

**Name** : Dr C Sharmila



**Designation** : Associate Professor & Research Associate

**Department** : Physics

**Qualification** : Ph.D

**Experience** : Teaching -19 Years

**Research** : 12 Years

**Area of Specialization(s)** : Nanotechnology/ Polymer technology/Green energy

**Email (Official ID)** : [sharmilac@psgrkcw.ac.in](mailto:sharmilac@psgrkcw.ac.in)

### Academic Qualifications

Degree	Branch	Institution/University Name	Year of Graduation
Ph.D.	Physics	Kongunadu College of Arts and Science, Coimbatore	2019
M.Phil.	Physics	Kongunadu College of Arts and Science, Coimbatore	2005
M. Sc.	Physics	Kongunadu College of Arts and Science, Coimbatore	2003
B.Sc.	Physics	Kongunadu College of Arts and Science, Coimbatore	2001

### Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
M.Phil.	5	-
Ph.D	-	3

### Research Publications (Indexed)

#### International

1. Electrical Conduction on Zinc Phosphide Thin films, R.Sathyamoorthy, C.Sharmila, P.Sudhagar, S.Chandramohan and S.Velumani, Materials Characterization , Volume 58, Issue 8-9(2007) pp. 730-734.  
<https://doi.org/10.1016/j.matchar.2006.11.014> . Impact factor: 4.3

2. Influence of Annealing on Structural and Optical Properties of Zn<sub>3</sub>P<sub>2</sub> thin films, C.Sharmila, R.Sathyamoorthy, K.Natrajan and S.Velumani, Materials Characterization, Volume 58, Issue 8-9(2007) pp.745-749. <https://doi.org/10.1016/j.matchar.2006.11.015> . **Impact factor: 4.3**
3. Sathish Sugumaran , Mohd Noor Bin Ahmad, Mohd Faizal Jamlos, Chandar Shekar Bellan, Sharmila Chandran, Manoj Sivaraj, New possibility on InZnO nano thin film for green emissive optoelectronic devices, Optical Materials, 54 (2016) 67–73. <https://doi.org/10.1016/j.optmat.2016.02.007> . **Impact factor: 4.0**
4. Sharmila Chandran, Vinupriya Ravichandran, Selvi Chandran, Jincy Chemmada , Bellan Chandarshekar, Biosynthesis of PVA encapsulated silver nanoparticles, Journal of Applied Research and Technology, Volume 14, Issue 5, October 2016, Pages 319–324. <https://doi.org/10.1016/j.jart.2016.07.001>.
5. Sathish Sugumaran, Dinesh Muthu, Chandar Shekar Bellan, Dinesh Bheeman and Sharmila Chandran, Hybrid PVA-In<sub>2</sub>O<sub>3</sub> Nano Thin Film for Transparent Optical Devices, International Journal of Advanced Engineering and Research Development, Volume 4, Special issue 6, December 2017, Pages 1-9.
6. Sharmila. C, Ranjith kumar. R and Chandar Shekar. B, PSIDIUM GUAJAVA: A Novel Plant in the Synthesis of Silver Nanoparticles for Biomedical Applications, Asian Journal of Pharmacology and Clinical Research, Vol 11, Issue 1, January 2018, Page: 341-345. DOI: <https://doi.org/10.22159/ajpcr.2018.v11i1.21999>.
7. Sharmila Chandran, Jincy Chemmada Sunny, Selvi Chandran, Chandrashekar Bellan, Enhanced Antimicrobial activity of Aleovera blended Zinc oxide Nanoparticle in PVA matrix, Materials Today Proceedings, Vol 5, August- 2018, 16190-16198.
8. Sharmila. C, Prabhavathi. V, Dinesh. M, Ranjith kumar. R and Chandar Shekar. B, Shape controlled synthesis of dextran sulfate stabilized silver nanoparticles: biocompatibility and anticancer activity, Materials research express., Vol 6, January 2019, 045066. <https://doi.org/10.1016/j.matpr.2018.05.108> , **Impact factor: 2.3**
9. C.Sharmila, A. Lincy Priyangaa and B. Chandrashekar, Dextran Sulfate Stabilized Silver Nanoparticle: Next Generation Efficient Therapy for Cancer, International journal of Applied Pharmaceuticals, Vol 12 (1) 2020. DOI: <http://dx.doi.org/10.22159/ijap.2020v12i1.35327>. **Impact factor: 2.4**

10. Praveetha Senthilkumar, Sharmila Chandran, Alexey Kartsev, Vladimir Shavrov, Petr Lega, Ramesh Subramani., Preparation and Chemical/Physical Characterization of Individual Nanoscaled Fibrils, Nanoscience & Nanotechnology-Asia, Vol 12 (2) 2022. Pages 1-10, Impact factor: 0.96, 4th January-2022. DOI: <https://doi.org/10.2174/221068121266220217121830>.  
**Impact factor: 1.4.**

11. Enhancing sustainability: chitosan biopolymers with Ag nanoparticles for eco-friendly applications in food packaging, Sharmila Chandran, Arthi Pricillia, Arunadevi Natarajan & Geetha Venkatesan, Biomass Conversion and Biorefinery, <https://doi.org/10.1007/s13399-024-05325-7>. 23 January 2024, **Impact factor: 4.0.**

12. Reduced graphene oxide nanoplatelets derived from the *Ziziphus mauritiana*: Bio-mediated synthesis and antimicrobial and anticancer activities, Thirumoorthy Poongodi, Manickam Paulpandi, Krishnamoorthy Kavithaa, Giriraj Kalaiarasi, Rajapandian Rajaganesh, Sangeetha Dhayalan, Veerapandiyan Ramabhai, Chandran Sharmila, Biocatalysis and Agricultural Biotechnology, Volume 56, February 2024, 103038, <https://doi.org/10.1016/j.bcab.2024.103038>.  
**Impact factor: 4.0.**

13. Proliferating optoelectronic properties of doped ZnO nanoparticles, Sharmila Chandran, Arthi Priscilla Ganesan, Nidhi Asthana, Shyam S Pandey, Kshitij RB Singh, Arunadevi Natarajan, Journal of Molecular Structure, 17 April 2024, 138310, <https://doi.org/10.1016/j.molstruc.2024.138310>. **Impact factor: 3.8.**

14. Synthesis and advances of smart heteroatom-sited coatings for anticorrosion, M. Swathika, Sharmila Chandran, Kshitij RB Singh, Ravindra Pratap Singh, Shyam S. Pandey, Arunadevi Natarajan, Journal of Taiwan Institute of Chemical Sciences, **Impact factor: 5.7.**

15. Chemical Composition, Cytotoxicity, and Molecular Docking Analyses of *Ziziphus Mauritiana* Extracts and its Apoptotic Induction in Human Breast Cancer Cells (MCF-7), Poongodi Thirumoorthy, Sharmila Chandran, Journal of Technology, December 2025, Volume 13 (12), Pg: 491-509. doi.org/ [18.15001/JOT.2025/V13I12.25.17906](https://doi.org/10.15001/JOT.2025/V13I12.25.17906). **Impact factor: 4.6.**

16. Exploring Agrivoltaics- Concepts, Impacts, Challenges and Future Prospects with a Focus on India's Emergence, Sharmila C, January 2026, Volume 14 (1), **Impact factor: 4.6.**

## Patent

S.No	Title of the Invention	Application No.	Date of Filing	Publication Date
1.	POLYMER COMPOSITION FOR PACKING FOOD MATERIALS AND PROCESS THEREOF	201941054252	2019	20/01/2022
2.	BIODEGRADABLE BIOPLASTIC PELLET COMPOSITION AND PROCESS THEREOF	20251082434	29/08/2025	Under processing

## Grants

1. **Completed:** Minor research project for UGC on comparative study of thermally evaporated and electrodeposited  $Zn_3P_2$  thin films for photovoltaic application. Sanctioned amount **Rs100000/-: (2008-2010)**
2. **Completed:** IEDC project for DST on 3in 1 Burgular alarm. Sanctioned amount **Rs.100000/-: (2010-2011)**
3. **Completed:** GRG Trust Funded Research Project for GRG trust on Dextran sulfate stabilized silver nanoparticle: Next generation efficient therapy for cancer: **Sanctioned amount Rs.15,000/- (2017-18)**
4. **Completed:** GRG Trust fund project entitled as Chitosan encapsulated silver nanoparticles in-vitro evaluation of cytotoxicity on vero and MCF-7 cell line. Sanctioned amount **Rs.1,50,000/-: (2018)**
5. **Completed:** Development of novel mechanical characterization method for bio-polymeric nanomaterials using newly fabricated micro and nano- mechanical tools, **Indo-Russian Collaboration Project, DST international Division**, Sanctioned amount **Rs.40 Lakhs, (2019-2021)**.
6. **Completed:** Pilot study for compostable plastic bags with the developed prototype with STEER Engineering company, Bangalore. Sponsored by GRG Trust. **Sanctioned Amount: 200000/- (2022)**
7. **Completed:** Yukti Innovation Challenge-2023, under Institute innovation council, AICTE and Ministry of Education for the project “Biowrap Solutions- Compostable Biopolymers form Lab to Fab”- Sanctioned amount: **800000/- (2023-2024)**
8. **Ongoing:** DST Hydrogen and Fuel Cell Call -2024, Indigenous Innovation for Sustainable Hydrogen Production: Advancing Cost-Effective Green Hydrogen Technologies for Resilient Power Generation and Optimization, DST C3 Division, Sanctioned amount **Rs.4 Crore.**

## **Consultancy Project**

1.IIM- Bangalore Collaborative Project on “Tourist Carrying Capacity of Nilgiris District”. 2025 (August-November 2025). Sanctioned Amount: 10,89,140/-

## **Acted as a Resource Person**

Served as a resource person for guest lectures, also actively participated in panel discussion for international workshop.

## **Reviewer**

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- Journal of Nanoscience and Nanotechnology application
- Materials Letters (Elsevier)
- Asian Journal of Pharmacology and clinical research
- Journal of Nanostructure in Chemistry
- Journal of Scientific Reports

## **Paper Presentations in Conference**

**International : 30**

**National : 10**

## **Presentations in Seminar : 10**

## **Participation in Conference : 30**

## **Participation in Seminars : 10**

## **Participation in Workshop : 10**

## **Participation in Faculty Development Programme : 10**

## **Participation in Webinar : 15**

Conference/Seminar/Workshop Organized: 20

## **Membership in Professional Bodies**

Name of the Professional Body	Nature of membership	Duration
• Indian Science Congress	Academic member	Life time Member
• Indian Society of systems for science and Engineering	Academic member	Life time Member
• Sustainability and Energy Practitioner's Associaton (SEPA)	Academic Council Member	Life time Member

#### Awards/Honors

Awards/Honors	Agency/Institute	Year of Award
Women Achiever Award	Lions Club SIDCO Industrial Estate	2018
Best Faculty Award	PSGR Krishnammal College for Women	2019
Faculty Ambassador award	Coursera	2020
Achiever Award	BPA, Coimbatore	2021
Outstanding Scientist Award	Chemical Science Review and Letters and Royal Science Forum.	2024
Best Faculty Award	PSGR Krishnammal College for Women	2024

#### Indexing and Citations

Published high-quality research articles indexed in prestigious databases such as Scopus, Web of Science, and contributing significantly to the academic and professional community. Citations: 223

#### Contribution

- Heading department of Physics-SF from 2017 onwards.
- Heading Centre for Energy from 2024 onwards
- ISO internal auditor since 2015 onwards
- NAAC committee member
- NIRF committee Co-ordinator

- India Today Ranking committee Co-ordinator
- National Educational Policy (NEP) Task Force committee Member
- Academic Council Member
- Board of Studies Member
- Mentor for various Arts and Science Colleges under UGC Paramash Scheme.
- Institutional Development Plan ( IDP) member.

#### **Trainer**

- Teachers learning Centre (TLC of KCW)

- Training of Trainers (ToT Under National Skill development Centre NSDC) under solar domain.

#### **Non-Academic**

- Content developer (University level) for Heartfulness Institute, Hyderabad, Telangana.