Supercapacitor Application", Physica E: Lowdimensional Systems and Nanostructures, Vol. 106 (2019) 121-126.
114. A.Venkatesan, N.Krishna Chandar, K. Pradeeswari, P. Pandi; A. Kandasamy R.Mohakumar, R. Jayavel, "Influence of Al doping on structural, luminescence and electrochemical properties of V2O5 nanostructures synthesized via nonhydrolytic sol-gel technique", Mater. Res. Exp., Vol. 6 (2019) 015017.
115. A Saranya, T Devasena, H Sivaram, R Jayavel, Role of hexamine in ZnO morphologies at different growth temperature with potential application in dye sensitized solar cell, J. Mater. Sci.: Mater. Semicond. Proc., 92(2019) 108-115.
116. Sengottaiyan, C, Jayavel, R, Shrestha, R.G, Subramani, T, Maji, S, Kim, J.H,Hill, J.P, Ariga, K, Shrestha, L.K, "Indium oxide/carbon nanotube/reduced graphene oxide ternary nanocomposite with enhanced electrochemical supercapacitance" Bull. Chem. Soc. Jpn., Vol. 92 (2019) 521-528.
117. Manibalan, G, Murugadoss, G, Thangamuthu, R, Kumar, R.M, Jayavel, R,Kumar, M.R, "Enhanced photocatalytic performance of heterostructure CeO2-SnO2 nanocomposite via hydrothermal route" Mater. Res. Exp., Vol. 6 (2019)075032
118. Alagar Nedunchezhian, A.S, Sidharth, D, Devi, N.Y, Rajkumar, R,Rajasekaran, P, Arivanandhan, M, Anbalagan, G, Jayavel, R, "Effect of Bismuth substitution on the enhancement of thermoelectric power factor of nanostructured BixCo3-xO4, Ceramics Interntl. Vol. 45 (2019), 6782-6787.
119. Arivarasan, A, Bharathi, S, Ezhilarasi, S, Arunpandiyan, S, Jayavel, R,"Photovoltaic Performances of Yb Doped CdTe QDs Sensitized TiO 2 Photoanodes for Solar cell Applications, J. Inor.and Organomet. Poly. &Mater.,Vol. 29 (2019) 859-868.
120. Govindarajan, D, Lakra, R, Korapatti, P.S, Ramasamy, J, Kiran, M.S,"Nanoscaled Biodegradable Metal-Polymeric Three-Dimensional Framework for Endothelial Cell Patterning and Sustained Angiogenesis, ACS Biomater. Sci. & Engg. Vol. 5, (2019)2519-2531.
121. Selvakumar, D, Sivaram, H, Alsalme, A, Alghamdi, A, Jayavel, R,"Freestanding flexible, pure and composite form of reduced graphene oxide paper for ammonia vapor sensing, Scientific Reports, Vol.9, (2019)9:8749.
122. Archana, T, Vijayakumar, K, Arivanandhan, M, Jayavel, R, "TiO2 nanostructures with controlled morphology for improved electrical properties of photoanodes and quantum dot sensitized solar cell characteristics", Surfaces and Interfaces, Vol. 17 (2019) 100350.
123. R Dhinesh Kumar, R Thangappan, R Jayavel, "Structural, Morphological and Photocatalytic Activity of YMnO3 Nanorods", J. Nanosci. & Nanotech. Vol.19(2019) 2385-2390.
124. Dhanasekar, K, Sridaran, M, Arivanandhan, M, Jayavel, R, "A facile preparation, performance and emission analysis of pongamia oil based novel biodiesel in diesel engine with CeO2:Gd nanoparticles", Fuel, Vol. 255 (2019)115756.
125. D Sidharth, AS Alagar Nedunchezhian, R Rajkumar, N Yalini Devi, P Rajasekaran, M Arivanandhan, Kozo Fujiwara, G Anbalagan, R Jayavel, "Effect of Te substitution on the enhancement of thermoelectric power factor of nanostructured SnSe1-xTex", Phys. Chem. Chem. Phys.. 21 (2019), pp. 15725-15733.
126. Muthamizh, S, Narayanan, V, Jayavel, R, "Hydrogen evolution reaction with transition metal molybdate as cathode material, AIP Prceedings, Vol.2115, (2019)030553.
127. Sivasamy, P, Harikrishnan, S, Jayavel, R, Hussain, S.I., Kalaiselvam, S., Lu, Li, "Preparation and thermal characteristics of caprylic acid based composite as phase change material for thermal energy storage", Mater. Res. Express, Vol.6 (2019)105051.

128. M Sivaraj, Swathi Sudhakar, M Arivanandhan, S Ganesan, R Jayavel, “Study on Photo-Catalytic and Antimicrobial Activity of Green Synthesized TiO2 Nanoparticles Coated Vitrified Tiles, J. Nansci. And Technol. (2019) 836-839.
129. Saravanan, T, Anandan, P, Shanmugam, M, Azhagurajan, M, Mohamed Ismail, M,Arivanandhan, M, Hayakawa, Y, Jayavel, R, “Facile synthesis of Yb2O3–graphene nanocomposites for enhanced energy and environmental applications, , Polimer Bulletin (2019) In Press.
130. S. Subhasree, P. Anitha, K. Kannan, A. Ramachandran, J. J. Sheri, R. Jayavel, “Anticorrosion Behavior of ZnO Nanoparticles Coated on Mild Steel in NaCl Solution”, J. Nanosci. & Nano Technol. (2019) In Press.
131. Gunasekaran Manibalan, Govindhasamy Murugadoss, Rangasamy Thangamuthu, Pitchai Ragupathy, Manavalan Rajesh Kumar, Rangasamy Mohan Kumar, and Ramasamy Jayavel, ACS-Inorganic Chemistry, (2019) In Press.