

List of Important Research Articles in the last five years

1. Altaf Pasha, Zhang, Isaac Metcal, Jianlin Zhou, Mathias Staunstrup, Yunxuan Zhu, Shusen Liao, Ken Ssenyimba, Jia-Shiang Chen, Surya Prakash Reddy, Simon Thébaud, Jin Hou, Xinting Shuai, Faiz Mandani, Siraj Sidhik, Matthew R. Jones Xuedan Ma, **R Geetha Balakrishna**, Sandhya Susarla, David S. Ginger, Claudine Katan, Mercouri G. Kanatzidis¹⁴, **Moungi G. Bawendi**, Douglas Natelson, Philippe Tamarat, Brahim Lounis, Jacky Even and Aditya D. Mohite*, Extremely efficient and stable quantum emission from buried perovskite quantum dots in wide-bandgap perovskite thin films, (2024-10-22414), under Review [Nature Nanotechnology](#).
2. Gayathri Karthikeyan, Sakar Mohan, P. Muthu Austeria, **R. Geetha Balakrishna***, Surface-Engineered 2D Bimetallic FeNi-MOFs Derived from Layered Double Hydroxides for Photocatalytic Membranes with Enhanced Dye Fixation in Wastewater Treatment, [Small](#), 21, 6, 2409133, (2025)
3. Kaveramma, A. B. and Chakraborty, Abhisek and **R Geetha Balakrishna***, Managing Film Crystallization via Low Toxic Antisolvents: Stabilizing Ag₃BiI₆ Perovskite like Solar cells under Ambient Conditions, [J. Mater. Chem. A](#), 13, 3811 - 3824, (2025)
4. Altaf Pasha, Shubhangi Bhardwaj, Andrew Torma, Kaveramma AB, Nagaraj S Naik, Isaac Metcalf, Mukaddar SK, Hao Zhang, Mahesh Padaki, Suman Kalyan Sahoo, Aditya D Mohite, Sushobhan Avasthi, **R Geetha Balakrishna***, Ionic Lockdown: Sealing Migration Channels across Device Interfaces in Mixed Halide Perovskite Solar Cells [ACS Energy Lett.](#) 9, 6002–6010, (2024)
5. S. Akhil, Dong-Won Kang, Hyosung Choi, **R. Geetha Balakrishna***, Emerging Bi-Based Multicationic Ternary Chalcogenides as Promising Photoabsorbers for Solar Cells, [Solar RRL](#), , 2400662 (2024)
6. Abhisek Chakraborty, Giulia Lucarelli, Jie Xu, Zeynab Skafi, Seezrgio Castro-Hermosa, AB Kaveramma, **R Geetha Balakrishna**, Thomas M Brown, Photovoltaics for indoor energy harvesting, [Nano Energy](#), 128, 109932, (2024)
7. Abhishek Narayanan, Nagaraj S Naik, Samadhan Kapse, Ranjith Thapa, **R Geetha Balakrishna**, Chandra Sekhar Rout & Mahesh Padaki, In Situ Cascade Steric Stabilization of Poly (Ionic Liquid) Mediated Hexagonal nickel Hydroxide Morphogenesis for high-Performance Flexible Super Capacitors, [Journal of Materials](#)

Chemistry A, (2024).

8. Jesna George, Altaf Pasha, **R. Geetha Balakrishna***, Creating Energy Transfer Pathways in Lead-Free Perovskite Nanocrystals via Dopant Emission Centers for Optical Sensing, *ACS Appl. Nano Mater.* 17, 19774- 19783, (2024)
9. Swathi Divakar, Harini G Sampatkumar, Satish S Naik, Shridhar Malladi, Mahesh Padaki, Siddappa A Patil, **R Geetha Balakrishna***, Graphitic carbon nitride enriched phytochemicals-based photo active membranes for perilous chromium (VI) ion removal, *Sep. Purif. Technol*, Volume 334, 125953, (2024)
10. Karthikeyarajan Vinothkumar, **R Geetha Balakrishna***, One-pot synthesis of NH₂-MIL-101(Fe) and α - Fe₂O₃ composite as efficient heterojunction for multifunctional photocatalytic membranes: Towards zero waste generation, *Appl. Cat., B: Environ*, 340,123199, (2024)
11. S Akash, S Akhil, V Sanjana, A Chakraborty, R Geetha Balakrishna*, Suppressing phase segregation in mixed halide CsPbI₃-xBr_x perovskites by dual passivation using sodium dodecyl sulphate, *Sol. Energy*, 324, 112596, (2024)
12. Jomy Jose Philip, Gouranga H. Debnath,* David H. Waldeck **R. Geetha Balakrishna***, Halide exchange mediated cation exchange facilitates room temperature co-doping of d-and f-block elements in cesium lead halide perovskite nanoparticles, *Nanoscale*, 16, 9558, (2024)
13. Sumanth Dongre S, Asif Iqbal, Ranjit Thapa, Pratheeksha M, Shwetharani Ramu, and **R. Geetha Balakrishna**, Synergistic Catalyst Design for Enhanced Electrochemical Hydrogen Evolution: Fe₂O₃/MoS₂/Ti₃C₂T_x MXene Ternary Composite, *ACS Appl. Eng. Mater.* 2, (2024)
14. Altaf Pasha, Patatri Pramanik, Jesna K G, Nishant Dhiman, Hao Zhang, Siraj Sidhik, Faiz Mandani, Sudhir Ranjan, Ahipa TN, Siva Umapathy, Aditya D. Mohite and **R Geetha Balakrishna***, Cationic and Anionic Vacancy Healing for Suppressed Halide Exchange and Phase Segregation in Perovskite Solar Cells, *ACS Energy Lett.*, 8, 3081–3087(2023)
15. Sanjayan C. G, **R. Geetha Balakrishna***, Ratiometric probe of PQDs/R6G: Achieving high sensitivity and precision in contaminant detection, *Sens. Actuators B Chem*, 397, 134626 (2023)
16. Bhavya M. Basavaraja, Ramya Prabhu Bantwal, Anjana Tripathi, Gautam Hegde, Neena Susan John, Ranjit Thapa, Gopalkrishna Hegde, **R. Geetha Balakrishna***, Manav Saxena, Ali Altaee, Akshaya K. Samal*, Functionalized Silver Nanocubes for the Detection of Hazardous Analytes through Surface-Enhanced Raman Scattering: Experimental and Computational Studies, *ACS Sustain. Chem. Eng.* 11, 29, 10605–

10619, (2023)

17. Hemanth Kumar Beere, Pranav Kulkarni, Uday Narayan Maiti, **R. Geetha Balakrishna**, Priyam Mukherjee, Hyun Young Jung, Ketaki Samanta and Debasis Ghosh, Realizing Favourable Oxygen Electrocatalytic Activity with Compositionally Complex Metal Molybdates, *Sustain. Energy Fuels*, doi.org/10.1039/D3SE00736G, (2023)
18. Dual Vacancy Passivation in CsPbCl₃ Perovskite Nanocrystals: Implications on Optoelectronic Applications, Sumanth Dongre S, E E. Siddharthan, Ranjit Thapa, Shwetharani R* and **R. Geetha Balakrishna***, *ACS Appl. Nano Mater.* 6, 14, 13227–13237, (2023)
19. Akhil S and **R Geetha Balakrishna***, CuBiS₂ Ternary Quantum Dots: Tuning the Deposition Techniques for Enhanced Photovoltaic Performance, *ACS Appl. Energy Mater.*, 6, 14, 7487–7496 (2023)
20. Jesna K George, Altaf Pasha, Sakar Mohan, R Geetha Balakrishna*, Binding of CsPbBr₃ Nanocrystals to MOF-5 for the Detection of Cadmium Ions in Aqueous Media, *ACS Appl. Nano Mater.*, 2023, 6, 11, 9464–9474, (2023)
21. Basir Maleki, Yatish Kalanakoppal Venkatesh, S Siamak Ashraf Talesh, Hossein Esmaeili, Sakar Mohan, **Geetha R Balakrishna***, A novel biomass derived activated carbon mediated AC@ZnO/NiO bifunctional nanocatalyst to produce high-quality biodiesel from dairy industry waste oil: CI engine performance and emission, *Chem. Eng. J.*, 467, (2023)
22. Shwetharani R, Itika Kainthla, Sumanth Dongre, Laveena D'Souza, **R Geetha Balakrishna***, Recent Advances of Ecofriendly 2D Monoelemental Bismuthene as a photoabsorber for Energy, Catalysis and Biomedical applications, *J. Mater. Chem. C*, 11, 6777-6799, (2023)
23. Sanjayan C.G, Chandan Hunsur Ravikumar, **R. Geetha Balakrishna**, Perovskite QD based paper microfluidic device for simultaneous detection of lung cancer biomarkers – Carcinoembryonic antigen and neuron specific enolase, *Chem. Eng. J.*, 464, 142581, (2023)
24. Sanjay and **R Geetha Balakrishna***, Phase transferred and non-coated, water soluble perovskite quantum dots for biocompatibility and sensing, *J. Mater. Chem. B*, 11, 2184-2190, (2023)
25. Akhil S and **R Geetha Balakrishna***, CuBiSe₂ Quantum dots as ecofriendly photosensitizers for solar cells, *ACS Sustain. Chem. Eng.*, 10, 39, 13176–13184, (2022)
26. Sanjayan C G, Jyothi Mannekote Shivanna, Jessica D. Schiffman, Sakar Mohan, Srinivasa Budagumpi, and **R. Geetha Balakrishna***, Aqueous, Non-Polymer-Based

Perovskite Quantum Dots for Bioimaging: Conserving Fluorescence and Long-Term Stability via Simple and Robust Synthesis, *ACS Appl Mater Interfaces*, 14 (34), 38471-38482 (2022)

27. S. Akhil and **R Geetha Balakrishna**, AgBiS₂ QDs as a photoabsorber for eco-friendly solar cells, *J. Mater. Chem. A*, 10, 8615-8625, (2022)
28. S Akash, Altaf Pasha, **R Geetha Balakrishna**, Dissipation of Charge Accumulation and Suppression of Phase Segregation in Mixed Halide Perovskite Solar Cells via Nanoribbons, *ACS Appl. Energy Mater.*, 5, 3, 2727–2737, (2022)
29. Akhil, S.; Kusuma, J.; **Balakrishna, R. G.**, Green AgBiSe₂/AgBiS₂ core shell quantum dots for stable solar cells by robust SILAR method. *J. Clean. Prod.*, 366, 132760, (2022).
30. Sanjayan C. G, Jyothi M S and **R Geetha Balakrishna**, Stabilization of CsPbBr₃ Quantum Dots for Photocatalysis, Imaging and Optical Sensing in Water and Biological Medium; A Review *J. Mater. Chem. C*, 10, 6935-6956, (2022)
31. Karthikeyarajan Vinothkumar, Mannekote Shivanna Jyothi, Chandra Lavanya, Mohan Sakar, Suresh Valiyaveetil, **R Geetha Balakrishna***, Strongly co-ordinated MOF-PSF matrix for selective adsorption, separation and photodegradation of dyes, *Chem. Eng. J*, 428, 132561, (2022)
32. Akhil S, Mithun Prakash Ravikumar, Mohammed Jalalah, Mabkhoot Alsaieri, Farid A Harraz, **R. Geetha Balakrishna**, Manifestation of the enhanced photovoltaic performance in eco-friendly AgBiS₂ QD Solar Cells Using Titanium Oxynitride as the electron transport layer, *Energy & Fuels*, 36, 14393-14402, (2022)
33. Pranav Kulkarni, Hyunyoung Jung, Debasis Ghosh, Mohammed Jalalah, Mabkhoot Alsaieri, Farid A Harraz, **R Geetha Balakrishna**, A comprehensive review of pre-lithiation/sodiation additives for Li-ion and Na-ion batteries, *J. Energy Chem.*, 76, 479-494, (2022)
34. Sumanth Dongre S, Chandan Hunsur Ravikumar, **R. Geetha Balakrishna**, Review on 2D Arsenene and Antimonene: Emerging Materials for Energy, Electronic and Biological Applications, *Adv. Mater. Interfaces*, 9, 23, 2200442, (2022)
35. Jesna K George, Shwetharani Ramu, Vishaka V. Halali, **R. Geetha Balakrishna**, Inner Filter Effect a Boon in Perovskite Sensing Systems to Achieve Higher Sensitivity Levels, *ACS Appl Mater Interfaces*, 13, 48, 57264–57273, (2022)
36. Altaf Pasha, S. Akhil and **R. Geetha Balakrishna**, Reliability of Cs₂M⁺M³⁺X₆ type perovskites for solar cells: Assessing the Figures of Merit. *J. Mater. Chem. A*, 9, 17701-17719, (2022)
37. Sakar M, Ningaraju C, Yatish K V, Mithun Prakash R, **R Geetha Balakrishna***, Simultaneous refining of biodiesel-derived crude glycerol and synthesis of value-

- added powdered catalysts for biodiesel production: A green chemistry approach for sustainable biodiesel industries, *J. Clean. Prod.*, 363, 132448, (2022)
38. CG Sanjayan, MS Jyothi, M Sakar, R Geetha Balakrishna, Multidentate ligand approach for conjugation of perovskite quantum dots to biomolecules, *J. Colloid Interface Sci.*, 758-770, (2021)
 39. S Akhil, J Kusuma, S Akash, **R Geetha Balakrishna**, Perovskite-like ceramic hole transport material for quantum dot sensitized solar cells, *Solar Energy*, 224, 355-360, (2021)
 40. S Akash, **R Shwetharani**, J Kusuma, **R Geetha Balakrishna**, Insights and future perspectives for constructing efficient electron pathways in photoanodes of QDSSCs, *Solar Energy*, 224, 650-665, (2021)
 41. S. Akhil, S. Akash, Altaf Pasha, Bhakti Kulkarni, Mohammed Jalalah, Mabkhoot Alsaiani, Farid A. Harraz, R Geetha Balakrishna, Review on perovskite silicon tandem solar cells: Status and prospects 2T, 3T and 4T for real world conditions, *Mater. Des.*, 211, (2021) 110138
 42. C Lavanya, J Kusuma, **R Geetha Balakrishna**, Pyrochlores: oxygen-rich moieties as ceramic fillers in uplifting the antifouling property and dye removal capacity of polymeric membranes, *Sep. Purif. Technol.*, 272, 118946, (2021)
 43. R. Shwetharani, Samadhan Kapse, Ranjit Thapa, D. H. Nagaraju and R. Geetha Balakrishna, Dendritic ferroselite (FeSe₂) with 2D carbon-based nanosheets of rGO and g-C₃N₄ as efficient catalysts for electrochemical hydrogen evolution, *ACS Appl. Energy Mater.*, 3, 12, 12682–12691, (2020)
 44. Halali V. Vishaka, George K. Jesna, Pasha Altaf, K. Sarina and Balakrishna R. Geetha, Lattice constriction and trapped excitons: a structure–property relationship unveiled in CsPbBr₃ perovskite QDs, *J. Mater. Chem. C*, 8, 17090-17098, (2020)
 45. Christina MacLaughlin, Prashant V. Kamat, and Constance M. Biegel, Women Scientists at the Forefront of Energy Research: A Virtual Issue, *ACS Energy Lett.*, 5 (1), 282-289, (2020)
 46. Kusuma and R Geetha Balakrishna, Ceramic grains: Highly promising hole transport material for solid state QDSSCs, *Sol. Energy Mater. Sol. Cells.*, 10.1016/j.solmat.2020.110445, (2020)
 47. Shwetharani R. Halali, V. Vishaka, Kusuma J, R. Geetha Balakrishna, Green to blue light emitting CsPbBr₃ perovskite by ligand exchange and its encapsulation by TiO₂ for tandem effect in photovoltaic applications, *ACS Appl. Nano Mater.*, 3, 6, 6089- 6098, (2020)
 48. Thangavelu Kokulnathan, Tzyy-Jiann Wang, Elumalai Ashok Kumar, V. Suvina, **R.**

- Geetha Balakrishna**, Development of an electrochemical platform based on nanoplate-like zirconium phosphate for the detection of furazolidone, *ACS Appl. Nano Mater.*, 3, 5, 4522-4529, (2020)
49. J. Kusuma, S. Akash, **R. Geetha Balakrishna**, Transition metal nanohybrid as efficient and stable counter electrode for heterostructure quantum dot sensitized solar cells: A trial, *Sol. Energy*, 201, 674-681, (2020)
 50. R Shwetharani, Sakar Mohan, C. A. N. Fernando, Vassilios Binas and R Geetha Balakrishna, Recent Advances and Strategies Applied to Tailor Energy levels, Active Sites and Electron Mobility in Titania and its Doped/Composite Analogues for Hydrogen Evolution in Sunlight, *Catal. Sci. Technol.*, 9, 12, (2019)
 51. Pratap Vishnoi, K. Pramoda, Uttam Gupta, Manjeet Chhetri, R. Geetha Balakrishna, C. N. R. Rao, Covalently Linked Heterostructures of Phosphorene with MoS₂/MoSe₂ and their Remarkable Hydrogen Evolution Reaction Activity, *ACS Appl Mater Interfaces*, 11, 31, 27780-27787, (2019)
 52. C Lavanya, **R Geetha Balakrishna**, Naturally derived polysaccharides-modified PSF membranes: A potency in enriching the antifouling nature of membranes, *Sep. Purif. Technol.*, 230, 115887, (2019)
 53. J Kusuma, HR Chandan, **R Geetha Balakrishna**, Conjugated molecular bridges: A new direction to escalate linker assisted QDSSC performance, *Solar Energy*, 194, 74- 78, (2019)
 54. Kusuma and R Geetha Balakrishna*, Exploration of Graphene Oxide Nanoribbons as Excellent Electron Conducting Network for Third Generation QD Solar Cells, *Sol. Energy Mater Sol. Cells*, 183, 211-219, (2018)
 55. R. Geetha Balakrishna, Steven M. Kobosko, and Prashant V. Kamat*, Mixed Halide Perovskite Solar Cells. Consequence of Iodide Treatment on Phase Segregation Recover, *ACS Energy Lett.*, 3, 2267 -2272, (2018)
 56. Kusuma and **Geetha Balakrishna**, A review on electrical characterization techniques performed to study the device performance of quantum dot sensitized solar cells, *Solar Energy*, 159, 682-696, (2018)
 57. Chandan H. R, Jessica Schiffman and **Geetha R. Balakrishna**, Quantum dots as fluorescent probes: synthesis, surface chemistry, energy transfer mechanism and applications, *Sens. Actuators B Chem.*, 258, 1191-1214, (2018)

Other Publications than selected list above

58. Bhakti Kulkarni, Thangavelu Kokulnathan, Tzyy-Jiann Wang, Mysoon, M. Al-Ansari, **R. Geetha Balakrishna***, Trace-level electrochemical detection of organic pollutant metal in environmental samples using MIL-101(Cr)@F-MWCNTs nanocomposite, *Journal of Environmental Chemical Engineering*, 13, 6, 119262, (2025)
59. Manjunatha Palanna, Mahesh Itagi, Lokesh Koodlur Sannegowda, Bhakti Kulkarni, Kiran Hiremath, Muthu Austeria, **R Geetha Balakrishna***, A bio-mimicking cobalt tetramenthol-substituted phthalocyanine-based electrochemical sensor for selective and sensitive detection of tert-butylhydroquinone, *Journal of Materials Chemistry B*, 13, 4188-4200, (2025)
60. Aravind R Nesaragi, Sumanth Dongre, Asif Iqbal, Ranjit Thapa, **R Geetha Balakrishna**, Siddappa A Patil, Shwetharani R, Graphitic-carbon nitride immobilized Schiff base Palladium(II): Highly efficient electrocatalyst for hydrogen evolution reaction and density functional theory calculations, *International Journal of Hydrogen Energy*, 117, 314-324, (2025)
61. Hemavathi NJ, Sumanth Dongre S, Suman Kalyan Sahoo, **R Geetha Balakrishna***, NiMo LDH-Derived Mo@ NiSe₂ as Advanced Electrocatalysts for Hydrogen Evolution in Acidic and Alkaline Systems, *Energy & Fuels*, 39, 14, 6930–6941, (2025)
62. Gayathri Karthikeyan, Sakar Mohan, **R Geetha Balakrishna***, Multidimensional Nickel-Based Nanoporous Metal–Organic Framework-Integrated Photoactive Membranes for Pollutant Separation and Degradation in Wastewater Treatment, *ACS Applied Nano Materials*, 8, 25, 12966–12979, (2025)
63. Sumanth Dongre, Giovanni Zuccante, Mohsin Muhyuddin, Carmelo Lo Vecchio, Vincenzo Baglio, Enrico Berretti, Alessandro Lavacchi, **R Geetha Balakrishna**, Carlo Santoro, Innovative biochar-based electrocatalysts from chilli plants and fruits for sustainable oxygen reduction and hydrogen evolution reactions, *Electrochimica Acta*, 517, 145763, (2025)
64. Gayathri Karthikeyan, Vidya Devadiga, Sakar Mohan, **R Geetha Balakrishna***, Europium MOFs-Enabled Fluorescent Membranes with Optimized Flux, Filtration, and Fouling Resistance for Wastewater Treatment: A Strategy to Probe MOF Distribution in Membranes, *Journal of Environmental Chemical Engineering*, 13, 5, 118679, (2025)
65. Karthikeyan Manivannan, CG Sanjayan, Karthikeyarajan Vinothkumar, R Shwetharani, **R Geetha Balakrishna***, In situ synthesis of CsPbBr₃ perovskite quantum dots within

- Pb-MOF framework for sensitive detection of Hg^{2+} ions in aqueous solutions, *Materials Science in Semiconductor Processing*, 200, 109962, (2025)
66. Prajwal Sherugar, Abhishek Narayanan, Afzal Hussain, R Shwetharani, **R Geetha Balakrishna**, Mahesh Padaki, Sustainable Nitrogen-Rich Activated Carbon Derived from *Rhizophora mucronata* Propagules for Wastewater Treatment and Hydrogen Generation, *Materials Chemistry and Physics*, 347, 131468, (2025)
 67. Dani George, Chandan Hunsur Ravikumar, Jomy Jose Philip, **R Geetha Balakrishna***, Sulfhydryl functionalization of MXene enables selective sensing of mercury ions, *J. Mater. Chem. C*, 12, 18345-18355, (2024)
 68. Gayathri Karthik, Sakar Mohan, **R Geetha Balakrishna***, Engineering Ni-MOF/g-C₃N₄ Composite-Infused Polysulfone Membranes with Optimal Rejection, Flux, Antifouling, and Photocatalytic Properties for Wastewater Treatment, *ACS EST Water*, 10, 4454–4463, (2024)
 69. Gayathri Karthik, Sakar Mohan, **R Geetha Balakrishna***, Ligand modulated charge transfers in Z-scheme configured Ni-MOF/g-C₃N₄ nanocomposites for photocatalytic remediation of dye-polluted water, *Sci. Rep.* 14, 26149 (2024)
 70. Bhakti Kulkarni, Thangavelu Kokulnathan, Tzyy-Jiann Wang, **R Geetha Balakrishna***, Allen Joseph Anthuvan Zeolitic imidazole framework-67/halloysite nanotube nanocomposites as electrocatalysts for the electrochemical detection of 4-nitrochlorobenzene, *J. Alloys Compd.*, 1010, 177496, (2025)
 71. Jomy Jose Philip, Aishwarya CS, Nagaraju Kottam, Chandan Hunsur Ravikumar, **R Geetha Balakrishna***, Reliability of Multi-Emissive Carbon Quantum Dots for Multiplexing; Assessing the Figures of Merit, *J. Fluores*, XX, (2024)
 72. Mounesh, BA Thippeswamy, Pramod Shiralkar, **R Geetha Balakrishna**, BM Nagaraja, K Pramoda, n Z-scheme configured Ni-MO Tetra-(4-methylthiazole)-carboxamide Cobalt(II) Phthalocyanine Supported on Functionalized Carbon Nanotubes as an Efficient Electrocatalyst for a Hydrogen Evolution Reaction, *ACS Appl. Energy Mater.*, (2024)
 73. Dani George, HR Chandan, R Shwetharani, M Faisal, Jahir Ahmed, Farid A Harraz, **R Geetha Balakrishna*** Understanding graphyne; theoretical insights and its optoelectronic behaviour, *Mater. Sci. Semicond. Process.*, 187, 109113, (2025)
 74. Bhuwaneshwari Chandrashekharan, Harini G Sampatkumar, Dani George, Arnet Maria Antony, Siddalingeshwar V Doddamani, BS Sasidhar, **R Geetha Balakrishna**, Siddappa A Patil, Palladium nanoparticle immobilized on coconut coir extract coated boron carbon nitride: A green and sustainable nanocatalyst for cross-coupling reactions and HER studies, *Diamond and Related Materials*, 147, 111261, (2024)

75. Harini G Sampatkumar, Pramod Shiralkar, **R Geetha Balakrishna**, K Pramoda, Siddappa A Patil, Palladium nanoparticles incorporated biogenic modified graphitic carbon nitride as an electrocatalyst for methanol oxidation reaction, *Inorg. Chem. Commun.*, 170, 113173, (2024)
76. K Gayathri, K Vinothkumar, Sakar Mohan, **R Geetha Balakrishna***, Manifestation of UiO-66-Zr MOF-enabled photocatalytic membranes for successive separation and degradation of dye mixtures in water remediation, *Journal of Environmental Chemical Engineering*, 12, 112490, (2024)
77. Praveen Kumar Gopi, Sanjayan C. G, Akhil. S, Chandan Hunsur Ravikumar, Siripong Thitamadee, Supornchai Kongpatanakul1, **R. Geetha Balakrishna***, Werasak Surareungchai, Silver Bismuth Sulphide (AgBiS₂)-MXene Composite as High Performance Electrochemical Sensing Platform for Sensitive Detection of Pollutant 4-Nitrophenol, *Electrochim acta*, 498, 144616, (2024).
78. Sumanth Dongre, Rohit Kumar, Bhubaneswar Paswan, Itika Kainthla, Amitava Banerjee, Jari S Algethami, Mabkhoot Alsaiani, Farid A Harraz, R Shwetharani, **R Geetha Balakrishna***, Synergistic electrocatalytic activity unveiled: Cu–Mo bimetal sulfo-selenide nanocomposite for hydrogen evolution reaction, *Mater Today Sustain*, 27, 100894, (2024)
79. Swathi Divakar, Prajwal Sherugar, KK Nagaraja, **R Geetha Balakrishna***, Mahesh Padaki*, Elevating oil-in-water emulsion separation: Unleashing the power of exfoliated graphitic carbon nitride composite membranes, *Chem. Eng. J. Adv*, Volume 17, 100580, (2024)
80. Shwetharani Ramu, Itika Kainthla, Lavanya Chandrappa, Jyothi Mannekote Shivanna, Brijesh Kumaran, **R Geetha Balakrishna***, Recent advances in metal organic frameworks-based magnetic nanomaterials for waste water treatment, *Environ. Sci. Poll. Res.*, Volume 31, (2024)
81. Aravind R Nesaragi, Jahir Ahmed, Mabkhoot Alsaiani, Lohit Naik, Naveen Kumar Kalagatur, HR Chandan, Swati R Hoolageri, Farid A Harraz, **R Geetha Balakrishna**, Siddappa A Patil, Fluorescent imidazole derived sensor for selective in vitro and in vivo Fe²⁺ detection and bioimaging in zebrafish with DFT studies, *Opt. Mater.* Volume 148, 114850, (2024)
82. Gayathri Karthik, Karthikeyarajan Vinothkumar, Sakar Mohan, **R Geetha Balakrishna**, Synergy of Ligands in Tailoring the Photocatalytic Properties of Zirconium Metal–Organic Framework-Impregnated Membranes for Water Treatment, *Ind. Eng. Chem. Res.*, 63, (2024)
83. KV Yatish, C Ningaraju, HS Lalithamba, M Sakar, **R Geetha Balakrishna**,

Demonstrating photocatalytic esterification as a potential strategy to improve the properties of feedstock oil derived from dairy waste scum for biodiesel production, *Energy Convers. Manag.*, 309, 118463, (2024)

84. Hemanth Kumar Beere, KV Yatish, K Aravind, Debasis Ghosh, **R Geetha Balakrishna**, K Pramoda, Unveiling favorable synergy of tubules-like NiMoSe₂ with defect-rich borocarbonitride over graphene or MXene for efficient hydrogen evolution reaction electrocatalysis, *Int. J. Hydrogen Energy*, Volume 54, (2024)
85. Basir Maleki, Yatish Kalanakoppal Venkatesh, Hossein Esmaeili, Masoumeh Haddadi, Ravikumar Mithun Prakash, **Geetha R Balakrishna**, Novel Co₃O₄ decorated with rGO nanocatalyst to boost microwave-assisted biodiesel production and as nano- additive to enhance the performance-emission characteristics of diesel engine, *Energy*, Volume 289, 129944, (2024)
86. Swathi Divakar, Nagaraj S Naik, **R Geetha Balakrishna***, Mahesh Padaki, Liquid-liquid (Cyclohexanone: Cyclohexanol) separation using augmented tight nanofiltration membrane: A sustainable approach, *Chemosphere*, 355, 141820, (2024)
87. Yatish Kalanakoppal Venkatesh, Mithun Prakash Ravikumar, Shwetharani Ramu, Chandan Hunsur Ravikumar, Sakar Mohan, **R Geetha Balakrishna***, Developments in Titanium-Based Alkali and Alkaline Earth Metal Oxide Catalysts for Sustainable Biodiesel Production: A Review, *Chem. Rec.*, e202300277 (2023)
88. Veeranna R Kattimani, KV Yatish, K Pramoda, M Sakar, **R Geetha Balakrishna***, Acacia furnesiana plant as a novel green source for the synthesis of NiFe₂O₄ magnetic nanocatalyst and as feedstock for sustainable high quality biofuel production, *Fuel*, 348, 128549, (2023)
89. P. Manikanta, Mounesh, Rohit Rangnath Nikam, Jubate Mohantay, **R. Geetha Balakrishna***, S Sandeep and Bhari Mallanna Nagaraja, CdO Decorated with Polypyrrole Nanotube Heterostructure: Potent Electrocatalyst for the Detection of Antihistamine Drug Promethazine Hydrochloride in Environmental Samples, *Langmuir*, 39, 31, 11099–11107 (2023)
90. KN Brinda, Zhoveta Yhobu, Jan Grzegorz Małecki, Rangappa S Keri, **R Geetha Balakrishna**, DH Nagaraju, Srinivasa Budagumpim, Novel coumarin substituted Neheterocyclic carbene Ag(I), Au(I) and Ni(II) complexes as electrocatalysts in hydrogen evolution reactions from water. *Inter. J. Hyd. Energy*. 48, 10911-10921, (2023)
91. Yatish, K. V., Omkaresh B. R., Kattimani, V. R., Lalithamba, H. S., Sakar, M., **Balakrishna R. G***, Solar energy-assisted reactor for the sustainable biodiesel production from Butea monosperma oil: Optimization, kinetic, thermodynamic and assessment studies, *Energy*, 263, 125768, (2023)

92. Shwetharani, R., Pratheeksha, M., Sumanth Dongre, S., **Geetha Balakrishna R***, Functionalized 2D materials F-MoS₂ and F-g-C₃N₄ with TiO₂ as Composite Electrocatalysts for Electrochemical Hydrogen Evolution. *Int. J. Hydrog. Energy*, 48 (14), 5438-5446, (2023)
93. SB Arun, BM Karthik, KV Yatish, KN Prashanth, **Geetha R Balakrishna***, Green synthesis of copper oxide nanoparticles using the *Bombax ceiba* plant: Biodiesel production and nano-additive to investigate diesel engine performance-emission characteristics, *Energy*, 274, 12734, (2023)
94. Aravind R Nesaragi, Chandan Hunsur Ravikumar, Naveen Kumar Kalagatur, Swati R Hoolageri, KM Mussuvir Pasha, R Geetha Balakrishna, Siddappa A Patil, In vitro and in vivo nanomolar Hg²⁺ detection in live cells and zebrafish, theoretical studies, *J. Photochem. Photobiol., A*, 445, 115079, (2023)
95. Vinothkumar, K., Chandra, L., Mohan, S., **Balakrishna, R. G***, Nature-Inspired Photoactive Metal–Organic Framework Nanofiber Filters for Oil–Water Separation: Conserving Successive Flux, Rejection, and Antifouling. *Ind. Eng. Chem. Res.*, 62 (2), 1085-1098, (2023)
96. Chandra, L., Vinothkumar K., **Balakrishna R. G***, MIL-100 (Fe) integrated fibrous polyvinyl alcohol graft on cellulose acetate towards the development of green photo membranes; Application in multi solute rejection, *J. Environ. Chem. Eng.*, 11, 109851, (2023)
97. S Sumanth Dongre, R. Shwetharani, Sk Abdul Moyez, **R. Geetha Balakrishna***, In-situ neodymium ion doping into perovskite nanocrystals over ex-situ and its importance in triclosan sensing, *Mater. Chem. Phy.*, 307, 128221, (2023)
98. Kulkarni, B., Suvina, V., Pramoda, K., **Balakrishna, R. G***, Picomolar, Electrochemical Detection of Paraoxon Ethyl, by Strongly Coordinated NiCo₂O₄-SWCNT Composite as an Electrode Material. *J. Electroanal. Chem.*, 931, (2023)
99. S Akash, R Shwetharani, J Kusuma, S Akhil, **R. Geetha Balakrishna***, highly efficient and durable electron transport layer for QDSSC: An integrated approach to address recombination losses, *J. Alloys Compd.*, 897, 162740, (2022)
100. MS Jyothi, R Shwetharani, Sabarish Radoor, **R Geetha Balakrishna***, 9 - Switchable photovoltaic effect in solar cells: Architecture, features, and future scope, *Functional Materials Processing for Switchable Device Modulation*, 161-184, (2022)
101. Chandan Hunsur Ravikumar, Nikhil Maroli, Bhakti Kulkarni, Ponmalai Kolandaivel, **R Geetha Balakrishna***, Heterostructure of CsPbBr₃-CdS perovskite quantum dots for enhanced stability and charge transfer, *Mater. Sci. Eng. B*, 275,

115513, (2022)

102. Vignesh Nayak, Jyothi Mannekote Shivanna, Shwetharani Ramu, Sabarish Radoor, **R. Geetha Balakrishna***, Efficacy of electrospun nanofiber membranes on fouling mitigation: A review, *ACS Omega*, 7, 48, 43346-43363, (2022)
103. Swathi Divakar, Mahesh Padaki, **R. Geetha Balakrishna***, Review on Liquid-Liquid Separation by Membrane Filtration, *ACS omega*, 7, 49, 44495-44506, (2022)
104. Vishal Kandathil, Akshay Moolakkil, Pranav Kulkarni, Alaap Kumizhi Veetil, Manjunatha Kempasiddaiah, Sasidhar Balappa Somappa, R. Geetha Balakrishna, Siddappa A. Patil, Pd/Fe₃O₄ supported on bio-waste derived cellulosic- carbon as a nanocatalyst for C-C coupling and electrocatalytic application, *Front. Chem. Sci. Eng.*, 16, 1514-1525, (2022)
105. Pranav Kulkarni, Hemanth Kumar Beere, Mohammed Jalalah, Mabkhoot Alsaiani, **R. Geetha Balakrishna***, Farid A Harraz, Debasis Ghosh, Developing a high-performance aqueous zinc battery with Zn²⁺ pre-intercalated V₃O₇·H₂O cathode coupled with surface engineered metallic zinc anode, *J. Electroanal. Chem.*, 924, 116851, (2022)
106. K Gayathri, K Vinothkumar, YN Teja, Badria M Al-Shehri, Manickam Selvaraj, M Sakar, **R. Geetha Balakrishna***, Ligand-mediated band structure engineering and physiochemical properties of UiO-66 (Zr) metal-organic frameworks (MOFs) for solar-driven degradation of dye molecules, *Colloids Surf. A: Physicochem. Eng. Asp.*, 653, 129992, (2022)
107. P. Kulkarni, D Ghosh, **R Geetha Balakrishna***, Recent Progress in 'Water-in-Salt' and Water- in-Salt'-Hybrid Electrolytes Based High Voltage Rechargeable Batteries, *Sustain. Energy Fuel.*, 5, 1619-1654, (2021)
108. Rangaswamy Puttaswamy, Radha Nagaraj, Pranav Kulkarni, Hemanth Kumar Beere, Shrish Nath Upadhyay, **R Geetha Balakrishna***, Nataraj Sanna Kotrappanavar, Srimanta Pakhira, Debasis Ghosh, Constructing a High-Performance Aqueous Rechargeable Zinc-Ion Battery Cathode with Self-Assembled Mat-like Packing of Intertwined Ag(I) Pre-Inserted V₃ OH 2 O Microbelts with Reduced Graphene Oxide Core, *ACS Sustain. Chem. Eng.*, 9, 11, 3985-3995, (2021)
109. K. Sunil, Prajwal Sherugar, Srilatha Rao, C. Lavanya, **Geetha R. Balakrishna**, G. Arthanareeswaran, Mahesh Padaki, Prolific approach for the removal of dyes by an effective interaction with polymer matrix using ultrafiltration membrane, *J. Environ. Chem. Eng.*, 9, 6, 106328, (2021)
110. RDAA Rajapaksha, CAN Fernando, **R. G. Balakrishna**, V Kumar, P See, An insight

in photocurrent generation mechanism on Cu₂O quantum dot sensitized Cu/p-CuI photo-electrochemical cell and efficient H₂ generation at Cu/p-CuI/Cu₂O electrolyte interface, *Mater. Sci. Eng. B.*, 270, 115205, (2021)

111. Bhakti Kulkarni, V Suvina, **R Geetha Balakrishna***, DH Nagaraju, J Kusuma, 1D GNR- PPy Composite for Remarkably Sensitive Detection of Heavy Metal Ions in Environmental Water, 9, 2, e202101269, *Chem Electro Chem.*, (2021)
112. Chandan Hunsur Ravikumar, Vishnu Nair, MP Raghavendra, Werassak Surareungchai, Archana Thakur, **R Geetha Balakrishna***, Biomass derived carbon dot decorated ssDNA for a 'turn-on' fluorescent assay for detection of *Staphylococcus aureus* MNase, *New Journal of Chemistry*, 45, 5890-5896, (2021)
113. Pranav Kulkarni, **R. Geetha Balakrishna***, Debasis Ghosh, R.S. Rawat, Rohit Medwal, B.V.R. Chowdari, Zaghbir Karim, M.V. Reddy, Molten salt synthesis of CoFe₂O₄ and its energy storage properties, *Mater. Chem. Phys.*, 257, 123747, (2021)
114. Soumya Nagashri Manjunath, M. Sakar, Manmohan Katapadi, **R. Geetha Balakrishna***, Photochemistry of ozone to combat coronavirus: Problems and perspectives, *Environ. Technol. Innov.*, 21, 10131, (2021)
115. K.V. Yatish, R. Mithun Prakash, C. Ningaraju, M. Sakar, **R. Geetha Balakrishna***, H.S. Lalithamba, Terminalia chebula as a novel green source for the synthesis of copper oxide nanoparticles and as feedstock for biodiesel production and its application on diesel engine, *Energy.*, 215, 119165, (2021)
116. C Ningaraju, KV Yatish, R Mithun Prakash, M Sakar, **R Geetha Balakrishna***, Gasoline pre-treated feedstock for the production of biodiesel with improved physicochemical properties, *Biomass Convers. Biorefin.*, 1-10, (2021)
117. Soumya Nagashri Manjunath, M Sakar, Manmohan Katapadi, **R Geetha Balakrishna***, Recent case studies on the use of ozone to combat coronavirus: Problems and perspectives, *Environ. Technol. Innov.*, 21, 101313 (2021)
118. Y.N. Teja, M. Sakar, K. Vinothkumar, **R. Geetha Balakrishna***, Large scale synthesis of silane functionalized near-superhydrophobic aluminium hydroxide particles via facile surface grafting technique, *Mater. Today Commun.*, 101744, (2021)
119. K. Vinothkumar, V. Suvina, M. Sakar, **R. Geetha Balakrishna**, Fe-based metal organic frameworks for the simultaneous detection of multiple metal ions in aqueous medium by square wave voltammetry method, *AIP Conf. Proc.*, 2265, 030172, (2020)
120. R. Shwetharani, T. Sushmitha, G.U. Preethi, **Geetha R. Balakrishna**, Amplification of active sites and porosity for the adsorption of QDs via the induction of rare-earth

element La into TiO₂ for enhanced photovoltaic effects in QDSSCs, *New J. Chem.*, 44, 20441-20448, (2020)

121. Bhakti Kulkarni, Mabkhoot Alsairi, Jyothi M.S., Kusuma J, Mohammed Jalalah, Farid A. Harraz, **R. Geetha Balakrishna**, Performance of functionalized 1T-MoS₂ as composite counter electrode material for QDSSCs and its analogy with 2H-MoS₂, *Mater. Res. Bull.*, 134, 111096, (2020)
122. K.V. Yatish, H.S. Lalithamba, M. Sakar, **Geetha R. Balakrishna**, B.R. Omkaresh, S.B. Arun, Parametric studies on the storage stability and aging effect of biodiesel treated with Eucalyptus oil as a cost-effective green-antioxidant additive, *Int. J. Energy Res.*, 44, 11711-11724, (2020)
123. Jesna George K, Vishaka Halali, Sanjayan C.G., V. Suvina, M. Sakar, **R. Geetha Balakrishna**, Perovskite nanomaterials as optical and electrochemical sensors, *Inorg. Chem. Front.*, 7, 2702-2725, (2020)
124. R. Shwetharani, Vignesh Nayak, M.S. Jyothi, **R. Geetha Balakrishna**, Review on recent advances of core-shell structured lead halide perovskites quantum dots, *J. Alloys Compd.*, 834, 155246, (2020)
125. Vishaka V. Halali, R. Shwetha Rani, **R. Geetha Balakrishna**, Srinivasa Budagumpi, Ultra-trace level chemosensing of uranyl ions; scuffle between electron and energy transfer from perovskite quantum dots to adsorbed uranyl ions, *Microchem. J.*, 156, 104808, (2020)
126. V. Suvina, Thangavelu Kokulnathan, Tzyy-Jiann Wang, **R. Geetha Balakrishna**, Lanthanum cobaltite supported on graphene nanosheets for non-enzymatic electrochemical determination of catechol, *Microchimica Acta*, 187, 1-7, (2020)
127. Vishaka V. Halali, **R. Geetha Balakrishna**, An expeditious method for the ultra-level chemosensing of uranyl ions, *Anal. Methods*., 12, 1070-1076, (2020)
128. Vignesh Nayak, Khantong Soontarapa, **R. Geetha Balakrishna**, Mahesh Padaki, V. Yu zadorozhnyy, S.D. Kaloshkin, Influence of TiO₂ charge and BSA-metal ion complexation on retention of Cr (VI) in ultrafiltration process, *J. Alloys Compd.*, 832, 153986, (2020)
129. Chandan Hunsur Ravikumar, R. Shwetharani, **R. Geetha Balakrishna**, Surface modified glass substrate for sensing *E. coli* using highly stable and luminescent CdSe/CdS core shell quantum dots, *J. Photochem. Photobiol. B, Biol.*, 204, 111799, (2020)
130. Vignesh Nayak, Jyothi M. S, **R. Geetha Balakrishna**, Mahesh Padaki, V. Yu Zadorozhnyy, S.D. Kaloshkin, 4-aminophenyl sulfone (APS) as novel monomer in fabricating paper based TFC composite for forward osmosis: Selective layer

- optimization, *J. Environ. Chem. Eng.*, 8, 103664, (2020)
131. V. Suvina, Thangavelu Kokulnathan, Tzyy-Jiann Wang, **R. Geetha Balakrishna**, Unraveling the electrochemical properties of lanthanum cobaltite decorated halloysite nanotube nanocomposite: An advanced electrocatalyst for determination of flutamide in environmental samples, *Ecotoxicol. Environ. Saf.*, 190, 110098, (2020)
 132. Bhavya MB, Sai Rashmi Manippady, Manav Saxena, Neena S John, **R Geetha Balakrishna**, Akshaya K Samal, Gold nanorods as an efficient substrate for the detection and degradation of pesticides, *Langmuir*, 36, 26, 7332-7344, (2020)
 133. Halali V Vishaka, Manav Saxena, HR Chandan, Anupam Anand Ojha, **R Geetha Balakrishna**, Paper based field deployable sensor for naked eye monitoring of copper (II) ions; elucidation of binding mechanism by DFT studies, *Spectrochim. Acta A Mol. Biomol.*, 223, 117291, (2019)
 134. MS Jyothi, V Jagadeesha Angadi, TV Kanakalakshmi, Mahesh Padaki, **Balakrishna R Geetha**, Khantong Soontarapa, Magnetic nanoparticles impregnated, cross-linked, porous chitosan microspheres for efficient adsorption of methylene blue from pharmaceutical waste water, *J Polym Environ*, 27, 2408-2418, (2019)
 135. KN Brinda, G Achar, JG Malecki, S Budagumpi, DH Nagaraju, V Suvina, **R. Geetha Balakrishna**, Glucose oxidase mimicking half-sandwich nickel (II) complexes of coumarin substituted N-heterocyclic carbenes as novel molecular electrocatalysts for ultrasensitive and selective determination of glucose, *Biosens. Bioelectron.*, 134, 24-28, (2019)
 136. S Yadav, K Soontarapa, MS Jyothi, M Padaki, **RG Balakrishna**, JY Lai, Supplementing Multi-functional groups to polysulfone membranes using Azadirachta indica leaves powder for effective and highly selective acid recovery, *J. Hazard. Mater.*, 369, 1-8, (2019)
 137. Thangavelu Kokulnathan, V. Suvina, Tzyy-Jiann Wang and **R. Geetha Balakrishna**, Synergistic design of a tin phosphate-entrapped graphene flake nanocomposite as an efficient catalyst for electrochemical determination of the antituberculosis drug isoniazid in biological samples, *Inorg. Chem. Front.*, 2019,6, 1831-1841, (2019)
 138. Pranav Kulkarni, Chepurthy Varnika, Beverly Low Ying Tong, Debasis Ghosh, **Geetha Balakrishna**, RS Rawat, S Adams, MV Reddy, Investigating the role of precipitating agents on the electrochemical performance of MgCO_3O_4 , *J. Electroanal. Chem.*, 851, 113403, (2019)
 139. Pranav Kulkarni, Debasis Ghosh, **Geetha Balakrishna**, RS Rawat, MV Reddy,

- Stefan Adams, Facile high yield synthesis of MgCo_2O_4 and investigation of its role as anode material for lithium ion batteries, *Ceram. Int.*, 45, 14775-14782, (2019)
140. TM Subrahmanya, Nagaraj S Naik, Mahesh Padaki, **R Geetha Balakrishna**, MS Jyothi, Sudesh Yadav, Wei-Song Hung, Synthesis of poly (4, 4'-biphenylene sulfonyl succinamide) -polysulfone blend membranes for removal of toxic metal ions from water, *J. Appl. Polym. Sci.*, 48254, (2019)
 141. B Hemavathi, K Jagadish, TN Ahipa, **RG Balakrishna**, Fabrication of TiO_2 /poly (3-Cyanopyridine-fluorene) hybrid nanocomposite as electron transport layer for dye sensitized solar cell, *J. Electroanal. Chem.*, 838, 136-141, (2019)
 142. B Hemavathi, S Akash, J Kusuma, T Devaiah, R Shwetharani, **R. Geetha Balakrishna**, Ahipa T. N., New 2-methoxy-4, 6-bis (4-(4-nitrostyryl) phenyl) nicotinonitrile: Synthesis, Characterization and dye sensitized solar cell study, *J. Photochem. Photobiol. A: Chem.*, 377, 75-79, (2019)
 143. R Shwetharani, DH Nagaraju, **RG Balakrishna**, V Suvina, Hydrogenase Enzyme like Nano catalysts FeS_2 and FeSe_2 for Molecular Hydrogen Evolution Reaction, *Mater. Lett.*, 248, 39-42, (2019)
 144. P Kulkarni, D Ghosh, **G Balakrishna**, RS Rawat, S Adams, MV Reddy, Investigation of MnCo_2O_4 /MWCNT composite as anode material for lithium-ion battery, *Ceram. Int.*, 45, 10619-10625, (2019)
 145. M. Sakar, R. Mithun Prakash, Kiran Shinde and **R Geetha Balakrishna**, Revisiting the materials and mechanism of metal oxynitrides for photocatalysis, *Int. J. Hydrog. Energy*, 45, 7691-7705, (2019)
 146. R. Shwetharani, H.R. Chandan, M. Sakar, **Geetha Balakrishna**, Kakarla Raghava Reddy, Anjanapura V. Raghunath, Photocatalytic semiconductor thin films for hydrogen production and environmental applications, *Int. J. Hydrog. Energy*, 45, 18289-18308, (2019)
 147. BJ Rajesha, V Halali Vishaka, **Geetha R Balakrishna**, Mahesh Padaki, NAM Nazri, Effective composite membranes of cellulose acetate for removal of benzophenone-3, *J. Water Process Eng.*, 30, 100419, (2019)
 148. K Raghav Reddy, B Hemavathi, **GR Balakrishna**, AV Raghunath, S Naveen, MV Shankar, Organic conjugated polymer-based functional nanohybrids: synthesis methods, mechanisms and its applications in electrochemical energy storage supercapacitors and solar cells, Micro and nano technologies, polymer composites with functionalized nanoparticles. *Elsevier, Amsterdam*, 357-379, (2019)
 149. B Hemavathi, V Jayadev, Praveen C Ramamurthy, Ranjith Krishna Pai, Narayanan Unni KN, TN Ahipa, Suraj Soman, **R Geetha Balakrishna**, Variation of the donor

- and acceptor in D-A- π -A based cyanopyridine dyes and its effect on dye sensitized solar cells, *New J. Chem.*, 43, 39, 15673-15680 (2019)
150. VH Vishaka, Manav Saxena, Sachin Latiyan, Shilpee Jain, **R Geetha Balakrishna**, Remarkably selective biocompatible turn-on fluorescent probe for detection of Fe³⁺ in human blood samples and cells, *RSC Adv.*, 9, 47, 27439-27448, (2019)
 151. M Sakar, **R Geetha Balakrishna**, SK Nataraj, Dibyendu Mondal, International Conference on Green Methods for Separation, Purification and Nanomaterials Synthesis (24-25th April 2018), *Mater. Today: Proc.*, 9, 491-498, (2019)
 152. Satyapriya Bhandari, Dibyendu Mondal, S. K. Nataraj, **R. Geetha Balakrishna**, Biomolecules Derived Quantum Dots for Sustainable Optoelectronics, *Nanoscale Adv.*, 1, 913-936, (2019)
 153. C. Lavanya, R. Geetha Balakrishna, Khantong Soontarapa, Mahesh S. Padaki, Fouling resistant functional blend membrane for removal of organic matter T and heavy metal ions, *J. Environ. Manage.*, 232, 372-381, (2019)
 154. C. Lavanya, Khantong Soontarapa, M.S. Jyothi, **R. Geetha Balakrishna**, Environmental friendly and cost effective Caramel for Congo red removal, high flux, and fouling resistance of Polysulfone membranes, *Sep. Purif. Technol.*, 211, 348-358, (2019)
 155. Chandan Hunsur Ravikumar, Manjunath Ira Gowda, **R Geetha Balakrishna**, An "OFF-ON" quantum dot-graphene oxide bioprobe for sensitive detection of micrococcal nuclease of Staphylococcus aureus, *Analyst*, 144, 13, 3999-4005, (2019)
 156. R Shwetharani, **R Geetha Balakrishna**, One-Pot Synthesis of Flower like FeS₂ as Counter Electrode for Quantum Dot Sensitized Solar Cells, *Mater. Today: Proc.*, 9, 594-598, (2019)
 157. M.S.Jyothi, Sudesh Yadav, **Geetha Balakrishna**, Effective recovery of acids from egg waste incorporated PSf membranes: A step towards sustainable development, *J. Membr. Sci.*, 549, 227-235, (2018)
 158. Chandan H. R, Vishnu Nair G, Muralikrishna S, Nagaraju D. H. and **R. Geetha Balakrishna**, Nanoflower like structures of MoSe₂ and MoS₂ as efficient catalyst for hydrogen evolution, *Mater. Lett.*, 220, 163-165, (2018)
 159. V. Suvina, S. Murali krishna, D. H. Nagaraju, J. S. Melo, **R. Geetha Balakrishna**, "Polypyrrole-Reduced Graphene Oxide Nanocomposite Hydrogels: Promising electrode material for the simultaneous detection of multiple heavy metal ions", *Mater. Lett.*, 232 209-212, (2018)
 160. B. Hemavathi, **R. Geetha Balakrishna** et al., Aggregation induced light harvesting of molecularly engineered D-A- π -A carbazole dyes for dye-sensitized solar cells, *Solar Energy*, 174 1085-1096, (2018)

161. B. Hemavathi, Arul Varman Kesava, G.K. Chandrashekar, Praveen C. Ramamurthy, Ranjith Krishna Pai, T.N. Ahipa **R. Geetha Balakrishna**, Polycondensation of thiophene-flanked cyanopyridine and carbazole via direct arylation polymerization for solar cell application, *React. Funct. Polym.*, 133, 1-8, (2018)
162. V.S.Babu, Mahesh Padaki, Laveena D'Souza, Sébastien Deon, **R. Geetha Balakrishna**, A.F.Ismail, Effect of hydraulic coefficient on membrane performance for rejection of emerging contaminants, *J. Chem. Eng.*, 2392-2400, 334, (2018)
163. Shwetha Rani R, Sakar Mohan, Chandan H R and **Geetha Balakrishna R**, Observation of Simultaneous Photocatalytic Degradation and Hydrogen Evolution on the Lanthanum Modified TiO₂ Nanostructures, *Mater. Lett.*, 220, 133-135, (2018)
164. Chandan H. R, Sakar Mohan, Ashesh Mahto, Ravishankar T N, Ramakrishnappa, Sergio Dupont, and **Geetha R Balakrishna**, Observation of oxo-bridged yttrium in TiO₂ nanostructures and their enhanced photocatalytic hydrogen generation under UV/Visible light irradiations, *Mater. Res. Bull.*, 104, 212-219, (2018)
165. SM Anush, B Vishalakshi, HR Chandan, **BR Geetha**, Heterocyclic modification of chitosan for the adsorption of Cu (II) and Cr (VI) ions, *Sep Sci Technol .*, 53, 13, 1979-1990, (2018)
166. J Kusuma, **R Geetha Balakrishna**, Siddappa Patil, MS Jyothi, HR Chandan, R Shwetharani, Graphene Ribbons Tilting the efficiency scales, *Curr. Sci.*, 115, 4, 603-603, (2018)
167. G Nagaraju, Alamelu K Ramasami, **Geetha R Balakrishna**, Jaitron Dupont, Ionic liquid-assisted hydrothermal synthesis of silver vanadate nanorods, *Iran J Sci Technol Trans A Sci*, 42, 451-456, (2018)
168. Prashant V Kamat, Rebecca Scheidt, **Geetha Balakrishna**, Steven Kobosko, Vikashkumar Iavi, Photocatalytic Aspects of CsPbBr₃ Perovskite Nanocrystals, *ECS Meeting Abstracts*, 233, 31 1842-1842 (2018)
169. Pranav Kulkarni, S. K. Nataraj, R. Geetha Balakrishna*, D. H. Nagaraju and M. V. Reddy Nanostructured binary and ternary metal sulfides: synthesis methods and their application in energy conversion and storage devices, *J. Mater. Chem. A*, 5 22040, (2017)
170. Prashant V Kamat, **Geetha Balakrishna**, Steven Kobosko, Effect of Iodide Treatment on the Photovoltaic Performance of Mixed Halide Perovskite Solar Cells, *Electrochemical Society Meeting Abstracts*, 233, 11, 908-908, (2017)
171. P. Nithyadharseni, **R Geetha Balakrishna**, B.V.R. Chowdari, M.V. Reddy, et al., Synthesis and Lithium Storage Properties of Zn, Co and Mg doped SnO₂ Nano Materials, *Electrochim. Acta*, 247, 1, 358, (2017)

172. Shwetharani and **Geetha Balakrishna**, La Activated High Surface Area Titania Float for Adsorption of Pb (II) From Aqueous Media, *New J. Chem.*, 1, 26, (2017)
173. B. Hemavathi, **R Geetha Balakrishna**, T.N. Ahipa, Alcohol soluble cyanopyridine based conjugated donor-acceptor polymers: Synthesis, photophysical and their charge transport behavior, *Eur. Polym. J.*, 95, 1–10, (2017)
174. M.S. Jyothi, Khantong Soontarapa, Mahesh Padaki, **R. Geetha Balakrishna**, Arun M Isloor, Favourable Influence of mPIAM on PSf Blend Membranes for Ion Rejection, *Journal of Membrane Science*, 533, 229, (2017)
175. zJyothi M S, **Geetha Balakrishna R**, Mahesh S Padaki, Eco-friendly Membrane Process and Product Development for Complete Elimination of Chromium Toxicity in Wastewater, *Journal of Hazardous Materials*, 332, 112, 1123, (2017)
176. S.Muralikrishna, D.H.Nagaraju, **R. Geetha Balakrishna**, WerasakSurareungchai, T.Ramakrishnappa, Avinash B.Shivanandareddy, Hydrogels of polyaniline with graphene oxide for highly sensitive electrochemical determination of lead ions, *Analytica Chimica Acta*, 990, 67-77, (2017)
177. Alamelu.K. Ramasami, M. V. Reddy, P. Nithyadharseni, B. V. R. Chowdarib, **Geetha. R. Balakrishna**, Gel-combustion synthesized vanadium pentoxide nanowire clusters for rechargeable lithium batteries, *J. Alloys Compd.*, 69, 850, (2017)
178. Vignesh Nayak, M.S. Jyothi, **R. Geetha Balakrishna**, Mahesh Padaki, Sebastien Deon, Novel modified poly vinyl chloride blend membranes for removal of heavy metals from mixed ion feed sample, *J. Hazard. Mater.*, 331, 289-299, (2017)
179. M S Jyothi, **R Geetha Balakrishna**, Mahesh Padaki, Sunlight Active PSf/TiO₂ Hybrid Membrane for Elimination of Chromium, *J. Photochem. Photobiol. A: Chem.*, 339, 89 – 94, (2017)
180. K Manjunatha, TS Koley, V Kandathil, RB Dateer, **G Balakrishna**, Magnetic nanoparticle-tethered Schiff base–palladium (II): Highly active and reusable heterogeneous catalyst for Suzuki–Miyaura cross-coupling and reduction of nitroarenes in aqueous medium at room temperature, *Appl. Organomet. Chem.*, 32 (4), e4266, (2017)
181. Vignesh Nayak, **R. Geetha Balakrishna**, Mahesh Padaki, Khantong Soontarapa, Zwitterionic ultrafiltration membranes for As (V) rejection, *Chem. Eng. J.*, 308, 347–358, (2017)
182. JB Rajesha, Alamelu K Ramasami, G Nagaraju, **Geetha R Balakrishna**, Photochemical elimination of Endocrine Disrupting Chemical (EDC) by ZnO nanoparticles, synthesized by gel combustion, *Water Environ. Res.*, 89, 5, 396-405,

(2017)

183. R. Shwetharani, **R. Geetha Balakrishna**, Efficient algal lipid extraction via photocatalysis and its conversion to biofuel, *Appl. Energy*, 168, 364, (2016)
184. Laveena P. D'Souza, R. Shwetharani, Vipin Amoli, C.A.N. Fernando, Anil Kumar Sinha, **R. Geetha Balakrishna**, Photoexcitation of Neodymium Doped TiO₂ for Improved Performance in Dye - Sensitized Solar Cells, *Mater. Des.*, 104, 346, (2016)
185. Chandan H. R, M. Venkataramana, Mahaveer D. Kurkuri, **Geetha Balakrishna R**, Simple quantum dot bioprobe/label for sensitive detection of Staphylococcus aureus TNase, *Sens. Actuators B Chem.*, 222, 1201–1208, (2016)
186. M.S. Jyothi, Vignesh Nayak, Mahesh Padaki, **R. Geetha Balakrishna**, Aminated polysulfone/TiO₂ composite membranes for an effective removal of Cr(VI), Khantong Soontarapa *Chem. Eng. J.*, 283, 1, 1494–1505, (2016)
187. Vignesh Nayak, Jyothi M S, **Geetha Balakrishna**, Mahesh Padaki and Arun M Isloor, Synthesis and characterization of novel sulfanilic acid-poly vinyl chloride - polysulfone blend membranes for metal ion rejection, *RSC Adv.*, 6, 25492, (2016)
188. Alamelu. K. Ramasami et al and **Geetha. R. Balakrishna**, Synthesis, Exploration of Energy Storage and Electrochemical Sensing Properties of Hematite Nanoparticles, *J. Alloys Compd.*, 671, 552–559, (2016)
189. T. N. Ravishankar, **Geetha R Balakrishna** and et al, Enhanced photocatalytic hydrogen production from Y₂O₃/TiO₂ nano-composites: A comparative study on hydrothermal synthesis with and without ionic liquid, *N J of Chem*, 40 (4), 3578-3587, (2016)
190. Swetharani and **Geetha R Balakrishna**, Photo-Active Float for Field Water Disinfection, *Photochem. Photobiol. Sci.*, 15 (3), 447, (2016)
191. Nithyadharseni, P., Reddy, M. V., Ozoemena, K. I., **Balakrishna, R. G.**, & Chowdari, B. V. R Electrochemical performance of BaSnO₃ Anode Material for Lithium-ion battery prepared by Molten salt Method, *J. Elect. Chem Soc.*, 163, 540, (2016)
192. 182. M.S. Jyothi, P. D'Souza Laveena, R. Shwetharani, **Geetha Balakrishna**, Novel hydrothermal method for effective doping of N and F into nano Titania for both energy and environmental applications, Material, *Res. Bull.*, 74, 478–484, (2016)
193. 183. TN Ravishankar, MO Vaz, S Khan, T Ramakrishnappa, SR Teixeira, **Geetha Balakrishna**, G Nagaraju, J Dupont, Ionic Liquid Assisted Hydrothermal Syntheses of TiO₂/CuO nano Composites for Enhanced Photocatalytic Hydrogen Production from Water, *Chemistry Select*, 1 (10), 2199-2206, (2016)
194. 184. S Muralikrishna, S Cheunkar, B Lertanantawong, T Ramakrishnappa, D.H. Nagaraju, Werasak Surareungchai, **R. Geetha Balakrishna**, K. Ramakrishna

- Reddy Graphene oxide-Cu (II) composite electrode for non-enzymatic determination of hydrogen peroxide, *J. Electroanal. Chem.*, 776, 1, 59–65, (2016).
195. VS Babu, MS Jyothi, R Shwetharani, Mahesh Padaki, **R Geetha Balakrishna**, Elimination of an Endocrine Disruptive Chemical by PSf/TiO₂ hybrid Membranes via Membrane Rejection and Photocatalytic Oxidation, *Journal of Applied Membrane Science & Technology*, 19, 1, (2016)
 196. Mahesh Padaki and **Geetha R. Balakrishna**, B.J. rajesha, H.R. Chandan, K. Sunil, Removal of BP-3 Endocrine Disrupting Chemical (EDC) using cellulose acetate and ZnO nano particles mixed matrix membranes, *Membr. Water Treat.*, 7, 6, (2016)
 197. Nithyadharseni, P., Reddy, M. V., Ozoemena, K. I., **Balakrishna, R. G.**, & Chowdari, B. V. R. Low temperature molten salt synthesis of Y₂Sn₂O₇ anode material for lithium-ion batteries. *Electrochimica Acta*, 182, 1060-1069, (2015)
 198. Laveena P. D'Souza, S Muralikrishna, Hunsur R. Chandan, T Ramakrishnappa and **R. Geetha Balakrishna**, Neodymium doped titania as photoanode and graphene oxide–CuS composite as counter electrode material in quantum dot solar cell, *Journal of Materials Research*, 30, 3241-3251, (2015)
 199. Alamelu K. Ramasami, M.V. Reddy, **Geetha R. Balakrishna**, Combustion synthesis and characterization of NiO nanoparticles, *Mater. Sci. Semicond. Process.*, 40, 194–202, (2015)
 200. Alamelu K. Ramasami, H. Raja Naika, H. Nagabhushana, T. Ramakrishnappa, **Geetha R Balakrishna**, G. Nagaraju, Tapioca starch: An efficient fuel in gel-combustion synthesis of photocatalytically and anti-microbially active ZnO nanoparticles, *Mater. Charact.*, 99, 266–276, (2015)
 201. Shwetha Rani R, CAN Fernando and **Geetha Balakrishna**, Excellent Hydrogen Evolution by a Multi Approach via Structure - Property Tailoring of Titania, *RSC Adv.*, 5, 39122-30, (2015)
 202. Laveena P. D'Souza, Vipin Amoli, Chandan H R, Anil Kumar Sinha, Ranjith Krishna Pai, **R Geetha Balakrishna**, Atomic Force Microscopic Study of Nanoscale Interaction between N719 dye and CdSe Quantum Dot in Hybrid Solar Cells and their Enhanced Open Circuit Potential, *Solar energy*, 116, 25-36, (2015)
 203. Vignesh Nayak, M S Jyothi, S. P Mahesh Padaki and **Geetha R Balakrishna**, Ahmad Fauzi Ismail, Preparation and Characterization of Chitosan Thin Films on Mixed-Matrix Membranes for Complete Removal of Chromium, *Chemistry Open*, 4, 278 – 287, (2015)
 204. Siddappa A Patil, Shivaputra A Patil, Renukadevi Patil, Rangappa S Keri, Srinivasa Budagumpi, **Geetha R Balakrishna** & Matthias Tacke, N-heterocyclic carbene

metal complexes as bio-organometallic antimicrobial and anticancer drugs, *Future Med. Chem.*, 7(10), 1305–1333, (2015)

205. M S Jyothi, S. P Mahesh Padaki and **Geetha R Balakrishna**, The Effect of UV Irradiation on PSf/TiO₂ Mixed Matrix Membrane for Chromium Rejection, *Desalination*, 354, 189-199, (2014)
206. Shwetharani, R and **Geetha Balakrishna R**, Comparative study of homogeneous and heterogeneous photo-oxidative treatment on bacterial cell via multianalytical techniques, *J. Photochem. Photobiol. A: Chem.*, 295, 11–16, (2014)
207. Chandan H. R, Saravanan V, Ranjith Krishna Pai and **Geetha R Balakrishna**, Synergistic Effect of Binary Ligands on Nucleation and Growth /Size Effect of Nanocrystals; Studies on Reusability of the Solvent, *J. Mater. Res.*, 29, 14, (2014)
208. Shwetharani, R., Jyothi, M.S., Laveena, P.D., **Balakrishna, R.G.** Photoactive Titania Float for Disinfection of water; Evaluation of Cell Damage by Bioanalytical Techniques, *Photochem. Photobiol.*, 90, (5) 1099–1107, (2014)
209. M. S., Jyothi, Padaki, Mahesh S, **Balakrishna, Geetha R.**, Pai, Dr. Ranjith Krishna, Synthesis and Design of PSf/TiO₂ Composite membranes for Reduction of Chromium (VI); Stability and Reuse of the Product and the Process, *J. Mater. Res.*, 29, 14, (2014)
210. M.V. Reddy et al, **R Geetha Balakrishna**, B.V.R. Chowdari, Studies on Bare and Mg-doped LiCoO₂ as a cathode material for Lithium-ion Batteries, *Electrochim. Acta*, 128, 192, (2014)
211. Keri, R.S., Budagumpi, S., Pai, R.K., **Balakrishna, R.G.** Chromones as a privileged scaffold in drug discovery: A review, *Eur. J. Med. Chem.*, 78, 340-374, (2014)
212. K. Suresh Kumar & T. Ramakrishnappa & **R. Geetha Balakrishna** & M. Pandurangappa, A Fluorescent Chemodosimeter for Hg²⁺ Based on a Spirolactam Ring-Opening Strategy and its Application Towards Mercury Determination in Aqueous and Cellular Media, 24(1), 67-74, *J. Lumin.*, (2013)
213. Laveena. P. D'Souza, Sindushree and **R. Geetha Balakrishna**, Bifunctional Titania Float for Metal Ion Reduction and Organics Degradation, via Sunlight, ACS, *Ind. Eng. Chem. Res.*, 52, 16162–16168, (2013)
214. HR Chandan, **Balakrishna R Geetha**, Study on precipitation efficiency of solvents in postpreparative treatment of nanocrystals, *J. Mater. Res.*, 28, 21, 3003-3009, (2013)
215. **R Balakrishna**, KS Rajesh, Design and Implementation of AMRP for Multi hop wireless Mobile ad hoc Networks, *Int J Adv Comput Sci Appl.*, 4, 4, 1662, (2013)
216. Swetha, Maheshwari Minchitha and **Geetha R. Balakrishna**, Elucidation of cell killing mechanism by various biochemical estimations", *Photochem Photobiol*,

88,414–422, (2012)

217. KU Minchitha and **Geetha R. Balakrishna**, Structural modification and property tailoring in titania for high efficiency in sunlight" *Mater. Chem. Phys.*, 136, 720-728, (2012)
218. Yongzhi Wu, Rajiv **Balakrishna**, MV Reddy, A Sreekumaran Nair, BVR Chowdari, S Ramakrishna, Functional properties of electrospun NiO/RuO₂ composite carbon nanofibers, *J. Alloys Compd.*, 517, 69-74, (2012)
219. Swetha, and **R. Geetha Balakrishna**, Preparation and Characterization of High Activity Zirconium- Doped Anatase Titania for Solar Photocatalytic Degradation of Ethidium Bromide" *Chin. J. Catal.*, 32: 1–0, (2011)
220. TV Shalini, TN Nagaraja, **Balakrishna Geetha**, D Ashok Satpute, Sheshagiri Shwetha, ANTI-BACTERIAL ACTIVITY OF RASAMANIKYA., Int J Res *Ayurveda Pharm.*, 2, 5, (2011)
221. TN Anitha, **R Balakrishna**, An efficient and scalable content based dynamic load balancing using multiparameters on load aware distributed multi-cluster servers, *Int.J. Eng. Sci. Technol.*, 3, 8, 6401-6411, (2011)
222. Prasanna Kumar Tirupati, Srilakshmi Dasari, KC Ragamala, **Geeta Balakrishna**, Shwetha Seshagiri, Anti-Microbial activity of Talakeshwara Ras, *Int. J. Ayurveda Res.*, 2, 1, (2011)
223. Swetha, Santhosh S. M. and **R. Geetha Balakrishna**, Enhanced Bactericidal Activity of Modified Titania in Sunlight against *Pseudomonas aeruginosa*, a Water-Borne Pathogen". *Photochem. Photobiol.*, 86, 1127-1134, (2010)
224. S.M. Santhosh Swetha. S, and **Geetha R. Balakrishna**, Structure and Photocatalytic activity of Ti_{1-x} MX O₂ (M = Zr, Co and Mo) Synthesized by Pulverized Solid State Technique" *Cent. Eur. J. Chem.*, 8, 453-460, (2010)
225. Swetha. S, S.M. Santhosh, and **Geetha R. Balakrishna**, Synthesis and Comparative Study of Nanotitanates over Degussa P-25 in Disinfection of Water, *Photochem. Photobiol.*, 86 (3), 628 – 632, (2010)
226. SM Santosh, **GR Balakrishna**, Catalysed degradation of indanthrene golden orange RG in sunlight with vanadium-doped TiO₂, *Int. J. Chem. Sci.*, 6, 1752-1771, (2008)
227. LG Devi, **RG Balakrishna**, Photocatalytic oxidation of indanthrene blue RS-An anthraquinone vat dye using TiO₂ photocatalyst, *Oxid. Commun.*, 29, 1, 31-40, (2006)
228. **R Geetha Balakrishna**, L Gomathi Devi, A study of photocatalytic oxidation of indanthrene red LGG an anthraquinone vat dye on TiO₂, *Pol. J. Chem.*, 79, 5, 919-

931, (2005)

229. L Gomathi Devi, **R Geetha Balakrishna**, Mass spectrometric and IR spectroscopic study of the destruction of environmentally hazardous Indanthrene Red FFB, a textile pollutant, *Res J Chem Environ.*, 8, 4, 62-72, (2004)
230. LG Devi, **RG Balakrishna**, UV-visible spectral study of oxidation of indanthrene red Vat dye by photocatalytic degradation over TiO₂ semiconducting particles, *Oxid. Commun.*, 27, 3, 571-576, (2004)