

Dept. of Chemistry

List of Publications during 2013-2026

S.No	Title	Author's Name	Name of the Journal/ Publisher
1	CaTiO ₃ /TiO ₂ Nanocomposite: Easy Synthesis, Structure, Optical and Photocatalytic Activity	Gopika V.; Nivetha P.; SureshR.; N.Jayaprakash Arumugam T.; Bothi Raja P.	Topics in Catalysis Volume 69, Year 2026, Pages 1293-1302
2	Enhanced Filtration Efficiency and Antifouling Characteristics of PEES/n-CeO ₂ Ultrafiltration Membranes for Water Treatment	Somasundaram C.;Purushothaman M.	Polymers for Advanced Technologies, Volume 36 , Year 2025
3	Zinc vanadate-based nanocomposites: Structural, optical and photocatalytic studies	Jayanthi R.;Suresh R.;Jayaprakash N.	Journal of the Indian Chemical Society Volume 102, Year 2025
4	One-Step Formation of CoV ₂ O ₆ Nanostructure and its Photocatalytic Activity	Jayanthi R.;Suresh R.;Jayaprakash N	Asian Journal of Chemistry, Volume 37, Year 2025, Pages 2237-2 243
5	Structural, Optical, Catalytic, and Pigment Properties of Ca-Doped V ₂ O ₅ Nanostructures	Mythili S.;Jayaprakash N.;Santhamoorthy M.;Kim S.C.;Sathesh V.;Gajendiran J.;Rajendran S.;Suresh R.	Journal of Inorganic and Organometallic Polymers and Materials, Volume 35, Y ear 2025, Pages 8127-81 39

6	Biosorption of Chromium(VI) and Cadmium(II) from waste water using Penicillium-immobilized chitosan microspheres	Soundarrajan M.; Senthilkumar M.	Spectroscopy Letters, Year 2025
7	Resolution enhanced two-dimensional correlation Infrared spectra of biomolecular changes in muscle tissues of Gambusia affinis	L. Devaraj Stephen S. Binu Kumari E. Kavitha Cicero Cena M. Karl Chinnu G. Murugan S. Karthikeya	Spectroscopy Letters
8	An alternative approach in the synthesis of strontium-hydroxyapatite and strontium hydroxyapatite embedded in graphitic carbon nitride nanocomposites for potential tissue engineering applications	Varun Prasath Padmanabhan Sivashanmugam Pugalmani Sarath Chandra Veerla S.M. Mubashera Ravichandran Kulandaivelu	Diamond and Related Materials Vol.149, 111561
9	Fabrication and characterization of poly(methyl vinyl ether maleic anhydride) blended poly(lactic acid) ultrafiltration membrane with upgraded antifouling and separation performance	Jenet George Vahulabaranan Rajagopalan, P. Senthil Kumar, Maheswari Purushothaman Panneerselvam Perumal, Vinoth Kumar Vaidyanathan Gayathri Rangasamy	Volume 191, Part B, Pages 2237-2246
10	Tecoma stans intermediated green synthesis of copper oxide nanoparticles, their characterization, paracetamol degradation and biological activities	Arumugham Nagaveni Mariappan Anusuya Daniel Santharaj S.G. Gunasekaran Jothiprakash Gitanjali Subramani Thangabalu Kathirvel Krishnaveni Eswaran Jayanthi Kanthapazham Rajakumar	Inorganic Chemistry Communications, 170, 113503

11	Synthesis, characterization and eco-agricultural applications of $WO_3@g-C_3N_4$ heterostructures	Varun Prasath Padmanabhan Arivalagan Vaiyapuri R. Biju Bennie D. Jegadeesan C. Joel	Ceramics International
12	Novel photodamage-free bioimaging and anticancer studies using ultra-bright near-infrared emitting nitrogen-doped carbon Dots intercalated $Zn(OH)_2$ nanosheets	G.Gnanamani Simiyon B. Nivetha T. Mary Vergheese & N. Jayaprakash	Chemical Papers
13	Adsorption and removal behaviour of chitosan coated carbon biosorbent towards potential abatement of cadmium heavy metal from wastewater	M.Soundarajan S.G.Gunasekaran V. Arivalagan and L. Devaraj Stephen	Rasayan Journal of Chemistry 18(01):266-274
14	Structural, Optical, Catalytic, and Pigment Properties of Ca-Doped V_2O_5 Nanostructures	S. Mythili, N. Jayaprakash, Madhappan Santhamoorthy, Seong-Cheol Kim, V. Sathesh, J. Gajendiran, Saravanan Rajendran & R. Suresh	Inorganic and Organometallic Polymers and Materials
15	Investigation on the Photodegradation Performance of S-Rich $g-C_3N_4/MnO_2$ Composites for Efficient Removal of Hazardous Dyes from Aqueous Phase	P Varun Prasath S M Muba Shera K Suganandam G Kalaiarasi S Sudhakar K Ravichandran A Kosiha	Luminescence journal

16	Synthesis, Characterization, Molecular Docking, and in Vitro Antidiabetic Activity Studies of New and Highly Selective Methoxy-Substituted Benzimidazole	T. Athimoolam L. Devaraj Stephen B. Gunasekaran J. Krishnamurthi	Journal of Structural Chemistry, Vol. 64, No. 11, PP. 2063-2081, 2023 (29 November 2023)
17	A Variant Gel-Combustion Approach to Impregnate Nanostructured MgO Coating on Cotton Fibers for Antibacterial Textile Application	Adhikesavan. H Maheswari P Devarajan. A Annamraju Kasi Viswanath Saravanan. P Jothi Ramalingam. R Muthusamy Karnan	Fibers and Polymers, Vol. 24, PP. 3927-3936, 2023 (08 September 2023)
18	Energy Recovery and Clean Water Remediation using Antibiofouling Polysaccharide Coated PAN Hollow Fiber Membrane Obtained via Green Route Synthesis	A. Annam Renita D. Shanthana Lakshmi P. Maheswari Mayank Saxena J. Aravind Kumar V.S. Vigneswaran	Energy Vol. 94, 130635 (17 February 2024)
19	Structural, Optical, Magnetic and Photocatalytic Properties of Mn-doped Fe ₂ O ₃ Nanostructured Particles	N. Jayaprakash Santhamoorthy Madhappan N.S. Karthikeyan Sook-Keng Chang R. Suresh	Journal of the Indian Chemical Society, Vol. 101, No. 8 (2024) 101208 (5 June 2024)
20	Enhanced visible-light-driven photocatalytic and dielectric properties of inorganic-organic hybrid (NiO-g-C ₃ N ₄) nanocomposite for degradation of rhodamine blue	M. Gayathri D. Ranjith Kumar E. Satheeshkumar Devaraj Manoj A. Kumaresan A. Arun N. Jayaprakash E. Sundaravadivel	Journal of Materials Science: Materials in Electronics, 33, pages 10965–10976, 2022

21	Studies on Removal of Cd 2+ using Chitosan Coated Carbon Biosorbent from Wastewater	M. Soundarrajan S.G. Gunasekaran L. Devaraj Stephen	YMER Journal, Vol. 21(2), 11-24 2022
22	Impact of nano-ZnO consolidated poly (ether ether sulfone) nano filtration membrane for evacuation of hazardous metal particles,	Purushothaman Maheswari' Doraiswamy Raju Mohan, Adikesavan HariKrishnan, Ramachandran Sivaramkrishnan, Arivalagan Pugazhendhi,	Chemosphere, 25 February 2022, 134024 (Impact Factor: 7.086)
23	Synthesis, characterization, biological and DFT studies of charge-transfer complexes of antihyperlipidemic drug atorvastatin calcium with Iodine, Chloranil, and DDQ,	S. Niranjani, C.B. Nirmala, P. Rajkumar, Goncagül Serdarog˘lu, N. Jayaprakash, K. Venkatachalam,	<i>Journal of Molecular Liquids</i> , 346, (2022) 117862 (Impact Factor: 6.16)
24	Fabrication of highly permeable and anti-fouling performance of Poly(ether ether sulfone) nanofiltration membranes modified with zinc oxide nanoparticles,	Maheswari Purushothaman , Varshni Arvind, Kongkona Saikia, Vinoth Kumar Vaidyanathan,	chemosphere, 286(2022) (Impact Factor: 7.086)
25	Performance study of fouling resistant novel ultrafiltration membranes based on the blends of poly(ether ether sulfone)/poly (vinyl pyrrolidone)/nano-titania for separation of humic acid, dyes and biological macromolecular proteins from aqueous solutions	<u>Jenet George</u> , Maheswari Purushothaman , <u>Isita Singh</u> , <u>Ishani Singh</u> , <u>Vinoth Kumar Vaidyanathan</u> ,	Journal of Hazardous Materials 10 (424) 2021 (Impact Factor: 10.588)
26	Application of statistical modeling for the production of highly pure rhamnolipids using magnetic biocatalysts: Evaluating its efficiency as a bioremediation agent,	Abiram Karanam Rathankumar, Kongkona Saikia, Maria H. Ribeiro Chin Kui Cheng, Maheswari Purushothaman , Vinoth kumar Vaidyanathan,	Journal of Hazardous Materials, 412, 2021. (Impact Factor: 10.588)

27	Two-trace two-dimensional (2T2D) correlation infrared spectral analysis of <i>Spirulina platensis</i> and its commercial food products coupled with chemometric analysis'	E Kavitha, L Devaraj Stephen , Fatema Hossain Brishti, S Karthikeyan,	Journal of Molecular Structure, 1244, 2021, 130964-130965 (Impact Factor- 3.16)
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28	Carbazole Terminal Phenylene core Imine Skeletal Nanosilica reinforced Polybenzoxazine (nSiO ₂ /PBZ) Hybrid Nanocomposites'	V. Arivalagan , L. Devaraj Stephen, M. Meera, S.G. Gunasekaran	Journal of Polymer Research, vol. 28, 381, 2021(Impact Factor:3.097)
29	Preparation and characterization of boron doped CN's/MnO ₂ and its photocatalytic application of dye degradation,	M. Gayathri, M. Shanthi, E. Satheeshkumar, N. Jayaprakash , E. Sundaravadivel,	<i>Materials Today: Proceedings</i> , 42, (2021) 1506-1512. (Impact Factor: 1.24)
30	Removal of Arsenic, nitrate and fluoride by PEES/Nano- Silver Hybrid Membranes	Maheswari P. , Gunasekaran S. G., Devaraj Stephen L.	Research Journal of Chemistry and environment, 2021, 25 (9); 107-112. Impact Factor: 0.46)
31	Structurally Designed Imine Skeletal Pyrenyl Pendant Pyridine Core Polybenzoxazine (nSiO ₂ /PBZ) Hybrid Polymer Nanocomposites	S.G. Gunasekaran, L. Devaraj Stephen, V. Arivalagan , M. Soundarrajan	Asian Journal of Chemistry, vol. 33(4), 793-801, 2021 (Impact Factor:0.463)
32	Phenyl Pendant Carbazole End Capped Pyridine Core Imine Skeletal Based Polybenzoxazine-Nanosilica (nSiO ₂ /PBZ) Hybrid Nanocomposites	V. Arivalagan , L. Devaraj Stephen, M. Soundarrajan, S.G. Gunasekaran,	International Research Journal of Engineering and Technology, vol. 08(1), 2119-2127, 2021 (Impact Factor:0.42)
33	One-step synthesis, characterisation, photocatalytic and bio-medical applications of ZnO nanoplates.	N. Jayaprakash , R. Suresh, S. Rajalakshmi, S. Raja, E. Sundaravadivel, M. Gayathri, M. Sridharan,	<i>Materials Technology</i> , 35 (2020) 112-124. (Impact Factor: 3.846)

34	One-Step Synthesis of CuO nanoparticles and their effects on H9c2 cardiomyoblasts cells	N. Jayaprakash R. Suresh S. Rajalakshmi E. Sundaravadivel S. Raja	Inorganic and Nanometal Chemistry, doi.org/10.1080/24701556.2020.1723628
35	Ion-Pair Formation of $[\text{Co}^{\text{III}}(\text{pn})_2(\text{Cl})(\text{I})^{2+} \cdot \text{I}^-]$ by Aqueous Organic Solvent medium Enhanced Photoreduction: A Perspective Regression Analysis	L.Devaraj Stephen, S.G. Gunasekaran , M. Soundarrajan	Asian journal of Chemistry, vol. 32, 139-1383, 2020 (Impact Factor:0.463)

36	Nanotitania Reinforced Imine Skeletal Maleimido Terminal Phenylene Core Polybenzoxazine ($n\text{TiO}_2/\text{PBZ}$) Nanocomposites' in the International	M. Soundarrajan L. Devaraj Stephen V. Arivalagan S. G. Gunasekaran	Research Journal of Engineering and Technology, 07, 866-874, 2020
37	Removal of Boron by Desalination Process-A Review	P. Maheswari Poornima	International journal of Scientific & Engineering Research, 10(7), 791-795, 2019
38	Design and development of novel flexible bismaleimide toughened multi-walled carbon Nanotube reinforced epoxy nanocomposites	M. Soundarrajan , L. Devaraj Stephen , S. G. Gunasekaran	Rasayan Journal of Chemistry, 12 (1), 168-183 (2019)
39	Thermal Reduction of $\text{Co}^{\text{III}}(\text{pn})_2\text{Cl}(\text{L})^{2+}$ -Fe(II) Ions in Aqueous-Organic Solvent Medium via Outer-Sphere Electron Transfer Approach	L.Devaraj Stephen , S. G. Gunasekaran , G. Nalini, M. Soundarrajan .	Asian Journal of Chemistry, 31 (1), 191-198, 2019
40	A review: An assortment of synthesis methods of silver nanoparticles	N. Jayaprakash , R. Suresh, S.Rajalakshmi, S. Raja, E.Sundaravadivel.	Asian Journal of Chemistry 31(7),1405-1412 (2019)
41	Microwave Assisted Synthesis, Characterization and Photo-catalytic Study of Cu/ZnO Nanocomposite.	Vaishali Prasad, G. Gnanamani Simiyon, Ansha Elizabeth Mammen, N. Jayaprakash .	Rasayan Journal of Chemistry 12 (2), 860-865, (2019).
42	Solvent effects on outer-sphere electron transfer between $\text{Co}^{\text{III}}(\text{L})_3^{3+}$ -Fe(II) ions in aqueous organic solvent media: a speciation approach	L. Devaraj Stephen	Rasayan Journal of Chemistry 11 (1), 155-165, 2018
43	Comparative removal of chromium toxic metal from water using vermiculite blended chitosan coated carbon biopolymer composites	S.G. Gunasekaran , L. Devaraj Stephen , M. Soundarrajan	International Journal of Civil Engineering and Technology, 9, 76, 2018
44	Pyrenyl pendent siloxane core dendritic skeletal chain extended multi-walled carbon nanotube reinforced hyperbranched polyimide (MWCNT/PI) nanocomposites	S.G. Gunasekaran V. Arivalagan , M. Dharmendira Kumar	International Research Journal of Engineering and Technology, 05 (01), 1-11, 2018

45	Green synthesis of Ag nanoparticles using Tamarind fruit extract for the antibacterial studies	N. Jayaprakash, J.JudithVijaya, K.Kaviyarasu, K.Kombaiah, L. JohnKennedy, R. JothiRamalingam, Murugan, A.Munusamy, Hamad A. Al-Lohedan	Journal of Photochemistry and Photobiology B: Biology, 169, 178-185, 2017
46	Bioreduction potentials of dried root of Zingiber Officinale for a single green synthesis of silver nanoparticles: Antimicrobial studies	J. JudithVijaya N.Jayaprakash K. <u>Kombaiah</u> , K. <u>Kaviyarasu</u> , L. <u>John Kennedy</u> , R. <u>Jothi Ramalingam</u> , <u>Al-Lohedan HA</u> , <u>V M</u> <u>MA</u> , <u>Maaza M</u> .	Journal of Photochemistry and PhotobiologyB: Biology, 177, 62-68, 2017
47	Triaryl Pendant Pyridine Core Hydroxyl Terminal Benzoxazine Based Polybenzoxazine-Silica (PBZ-SiO ₂) Hybrid Nanocomposites	S. G. Gunasekaran, V. Arivalagan, L. Devaraj Stephen	Journal of Nanoscience and Nanotechnology, 17(8), 5271-5283, 2017
48	Maleimido Terminal Triaryl Pyridine Core Skeletal Modified Benzoxazine/Cyanate Ester Co-Cured Polymer (PBZ/CE) Hybrid Blends	S.G. Gunasekaran M. Dharmendira Kumar	International Journal for Scientific Research and Development, 4 (4), 436-443, 2016
49	FT-IR Spectral Analysis of Chitosan Coated Carbon Biosorbent	M.Soundarrajan, P.N.Sudha	Elixir Pollution, 86, 35035-35037, 2015.
50	Organo modified MWCNT Reinforced Triaryl Pyridine Core Polybenzoxazine (MWCNT/PBZ) Nanocomposites	S.G.Gunasekaran, K. Rajakumar, M.Dharmendirakumar	International Journal of Nanoscience, 14(5 & 6), 1550021-1550033, 2015.
51	Antibacterial Activity of Silver Nanoparticles Synthesized from Serine	N.Jayaprakash, J. Judith Vijaya, L.John Kennedy, K.Priadharsini, P.Palani	Materials Science and Engineering C, 49, 316-322, 2015.
52	Structural Elucidation of a Few Electron-Deficient Porphyrin/ Fullerene Cocrystallate: Effect of Fullerene on the Porphyrin Ring Conformation	K.Karunanithi, P.Bhyrappa	Inorganica Chimica Acta, 427, 41-51, 2015.
53	Microwave-Assisted Rapid Facile Synthesis, Characterization and Their Antibacterial Activity of PVP Capped Silver Nanospheres	N.Jayaprakash, J.Judith Vijaya, L.John Kennedy	Synthesis and Reactivity in Inorganic, Metal-Organic and Nano-Metal Chemistry, 45, 1533-1538, 2015.
54	Characterization of Chitosan Blended Vermiculite by using Analytical Technique	M.Soundarrajan, P.N.Sudha	International Journal of Technology and Research Advances, 2014, Issue VII,
55	Synthesis, Characterization, in vivo and in silico Studies of Antidepressant Activity of 2-chloro-4' methoxy Benzoin	B.Thanuja, C.K.Charles	Current Chemical Biology, 8, 17-26, 2014.

56	Synthesis, Characterization and Solvent Effect on the Fluorescence Spectra of Benzoin	B.Thanuja C.K.Charles	Journal of Energy and Chemical Engineering, 2(1), 51-58, 2014.
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57	Effect of Inductive Effect on the Formation of Cocrystals and Eutectics	K.D.Prasad, C.Suryanarayan, L.Deveraj Stephen, T.N.Guru Row	Crystal Engineering Communications, 16, 9930-9938, 2014.
58	Differential Cocrystallization Behaviour of Isomeric Pyridine Carboxamides toward Antitubercular Drug Pyrazinonic Acid	K.D.Prasad, C.Suryanarayan, G.Ramesh, L.Deveraj Stephen, P.Sravankumar, T.N.Guru Row	Crystal Growth and Design, 15, 858-866, 2014.
59	One Step Phytosynthesis of Highly Stabilized Silver Nanoparticles using Piper nigrum Extract and Their Antibacterial Activity	N.Jayaprakash, J.Judith Vijaya, L.John Kennedy, K.Priadharsini, P.Palani	Materials Letters 137, 358-361, 2014.
60	Synthesis and Nonlinear Optical Absorption of Novel Chalcone derivative Compounds	K.Mani Rahulan, S.Balamurugan, K.S.Meena, G.Y.Yeap, C.K.Charles	Optics and Laser Technology, 56, 142-145, 2014.
61	Study on intermolecular interactions in binary mixtures 2'-chloro-4-methoxy-3-nitro benzyl in Various Solvents and at Different Concentrations by the Measurement of Acoustic Properties	G.Nithya, B.Thanuja, C.K.Charles	Ultrasonics Sonochemistry, 20, 265-270, 2013
62	Modeling Analysis of the Photoreduction of Cobalt (III) Speciation via (CoIII-I-) Ion Pair Formation in Water-1,4-Dioxane Mixtures with XRPD and Voltammetric Studies	L.Devaraj Stephen, A.Anbalagan	Chemical Science Transactions, 2(S1), S65-S70, 2013.
63	Synthesis, structural, spectroscopic studies, NBO analysis, NLO and HOMO-LUMO of 4-methyl-N-(3-nitrophenyl)benzene sulfonamide with experimental and theoretical approaches	K.Sarojini, H.Krishnana, C.K.Charles, S.Muthu,	Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy, 108, 159-170, 2013.
64	Investigation on the Structural and Nonlinear Optical Properties of Pt doped TiO ₂ Nanoparticles	K.Mani Rahulan, N.Padmanathan, G.Vinitha, C.K.Charles	Materials Research Bulletin, 48, 3037-3042, 2013.
65	Structural Evaluation and Nonlinear Optical Properties of Ni/NiO, Ni/NiCo ₂ O ₄ and Co/Co ₃ O ₄ Nanocomposites	K.Mani Rahulan, N.Padmanathan, P.Reji, C.K.Charles	Applied Surface Science, 282, 656-661, 2013.
66	Structural Features and Existence of Three Photon Absorption in Ag Doped TiO ₂ Nanoparticles, Synthesized by Sol-Gel Technique	K.Mani Rahulan, N.Padmanathan, L.Devaraj Stephen, C.K.Charles	Journal of alloys and compounds, 554, 432-437, 2013.
67	Synthesis and Optical Limiting Effects in ZrO ₂ and ZrO ₂ @ SiO ₂ Core-Shell Nanostructures	K.Mani Rahulan, G.Vinitha, L.Devaraj Stephen, C.K.Charles	Ceramic International, 39(5), 5281-5286, 2013.

68	Spectral and Nonlinear Optical Transmission Studies of Zr ⁴⁺ doped TiO ₂ Nanoparticles	K.Mani Rahulan, L.Devaraj Stephen, C.K.Charles	Applied Surface Science, 266, 326-331, 2013.
69	Microwave-Assisted Synthesis and Characterization of Triton x 100 Capped Silver Nanospheres	N.Jayaprakash, J. Judith Vijaya, L.John Kennedy	Journal of Dispersion Science and Technology, 34, 1597–1602, 2013.