Dr. Sivakala S., M.Sc., CSIR-NET., Ph.D.

Assistant Professor  
  
Teaching Experience/ Service: 11 years teaching.

Research Interest:

* Polymer Nano composites, Conducting Polymers
* Cashew nut shell liquid derivatives, Liquid crystals
* Phyto chemistry
* Supercapacitors, Electromagnetic Interference shielding
* Electro Chemical Sensors, Electrochemical catalysis
* Nano metals and Metal Oxides.

Research Experience/ Guide ship Details: Three years research experience in NIIST, Trivandrum as Project fellow

**Achievements**

|  |  |  |
| --- | --- | --- |
| **Course/ Training Attended** | | |
|  | | |  |  |  | | --- | --- | --- | | Participated  in training workshop in Advanced Nano fabrication technologies | Flair programme Govt.of Kerala | IISc Bangalore 23-02-2016 to 26-02-2016 | | Attended FLAIR Induction training programme | Flair programme Govt.of Kerala | Tvm,29-09-2014 to 01-10-2014 | | Participated  in introductory training workshop in Nano fabrication technologies | Flair programme Govt.of Kerala | IISc Bangalore 13-02-2016 to 16-02-2016 | | Participated  in training workshop in communication skill development | Flair programme Govt.of Kerala | Tvm,12-12-2014 to 13-12-2014 | | Attended FLAIR Induction training programme phase II | Flair programme Govt.of Kerala | Tvm,06-08-2015 to 07-08-2015 | | Online FDP in MOOCS | Kerala State Higher Education Council | Tvm. | |
| **International Publications** | | |
|  | | * J. D. Sudha, S. Sivakala. Conducting polystyrene/polyaniline blend through template-assisted emulsion polymerization Colloid and Polymer Science, Springer 2009, 287:1347.   <https://doi.org/10.1007/s00396-009-2101-5> Impact factor – 1.870 , No of google scholar citations – 29   * J.D.Sudha, S.Sivakala, R.PrasanthV.L. Reena P. Radhakrishnan Nair Development of electromagnetic shielding materials from the conductive blends of polyaniline and polyaniline-clay nanocomposite-EVA: Preparation and properties. Composites Science and Technology, Elsevier 2009 69, 3–4, 358-364. <https://doi.org/10.1016/j.compscitech.2008.10.026>   Impact factor- 8.528, No of google scholar citations-137.   * J.D.Sudha, S.Sivakala, Kamlesh Patel, P.Radhakrishnan Nair. Development of electromagnetic shielding materials from the conductive blends of polystyrene polyaniline-clay nanocomposites. Composites Part A: Applied Science and Manufacturing, Elsevier 41, 11, 2010, 1647-165. <https://doi.org/10.1016/j.compositesa.2010.07.015>   Impact factor – 7.664, No of google scholar citations – 59   * J.D.Sudha,Rohini Kuttiplavil Narayanan, S.Sivakala .Electrically conducting silver nanoparticle–polyacrylic acid hydrogel by in situ reduction and polymerization approach. Materials Letters, Elsevier 2014, 116,135-138.   <https://doi.org/10.1016/j.matlet.2013.10.110> Impact factor – 3.423 , No of google scholar citations – 37   * J.D.Sudha, Andrij Pich, Viswan L. Reena, S.Sivakala and Hans-Juergen P. Adler .Water-dispersible multifunctional polyaniline-laponite-keggin iron nanocomposites through a template approach J. Mater. Chem., Royal Society of Chemistry 2011, 21, 16642-16650.   <https://doi.org/10.1039/C1JM13494A> Impact factor – 7.393, No of google scholar citations – 23   * R Ramakrishnan, S Sivakala, KN Rohini, J.D. Sudha,.Percolated conductive polyaniline-clay nanocomposite in polyvinyl chloride through the combined approach porous template and self-assembly,express polymer letter 2014,13,3144.   DOI: 10.3144/expresspolymlett.2014.13 Impact Factor – 4.161, No of google scholar citations- 15   * NK Sadanandhan, S Sivakala, J.D.Sudha .Tweaking the Organization of Liquid Crystallinity and Molecular Gelation in Cholesterol Tagged Cardanol by Self Assembly , Chemistry Select, 2016,201,600268.Wiley.   [https://doi.org/10.1002/slct.201600268 Impact Factor – 2.109](https://doi.org/10.1002/slct.201600268%20Impact%20Factor%20–%202.109)   * Sivakala S.,Suja S. Facile Green Synthesis of Silver nano particles from catharanthus roseus flower extract for Antimicrobial Applications. JETIR 2020 volume 7 issue 1 1577-1586. * Suja S, Sivakala S.Phyto chemical purification and Spectral analysis of compounds from root tuber extract of Aparagus   Material today proceedings 2020 Elsevier.  <https://doi.org/10.1016/j.matpr.2020.05.262>  Impact Factor – 0.55, No of google scholar citations- NIL   * S. Sivakala, E. Rishad Baig, C. Molji, Aravind Aashish, Asha S. Kumar and Sudha J. Devaki. Nipping the Shape of the Nanosilver through Bio-Based Capping Strategy and Studies on their Electrocatalytic Performance Using Electrospectrometry, J. Electrochem. Soc.  2021 168, 07,7504, IOP Science   <https://doi.org/10.1149/1945-7111/ac0ec1> Impact Factor – 4.316, No of google scholar citations – 1   * Sudha J.D., Sivakala S., J. Chameswary. Development of EMI shielding material from EVA polyaniline composite blends ICAMC 2009. Conference Proceedings. |
| Book Chapter Published | | |
|  | * Sivakala Sarojam.Size- and Shape-Reliant Antimicrobial Applications of Silver Nanoparticles,   published in the book entitled “Sustainable Nanomaterials for Biosystem Engineering: Impacts, Challenges, and Future Prospects”  published by AAP, CRC Press, USA (Taylor and Francis Group) | |
| National Publication | | |
|  | | * Sivakala S., Sree Raj S, Asha S. Kumar.Development of novel ternary hybrid composite as electrode material for super capacitors. Journal of Research in Applied Chemistry 2020, 5. Issue 1, 12. |
| **Papers presented in international Conferences and Seminars (Poster presentation):** | | |
|  | | * S.Sivakala, JD.Sudha. Polyaniline-clay nanocomposite using renewable resource based functionalized dopant. Macro 2009, IIT Madras ,India, March 9-11. * S.Sivakala, JD.Sudha .Electrically conducting polyaniline/polystyrene blend through host matrix assisted in-situ   Polymerization of aniline in presence of functionalized dopant for electromagnetic shielding applications., MRSI AGM 2009, Kolkata February 10-12. * S.Sivakala, J.Chameswary, R. Prasanth and  JD.Sudha .Intrinsically Conducting polyaniline –clay nanocomposite/low density polyethylene blend for EMI shielding: Preparation and properties:  International conference on advanced materials and composites, organized by  National Institute for Interdisciplinary Science and Technology (NIIST), CSIR, Thiruvananthapuram, India. October 24-26, 2007, P. 84. * Sivakala S.Tuning the size and shape of silver nano particles through bio-based method ,International seminar on SITCA 2016 organized by Dept.of Chemistry Christian College, Kattakada 19th-20th July2016. * Sivakala S.Tuning the size and shape of gold nano particles using seed mediated growth method,KSCSTE sponsored seminar on Augmentation of ground water resources at S.N. College, Kollam. 29th-30th june 2016. * Sivakala S.EMI shielding materials. UGC sponsored national seminar on Recent and Emerging Advances in Chemical Science organized by Dept. Of Chemistry All saints College trivandrum, 8th-9th January 2015 * Sivakala S.PEDOT gold composite for solar cell application. National seminar on Emerging trends in material Science, organized by Dept of Chemistry, S.N. College for women , Kollam 29th 1st october 2014. * Sivakala S.Facile seed mediated strategy for nanoparticles.Emerging Trends in pure and applied sciences. organized by Dept of Chemistry, St.Gregorious college, Kottarakara 18th January 2014. * Sivakala S.Poster presentation in National seminar on Advanced analytical techniques, Mar ivanios college, Trivandrum, 9th 11th march 2016 * Sivakala S. “Organic inorganic hybrid composite for supercapacitor application” in the National Seminar conducted by Govt. College Chavara, Kollam on 28-29th November 2019. * Sivakala S.Polyethylene dioxythiophene silver composite as electrochemical sensor for ascorbic acid. Sivakala S. International e-conference on advanced polymeric materials. D.B. College, Sasthamkottai, November 2020. * Invited talk on ‘Organic inorganic hybrid composite new scopes and future perspectives’ in the online international conference ICAN 2021 organized by Amal Jyothi College of Engineering and school of materials M.G.University, Kerala 14-12-2021 t0 16-12-2021 |
| **Seminars / Workshops Organized** | | |
|  | | * National Science Day Celebrations 2017 by KSCSTE-Two day Seminar * Department level Spectrum Seminar Series by PTA 2019 * 150th Birth Anniversary of Marie Curie 2017 by Department * Ozone day Celebrations 2019 by Department * Ozone day Celebratins 2020 |
| **Achievements/ Awards** | | |
|  | | * M.Sc First Rank, Kerala University. * Prof. P.V. Nair endowment Gold medal from Kerala University * Prof. Dharmaraja Iyyer endowment Gold Medal from Kerala University * Reviewer Journal of Nano Particle Research, Springer * h-index -6, i -10 index- 6 |
| **Membership in Academic & Professional Bodies** | | |
|  | | * Academy of Chemistry teachers- Kerala, * Institute of Scholars, Bangalore * Electro chemical Research Society |
| **Position/Responsibilities held** | | |
|  | | * IQAC member at SNCW, Kollam, * NSS PO at SNC Chempazhanthy. |
| * Minor Project Completed- one- UGC Minor Project -1.6 lakhs ( completed in 2016) | | |