




DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT
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DEPARTMENT OF PHYSICS

Faculty Name	Dr. Nallamuthu N	
Designation	Professor & Head	
Educational Qualification	PhD	
Experience in Years	12 years of Teaching 12 years of Research	
Area of Interest	Solid state Ionics, Supercapacitors	
Email ID	nallamuthu-phy@dsatm.edu.in ; hodphy@dsatm.edu.in	

Educational Details

- PhD (2012) from Pondicherry University, Puducherry
- M.Phil. (2003) from Pondicherry University, Puducherry.

Personal Details

- Languages Known: English, Tamil

Professional Experience

- Working as a Professor, Head @ Department of Physics from 02/01/2023
- Worked as an Associate Professor and Head of the Department of Physics @Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu (2018-2022).
- Worked as an Assistant Professor of the Department of Physics @Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu (2011-2018).
- Handled BTech I year, B.Sc (Physics) and M. Sc (Physics) classes and Labs @KARE

International Journal Publications

- Preparation of $\text{NiAl}_2\text{O}_4/\text{SiO}_2$ and Co^{2+} - Doped $\text{NiAl}_2\text{O}_4/\text{SiO}_2$ Nanocomposites by the Sol-Gel Route, I. Prakash, P. Muralidharan, **N. Nallamuthu**, M. Venkateswarlu, David Carnahan and N. Satyanarayana, Journal of the American Ceramic Society. 89 [7], 2220-2225 (2006).
- Preparation and characterization of nanocrystallite size cuprous oxide, I.Prakash, P. Muralidharan, **N. Nallamuthu**, M. Venkateswarlu and N. Satyanarayana, Materials Research Bulletin journal, 42(9), 1619 (2007).
- Ac conductivity and Electrical modulus studies on Lithium vanadophosphate glasses, P. Muralidharan, **N. Nallamuthu**, I. Prakash, M. Venkateswarlu and N. Satyanarayana, journal of American Ceramic Society, 90(1), 125 (2007).
- Sol-Gel Synthesis, Characterization Of $\text{Li}_2\text{O}-\text{As}_2\text{O}_5-\text{SiO}_2$ Glassy System, **N.Nallamuthu**, I.Prakash, M.Venkateshwarlu, S.Balasubramaniyam and N.Sataynarayana, journal of material chemistry and physics, 111 (1), 24-28 (2008).

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- Electrical conductivity studies of nanocrystalline lanthanum silicate synthesized by sol-gel route, by **N. Nallamuthu**, I. Prakash, N. Satyanarayana, M. Venkateswarlu, Journal of alloys and compounds 509 (2011) 1138–1145.
- Preparation and characterization of nanocrystalline CoFe₂O₄ deposited on SiO₂:In-situ sol-gel process", by I. Prakash, **N. Nallamuthu**, P. Muralidharan, M. Venkateswarlu, Manjusri Misra, Amar Mohanty, N. Satyanarayana, J. Sol-Gel Sci. Technol. 58 (2011) 24–32
- Preparation, characterization and electrical conductivity studies of nanocrystalline scheelite Ba_{1-x}Dy_xMoO_{4+δ}, by Paramananda Jena, **N. Nallamuthu**, M. Venkateswarlu, N. Satyanarayana, Ceramics International 40(2014)2349-2358
- Structural characterization and electrical conductivity studies of BaMoO₄ nanofibers prepared by sol-gel and electrospinning techniques, Paramananda Jena, **N Nallamuthu**, K Hari Prasad, M Venkateswarlu, N Satyanarayana, Journal of Sol-Gel Science and Technology, 72,3 (2014) 480-489
- Structural characterisation and electrical conductivity studies of BaMoO₄ nanorods prepared by modified acrylamide assisted sol-gel process, P Jena, **N Nallamuthu**, PK Patro, M Venkateswarlu, N Satyanarayana, Advances in Applied Ceramics 113 (6) (2014) 372-379
- Electrical Impedance studies on sodium ion conducting composite blend polymer electrolyte, D. Vanitha, S. Asath bahadur, **N. Nallamuthu**, A. Manikandan, Journal of Inorganic and Organometallic Polymers and Materials 27 (2017) 257-265.
- Investigation of Phase Transition in Some Ferroelectrics Calcium and Zinc Doped Diammonium Dibromodichlorinate, D. Vanitha, S.Asath Bahadur, **N. Nallamuthu**, S. Athimoolam, A. Manikandan, Journal of inorganic and organo metallic polymers and Materials 27 (2017) 363-371.
- Electrical conductivity studies on Ammonium bromide incorporated with Zwitterionic polymer blend electrolyte for battery application V. Parameswaran, **N. Nallamuthu**, P. Devendran, E. R. Nagarajan, A. Manikandan, Physica B 515 (2017) 89-98.
- Studies on conducting polymer blends: Synthesis and characterizations of PVA/PVP doped with CaCl₂, D. Vanitha, S. Asath Bahadur, **N. Nallamuthu**, A. Shunmuganarayanan, A. Manikandan, Journal of nanoscience and nanotechnology 18,3 (2018) 1723 - 1729.
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- Structural, thermal and electrical properties of polyvinyl alcohol/ polyvinyl pyrrolidone - sodium nitrate solid polymer blend electrolyte D. Vanitha, S. Asath Bahadur, **N. Nallamuthu**, A. Shunmuganarayanan, Ionics 24 (1), (2018) 139-151.
- Dielectric Investigation of NaLiS Nanoparticles Loaded on Alginate Polymer Matrix Synthesized by Single Pot Microwave Irradiation A. Shameem, P. Devendran, V. Siva, K. S. Venkatesh, A. Manikandan, S. Asath Bahadur, **N. Nallamuthu** Journal of inorganic and organo metallic polymers and Materials 28 (3), (2018) 671-678.
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- Cellulose hybrid nanocomposites using Napier grass fibers with *in situ* generated silver nanoparticles as fillers for antibacterial applications, M.P.Indiradevi, **N.Nallamuthu**, N.Rajini, A.Varada Rajulu, N.Hariram, SuchartSiengchin, International Journal of Biological

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- Tensile, thermal and antibacterial characterization of composites of cellulose/modified pennisetum purpureum natural fibers with in situ generated copper nanoparticles, M.P. Indira Devi, **N. Nallamuthu**, N. Rajini, A. Varada Rajulu, N. Hariram and Suchart Siengchin, International journal of polymer analysis and characterization, (2018)1485201
- Studies on sodium nitrate based polyethylene oxide / polyvinyl pyrrolidone polymer blend electrolytes, K. Sundaramahalingam, **N. Nallamuthu**, D. Vanitha, A. Manikandan and M. Muthuvinayagam, Physica B: Condensed Matter, 547 (2018) 55.
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- Biodegradable Poly (propylene) carbonate using in-situ generated CuNPs coated Tamarindus indica filler for Biomedical Applications, MP Indira Devi, **N Nallamuthu**, N Rajini, T Senthil Muthu Kumar, Suchart Siengchin, A Varada Rajulu, Nadir Ayrilmis, Materials Today Communications, 2019, 19 (2019) 106–113.
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- Structural, morphological and electrochemical studies of nanostructured BiVO₄ for supercapacitor application, R Packiaraj, KS Venkatesh, P Devendran, S Asath Bahadur, **N Nallamuthu**, Materials Science in Semiconductor Processing, 115 (2020) 105122
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- Investigations and fabrication of Ni(OH)₂ encapsulated carbon nanotubes nanocomposites based asymmetrical hybrid electrochemical supercapacitor, R Ranjithkumar, S Ezhil Arasi, P Devendran, **N Nallamuthu**, P Lakshmanan, S Sudhahar, A Arivarasan, M Krishna Kumar Journal of Energy Storage 32(2020)101934
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- Promising biodegradable polymer blend electrolytes based on cornstarch: PVP for electrochemical cell applications, M Anandha Jothi, D Vanitha, S Asath Bahadur, **N Nallamuthu**, Bulletin of Materials Science, 44(1) (2021) 1-12.
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- High Performance Nickel sulfide modified electrode material from single source precursor for energy storage applications, C.Sampath kumar, R. Ranjith Kumar, S. Ezhilarasi, A. Manikandan, **N. Nallamuthu**, M. Krishnakumar, A. Arivarasan, P. Devendran, journal Materials science: Materials in Electronics, 32(15) (2021) 20058-20070.
- Dielectric studies of designed noval sodium based polymer electrolyte with effect of adding amino acid, k. Sundaramahalingam, S. Jayanthi, D.Vanitha, **N. Nallamuthu**, Ionics, 27 (9) (2021) 3919- 3932
- Investigation on structural, morphological and electrochemical properties of co-precipitation synthesis of Mn doped WO₃ nanoparticles for supercapacitor applications. Lakshmi Mohan, AV Avani, P Kathirvel, R Marnadu, R Packiaraj, J Richards Joshua, **N Nallamuthu**, Mohd Shkir, S Saravanakumar, Journal of Alloys and Compounds 882 (15) (2021) 160670
- . Investigations on Electrochemical Performance of Hausmannite Manganese Oxide Nanoparticles in KOH and Na₂SO₄ Electrolytes for Energy Storage Applications, G Vignesh, R Ranjithkumar, P Devendran, **N Nallamuthu**, P Lakshmanan, S Sudhahar, M Krishna Kumar, Nano, 16 (12) (2021) 2150144
- Investigations on electrochemical performances of Co (OH) ₂, Fe₂O₃ and Mn₃O₄ nanoparticles covered carbon micro spheres for supercapacitor application, C Sambathkumar, M Krishna Kumar, **N Nallamuthu**, K Rajesh, P Devendran, Inorganic Chemistry Communications, 134, (2021) 10905
- Promising biodegradable polymer blend electrolytes based on cornstarch: PVP for electrochemical cell applications, M Anandha Jothi, D Vanitha, S Asath Bahadur, **N Nallamuthu**, Bulletin of Materials Science, 44 (1) (2021) 1-12
- Electrochemical Performances of ZnO–NiO–CuO Mixed Metal Oxides as Smart Electrode Material for Solid-State Asymmetric Device Fabrication, R Packiaraj, Kamaraj Mahendraprabhu, P Devendran, **N. Nallamuthu**, Baskaran Palanivel, KS Venkatesh, Ramesh Karuppannan, Energy & Fuels, 36(1) 2021, 603-617
- Cornstarch/polyvinylpyrrolidone based proton conducting biocompatible polymer blend electrolyte for long life battery, D Vanitha, K Sundaramahalingam, **N. Nallamuthu**, Ionics 2022, 1-14
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- Dielectric relaxation behaviour and ionic conductivity for corn starch and PVP with sodium fluoride, M Nandhinilakshmi, D Vanitha, **N. Nallamuthu**, K Sundaramahalingam, P Saranya, Journal of Materials Science: Materials in Electronics, (2022) 1-15
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- Electrochemical exploration of cobalt sulfide nanoparticles synthesis using cobalt diethyldithiocarbamate as single source precursor for hybrid supercapacitor device, C Sambathkumar, **N Nallamuthu**, M Krishna Kumar, S Sudhahar, P Devendran, Journal of Alloys and Compounds 920, 165839 (2022)
- Facile, Morphology-Controlled and Mass Production of 0D-Ag/2D-g-C₃N₄/3D-TiO₂ Nanocomposite Materials: Effect of Silver Morphology and Loading on the Electrochemical Performance, R Ranjithkumar, P Lakshmanan, N Palanisami, P Devendran, **N Nallamuthu**, S Sudhahar, M Krishna Kumar, Electronic Materials Letters, 1-12, (2022)
- Structural, optical and charge density investigations on lead free Mn²⁺ doped Cs₂NaBiCl₆ double perovskite microcrystals, M Jeevaraj, S Sudhahar, P Devendran, **N Nallamuthu**, ND Jayram, M Krishna Kumar, Materials Today Communications 33, 104715 (2023)
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- Influence of Mn²⁺ doping on the optical properties of Cs₂AgBiCl₆ double perovskite luminescent phosphors, M Jeevaraj, P Devendran, **N Nallamuthu**, S Sudhahar, MK Kumar, Journal of Materials Science: Materials in Electronics 34 (1), 65
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- Nitrogen doped reduced graphene oxide/ZnCo₂O₄ nanocomposite electrode for hybrid supercapacitor application, G Vignesh, R Ranjithkumar, P Devendran, **N Nallamuthu**, S Sudhahar, Materials Science and Engineering: B 290, 116328 (2023)

Awards

- TARE fellowship in DST-SERB major research project with entitled as “**Investigation of lithium based metal oxides and CNT based nanocomposites for lithium ion capacitor applications.**”
Sanctioned amount = Rs, 60,000 per year; dated on 22-02-2019.
- Senior research fellow (SRF) in CSIR major research project entitled, “**Investigation of lithium based superionic conducting materials for solid state battery applications.**” under the supervision of Dr. N. Satyanarayana, Department of physics, Pondicherry university, Pondicherry – 14.

Administrative Activity

- Head, Department of Physics @ Kalasalingam Academy of Research and Education
- Deputy Director R and D @ Kalasalingam Academy of Research and Education

Faculty Development Activity

- Conducted IDT workshop @DSATM
- Conducted Guest lecture and Seminars at DSATM.
- Conducted Project Exhibition @DSATM for first year B.E students
- Attended online FDPs

Contact Details

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