CUMULATIVE VITAE," or "CURRICULUM VITAE" (CV)

Name : **Dr. K.M. Prabu**

Date of Birth : 03. 06.1984

Designation/Present position : **Assistant Professor**

Official Address for communication : SRI VIDYA MANDIR ARTS & SCIENCE COLLEGE (A)
Katteri – 636 902, Uthangarai,
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Qualification : M.Sc., M.Phil., Ph.D.

i. Academic:

Degree	Subject	University	Month & Year of Passing	Class
Ph.D.	Physics	Periyar University	Jan 2016	Highly Commended
M. Phil.	Physics	Periyar University	Jun 2008	First
P.G.	Physics	Periyar University	Nov 2006	First
U.G.	Physics	Arignar Anna Government Arts College, Namakkal Periyar University	May 2004	First

ii. Additional qualifications :

Research Experiance : 15 Years

Discipline/Area of specialization : Solar Energy Conversion (DSSC), DFT, Nanomaterials.

Teaching Experience/Employment history : 17 Years 9 Months

S.No	Position	Organization	Period (from… to)
1.	Assistant Professor	Kamadhenu College of Arts & Science, Dharmapuri.	8 Months 18 Days (10.09.2007- 27.05.2008)

2.	Assistant Professor	Sri Vidya Mandir Arts & Science College, Krishnagiri.	16 Years 9 Months (15.07.2008 to Till date)

M.Phil./Ph.D. Candidates guided/awarded : M.Phil: 30 PhD: 05

Presently guiding : M.Phil: - PhD: 03

Editorial Activity/Journal Reviewer :

Number of Publications (International/National) :

International: 30 National: 23

Research Papers published in International Journals (Recent First)

1. R Suganesh, G Venkatesh, **KM Prabu**, G Periyasami, M Priyadharshini, R Ranjith, KL Meghanathan, (2025) Integration of $NiWO_4$ nanoparticles with multi-walled carbon nanotubes for next-generation energy storage, Journal of Materials Science: Materials in Electronics 36 (6), 371 **(2025)**
2. R Suganesh, G Venkatesh, **KM Prabu**, R Ranjith, Govindasami Periyasami, Rajesh Kumar Bheema, Synergistic effect of CoWO4 and g-C3N4 nanohybrid as reliable electrode for high performance supercapacitor, Journal of Materials Science: Materials in Electronics 35 (22), 1552 **(2024)**
3. Venkatesh Gopal, Govindasamy Palanisamy, Jintae Lee, Imad A Abu-Yousef, Amin F Majdalawieh, Amjad Mahasneh, **Kattupatti M Prabu**, Sofian Kanan, Fabrication of $SrTiO_3$ anchored rGO/g-C_3N_4 photocatalyst for the removal of mixed dye from wastewater: dual photocatalytic mechanism, Scientific Reports 14 (1), 16259 **(2024)**

4. K Akila, S Thambidurai, N Suresh, **KM Prabu** , Photocatalytic and bactericidal activity of zinc oxide nanoparticles biosynthesized with *Datura metel* leaf extract, Ionics 30 (6), 3637-3649 **(2024)**
5. M Chinnarani, S Suresh, **KM Prabu**, M Kandasamy, N Pugazhenthiran, Facile synthesis of reduced graphene oxide and graphitic carbon nitride modified titanium dioxide nanospheres for photoanode of dye-sensitized solar cell, Inorganica Chimica Acta 560, 121842 **(2024)**
6. S Venkatesan, S Suresh, J Arumugam, P Ramu, N Pugazhenthiran, **KM Prabu**, Sunlight assisted degradation of methylene blue dye by zinc oxide nanoparticles green synthesized using Vitex negundo plant leaf extract, Results in Chemistry 7, 101315 **(2024)**
7. S Suresh, **KM Prabu**, R Arivuselvi, M Kandasamy, N Pugazhenthiran , Cow dung extract as a low-cost and natural sensitizer for zinc oxide nanoparticles photoanode based dye-sensitized solar cell: A novel initiative for waste to energy conversion
   ,Results in Chemistry 6, 101060 **(2023)**
8. G Kalaiyan, **KM Prabu**, N Suresh, S Suresh, Green synthesis of copper oxide spindle like nanostructure using Hibiscus cannabinus flower extract for antibacterial and anticancer activity applications, Results in Chemistry 5, 100840 **(2023)**
9. M Chinnarani, **KM Prabu**, S Suresh, Plasmonic silver loaded anatase titanium dioxide nanospheres photoanode for dye-sensitized solar cell Results in Chemistry 5, 100835 **(2023)**
10. P Agalya, G Suresh Kumar, **KM Prabu**, S Cholan, G Karunakaran, J Hakami, One-pot ultrasonic-assisted synthesis of magnetic hydroxyapatite nanoparticles using mussel shell biowaste with the aid of trisodium citrate, Ceramics International 48 (19), 28299-28307 **(2022)**
11. P Araichimani, **KM Prabu**, G Suresh Kumar, G Karunakaran, S Surendhiran Rice husk-derived mesoporous silica nanostructure for supercapacitors application: a possible approach for recycling bio-waste into a value-added product, Silicon 14 (15), 10129-10135 **(2022)**
12. P Agalya, S Cholan, **KM Prabu,** G Suresh Kumar, G Karunakaran, M Shkir, Ultrasonic assisted in situ mineralization of hydroxyapatite nanoparticles in the presence of drug molecule: An insight on biowaste derived materials for the local drug delivery, Inorganic Chemistry Communications 143, 109788 **(2022)**
13. S Venkatesan, S Suresh, P Ramu, M Kandasamy, J Arumugam, S Thambidurai, **KM Prabu,** N Pugazhenthiran,,Biosynthesis of zinc oxide nanoparticles using Euphorbia milii leaf

constituents: characterization and improved photocatalytic degradation of methylene blue dye under natural Journal of the Indian Chemical Society 99 (5), 100436 **(2022)**

14. P Araichimani, **KM Prabu**, GS Kumar, G Karunakaran, S Surendhiran, Synthesis of Fe3O4-decorated SiO_2 nanostructure using rice husk as a source by microwave combustion for the development of a magnetically recoverable adsorbent
    Ceramics International 48 (7), 10339-10345 **(2022)**
15. G Venkatesh, G Palanisamy, M Srinivasan, S Vignesh, N Elavarasan, T Pazhanivel, Abdullah M Al-Enizi, Mohd Ubaidullah, Alamgir Karim, **KM Prabu**, $CaSnO_3$ coupled g-C3N4 S-scheme heterostructure photocatalyst for efficient pollutant degradation, Diamond and Related Materials 124, 108873 **(2022)**
16. P Araichimani, **KM Prabu,** GS Kumar, G Karunakaran, S Surendhiran, M Shkir, S AlFaify, Rice husk-derived mesoporous silica nanostructure for supercapacitors application: a possible approach for recycling bio-waste into a value-added product. Silicon 14: 10129–10135 (2022)
17. S Kanimozhi, S Suresh, S Thambidurai, N Suresh, **KM Prabu**, Facile co-precipitation assisted synthesis and characterization of zinc oxide-tin oxide nanocomposites and their performance evaluation as photoanodes in dye-sensitized solar cell 4, 100615
18. G Venkatesh, R Suganesh, J Jayaprakash, M Srinivasan, **KM Prabu**, Perovskite type BaSnO3-reduced graphene oxide nanocomposite for photocatalytic decolourization of organic dye pollutant. 787, 139237 (2022)
19. V Perumal, A Sabarinathan, R Robert, **KM Prabu**, R Uthirakumar, Facile synthesis of cationic surfactant-treated hierarchical nanorods SnO2@ CdO nanocomposite photocatalyst for degradation of methylene blue under sunlight. 56, 3418-3425, (2022)
20. S Kanimozhi, **KM Prabu**, S Thambidurai, SJCI Suresh, Dye-sensitized solar cell performance and photocatalytic activity enhancement using binary zinc oxide-copper oxide nanocomposites prepared via co-precipitation route 47 (21), 30234-30246, (2021)
21. P Agalya, G Suresh Kumar, Ramalingam Srinivasan, **KM Prabu**, Gopalu Karunakaran, S Cholan, Evgeny Kolesnikov, Myunghee Kim, Correction to: Hydroxyapatite-based antibacterial bio-nanomaterials: an insight into the synthesis using mussel shell as a calcium source, physicochemical properties. 127, 1-1, (2021)
22. P Agalya, S Suresh, **KM Prabu**, S Thambidurai, M Kandasamy, S Karthick Kumar, N Pugazhenthiran, Facile and low-cost synthesis of diverse copper oxide nanostructures for solar to thermal energy conversion. 244, 167499, (2021)

23. P Agalya, G Suresh Kumar, Ramalingam Srinivasan, **KM Prabu**, Gopalu Karunakaran, S Cholan, Evgeny Kolesnikov, Myunghee Kim, Hydroxyapatite-based antibacterial bio-nanomaterials: An insight into the synthesis using mussel shell as a calcium source, physicochemical properties, and nanoindentation …A 127, 1-12 (2021)
24. P Araichimani, G Suresh Kumar, **KM Prabu**, Gopalu Karunakaran, N Van Minh, Evgeny Kolesnikov, Mikhail V Gorshenkov, Amorphous silica nanoparticles derived from biowaste via microwave combustion for drug delivery. 18 (3), 583-589, (2021)
25. G Kalaiyan, S Suresh, **KM Prabu**, S Thambidurai, M Kandasamy, N Pugazhenthiran, S Karthick Kumar, TJJoECE Muneeswaran, Bactericidal activity of Moringa oleifera leaf extract assisted green synthesis of hierarchical copper oxide microspheres against pathogenic bacterial strains. 9 (1), 104847, (2021)
26. **KM Prabu**, M Kandasamy, N Pugazhenthiran, S Suresh, T Muneeswaran, S Thambidurai, G Kalaiyan, S Karthick Kumar, Bactericidal activity of Moringa oleifera leaf extract assisted green synthesis of hierarchical copper oxide microspheres against pathogenic bacterial strains. (2021)
27. G Kalaiyan, **KM Prabu**, S Suresh, N Suresh, Green synthesis of CuO nanostructures with bactericidal activities using Simarouba glauca leaf extract. 761, 138062 (2020)
28. **KM Prabu**, M Kandasamy, N Pugazhenthiran, S Suresh, S Thambidurai, G Kalaiyan, S Karthick Kumar, Green synthesis of hierarchical copper oxide microleaf bundles using Hibiscus cannabinus leaf extract for antibacterial application. (2020)
29. G Kalaiyan, S Suresh, S Thambidurai, **KM Prabu**, S Karthick Kumar, N Pugazhenthiran, M Kandasamy, Green synthesis of hierarchical copper oxide microleaf bundles using Hibiscus cannabinus leaf extract for antibacterial application. 1217, 128379, (2020)
30. E Elanchezhian, R Nirmalkumar, M Balamurugan, K Mohana, **KM Prabu**, Amelec Viloria, Heat and mass transmission of an Oldroyd-B nanofluid flow through a stratified medium with swimming of motile gyrotactic microorganisms and nanoparticles. 141 (6), 2613-2623, (2020)
31. P Araichimani, **KM Prabu**, G Suresh Kumar, Gopalu Karunakaran, N Van Minh, S Karthi, EK Girija, Evgeny Kolesnikov Rare-earth ions integrated silica nanoparticles derived from rice husk via microwave-assisted combustion method for bioimaging applications. 46 (11), 18366-18372, (2020)

32. G Venkatesh, S Prabhu, M Geerthana, P Baskaran, R Ramesh, **KM Prabu**, Facile synthesis of rGO/CaSnO3 nanocomposite as an efficient photocatalyst for the degradation of organic dye. 212, 164716, (2020)
33. S Suresh, R Ilakiya, G Kalaiyan, S Thambidurai, P Kannan, **KM Prabu**, N Suresh, R Jothilakshmi, S Karthick Kumar, M Kandasamy, Green synthesis of copper oxide nanostructures using Cynodon dactylon and Cyperus rotundus grass extracts for antibacterial applications. 46 (8), 12525-12537, (2020)
34. G Venkatesh, M Geerthana, S Prabhu, R Ramesh, **KM Prabu**, Enhanced photocatalytic activity of reduced graphene oxide/SrSnO3 nanocomposite for aqueous organic pollutant degradation. 206, 164055, (2020)
35. E Elanchezhian, R Nirmalkumar, M Balamurugan, K Mohana, **KM Prabu**, Amelec Viloria: Heat and mass transmission of an Oldroyd-B nanofluid flow through a stratified medium with swimming of motile gyrotactic microorganisms and nanoparticles, (2020)
36. K Loganathan, **KM Prabu**, E Elanchezhian, R Nirmalkumar, K Manimekalai, Computational analysis of thermally stratified mixed convective non-Newtonian fluid flow with radiation and chemical reaction impacts. 1432 (1), 012048, (2020)
37. **KM Prabu**, P Agalya, K Akila, S Suresh, Non-linear optical properties of carbazole based dyes modified with diverse spacer units for dye-sensitized solar cells: A first principle study. 2177 (1) , (2019)
38. **KM Prabu,** P Arachimani, M Chinnarani, G Kalaiyan, S Suresh, Molecular structure, vibrational, non-linear optical and natural bond orbital analysis of 7-amino-4-methylcoumarin: A quantum chemical study 2177 (1) , (2019)
39. **KM Prabu**, E Elanchezhian, S Suresh, MHD combined convection flow of non-Newtonian liquid with viscous dissipation and thermophoretic effects, 561 (1), 012076, (2019)
40. **KM Prabu**, G Venkatesh, R Amaravel, P Agalya, G Kalayan, S Kanimozhi, S Suresh, Synthesis and characterization of silver-aqueous polymer (Cts/Dx) nanocomposite. 1139 (1), 012038, (2018)
41. **KM Prabu**, K Akila, E Elanchezhian, S Kanimozhi, Study of Geometrical, Electronic Structure, Spectral and NLO Properties of Allium cepa Dye Sensitizer for Solar Cell Applications (2017)

42. C Vidya, PM Anbarasan, **KM Prabu,** Energy Crisis and Recent Technological Development in India. Journal of Energy Technologies and Policy, ISSN 2224-3232 (Paper) ISSN 2225-0573, Vol.7, No.1, (2017)
43. **KM Prabu**, PM Anbarasan, Preparation and performance study of dye sensitized solar cells using colorful natural dyes, International Journal of Advance Science and Engineering, 2 (1), 5-11, (2015)
44. **KM Prabu**, PM Anbarasan, Preparation and characterization of aluminium doped titanium dioxide nanoparticles by sol-gel method for solar cell applications, Int. J. Sci. Res. Dev (2014)
45. **KM Prabu**, K Suguna, PM Anbarasan, T Selvankumar, V Aroulmoji, Sensitizers Performance of Dye-Sensitized Solar Cells Fabricated with Indian Fruits and Leaves. International journal of advanced Science and Engineering, 1 (2) (2014)
46. **KM Prabu**, PM Anbarasan, Preparation and Characterization of Silver, Magnesium & Bismuth Doped Titanium Dioxide Nanoparticles for Solar Cell Applications., International Journal of Science and Research 3 (9), 132-137 (2014)
47. **KM Prabu**, PM Anbarasan, Dye-Sensitized Solar Cell using Natura Dye Extracted from Mirabilis Jalapa., Journal of Nano Science and Nano Technology (2014)
48. **KM Prabu**, L Arivuselvam, K Suguna, K Subramani, V Aroulmoji, PM Anbarasan, Synthesis of silver particles using the extracts of Strychnos potatorum 130-137 (2014)
49. **KM Prabu**, PM Anbarasan, S Janarthanan, Preparation characterization of CDO/PVP nanoparticles by precipitation method. 66-70 (2014)
50. **KM Prabu**, PM Anbarasan, S Ranjitha, Natural dye-sensitized Solar Cells,(NDSSCs) from opuntia prickly pear dye using ZnO doped TiO_2 nanoparticles by sol-gel method. 140-149 (2014)
51. **KM Prabu**, PM Anbarasan, Improved performance of natural dye-sensitized solar cells (NDSSCS) using ZnO doped TiO_2 nanoparticles by sol-gel method. 1740-1747 (2014)
52. **KM Prabu**, PM Anbarasan, Comparative analysis of natural sample and synthesis of silver nanoparticles (NPs) using medical plant Caesalpinia bonducella seed. NSNTAIJ (4), 147-155, (2013)
53. **KM Prabu,** Improved performance of natural dye sensitized solar cell using modified TiO_2 nanoparticles by sol gel technique.

Details of Research Works Presented in Conference/Seminar: 52
Details of Conference/Seminar/Workshop/Refresher Course, etc. attended: 55

List of Conferences / Workshops Organized with Internal Funding Agencies

S.No	Title of the Program	Sponsored/collaboration	Date, Month and Year	Nature of the Work
1	National Symposium on Materials Innovation and Leading Exploration	Collaboration with Indian Spectro Physics Association, Chennai.	27 & 28 December 2024	Organizing Secretary
2	International Conference on Research in Emerging Advanced Materials and Spectroscopy (ICREAMS 2024)	Collaboration with Indian Spectro Physics Association, Chennai.	21 & 22 February 2024	Organizing Member
3	International Virtual Conference on Physics of Emerging Materials and Molecules (IVCPEMM 2021)	Collaboration with Indian Spectro Physics Association, Chennai.	04 & 05 March 2021	Organizing Member
4	International workshop on Recent Advances in Material Science	Sri Vidya Mandir Arts & Science College, Katteri, Uthangarai, Krishnagiri(D.T), Tamilnadu.	14 February 2019	Organizing Member
5	International Conference on Modern Materials &	Collaboration with Indian SpectroPhysics Association, Chennai.	19 & 20 December 2016	Organizing Member

	Research 2016 **(**ICMMR 2016**)**			
6	National Conference on Advanced Materials 2014 **(**NCAM 2014**)**	Collaboration with Indian SpectroPhysics Association, Chennai**.**	18 & 19 July 2014	Organizing Member
7	International Conference on Recent Advances in Physics 2013 **(**ICRAP 2013**)**	Collaboration with Indian SpectroPhysics Association, Chennai**.**	12 &13 August 2013	Organizing Member