FACULTY PROFILE



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Date of Joining : **07-01-2011**

Current Professional status :

Areas of Academic Interest : Optics & Spectroscopy

Academic Achievements : PhD Awarded on 07.07.2022

PAPERS PRESENTED IN INTERNATIONAL SEMINARS:

- **Baiju V,** Dedhila Devadathan, Raveendran R, Adsorption Behaviour of Zinc Aluminate Nanocomposites at Four Different Temperatures on Pb2+ And Cd2+ Ions - A Case Study with Varying Contact Time, Adsorbent Dose & PH in an International Conference on "Fundamentals and Applications of Nanotechnology" (ICFAN 2024) organized by Chevalier T. Thomas Elizabeth College for Women, Chennai 11 on 05-01-2024
- **Baiju V**, Dedhila Devadathan, Raveendran R, Adsorption Behavior of Zinc Aluminate Nanocomposites at Four Different Temperatures on Pb2+ And Cd2+ Ions - A Case Study with Varying Contact Time, Adsorbent Dose & PH in an International Conference on "Fundamentals and Applications of Nanotechnology" (ICFAN 2024) organized by Chevalier T. Thomas Elizabeth College for Women, Chennai 11 on05-01-2024
- **Baiju V**, Dedhila Devadathan, Sajeevkumar G, Effect of Annealing on the Photocatalytic Degradation of Rhodamine B by Nickel oxide/Nickel Aluminate Nano Heterostructure, International Virtual Conference on Materials and Nanotechnology (IVCMN) – 2021, 29th and 30th April 2021, Jointly Organized by Guru Nanak College of Science, Ballarpur In Association with P R Pote (Patil) College of Engineering and Management, Amravati

in association with International Journal of Scientific Research in Science and Technology.

- **Baiju V**, Sheena Mary Y, Dedhila Devadathan, Sajeevkumar G, FTIR and Optical studies of different phases of Aluminium Oxide Nanoparticles Synthesized by Solution Combustion Method, International E-Conference on Synthesis, Characterization & Applications of Emerging Materials with Special Reference to Sustainable Technologies organized by Department of Applied Physics, Jabalpur Engineering College Jabalpur, MP under TEQIP-III during 22-24 February 2021.
- **Baiju V**, Dedhila Devadathan, Sajeevkumar G, Raveendran R, Adsorption Behaviour of Nickel Aluminate Nanocomposites at four different temperatures on Pb^{2+} and Cd^{2+} ions – A Case study with varying Contact time, adsorbent dose & pH, International E-Conference on Synthesis, Characterization & Applications of Emerging Materials with Special Reference to Sustainable Technologies organized by Department of Applied Physics, Jabalpur Engineering College Jabalpur, MP under TEQIP-III during 22-24 February 2021.
- Dedhila Devadathan, **Baiju V**, Sajeevkumar G, Raveendran R, Synthesis, Characterization and application of Zinc Aluminate for Photodegradation of Rhodamine B, International E-Conference on Synthesis, Characterization & Applications of Emerging Materials with Special Reference to Sustainable Technologies organized by Department of Applied Physics, Jabalpur Engineering College Jabalpur, MP under TEQIP-III during 22-24 February 2021.
- **Baiju V**, Dedhila Devadathan, Sajeevkumar G, Photocatalytic Degradation of Toxic Organic Pollutants Using Zinc Aluminate Nanocomposite, International Conference on Sustainable Technologies for Water Treatment and Desalination (STWTD 2020) organized by Department of Chemical Engineering, NIT Calicut during 18-19 December 2020.
- Dedhila Devadathan, **Baiju V** and Raveendran R, Temperature Dependent Structural and Optical studies of Polyindole, 4th interdisciplinary Symposium on Materials Chemistry, ISMC 2012, December 11-15, 2012, BARC, Mumbai.

PAPERS PRESENTED IN NATIONAL SEMINARS

- **Baiju V,** Naveen B. R and Dedhila Devadathan , Structural and Optical Characterizations of CuO Nanoparticles Coated with Curcumin in National Conference on Recent Trends in Energy and Environment-2022 (NSREE-2K22) Jointly organized by Post Graduate Department of Physics Sree Narayana College, Sivagiri, Varkala & KSCSTE on 8-9 December 2022.
- **Baiju V, Dedhila Devadathan, Sajeevkumar G,** Eco-friendly behaviour of Polyaniline based Nickel Aluminate Nanocomposite in the Removal of Cd (II) Ions from Polluted water, in the National online conference on "Emerging Trends In Science And Technology (NCETST-2021) held on 10th June 2021 organized by Arvindbabu Deshmukh Mahavidyalaya, Bharsingi, Dist- Nagpur, Maharashtra.

- **Baiju V**, Dedhila Devadathan, Raji.V.R, Sajeev Kumar G, Antibacterial activities of Polyaniline based Aluminium oxide Nanocomposites, E-Symposium on Recent Trends on Applications of Chemistry in Engineering (RTACE 2021)- 4th to 6th June 2021 organized by Department Of Chemistry Bharat Institute Of Engineering & Technology Telangana in Association With Association of Chemistry Teachers (ACT) & Institution's Innovation Council (IIC)..
- Nandana Babu, **Baiju V**, Dedhila Devadathan, Aluminates of Nickel and Cobalt – Comparative Structural Studies, E-Symposium on Recent Trends on Applications of Chemistry in Engineering (RTACE 2021) - 4th to 6th June 2021 organized by Department Of Chemistry Bharat Institute Of Engineering & Technology Telangana in Association With Association of Chemistry Teachers (ACT) & Institution's Innovation Council (IIC).
- Dedhila Devadathan, **Baiju V**,.,Raveendran R, Photocatalytic Degradation of Rhodamine B Dye Using Nickel Aluminate Nanocomposite, E-Symposium on Recent Trends on Applications of Chemistry in Engineering (RTACE 2021)- 4th to 6th June 2021 organized by Department Of Chemistry Bharat Institute Of Engineering & Technology Telangana in Association With Association of Chemistry Teachers (ACT) & Institution's Innovation Council (IIC).
- **Baiju V**, Dedhila Devadathan, Sajeevkumar G, Eco-friendly behaviour of PANI based Zinc Aluminate Nanocomposite in the Removal of Cd (II) Ions from Polluted water, Recent Trends in Acoustics and Material Science 2020 (RTAMS 2020), 28th to 30th November 2020, Organized By Department of Physics, School of Basic Sciences and Research Sharda University.
- **Baiju V**, Dedhila Devadathan, Sajeevkumar G, Eco-friendly behaviour of PANI based Zinc Aluminate Nanocomposite in the Removal of Cd (II) Ions from Polluted water, Online National Conference on "Recent Trends in Acoustics and Material Science 2020 (RTAMS 2020)" organized by Department of Physics, SBSR, Sharda University from 28-30 November 2020.
- Dedhila Devadathan, **Baiju.V**, Raveendran R, Polyindole based Nanocomposite for waste water treatment, Interdisciplinary Approaches In Materials And Biological Research, IAMBR - 2018, February 16 and 17, 2018, MG College Trivandrum.
- **Baiju V**, Dedhila Devadathan, Raveendran R, Photocatalytic degradation of Malachite green using ZnO/Al2O3 nanocomposite prepared from combustion method, Interdisciplinary Approaches In Materials And Biological Research, IAMBR - 2018, February 16 and 17, 2018, MG College Trivandrum.
- Dedhila Devadathan, **Baiju.V** Raveendran R, Conducting polymer based Nanocomposite as adsorbents for Heavy metal ions, "Reaching the Unreached Through Science and Technology - RURTST -2018", February 12-14, 2018, Sree Narayana College, Kollam.
- **Baiju.V**, Dedhila Devadathan, Raveendran R, Photocatalytic degradation of Organic Dye using ZnO/Al_2O_3 nanocomposite prepared from combustion method, "Reaching the Unreached Through Science and Technology - RURTST -2018", February 12-14, 2018, Sree Narayana College, Kollam.

- Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, Synthesis, Characterization And Application Of NiO/ZnO Heterostructured Adsorbent For Heavy Metal Ions, National Seminar on Advances in Functional Materials (AFM 2017), Sep 19 – 20, 2017, Department of Physics, All Saint's College, Thiruvananthapuram, Kerala.

- **Baiju V**, Dedhila Devadathan, Biju R, Raveendran R, Photocatalytic Degradation Studies of Polyaniline Based ZnO-Al_2O_3 Nanocomposite, National Seminar on Advances in Functional Materials (AFM 2017), Sep 19 – 20, 2017, Department of Physics, All Saint's College, Thiruvananthapuram, Kerala.

- Bhagya J, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, Synthesis, Characterization And Photocatalytic Activity Of MgO Nanoparticles, National Seminar on Advances in Functional Materials (AFM 2017), Sep 19 – 20, 2017, Department of Physics, All Saint's College, Thiruvananthapuram, Kerala.

- Dhanuja B. S, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, Synthesis, Characterization And Antibacterial Activity Of NiO Nanoparticles, National Seminar on Advances in Functional Materials (AFM 2017), Sep 19 – 20, 2017, Department of Physics, All Saint's College, Thiruvananthapuram, Kerala.

- Joyal Mary, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, Photocatalytic Degradation Of Azo Dye Congo Red Using Copper Oxide/Nickel Oxide Nanocomposite, National Seminar on Advances in Functional Materials (AFM 2017), Sep 19 – 20, 2017, Department of Physics, All Saint's College, Thiruvananthapuram, Kerala.

- Dedhila Devadathan, **Baiju V** and Raveendran R, Synthesis, Characterization and application of NiO/ZnO Heterostructured Photocatalyst, National Seminar on Recent Trends in Advanced Chemistry Research (RTACR – 2017), May 25-26, 2017, Post Graduate and Research Department of Chemistry, Sree Narayana College, Kollam, Sponsored by DST and KSCSTE.
- **Baiju V**, Dedhila Devadathan and Raveendran R, Photocatalytic Activities of Polyaniline Based ZnO-NiO Nanocomposite, National Seminar on Recent Trends in Advanced Chemistry Research (RTACR – 2017), May 25-26, 2017, Post Graduate and Research Department of Chemistry, Sree Narayana College, Kollam, Sponsored by DST and KSCSTE.
- Dedhila Devadathan, **Baiju V**, Raveendran R, Removal of Heavy Metal Ions from Industrial Effluents using a novel water purification method – Adsorption, National Seminar on Protection of Western Ghats: Issues, Concerns & Policy Alternatives, 27 & 28 Oct 2016, Department of Political Science, Sree Narayana College, Kollam in association with Association of Political Scientists-Kerala
- **Baiju V**, Dedhila Devadathan, Raveendran R, PANI Based Metal Oxide Nanocomposite – A Novel Material for Water Purification**,** National Seminar on Protection of Western

Ghats: Issues, Concerns & Policy Alternatives, 27 & 28 Oct 2016, Department of Political Science, Sree Narayana College, Kollam in association with Association of Political Scientists-Kerala

- **Baiju V**, Dedhila Devadathan, Ahalya Das M. R, Raveendran R , Aluminium oxide-Zinc oxide Nanocomposite as a photocatalyst and an antibacterial agent , Perspectives in Raman Spectroscopy, 15-16, October 2015**,** St Johns College Anchal.
- Dedhila Devadathan, **Baiju V** and Raveendran R, Synthesis, characterization and Photocatalytic Degradation Ativity of NiO/MgO Nanocompoite, National Seminar on Emerging Trends in Materials Science (ETMS 2014), 29th Sep - 1st Oct, 2014, Department of Chemistry, Sree Narayana College for Women, Kollam.
- Dedhila Devadathan, **Baiju V** and Raveendran R, Synthesis, Structural and Optical Studies of Polyindole Based Nickel Oxide Nanocomposite, NSNANO – 2014, 25-26, February 2014, Department of Physics, Sree Narayana College, Kollam.
- **Baiju V**, Dedhila Devadathan and Raveendran R, Structural and Optical Study of Cobalt - Nickel Oxide Nanocomposites Prepared by Co-Precipitation Method, NSNANO – 2014, 25-26, February 2014, Department of Physics, SreeNarayana College, Kollam.
- Dedhila Devadathan, **Baiju V** and Raveendran R, Polyindole based nickel oxide nanocomposite, National Seminar on Tomorrow's Material Science (TMS-2013) conducted by Department of Chemistry, Govt. College for Women, TVM on 11th Oct, 2013.
- **Baiju V** , Dedhila Devadathan and Raveendran R, Synthesis, Structural and Optical Studies of Cobalt - Zinc Oxide nanocomposite, National Seminar on Tomorrow's Material Science (TMS-2013) conducted by Department of Chemistry, Govt. College for Women, TVM on 11th Oct, 2013.

PAPER PUBLICATIONS

- Nandana Babu, Dedhila Devadathan, **Baiju V**, Sajeevkumar G, $NiAl_2O_4$ Nanocomposite via Combustion Synthesis for Sustainable Environmental Remediation, Nanosistemi, Nanomateriali, Nanotehnologii, 2,459-472 **(2022**).
- **Baiju V**, Dedhila Devadathan and Sajeevkumar G, Photocatalytic degradation of toxic organic pollutants using zinc aluminate nanocomposite, Materials Today: Proceedings,47(**2021**), 1507-1513 https://doi.org/10.1016/j.matpr.2021.06.066
- Dedhila Devadathan, Ardra S. Kumar, **Baiju V** and R Raveendran (**2021**) Comparative Assessment of Antibacterial Activity of CuO and MgO Nanoparticles, AIP proceedings https://doi.org/10.1063/5.0058468
- **Baiju V**, Dedhila Devadathan, Rejani P. Sajeevkumar G and Raveendran R (**2021**), Effect of annealing temperature in the purity of zinc aluminate synthesized by solution combustion method, AIP proceedings https://doi.org/10.1063/5.0058365
- Dedhila Devadathan, **Baiju V**, Deepa J. P, Raveendran R, (**2020**), The novel polyindole based ZnO/MgO nanocomposite adsorbent for the removal of heavy metal ions from industrial effluents, Nanosystems: Physics, Chemistry, Mathematics, 11 (6), 666–671.

- **Baiju V**, Dedhila Devadathan, Sajeevkumar G and Raveendran R, (**2020**), PANI based metal oxide nanocomposite-A novel material for water purification, Advances in Nanoscience and Nanotechnology, 4, 37-40.
- Megha S, Dedhila Devadathan, **V Baiju** and R Raveendran, (**2019**), Structural, Optical and Photocatalytic Degradation Studies of Polymer Based Fe_2O_3 Nanocomposite, IOP Conf. Series: Journal of Physics: Conf. Series 1172, 012051

- P K Anjali Nambiar, Dedhila Devadathan, **V Baiju** and R Raveendran, (**2019**), Structural and antibacterial studies of rice straw based ZnO nanocomposite, IOP Conf. Ser.: Mater. Sci. Eng. 577 012136

- Dedhila Devadathan, **Baiju V**, Raveendran R, (**2018**), Antibacterial studies of polyindole based metal oxide nanocomposites, Bulletin of Pure and Applied Sciences, Vol.37 C (Chemistry), No.1, 42-52.
- **Baiju V**, Dedhila Devadathan, Raveendran R, (**2018**), Photocatalytic degradation of an acidic dye and a basic dye using heterostructured photocatalyst, Bulletin of Pure and Applied Sciences, Vol.37 C (Chemistry), No.1, 35-41.

- Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, (**2017**), Synthesis, Characterization and Application of NiO/ZnO Heterostructured Adsorbent for Heavy Metal Ions, International Journal of Advance Research in Science and Engineering, 6, Special Issue No. 03, 194 – 198.

- **Baiju V**, Dedhila Devadathan, Biju R, Raveendran R, (**2017**), Photocatalytic Degradation Studies of Polyaniline Based ZnO-Al_2O_3 Nanocomposite, International Journal of Advance Research in Science and Engineering, 6, Special Issue No. 03, 120 – 124.

- Bhagya J, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, (**2017**), Synthesis, Characterization and Photocatalytic Activity of MgO Nanoparticles, International Journal of Advance Research in Science and Engineering, 6, Special Issue No. 03, 142 – 150.

- Dhanuja B. S, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, (**2017**), Synthesis, Characterization and Antibacterial Activity of NiO Nanoparticles, International Journal of Advance Research in Science and Engineering, 6, Special Issue No. 03, 162 – 167.

- Joyal Mary, Dedhila Devadathan, **Baiju V**, Biju R, Raveendran R, (**2017**), Photocatalytic Degradation Of Azo Dye Congo Red Using Copper Oxide/Nickel Oxide Nanocomposite, International Journal of Advance Research in Science and Engineering, 6, Special Issue No. 03, 284 – 287.

PROJECTS (MAJOR/MINOR)

- A novel capacitor from polymer –metal oxide nanocomposite (MRP(S)-0245/12-13/KLKE006 /UGC- SWRO dated 27.03.2014) Period 2014-2016

MEMBERSHIP PROFESSIONAL BODIES

- Indian Science Congress (L 33923)

ADMINISTRATIVE DISTINCTION

- NAAC Committee Member
- University Examination Chief Supdt.
- Admission Committee- Asst. Coordinator