Dr. NAGARAJU G

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Education

	Degree	Year	Institute	Specialization
1	B.Sc.	1998	Govt. First Grade College, Tumakuru	PCM
2	M.Sc.,	2000	Bangalore University	Chemistry
3	Ph.D.	2009	Bangalore University	Nanomaterials
4	PDF 1	2009-2011	IPC, IISc, Bangalore	Electrochemistry of Lithium ion battery
5	PDF 2	2011 - 2012	UFRGS, Porto Alegre, Brazil	Photo-catalyst for Hydrogen generation

Professional Experience

	Date (from-to)	Designation	Organization
1	March 2023 – till date	Assoc. Professor	Siddaganga Institute of Technology, Tumakuru
2	Oct. 2014 – Feb 2023	Asst. Professor	Siddaganga Institute of Technology, Tumakuru
3	Oct 2013- Sept. 2014	Asst. Professor	BMSIT, Bangalore
4	June 2012- Sept. 2013	Asst. Professor	Jain University, Bangalore

(Please fill in reverse order. Current designation should be at the top)

Positions held

4. Member of Board of Examination (BoE) for BE (Nanotechnology) , VTU, Belagavi for the academic year 2021-22

3. Member of Board of Examination (BoE) for BE (Civil Engg.- Chemistry), Jnana Bharathi Campus, Bangalore University, Bangalore, for the academic year 2019-20

1. Member to the Board of Studies (BoS) for Ph.D. at Dept. of Chemistry, Reva University, Bangalore on 16-03-2018

Affiliations of Professional organizations

Awards and Honors

- Secured top 2% scientists position in World Scientist and University Rankings since 2021, 2022, 2023,2024,2025

Courses Taught

- Engineering chemistry for CS, EE, ME streams
- Technical Chemistry

Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
1	Udayabhanu	Synthesis of pure/doped meal oxidesand their rGO hybrid nanocomposites: Applications to Photocatalytic and Lithium ion battery'.	2020
2	Lakshmi Sagar Reddy	Synthesis of metal oxide nanomaterials for photocatalytic and antibacterial activities	2021
3	Manukumar K N	Facile synthesis of metal oxides/sulphides nanomaterials- reduced graphene oxide hybrid nanomaterials: Applications to lithium batteries and hydrogen generation	2022
4	Jayalakshmi T	Synthesis of pure/doped metal oxides or metal oxides-rGO hybrid nano materials: Applications to lithium battery and photocatalytic activity	2023
5	Pavithra NS	Synthesis of metal oxide nanoparticles: Photocatalytic and biological applications	2023

Research Areas

Synthesis of nanomaterials for energy related applications

Synthesis and characterization of layered transition metal oxides/sulphides, alloys, lithiated transition metal oxides etc, via hydrothermal, solvothermal, ionothermal and combustion method.

- - Lithium ion battery
- - Hydrogen production
- - Electro-chemcial sensor
- - Super-capacitor
- - Degradation of organic dye/industrial pollutants
- – Graphene Chemistry

Sponsored Projects

Ongoing Projects: NIL

Completed Projects:

1. Title: Vanadium oxide based nanostructured materials and its reduced graphene oxide composite: Electrochemical performance in Lithium battery.
   Funding Agency:
   Amount: 18.58 lakh
   Duration: 03 years
   Role: Principal Investigator

2. Title: Green Synthesis of pure and doped nano metal oxides, metal oxide-reduced graphene oxide hybrid nanomaterials: Applications to hydrogen generation, lithium battery, energy saving, photo degradation and biological effects
   Funding Agency: DST Nanomission,
   Amount: 154.49 lakhs
   Duration: 03 years
   Role: Principal Investigator

3. Title: Synthesis of Ta2O5 – Reduced Graphene Oxide Hybrid Nanomaterials: Cathode Material for Lithium Battery
   Funding Agency: ISRO-RESPOND,

Amount: 14.86 lakh
Duration: 03 years
Role: Principal Investigator

4. Title: Oxide/sulphides of Titanium and Molybdenum - Reduced graphene oxide nanostructural hybrid materials: Electro chemical performance in Lithium battery.
   Funding Agency: BRNS-DAE, BARC,
   Amount: 22.22 lakh

   Duration: 03 years
   Role: Principal Investigator

5. Title: Green synthesis of BiVO4-RGO hybrid nanomaterials: Application to water splitting reaction, lithium battery and photodegradation.
   Funding Agency:
   Amount: VGST, Govt. of Karnataka
   Duration: 01 years
   Role: Principal Investigator

6. Title: A new class of pseudo-capacitive binary metal sulphides anodes for sodium-ion battery
   Funding Agency: VGST, Govt. of Karnataka
   Amount: 20 L
   Duration: 02 years
   Role: Principal Investigator

7. Title: DABCO-Piperidium based dual ionic liquids: A new class of polymer electrolyte material for alkaline fuel cell applications
   Funding Agency: VGST, Govt. of Karnataka
   Amount: 20 L
   Duration: 02 years
   Role: Co- Investigator

Publications

Journals : Published more than 321 research articles in reputed International journals of different research areas.

Research area	**No. of articles published**
Lithium ion battery	**41**
Photocatalytic Hydrogen generation	**27**
Photocatalytic Dye degradation	**110**
Electrochemical sensor	**18**
Super-capacitor	**07**
Optical properties	**28**
Other articles	**90**
TOTAL	**321 +**

Publications from 2022

124. Facile synthesis of potassium doped FeS2 nanofertilizers to enhance seed germination and plant growth in S22 tomato seeds, Nano-Structures & Nano-Objects 42 (2025) 101490

123.Efficient Atrazine degradation via green synthesized Zirconia NPs: A sustainable approach to water purification, J. of Cliuster Science 36 (2025) 133

122.Corrosion Inhibition Potential of Expired Chlorzoxazone on Mild Steel in Acidic Media: A Synergistic Approach with Electrochemical, Surface and Computational Insights, Materials Today Communications 45 (2025) 112409

121.Advancing in Situ synthesis of Zn3(OH)2V2O7·2H2O/Betalains nanocomposite for simultaneous enhancement of electrochemical performance and green energy storage in high-performance Li-Ion batteries and supercapacitors, Materials Science and Engineering: B, 317 (2025) 118189

120.Influence of Sodium lauryl sulphate as Surfactant on Structural, Morphological, Electrical and Biological Properties on Polypyrrole/CeO2 Composites. on March 09, 2025. Solid state communication 400 (2025) 115918

119. Type-1 heterojunction TiO2 Nanotubes/Ag2CrO4 nanoparticles: Advanced photo catalytic and electrochemical applications, Materials Chemistry and Physics 337 (2025) 130573

118.Green Approach to g-C3N4/ Zn2V2O7 Nanocomposites Synthesis Using Salvia Hispanica Powder for Photocatalytic Degradation of Dyes and Organic Catalysis, Inorganic Chemistry Communications 176 (2025) 114413

117.Facile green synthesis of MnV2O6 nanoparticles: Photocatalytic studies and selective oxidation of aromatic alcohols, Inorganic Chemistry Communications Inorganic Chemistry Communications 176 (2025) 114097

116."Design and synthesis of quasi- spherical fluorescent carbon quantum dots for visualization of latent fingerprints" has been accepted for publication in Journal of Molecular Structure 1333 (2025) 141674

15inc Vanadate Nanoparticle: An Innovative Electrochemical Sensor Synthesized via Green Fuel for the Detection of Ascorbic Acid and Its Other Applications, Journal of the Indian Chemical Society, 102 (2025) 101607

114.One step hydrothermal green synthesis of novel Cu2O/Cu-WO3 Nanocomposite: Efficient photocatalytic activity towards organic dyes under visible light Materials Chemistry and Physics: Sustainability and Energy, 2 (2025) 100009

113.nhanced photocatalytic applications of Ce doped MoO3 nanoparticles synthesized via combustion process using Calophyllum seed powder', J. of Molecular Structure, 1328 (2025) 141125.

112. Visible light-driven degradation of Brilliant Green and Indigo Carmine organic contaminants using SnS2/GCN/rGO and CuS/GCN/rGO ternary Composites – A comparative study, Flat Chem, 19 (2025) 100805

111.One step facile green synthesis of ZnFe2O4-ZnO Nanocomposite: Efficient photocatalytic activity towards organic dyes under visible light and Photoluminescence applications, Environmental Nanotechnology, Monitoring & Management, Environmental Nanotechnology, Monitoring & Management Chem 23 (2025) 101036

110.Facile Green synthesis of CuWO4 nanoparticles and its application for the photocatalytic degradation of rose Bengal dye under visible light irradiation Inorganic Chemistry Communications, 172 (2025) 113706

109.Fabrication of CuS-MoO3 Nanocomposite for High-Performance Photocatalysis and Biosensing, Molecular stracture, 1324 (2025) 140823

108.Facile green synthesis of ZnO/ZrO2 nanocomposite for Photocatalytic degradation and Chromium (VI) reduction, Journal of Crystal Growth 651 (2025) 128009

107.Enhanced charge carrier separation in stable Type-1 CoNi2S4/MoS2 nanocomposite photocatalyst for sustainable water treatment, Journal of Physics and Chemistry of Solids 198 (2025) 112444

106. “Eco-Friendly Synthesis of Cu11O2(VO4)6 Nanoparticles via Linum usitatism for Photocatalytic Degradation of Rose Bengal Dye and Photoluminescence studies” Water Conservation Science and Engineering, 9 (2024) 87

105.Multifunctional applications $BiVO_4$ nanoparticles: Enhanced photocatalytic, good sensor, and supercapacitor property, J. of Materails Science, Materials in electronics 35 (2024)1922

104. MoO2 nanostructures synthesized via hydrothermal method for enhanced Methylene blue decontamination, Ionics, 30 (2024) 8713

103. Eco-inspired synthesis of ZnO - CuO nanocomposites using phyllanthus niruri: Unveiling superior photocatalytic, antibacterial efficacy against escherichia coli and staphylococcus aureus, and Latent fingerprint studies, Ioncs, 30 (2024) 7665

102. Enhanced Degradation of Dyes Using a Novel CuS/g-C3N4/rGO Ternary Composite Catalyst: Synthesis, Characterization, and Mechanistic Insights, Materials Chemsitry and Physcis, 327, (2024) 129877

101. Cocos nucifera mediated green synthesis and characterization of BiOCl-Fe2O3 nanocomposite for photocatalytic dye degradation and electrochemical sensing of dopamine, Sustainable Chemistry for the Environment 7 (2024) 100138

100. Enhanced photocatalytic applications of Ni-doped MoO3 nanoparticle synthesized via green combustion process using Garcinia cambogia seed powder J Mater Sci: Mater Electron 35 (2024) 1746

99. Controlled growth of MPA-capped ZnS quantum dots through concentration-modulated single injection hydrothermal method, Journal of Crystal Growth, 644 (2024) 127834

98. CaSnO 3 nanorod-decorated Bi 2 WO 6 nanosheets as a stable heterojunction photocatalyst for improved photocatalysis and nitrite sensing, New J. Chem., 2024

97. Biogenic synthesis of LiNiVO4 nanoparticles for the evaluation of photocatalytic and electrochemical applications, Ionics, 30 (2024) 6575, (2024)

96. Phyto-mediated facile synthesis of ZnO nanoparticles: enhanced photocatalysis, biological, and electrochemical properties, Ionics, 30 (2024) 6611

95. Hexagonal rod-like Eu3+ doped CaMoO4 phosphors: Structural, photoluminescence and photometric properties for display device applications, Molecular Structure, 1319 (2025) 139331

94. Facile Green Synthesis of Bi2S3 Nanoparticles: Applications in Simultaneous Dye degradation and Seed germination of Fenugreek Seeds, Nano-Structures & Nano-Objects 39 (2024) 101262

93. Fabrication of Ag-doped CeO2 nanoparticles for the evaluation of their photocatalytic activity against the degradation of organic dyes and electrochemical sensing" Journal of Materials Science: Materials in Electronics, 35 (2024) 1457.

92. Exploring the Synergy of Zn3(OH)2V2O7 2H2O @Betalains as a Promising Photoluminescent Nanocomposite for Sustainable Optical and Electrochemical Applications, Ceramic International 50 (2024) 36458

91. Computational, and Photophysical Probing Studies on Mono Azo Sulfonamides and their Anti-bacterial Activity, Russian Journal of Bioorganic Chemistry, 50 (2024) 1735

90. Biogenic approach for synthesis of ZnO/NiO nano composites as a highly efficient photocatalyst and evaluation of their biological properties , Brazilian Journal of Chemical Engineering, 42 (2023) 95

89. ‘Spectroscopic Studies on Structurally Modified Anthraquinone Azo Hydrazone Tautomer: Theoretical and Experimental Approach’ J. of Fluorescence

88. Artemisia pallens assisted synthesis of CeO2-NiO nanocomposite for the removal of hazardous Rose Bengal dye and voltammetric sensing of heavy metals, Chemistry Africa 7 (2024) 3831

87. Green synthesis of m-$LaVO_4$ nanoparticles using Costus igneus leaves extracts and its photocatalytic and electrochemical applications, Ionics, 30 (2024) 3443

86. Artemisia pallens mediated synthesis of second-generation CuO/ZnO nano photocatalyst for rose bengal dye removal and simultaneous detection of heavy metals, Biomass Conversion and Biorefinery

85. Photophysical and antitubercular studies on newly synthesised structurally architectured sulphonamide, 94. Facile synthesis of BiOCl NPs for methylene blue removal, antibacterial with novel antifungal properties against Fusarium oxysporum, and enhanced germination of Solanum lycopersicum L. seeds. Environment, Development and Sustainability.

84.Excellent photoluminescence and electrochemical properties of Sm3þ doped Ca2MgSi2O7 nanophosphor: Display and electrochemical sensor applications, J. of Rare Earths 42 (2024) 1046

83. Synthesis and Characterization of Novel Cu3Bi3S7 Nanoparticle by Combustion using Green Fuel for Photocatalytic Degradation and Electrochemical Sensing Applications" Ceramics International, 50 (2024) 28543

82. Facile Green Synthesis of Zn doped MoO3 Nanoparticles and Its Photocatalytic and Photoluminescence, Molecualr structure, 1312 (2024) 138494

81. Limonia acidissima fruit juice mediated eco-friendly synthesis of pervoskite ZnSnO3 nanoparticles: Applications to photocatalytic , electrochemical, antioxidant and antibacterial activities, Inorganic Chemsitry Communications, 165 (2024) 112476

80. Green synthesis of polyoxometalate $Cu_3Mo_2O_9$ nanoparticles for efficient degradation of organic dyes under visible light irradiation and their photoluminescence, Ceramic International, 50 (2024) 24692

79. Exploring Potential Applications of α and β Polymorphs of Bi2O3 Nanoparticles, Mallikarjun, Chemistry Select

78. Facile green synthesis of Ni3V2O8 nanoparticles for efficient photocatalytic degradation of Rose Bengal dye under visible light irradiation Chemical Physics Letters, 843 (2024) 141246

77. Facile synthesis of Cu2S-NiS2 nanocomposite with highly active visible light photocatalyst for dye removal and biological evaluation, Polyhedron, 255 (2024) 116962

76. Effective approach to improve photocatalytic dye degradation and electrochemical properties of MoO3 nanoparticles., Ionics, 30 (2024) 3679

75. Avocado seed biomass-assisted synthesis of heterostructure bismuth vanadate nanomaterial by combustion method for the application of electrochemical lithium battery storage and supercapacitor", Process Safety and Environmental Protection 185 (2024) 1122

74. In Situ Growth of BiVO4-Bi2O3 p-n Heterojunction Nanocomposite Via Facile Green Combustion Method: Efficient Photocatalytic Activity Under Visible Light, Photoluminescence and Biosensing Applications, Materials Chemistry and Physics, 317 (2024) 129187

73. Facile one step green synthesis of CdO-CdS hybrid nanocomposite: Its electrochemical and photoluminescence applications, Nano-structures & Nano-objects, 38 (2024) 101131

72. BiVO4 nanoballs: a simple precipitation pathway, promising electrochemical sensor, and photodegradation under visible light, Ionics, 30 (2024) 2819.

71. Simultaneous Investigation of Dopamine and Uric Acid Using Novel Electrochemical Sensor Based on Green Synthesized Silver Vanadate Nanoparticles, Russian J. of General Chemistry 94 (2024) 406-418

70. A novel one-pot synthesis strategy for β-Mn2V2O7 nanorods synthesized via 1-(3,6-dioxa heptane) 3-methyl imidazolium methane sulfonate-assisted hydrothermal route for sustainable and on-demand advanced supercapacitor electrodes and as negative electrode materials for Li-ion batteries, Journal of Energy Storage 85 (2024) 111076

69. An impact of RGO on the ZnO nanoparticles: structural, morphological, electrical, and gas sensing properties, Sensing Technology 2 (2024) 2310479

68. Butea monosperma aided green synthesis of α-MoO3 nanoparticles: Biosensing and photocatalytic activity towards hazardous dyes and rangoli colorants, Environmental Nanotechnology, Monitoring & Management 21 (2024) 100930

67.Influence of temperature on the stability and optical characterizations of tga Capped Zns Quantum Dots For Utilization in Blue Light Emission, J. of Mines, metals and Fuels 721 (2023) 2212

66.Linum usitatissimum Mediated Green Synthesis of Cu3V2O8 Nanoparticles and its Photocatalytic Activity Studies, Environmental Nanotechnology, Monitoring & Management, 21 (2024) 100912

65.Microwave radiation assisted synthesis of NiFe2O4-CoFe2O4 nanocomposites for photocatalytic and photoelectrochemical water splitting applications,, Inorganic Chemistry Communications, 160, (2024) 111898

64. SnS2 based SnS2/rGO/g-C3N4 Z-scheme ternary nanocomposites for efficient visible light-driven photocatalytic activity", Optical Materails, 147 (2024) 114688

63.Green synthesis of Ag-$ZnFe_2O_4$@graphene nanocomposite for photocatalytic and electrochemical applications, Optical Materials, 147 (2024) 114704

62.Facile green synthesis of Ni/NiO/MoO3 nanocomposite for Photocatalytic, Chromium (VI) Reduction, Electrochemical Dopamine (DA) and Humidity Sensor application. Inorganic Chemistry Communication, 160 (2024) 111846

61.Facile green synthesis of Cu-doped MoO3 nanoparticles and its application for the photocatalytic degradation of hazardous organic pollutants Nanostr and nano objects, 36 (2023) 101066

60. Preparation of polypyrrole by chemical oxidation: applications for sensor studies, Macromolecular Research, 32 (2023) 23

59.Facile combustion synthesis of CuO-NiO nanocomposite for enhanced dye degradation,electrochemical sensing of dopamineand anti-hemolytic evaluation, Chemical Data Collection, Chemical Data Collections 48 (2023) 101081

58.Facile synthesis of NaTaO3 nanoparticles and fabrication of nanostructured NaTaO3 for detection of Dopamine, Inorganic Chemistry Communications, 158 (2023) 111427 IF:

57.Effect of Zn/S/TGA concentration on the stability and optical properties of TGA capped ZnS quantum dots synthesized via one pot aqueous synthesis method, Advances in Natural Sciences: Nanoscience and Nanotechnology 14 (2023) 45010

56.onochemical synthesis of nickel tungstate (NiWO4) nanoparticles for dye degradation and electrochemical sensing of lead ions in environmental samples, Inorganic Chemistry Communications, 157 (2023) 111346

55.Biogenic synthesis of orthorhombic α-MoO3 nanoparticles for photocatalytic degradation and electrochemical sensing, J Mater Sci: Mater Electron 34 (2023) 2226.

54. Green no chemical route for the synthesis of $MnWO_4$ nanostructures, evaluation of their photocatalytic and electrochemical properties. J. of Materials Science: Materials in Electronics, 34 (2023) 1791

53.Green synthesis and characterization of Mn_3O_4 nanoparticlesfor photocatalytic and supercapacitors, Ionics (2023) 29:733

52.Pt-doped TiO_2 nanotubes as photocatalysts and electrocatalysts for enhanced photocatalytic H_2 generation, electrochemical sensing, and supercapacitor applications, Int. Journal of Hydrogen Energy, 48 (2023) 31855-31874

51.Noble metals (Ag & Pt) doped BiVO4 nanoparticles as cathode materials for high performance Lithium ion battery, Journal of Materials Science: Materials in Electronics, 34 (2023) 1042

50.One pot synthesis of CuO-NiO nanoparticles using Aegle marmelos fruit extract and their antimicrobial activity Materials Today: Proceedings, 89 (2023) 159. Synthesis of Zn doped black TiO_2 nanoparticles for degradation of 2, 4, 6 tri-chloro-phenol under visible light, Chemcial Journal of the Indian Chemical Society 100 (2023) 100881

49.Efficient red-emitting $SrZrO_3:Eu^{3+}$ phosphor superstructures for display device applications" J. of Molecular Structure, 290 (2023) 116323

49. Facile synthesis of multifunctional bismuth oxychloride nanoparticles for photocatalysis and antimicrobial test, Materials Science and Engineering B 290 (2023) 116323

48.Rapid and facile synthesis of Z -scheme ZnO/g-C_3N_4 heterostructure as efficient visible light-driven photocatalysts for dye degradation and hydrogen evolution reaction, Journal of Hazardous Materials Advances 9 (2023) 100230

47.Comparative Study of Defuoridation of Water Using Green Synthesized Zirconia Nanoparticles and Zirconia–Graphene Oxide Nanocomposite, J. of The Institution of Engineers (India): Series E, 10 (2023) 29.

46. Design of Novel $M(MnNi)V_2O_6$ NPs via combution synthesis for Photocatalytic Performance on dual dye and dopamine biosensing, Optik, 272 (2023) 170231

45. Exploring the Spondias mombin (Hog plum) mediated $ZnWO_4$– $CuWO_4$ nanocomposite for photocatalysis and electrochemical nitrite sensing, Materials Chemistry and Physics, 293 (2023) 126882

44.Facile combustion derived synthesis of copper oxide nanoparticles: Application towards photocatalytic, electrochemical and DNA cleavage studies, Nano-Structures & Nano-Objects, 32 (2022) 100923

43.Combustion synthesis of calcium doped ZnO nanoparticles for the photocatalytic degradation of methylene blue dye, Journal of the Indian Chemical Society, 99 (2022) 100744.

42. Green Synthesis of Cerium Oxide Nanoparticles, Antibacterial Studies and as Catalyst for the Conversion of Cotton Seed Oil into Biodiesel, Asian Journal of Chemistry; 34 (2022) 2415

41.Microwave and Combustion Methods-A Comparative study of Synthesis, Characterization, and Applications of NiO nanoparticles, Inorganic and Nano-Metal Chemistry, 53 (2023) 527

40. Green and facile synthesis of zinc oxide nanoparticles for enhanced photocatalytic organic pollutant degradation, J Mater Sci: Mater Electronics, J Mater Sci: Mater Electron 33 (2022) 20361

39. Electrochemical activity of ultrathin MoO3 nanoflakes for long cycle lithium ion batteries, Results in Chemistry, 4 (2022) 100493

38. Development of Rhodium coatings by Electrodeposition for Photocatalytic Dye Degradation, Vacuum, 205, (2022) 111460

37. Ionic liquid aided synthesis of anatase TiO_2 nanoparticles : Photocatalytic water splitting and Electrochemical applications, Crystals, 12 (2022) 1133.

36. Evaluation of Various Biological Properties for BiOCl NPs, Inorganic Chemistry Communications 144 (2022) 109850

36. Effect of cation concentration on structural, morphology, optical properties of Zinc-Nickel ferrite nanoparticles, Materials Letters: X 15 (2022) 100156

35. Lithium ion battery performance of micro and nano-size V2O5 cathode materials" Materials Today: Proceedings, 65 (2022) 200-206.

34. Novel 3D-flower shaped $KTaO_3$ perovskite for highly efficient photocatalytic and H2 generation ability, Scientific Reprots, 12 (2022) 10776

33. Enhanced photoluminescence and decay studies of Li co-doped $LaAlO_3$: Ce^{3+} phosphor for display applications, The European Physcial Journal Plus 137 (2022) 630

32. Enhanced gas-sensing performance at room temperature and electrical properties of polyaniline–$Ni_{0.6}Zn_{0.4}Fe_2O_4$ nanocomposites, J Process Mechanical Engineering, 237 (2023) 162

31. Facile combustion synthesis of highly active Mo doped $BiVO_4$ for photocatalytic dye degradation, photo-oxidation of alcohols, antifungal and antioxidant activities International Journal of Environmental Analytical Chemistry, 104(2022) 3314

30. A facile green synthesis of nickel ferrite nanoparticles using Tamarindus Indica seeds for magnetic and photocatalytic studies Nanotechnology for Environmental Engineering, 8 (2023) 143

29. Ta2O5-rGO Nanocomposite as Emerging Anode Material for Sodium Ion Storage Via Extrinsic Pseudo-Capacitive Red-Ox Process , The Electrochemical Society -ECS Transactions, 107 (2022) 14829

28. Antibacterial study of $LaAlO_3$:Dy^{3+}: Bi^{3+} nanoparticles synthesized by modified combustion technique, The Electrochemical Society - ECS Transactions, 107 (2022) 14985

27. Eco-Friendly Green Synthesis, Characterizations and antimicrobial activities of nickel oxide nanoparticles, The Electrochemical Society - ECS Transactions, 107 (2022) 16303

26. Synthesis of Bismuth oxychloride nanoparticles via co-precipitation method: Evaluation of photocatalytic activity, Materials Today Proceedings, 62 (2022) 5533-5539

25. Green synthesis of bismuth tungstate nanoparticles, evaluation of its applications toward photocatalytic and bio-sensing, Inorganic and Nano metal Chemsitry, (In press, 2022)215.

24. HRSL supported fabrication of $LiZnVO_4$ nanoparticles: Applications to photoluminescence, dye elimination and biosensing, Materials Science and Engg. B, 280 (2022) 115718

23. Ionic liquid assisted synthesis of tri-functional ruthenium oxide nanoplatelets for electrochemical energy applications, J Mater Sci. Materials in Electronics 57 (2022) 7680

22. MDesign of Novel Perovskite $KTaO_3$ nanoflowers via hydrothermal synthesis for electrochemical lithium storage and dopamine biosensing, Materials Chemsitry and Physics, 282 (2022) 125990

21. "Green synthesis of $LiZnVO_4$ nanoparticles and its multiple applications towards electrochemical sensor, supercapacitor, humidity sensing, photoluminescence and antioxidant activities, J. of Mateials Science. Materials in Electroncis, 33 (2022) 10902

20. Optoelectronic, DFT and current-voltage performance of new Schiff base 6-nitro-benzimidazole derivatives, Inorganic Chemistry Communications, 139 (2022) 109354

19. Facile green synthesis of zirconium phosphate nanoparticles using Aegle marmelos: Antimicrobial and photodegradation studies, Mateails Today Proceeding 62 (2022) 5169

18. Larvicidal and antimicrobial activity of zinc oxide nanoparticles synthesized from rain tree pod aqueous extract, Materials Today Proceeding 62 (2022) 5083

17. Indian bael mediated eco-friendly synthesis and performance evaluation of zirconium oxide nanoparticles: An efficient anti-microbial agent, Materials Today Proceeding, 62 (2022) 5067

16. Facile and rapid synthesis of solar-driven TiO_2/g-C_3N_4 heterostructure photocatalyts for enhanced photocatalytic activity, Journal of Science: Advanced Materials and Devices. 7 (2022) 100419

15. $LaAlO_3$:Dy^{3+} perovskite for white light emitting phosphors suitable for display devices J Mater Sci: Mater Electron 33 (2022) 4400

14 'Color tunable $SrZrO_3$:Sm^{3+} nanopowders with satisfactory photoluminescent, band engineering properties, Journal of Molecular Structure, 1254 (2022) 132302

13. Enhanced photocatalytic, electrochemical and antimicrobial activities of α-$Mn_2V_2O_7$ nanopebbles, Journal of Materials Science: Materials in Electronics, 33 (2022) 617

12. Platinum Coating on SS304: Nucleation, Growth Mechanism and Photocatalytic Dye Degradation Application, Iranian Journal of Science and Technology, Transactions A: Science, 46 (2022) 137

11. 'One-pot synthesis of some new 7–hydroxy-5-(4-substitutedphenyl)- 9-methyl-1,5-dihydro-2 H -dipyrimido[1,2 a :4 ,5 - d]pyrimidine-2,4(3 H)–dione derivatives and it's optoelectronic, DFT, photocatalytic studies and latent fingerprint applications', Journal of Molecular Structure, 1250 (2022) 131930

10. 'Magnetic iron oxide nanoparticles immobilized on microporous molecular sieves as efficient porous catalyst for photodegradation, transesterification, and esterification reactions', Journal of Porous Materials, 29 (2022) 119

9. Eco-Mediated Synthesis of Visible Active Bi2WO6 Nanoparticles and its Performance Towards Photocatalyst, Supercapacitor, Biosensor, and Antioxidant Activity, Journal of Cluster Science, 33(2022) 1

8.‘Electrical property of zirconium oxide nanoparticles synthesized by hydrothermal method Materials Today: Proceedings, 49 (2022) 686

7. TiO_2 and Ag-TiO_2 nanomaterials for enhanced photocatalytic and antioxidant activity: Green synthesis using Cucumis melo juice, Materials Today: Proceedings, 49 (2022) 841

6."Reduction of graphene oxide by Phyllanthus Emblica as a reducing agent–A green approach for supercapacitor application." Materials Today: Proceedings, 49 (2022) 865

5.Green synthesis of dimanganese trioxide nanoparticles using tamarind seed powder: Effect of tamarind seed powder concentration on the structural, electrical and electrochemical properties of dimanganese trioxide nanoparticles, Materials Today: Proceedings, 49 (2022) 554

4. Resistivity of zirconium oxide nanoparticles synthesized by solution combustion method using rubber latex fuel." Materials Today: Proceedings, 49 (2022) 714

3. Rubber latex fuel extracted green biogenic Nickel doped ZrO_2 nanoparticles and its resistivity, Materials Today: Proceedings 49 (2022) 681

2. Green synthesis of MgO nanoparticles using Phyllanthus emblica for Evans blue degradation and antibacterial activity. Materials Today: Proce edings 49 (2022) 801

1. Combustion synthesis CuO nanoparticles: Application to photocatalytic activity." Materials Today: Proceedings, 49 (2022) 860

Book Chapters : 01

Books: 01

Editorial :

Reviewer of Journals: Elsevier, ACS, RSc, Willey, Springer etc.

(Please give details in IEEE format)

Editor/ Reviewer of Journal

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Patents

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Invited Lectures, talks and workshops

45. 'Introduction to Nanotechnology', organized by Dept. of Chemstry, PG Center, Govt. Science College, Chitradurga on 29-04-2025

44. Sodium ion battery in EV sustain for a customer satisfaction, Three days FDP on "Recent Innovations In Energy, Health and Environment" Organized by Adichunchanagiri University, Adichunchanagiri School of Natural Sciences, BG Nagara, 12th Feb. 2025

43. Lithium-ion battery and Beyond: Materials investigation, Three days FDP on "Essential Science for Engineering and Research" Organized by Dept. of Basic Science, ATME College of Engg, Mysuru on 15th Jan 2025.

42. 'Lithium-ion battery and Beyond: Materials investigation' AICTE sponsored one week ATAL FDP on "Recent Advances in Energy Harvesting and Sustainable Developments" Organized by Dept. of Chemistry, NIE, Mysore on 11th,Jan. 2025.

41. 'Lithium-ion battery and Beyond and Hydrogen generation' at Six days FDP on "RUSA Sponsored one week FDP on "Materials for Life" Organized by Dept. of Studies in

Chemistry in Association with Malaviya Mission Teachers Training Centre (MMTTC), University of Mysore, Mysuru on 20th Dec. 2024

40. ‘Lithium-ion battery and Beyond: Materials investigation’ at Six days FDP on “Next Generation Energy Storage: Integrated advanced Electronics and Sensor Technologies” Organised by Dept. of ECE and Chemistry, Srinivas University, Mukka, Mangalore, on 18-11-2024.

39. ‘Lithium-ion battery and Beyond: Materials investigation’ at Five days Faculty Development Program On “Green Technologies Towards Sustainable Future Science and Technology” Organised by Dept. of Chemistry, Ramaiah Institute of Technology, Bangalore on 23-09-2024

38. ‘Materials for Memory and Display Systems’, Organised by Dept. of Chemistry, Jawahrlal Nehru New College of Engg. Shivamogga on 14th May 2024.

37. ‘Materials for memory devices and display systems’ at NIE North campus, Mysore, on May7th, 2024.

36. Design of nanostractured metal oxide electordes for Lithium ion battery applications at JSS Saraswathipuram, Mysore during May7th, 2024.

35. ‘Synthesis of nanostructured materials and fabrication of electrode for Lithium ion battery applications’, conducted by Dept. of Chemsitry, BMSIT&M, Yelahanka, Bengaluru at FDP on 'Innovations in Material Science and Analytical Techniques' during 11th - 15th March 2024

34. Concept of Schrödinger wave équation and Quantum dots: Novel thoughts to Nobel Prize organised by Organised by Dept. of Physics, Govt. Engg. College, Hasan during 08-12-2024

33. ‘Nanostructuredmetal oxide for Lithium ion battery and photocatalytic applications” at Acharya Institute of Graduate Studies, Soladevanahalli, Bangalore on 2nd March 2023

32. ‘Global Science for Global Wellbeing’ orgnaised by Science and Research Forum, Vivekananda Degree College, Bengaluru, during 16-02-2023

31. ‘Hydrogen Energy as Future Fuel’ at Int.Conference on ‘Advanced Materials for Health, Energy and Environment (AMHEE-2023)’, Organised by JSS Science and Technology University, Sri Jayachamarajendra College of Engineering
Mysuru during 28 February – 02 March 2023

30. ‘Fabrication of nanostructured metal oxide electrode for lithium ion battery’ at One Day National Level Seminar on ‘Advanced approaches in Chemical and Oharmaceutical

Sciences, organized by Dept. of PG Studies and Research in Industrial Chemistry, Sahyadri Science College, Shivamogga, during 11-02-2023

29. Fabrication of nanostructured electrode materials for lithium ion battery' at Synergistic Training Program Utilizing the Scientific and Technological Infrastructure organized by Karnataka University, Dharawada in collaboration with Shivaji University, Kolhapura Supported by DST, Govt. of India.During 29-01-2023

28. 'Hydrogen Energy as Future Fuel, at National Conference on Advances in Analytical Techniques for Mateails and Biomedical Applications organized by Dept. of Chemistry, RCU, Belagavi and Dept. of Applied Sciences, VTU, Belagavi in association with Indian Society of Analytical Scientists (ISAS) BelagaviChapter on Dec. 15-16, 2022

27. 'Fabrication of nanostructured metal oxide electrodes materials for lithium ion battery applications' at Two day National Confeence on Emerging Perspectives of Chemical Science in Biological and Technological Aspects' Organized by Dept. of Chemsitry, Acharya Institute of Graduate Studies, Bengalore on 13 & 14 July 2022

26. 'Evaluation of electrochemical lithium ion battery performance of nanostructured metal oxide' at KSTA Sponsored Two-Day National Symposium On Material Science Organized by Department of Chemistry (UG & PG) and IQAC, JSS College of Arts, Commerce and Science, Ooty Road, Mysuru during 11 & 12 May 2022

25. 'Syntheses of metal oxide nanomaterials: Evaluation of its Photocatalytic activity' Organised by PG studies & Research in Chemsitry in association with PG-Dept. of Biochemistry, St. Philomena's College, Mysore during 12-05-2022

24. 'Introduction and Innovations of Nanomaterials: Applications to Lithium/Sodium ion batteries', Organised by Dept. of Chemsitry, Donbosco Institute of Technology, Bangalore on 29-03-2022

23. 'Novel Synthesis of Metal oxide Nanomaterials: Applications to Lithium ion batteries and Photocatalytic applications' Organised by Dept. of IQAC,
Govt. First Grade College, Madhugiri on 14-03-2022

22. 'Integrated Approach in Science and Technology for a sustainable future', at National Science Day'celebration Organized by Sree Siddaganga College of Arts, Science and Commerce, Tumakuru on 28-02-2022

21. 'Concept of Green Chemistry: Metal Oxide Nanoparticles for Li- ion Battery' at Five days online FDP on 'Recent Trends in Sustainable Energy Management and Green

Chemistry' Organised by Department of Chemistry, Global Academy of Technology, Bangalore during 6 – 10th Dec. 2021

20. 'Concept of Green Chemistry: Renewable Energy-Hydrogen generation' at Five days online FDP on 'Recent Trends in Green Chemsitry' Organized by Department of Chemistry, DBIT, Bangalore during 15-20, Nov. 2021

19. 'Novel Synthesis of Metal oxide Nanomaterials: Applications to Lithium ion batteries and Photocatalytic applications' at UGC sponsered One day Sate level seminar on New Innovations in advanced Materials Organized by Dept. of Chemistry (PG Center), 7th March, 2020, JSS College of Arts, Commerce and Science, Mysore

18. 'Metal oxide electrode materials for Lithium ion battery', at National Conference on Advanced Lithium Ion Batteries: Science and Technology, (NALiBST-2019) 27 -28, Dec. 2019, Organized by The Electrochemical Society of India and Dept. of IPC, IISc, Bengaluru

17. 'Application of metal oxide nanomaterials for lithium ion battery and Hydrogen generation" at Materials for Environment, Sustainable Society and Global Empowerement (MESSAGE - 2019)" 19th - 20th, Dec. 2019, organized by Dept. of Nanotechnology, VTU, Muddenahalli, Chikkaballapur.

16. Lithium ion battery and photocatalytic hyderogen generation of metal oxide nanomaterials', at Dept. of Chemistry, REVA University, Bangalore on 19-09-2019

15. Synthesis of pure and doped metal oxides-graphene nanocomposites for photocatalytic H_2 production via water splitting reaction' at one week Faculty Development Program (29th July – 3rd August 2019) on 'Scope and Significance of Materials Science for Industry-Academia Collaboration' Organized by Dept. of Chemistry and Physics, RIT, Bangalore on 31st July 2019.

14. 'Synthesis of pure and doped metal oxides-graphene nanocomposites for photocatalytic H2 production via water splitting reaction' at six day Faculty Development Programme (5th - 10th August 2019) on 'Advanced Functional Materials' organized by Dept. of Chemistry, Physics and Centre of Excellence - Macroelectronics, RVCE, Bangalore during 6th Aug. 2019.

13. 'Green synthesis and characterization of nanomaterials' organized by Dept. of PG studies in Biotechnology, Govt. Science College, Bangalore, on 06-01-2019.

12. ‘Metal oxide nanomateials : Lithium ion battery and Photocatalytic water splitting reaction’ at one week Faculty Development Program on “Functional Materials for Industrial Applications from 23 – 28th July 2018 organized by Department of Chemistry, Physics, RIT & SRI, Bangalore.

11. ‘Green synthesis and characterization of meal oxide nanoparticles’ at, at Faculty Development Programme on ‘Recent Advances in Nanotechnology for a Sustainability World-2018, from 19th -25th June 2018, conducted by Dept. of Biotechnology, Dayananda Sagar College of Engineering, Bengaluru on 21-06-2018.

10. ‘Metal oxides nanoparticles for lithium ion battery and water splitting reaction’ at Int. Conference on Innovations and Challenges in Science and Technology, at Dept. of Science and Humanities, DBIT, Bangalore during 24-26th , May 2018.

9. ‘Chemistry of Nanomaterials: Application and Opportunities’ at Dept. of the Chemistry, Govt. First Grade Women College, Tumakuru on 27-03-2018.

8. ‘Metal oxides nanoparticles for lithium ion battery and water splitting reaction’ at ‘Current Advances in Chemical Sciences” (NCCACS –2018)’ on 16-03-2018 organized by PG Department of Chemistry, University College of Science, Tumkur University, Tumakuru

7. ‘Green Synthesis of Nanomaterials: Characterization and its diverse applications’, at Quality Improvement Programme (QIP) on Advanced Trends in Pharmaceutics, at 12-03-2018 at Department of Pharmaceutics, JSS College of Pharmacy, Ooty, Tamilunadu.

6. ‘Metal oxide hybrid nanomaterials for energy related applications’ at AICTE sponsored Two weeks ‘National Level Faculty Development Programme’ on ‘Advanced Materials & Manufacturing Technology’ Organized by Dept. of Mechanical Engg. MSRIT, Bangalore 4th - 16th Dec. 2017.

5. ‘Basic concept of Nanoscience and Technology’ at One day lecture workshop on ‘Recent Advances in Interdisclipenary Research in Science’ at Dept. of Chemistry and Physics, Sridevi Postgraduate Center, Tumakuru on 18-04-2017

4. ‘Synthesis of metal oxide nanomaterials for diverse applications’ organized by Dept. of Mechanicla Engg., Kuppam Engineering College, Kuppam on 24-03-2017

3. ‘Synthesis of metal oxide nanomaterials for various applications’ at Dept. of Chemistry, DBIT, Bangalore 25th Oct. 2016.

2. Synthesis of metal oxide hybrid/composite nanomaterials for mechanical and energy related applications' at one week workshop on nanomaterials and nanocomposites, 20th to 25th June 2016 conducted by Dept. of Mechanical Engg. MSRIT, Bangalore,

1. Ionothermal synthesis of TiO_2 nanoparticles: Photocatalytic hydrogen generation', Int. Conference on Advanced Nanocomposites for Construction Materials, Mahatma Gandhi University, Kottayam, Kerala, 12-14th March, 2013.