

## CURRICULUM VITAE

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**Dr. B. KAVITHA M.Sc., M.Phil., Ph.D., PGDCT., CGT.**

Current address	W/O R. Ravikumar, 221, 1W, Vadivel Nagar, Pudhur, Bodinayakanur – 625513 Theni District	Date of Birth	10 <sup>th</sup> may 1989
		Nationality	Indian
		Place of birth	Bodinayakanur
Mobile phone	(+91)-9443301264 7397673789	<b>Permanent Address</b>  W/O R. Ravikumar, 221, 1W, Vadivel Nagar, Pudhur, Bodinayakanur – 625513 Theni District	
Email	<a href="mailto:kaviravee@gmail.com">kaviravee@gmail.com</a>		

ORCID ID: <https://orcid.org/0000-0002-4428-6528>

Google Scholar link:

[https://scholar.google.com/citations?hl=en&user=PIqbdioAAAAJ&view\\_op=list\\_works](https://scholar.google.com/citations?hl=en&user=PIqbdioAAAAJ&view_op=list_works)

### *Professional strengths*

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- **Citations -468, h-index - 12, i10-index - 15** in research publications.
- Received proficiency first prize in M.Phil., Chemistry
- Received proficiency second prize in B.Sc., Chemistry
- Received proficiency second prize in M. Sc., Chemistry
- Putting ten years of twelve years experience
- Possess research experience form 2011 onwards
- Possess excellent command over spoken and written English
- In-depth knowledge of the concepts, theories and experimentation techniques of Chemistry
- Possess excellent teaching and time management skills

## *Professional Records*

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<b>Degree/Course</b>	<b>Major</b>	<b>University/Institution Location</b>	<b>Year of Passing</b>	<b>Marks/ Grade</b>	<b>Class</b>
Ph.D.,	Chemistry	Bharathiar University, Coimbatore	2018	-	Commented
M.Phil.,	Chemistry	C.P.A. College, Bodinayakanur	2013	78 %	First
M. Sc.,	Chemistry	J. A. College for Women (Autonomous), Periyakulam	2011	D+ (83%)	First class with Distinction
B. Sc.,	Chemistry	J. A. College for Women (Autonomous), Periyakulam	2009	80.67 %	First class with Distinction
CGT	Gandhian Thought	J. A. College for Women (Autonomous), Periyakulam	2009	174	-
PGDCT	Computer Technology	Tamilnadu Job Oriented Programm, Cinnamanur	2008	B	-
HSC	Bio-Maths	Pankajam Girls Hr. Sec. School, Bodinayakanur	2006	86 %	-
SSLC	-	Pankajam Girls Hr. Sec. School, Bodinayakanur	2004	92 %	-

## *Professional Experience*

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- Worked as an Assistant Professor and Head i/c in C. P. A. College, Bodinayakanur from 2013 to till now.
- Worked as an Assistant Professor in Jayaraj Annapackiam College for women, Periyakulam from 2011 to 2012.

## *Awards / Recognition*

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- **Recognized as Research Supervisor in Madurai Kamaraj University, Madurai (ID.No:SF0001/23) Letter dated 31.01.2024.**
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2023 – 2024 for research publication
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2022 – 2023 for research publication
- **Indian Women Achiever Award 2022, International Research Association, London, UK.**
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2021 – 2022 for research publication.
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2020 – 2021 for research publication.
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2018 – 2019 for research publication.
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2017 – 2018 for research publication.
- Appreciation certificate received from Management, Cardamom Planters' Association College, Bodinayakanur for 2016 – 2017 for research publication.
- Chair Person, Second International Conference on Advanced Polymeric Materials (ICAPM – 2017), April 7-9, M. G. University, Kottayam, Kerala.

## *Resource Person*

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- Invited Talk, Insights into the adsorption mechanism of reduced graphene oxide functionalized WO<sub>3</sub> nanocomposite for removal of Cu(II) ions from aqueous solutions: Kinetics, Equilibrium, thermodynamics and artificial neural network modelling, 5<sup>th</sup> World congress on Advance Chemistry, Peers Alley Media, **Netherlands, 25<sup>th</sup> March 2024.**
- Invited Talk, Preparation of cottage industrial Goods, NSS Camp of Cardamom Planters' Association College at Kurangani, Febraury 2024.

- Invited Talk, Preparation of cottage industrial Goods, NSS Camp of Cardamom Planters' Association College at Kurangani, March 2023.
- Invited Talk, Surface Modified Metal oxide nanoparticles and its potential applications, Dr. Sr. Y. Yesuthangam Endowment Lecture Series, PG and Research Centre of Chemistry, J.A. College for Women, Periyakulam, 4<sup>th</sup> March 2022.
- Invited Talk, "Awareness Programme on Food Safety and Adulteration in Spices ", October 23, 2021, Spices Board, , Bodinayakanur
- Invited Talk, Career Guidance for B.Sc., and M.Sc., (Physics and Chemistry) students, 23<sup>rd</sup> March, 2021, Sri Sakthikailash College for Women, Salem.
- Invited Talk, Preparation of cottage industrial Goods, NSS Camp of Cardamom Planters' Association College at Kurangani, Febraury 2019.
- Invited Talk, Second International Conference on Advanced Polymeric Materials (ICAPM – 2017), April 7-9, M. G. University, Kottayam, Kerala.
- Resource Person, UGC Bridge Intensive Course, 2014, Cardamom Planters' Association College, Bodinayakanur.
- Resource Person, UGC Bridge Intensive Course, 2015, Cardamom Planters' Association College, Bodinayakanur.
- Resource Person, UGC Bridge Intensive Course, 2016, Cardamom Planters' Association College, Bodinayakanur.
- Resource Person, Bridge Intensive Course, 2017, Cardamom Planters' Association College, Bodinayakanur.

### *Membership in academic/Research bodies*

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- Co-ordinator, Extension Activities (SFC), C.P.A. College, Bodinayakanur.
- Faculty In-Charge, Diploma in Industrial Chemistry, Diploma in Food Processing, C.P.A. College, Bodinayakanur.
- Liaison officer, NAAC, C. P.A. College, Bodinayakanur.
- Member, Online Class Co-coordinating Committee, 2020-2021, C.P.A. College, Bodinayakanur.
- Co-coordinator, CPAC IAS Academy, C. P.A. College, Bodinayakanur.
- Member, Women Cell, C. P.A. College, Bodinayakanur.

- Member, EDC Cell, C. P.A. College, Bodinayakanur
- Member, Disastermanagment, C. P.A. College, Bodinayakanur.
- Member, Consultancy, C. P.A. College, Bodinayakanur.
- Additional Examiner, B.Sc., Chemistry Board, Central Valuation, MKU, Madurai.
- Examiner, PG Chemistry Board, Central Valuation, MKU, Madurai.
- Examiner, PG Chemistry Board, DDE, MKU, Madurai.
- Member, Protocol Committee, INSPIRE programmes, Feb – 2014 and Sep – 2014.
- Member, Protocol Committee, ETC – 05, 2014.
- Reviewer in various international journals.

### *Minor / Major Research Projects handled as Principal Investigator*

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UGC – F. No – MRP – 600/15(SERO), Photocatalytic activity of metal oxide nanocomposites for environmental remediation, Rs. 1,70,000/-, 2014-2016.

### *Student Project handled as Guide*

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TNSCST - BS-0112, Synthesis and characterization of carbonaceous supported metal nanocomposites for the electrochemical biosensors application in human blood serum and urine samples, Rs. 7,500, 2022-2023

### *Patent*

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**Design Patent:** Design number : 361324-001

Title: Nanofiber coated lab table

Published date: 17.03.2023

### *Project Guidance*

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- **M. Phil.**  
Degree awarded : 4
- **M.Sc.**  
Completed : 42  
Ongoing : -
- **B.Sc.**  
Completed : 3

**Title:** “Effect of Sulfonic acid functionalization of Vulcan-XC72 carbon black support of Pt/Vulcan-XC72 catalyst for methanol electro-oxidation studies”.

**Objectives:** To face the global energy demand, nowadays FUEL CELLS are developed as an alternative energy sources. It converts electrochemical energy to electricity with water and heat as byproduct. The functionalization of catalyst reduces the platinum utilization. It will increase the durability and then the proton conductivity of the Direct Methanol Fuel Cells. The development of FUEL CELLS leads to the pollution free environment.

### *Books Published*

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“A concise laboratory manual for Physical Chemistry” by RN Publishers, Sivakasi.  
ISBN No: 978-81-951522-1-6

### *Paper publications*

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1. **B. Kavitha**, K. Eswaran, Fabrication of Novel  $\text{CuWO}_4/\text{SnO}_2$  heterogeneous Photocatalyst for Efficient Degradation of Rose Bengal Dye under Visible Light Irradiation, *Iranian Journal of Material Science and Engineering*, 21(2), 2024, 1-13. (Scopus indexed Q3). IF - 0.89
2. A. Subalakshmi, **B. Kavitha**, N. Srinivasan, M. Rajarajan, A. Suganthi, Evaluation of Photocatalytic activity of  $\text{Cu}_3(\text{PO}_4)_2/\text{MgO}$  nanocomposite for the efficient removal of amaranth dye under solar light irradiation, *Inorganic Chemistry Communications*, 161 (2024) 112033. (Scopus indexed Q2). IF - 3.92
3. **B. Kavitha**, and D. Sarala Thambavani, Evaluation of adsorption potential of illite/quartz/kaolinite/montmorillonite for Cr(VI), Ni(II), and Cu(II) ions and modeling of experimental results by artificial neural networks, *Water Practice & Technology*, 18(10) 2023, 2223. (Scopus indexed Q3). IF - 1.6
4. **B. Kavitha**, S. Sharumathi, S. Sivakumar, Fabrication of  $\text{MnWO}_4$  modified ZnS nanocomposite as an effective nanoadsorbent: Experimental investigation and neural network modeling, *Journal of Water and Environmental Nanotechnology*, 8(1): 79-93, 2023 (Scopus indexed - Q3). IF - 1.3

5. C. Gowri Shankari, **B. Kavitha** and M. Kalanithi, Synthesis and characterization of phytochemical fabricated Ag doped ZnO nanoparticles with *Ficus benghalensis* and their enhanced antibacterial and photocatalytic applications, *Research Journal of Chemistry and Environment*, 27 (3) (2023) (**Scopus indexed Q4**).
6. K. Eswaran, L. Yong Rok, **B. Kavitha**, Fabrication of a visible-light-driven p-type NiWO<sub>4</sub>/n-type SnO<sub>2</sub> heterojunction with efficient photocatalytic activity for degradation of Amaranth, *Journal of Chinese Chemical Society*, 2022, 1. (**Scopus indexed Q3**). IF – 1.9
7. Y. Sheik Mohideen Badhusha, **B. Kavitha**, M. Rajarajan, P. Tharmaraj, A. Suganthi, Synthesis of Co and Cu codoped ZnO nanoparticles by citrate gel combustion method: Photocatalytic and antimicrobial activity, *Journal of Water and Environmental Nanotechnology*, 7(2): 143-154, 2022. (**Scopus indexed – Q3**). IF – 1.3
8. M. Sathiyapriya, R. Arunadevi, **B. Kavitha**, Facile green synthesis, characterization and solar assisted photocatalytic effect of Ni<sub>2</sub>O<sub>3</sub> using *Catharanthus roseus* aqueous extract, *Journal of Applied Chemical Science International*, 13(3) (2022) 1-12.
9. **B. Kavitha**, R. Deepa, S. Sivakumar, *Evolvulus alsinoides* plant mediated synthesis of Ag<sub>2</sub>O nanoparticles for the removal of Cr(VI) ions from aqueous solution: modeling of experimental data using artificial neural network, *Materials Today Sustainability* 18 (2022) 100124. (**Scopus indexed Q1**). IF – 8.57
10. A. Subalakshmi, **B. Kavitha**, A. Karthika, S. Nikhil, N. Srinivasan, M. Rajarajan, A. Suganthi, Design of Mn and Zr incorporated Ag<sub>2</sub>O nanoparticles and their enhanced photocatalytic activity driven by visible light irradiation for degradation of rose bengal dye, *New Journal of Chemistry*, 45 (2021) 1876-1886. (**Scopus indexed**) Q2. IF - 3.59
11. A. Subalakshmi, **B. Kavitha**, N. Srinivasan, M. Rajarajan, A. Suganthi, An affordable efficient SrWO<sub>4</sub> decorated Bi<sub>2</sub>O<sub>3</sub> nanocomposite: Photocatalytic activity for the degradation of methylene blue under visible light irradiation, *Materials Today Proceedings* 48(2) (2022) 409-419. (**Scopus indexed Q2**). IF – 2.59
12. P. Nivetha, **B. Kavitha**, M. Kalanithi, Investigation of photocatalytic and antimicrobial activities of BaWO<sub>4</sub> - MoS<sub>2</sub> nanoflowers, *Journal of Science: Advanced Materials and Devices* 6 (2021) 65 -74. (**Scopus indexed Q1**). IF – 8.6

13. **B. Kavitha** and D. Sarala Thambavani, Artificial neural network optimization of adsorption parameters for Cr(VI), Ni(II) and Cu(II) ions removal from aqueous solutions by Riverbed Sand, *Iranian Journal of Chemistry and Chemical Engineering* 39 (5) (2020) 203 - 223. **(Scopus indexed Q3). IF - 1.91**
14. K. Palpandi , K. Eswaran, **B. Kavitha**, Novel Sphere CuO/Ag<sub>3</sub>PO<sub>4</sub> Nanocomposites with Enhanced Visible Light Photocatalytic Activity for Degradation of Amaranth, *Journal of Applicable Chemistry*, 9 (2) (2020) 229-239. **IF- 2.56**
15. **B. Kavitha**, R. Karthiga, Synthesis and characterization of CuWO<sub>4</sub> as nano-adsorbent for removal of Nile blue and its antimicrobial studies, *Journal of Materials and Environmental Science*, 11(1) ( 2020) 57-68.
16. A. Subalakshmi, **B. Kavitha**, N. Srinivasan , M. Rajarajan A. Karthika, A. Suganthi, A Facile Novel Synthesis of Cadmium oxide Nanoparticle Decorated Oleic acid with Enhanced Photocatalytic activity for the Degradation of Crystal Violet under Solar Light Irradiation, *Journal of Applicable Chemistry*, 8 (6) (2019) 2348-2359. **IF- 2.56**
17. R. Arunadevi, **B. Kavitha**, M. Rajarajan, A. Suganthi, Sonochemical synthesis and high-efficient solar-light-driven photocatalytic activity of novel Cobalt and Manganese codoped Tungsten oxide nanoparticles, *Chemical Physics Letters*, 17 (2019), 252 – 262. **(Scopus indexed Q2). IF - 2.38**
18. R. Ajithkumar, R. Arunadevi, **B. Kavitha**, Studies on the Removal of Auramine-O and Cu (II) ions from aqueous solutions using activated charcoal loaded Silver Chloride, *Research Journal of Chemistry and Environment*, 22 (2018) 72-83. **(Scopus indexed Q4). IF - 0.247**
19. P. Gowtham , **B. Kavitha**, R. Arunadevi , R. Sivaperumal, Removal of anionic dye Congo red from aqueous solution by ZnO-Montmorillonite as adsorbent: Equilibrium and kinetics, *International Journal of Advanced Scientific Research and Management*, 3 (12) (2018), 110-116. **(UGC Approved Journal No: 63502). IF - 5.015**
20. R. Arunadevi, **B. Kavitha**, Biosorption of Copper (II ) Ions by Eclipta Alba Leaf Powder from Aqueous Solutions, *International Journal of Trend in Scientific Research and Development*, 2 (2018), 1775 – 1782. **IF - 7.251**



21. P. Kodisundram R. Sivaperumal P. Lisa, **B. Kavitha**, R. Arunadevi, Application of kinetic, isotherm and thermodynamic models for the adsorption of Cr(VI) ions on activated charcoal, *International Journal of Research and Analytical Reviews*, 5 (2018) 790-799. (UGC Approved Journal NO: 43602) IF - 7.17
22. M. Krishnan, R. Arunadevi, **B. Kavitha**, R. Karthiga, Effect of Fe and Cu codoped NiMoO<sub>4</sub> nanoparticles on the photocatalytic degradation of Methylene blue Under visible light irradiation, *Asian Journal of Research in Chemistry*, 11 (2018) 663-670. IF - 0.53
23. R. Arunadevi, **B. Kavitha**, M. Rajarajan, A. Suganthi, Synthesis of Ce/Mo-V<sub>4</sub>O<sub>9</sub> nanoparticles with superior visible light photocatalytic activity for Rhodamine-B degradation, *Journal of Environmental Chemical Engineering*, 6 (2018) 3349-3357. (Scopus indexed Q1). IF - 8.1
24. R. Karthiga, **B. Kavitha**, Green synthesis and characterization of zinc oxide (ZnO) nanoparticles using *Achrassapota* Linn latex and its antimicrobial activity, *International Journal of Creative Research Thoughts*, 6(2) (2018) 615 – 620. (UGC Approved Journal No: 49023). IF - 7.97
25. R. Karthiga, **B. Kavitha**, M. Rajarajan, A. Suganthi, Synthesis of MoO<sub>3</sub> micro-rods via phytoconstituents of Azadirachtaindicaleaf to study the cationic dye degradation and antimicrobial properties, *Journal of Alloys and Compounds* 753 (2018) 300-307. (Scopus indexed Q1). IF - 6.67
26. R. Arunadevi, **B. Kavitha**, M. Rajarajan, A. Suganthi, An eco-friendly highly stable and efficient Ni- C-S codoped wurtzite ZnO nanoplate: a smart photocatalyst for the quick removal of food dye under solar light irradiation, *Separation Science and Technology* 53(2018) 1-12. (Scopus indexed Q2). IF - 3.23
27. **B. Kavitha**, R. Arunadevi and M. Justin Diraviam, Degradation of methylene blue under solar light using Quartz – Bi<sub>2</sub>WO<sub>6</sub> nanocomposites, *International Journal of Modern Trends in Engineering and Research* 5(1) (2018) 38-45. IF - 5.278
28. R. Arunadevi, **B. Kavitha**, M. Rajarajan, A. Suganthi, A. Jayamurugan, Investigation of the drastic improvement of photocatalytic degradation of Congo red by monoclinic Cd-Ba/CuO nanoparticles, *Surfaces and Interfaces* 10 (2018) 32 - 44. (Scopus indexed Q1). IF - 6.6

29. K. Eswaran, S.Sivaraman, **B. Kavitha**, E. MuthuPrema, M. Rajarajan, S. Park, Facile fabrication of CuO-Pb<sub>2</sub>O<sub>3</sub> nanophotocatalyst for efficient degradation of Rose Bengal dye under visible light irradiation, *Applied Surface Science* 433 (2018) 206–212. **(Scopus indexed Q1). IF –7.3**
30. R. Arunadevi, **B. Kavitha**, P. PandiSudha, M. Rajarajan, A. Suganthi, Photocatalytic enhancing for tin oxide nanoparticles by codoping with nitrogen and bismuth, *Desalination and Water Treatment* (2017) 1-11. **(Scopus indexed Q3). IF – 1.631**
31. **B. Kavitha** and D. Sarala Thambavani, Kinetics, equilibrium isotherm and neural network modeling studies for the sorption of hexavalent chromium from aqueous solution by quartz/ feldspar/wollastonite, *RSC Advances* 6 (2016) 5837 – 5847. **(Scopus indexed Q2). IF – 4.08**
32. K. Buvaneswari, R. Karthiga, **B. Kavitha**, M. Rajarajan, A. Suganthi, Effect of FeWO<sub>4</sub> doping on the photocatalytic activity of ZnO under visible light irradiation, *Applied Surface Science* 356 (2015) 333–340. **(Scopus indexed Q1). IF – 7.3**
33. R. Karthiga, **B. Kavitha**, M. Rajarajan, A. Suganthi, Photocatalytic and antimicrobial activity of NiWO<sub>4</sub> nanoparticles stabilized by the plant extract, *Materials Science in Semiconductor Processing* 40(2015)123–129. **(Scopus indexed Q1). IF – 4.51**
34. **B. Kavitha** and D. SaralaThambavani, Characterization of riverbed sand from MullaiPeriyar, Tamilnadu by FT-IR, XRD and SEM/EDAX, *Asian Journal of Chemistry*, 27(4) 2015 1506 – 1508. **(Scopus indexed Q4) (UGC Approved Journal No: 8774) IF – 0.36**
35. **B. Kavitha** and D. Sarala Thambavani, Adsorption of Chromium (VI) Ions by Riverbed Sand from MullaiPeriyar, Tamilnadu, *Chemical Science Reviews and Letters*, 3(12) 2014 847-859. **(UGC Approved Journal No.45864). IF – 6.97**
36. D. Sarala Thambavani and **B. Kavitha**, Study on the Physico-Chemical characteristics of Riverbed sand in Suruli Falls at Theni District of Tamil Nadu, India, *International Journal of Universal Pharmacy and Bio sciences* 3(2) (2014) 201430. **IF -1.89**
37. D. SaralaThambavani and **B. Kavitha**, Removal of Chromium (VI) ions by adsorption using riverbed sand from Tamilnadu – A kinetic study, *International Journal of Research* 1(4) 2014 718. **IF – 3.541**
38. D. Sarala Thambavani and **B. Kavitha**, Prediction and simulation of Chromium (VI) ions removal efficiency by riverbed sand adsorbent using Artificial Neural Networks,

*International Journal of Engineering Sciences & Research Technology* 3(5) 2014  
906. **IF - 1.852**

39. D. SaralaThambavani and **B. Kavitha**, Minerological characterization of river bed soil from Tamil Nadu by FT-IR, XRD and SEM/EDAX, **International Journal of Advanced Research** 2(2) (2014) 656. **IF - 1.659**
40. **B. Kavitha** and D. SaralaThambavani, Physico-Chemical Characterization of Riverbed Sand from Mullai Periyar, Tamilnadu, *IOSR Journal of Applied Chemistry (IOSR-JAC)*, 7 (9) 2014 54-56. **IF - 1.327**
41. Y. Yesu Thangam, R. Anitha, **B. Kavitha**, Novel method to synthesize and characterize Zinc Sulfide nanoparticles, *Int. Journal of Applied Sciences and Engineering research* 1(2) (2012) 282. **IF - 0.94**
42. S. Chandravathanam, **B. Kavitha**, B. Viswanathan, Y. Yesu Thangam, Study of Vulcan XC-72 carbon black support of Pt/Vulcan XC-72 catalyst for methanol electrooxidation, *Indian Journal of Chemistry*, 51A (2012) 704. **(Scopus indexed Q4). IF - 0.66**

#### *Proceedings publications*

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1. C. Gowri Shankari, **B. Kavitha**, M. Kalanithi, Ecofriendly synthesis of Ag doped ZnO nanoparticles using *Ficus benghalensis* leaf extract: characterization and antibacterial activity, *JAC JOSHAM*, 8 (2) (2021), 1-10.
2. R. Savitha, **B. Kavitha**, Synthesis, optical, structural and morphological properties of Bi<sub>2</sub>O<sub>3</sub> nanoparticles and its photocatalytic activity, *Proceedings on National conference on Materials in Suitable Chemistry (NCMSC-19)*, (2019), 28 – 35.
3. P. Nivetha, **B. Kavitha**, M. Kalanithi, Synthesis, characterization and photocatalytic activity of BaWO<sub>4</sub> nanoparticles, Proceedings of the National Seminar on *National seminar on Recent Trends in Chemistry (RTC - 10)*, (2019), 138-144.
4. R. Karthiga, **B. Kavitha**, K. Vignesh, M. Rajarajan, A. Suganthi, Photosynthesis of ZnO nanoparticles using *Mirabilis jalapa* flower extract and evaluation of its antimicrobial activity, *Proceedings on National conference on Recent Developments in Green Chemistry*, (2013), 7 -11.

### International Conferences

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1. Y. Yesu Thangam, R. Anitha, **B. Kavitha**, Antioxidant analysis in fruits, International Symposium on Innovations in Free Radical Research and Experimental Therapeutics held on December 7 -9, 2011, Karunya University, Coimbatore, India.
2. **B. Kavitha**, R. Karthiga, K. Vignesh, M. Rajarajan and A. Suganthi, Visible light assisted photocatalytic degradation of methylene blue dye using FeWO<sub>4</sub> modified ZnO nanoparticles, Third International Conference on Advanced Oxidation Process held on September 25 – 28, M.G. University, Kerala.
3. **B. Kavitha** and D. Sarala Thambavani, Artificial Neural Network Approach for the Adsorption of Chromium (VI) Ions from its Aqueous Solution by Riverbed Sand, International conference on energy, environment, Materials and safety held on December 10 – 12, 2014, Cochin University of Science and Technology, Cochin.
4. **B. Kavitha** and D. Sarala Thambavani, Prediction of adsorption efficiency for the removal of Chromium (VI) ions using Lavenberg-Marquardt algorithm, International conference on environment and energy held on December 15 – 17, 2014, Jawaharlal Nehru Technological University, Hyderabad.
5. **B. Kavitha** and D. Sarala Thambavani, Removal of chromium (VI) ions from aqueous solutions by riverbed sand as adsorbent: Process optimization using artificial neural networks, International conference on water: From pollution to purification held on January 23 – 26, 2015, M.G. University, Kottayam.
6. **B. Kavitha**, R. Karthiga, M. Rajarajan, A. Suganthi Fabrication of NiWO<sub>4</sub> Modified SnO<sub>2</sub> Nanoparticles and its Photocatalytic Activity under Visible Light Irradiation, International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015) 13-15, November 2015, M.G. University, Kottayam.
7. **B. Kavitha** and D. Sarala Thambavani, Evaluation of adsorption potential of riverbed sand for Cr(VI), Ni(II) and Cu(II) ions: Process optimization using artificial neural networks, 6<sup>th</sup> International Conference on Metals in Genetics, Chemical Biology and Therapeutics (ICMG-2016), February 17-20, 2016, Indian Institute of Science, Bangalore.
8. D. Inbarathi, R. Arunadevi, **B. Kavitha**, Fabrication of NiS and CuWO<sub>4</sub> modified g-C<sub>3</sub>N<sub>4</sub> nanoparticles with highly enhanced photocatalytic degradation of organic pollutants, International Conference on Modern Trends in Chemistry (MTC-25), 23<sup>rd</sup> February, 2018, Vivekananda College, Tiruvedakam.

9. P. Kalaivani, R. Arunadevi, **B. Kavitha**, Enhancement of visible-light photocatalysis by coupling with narrow band gap semiconductor: Synthesis of  $\text{Bi}_2\text{S}_3/\text{SrWO}_4$  and application for degradation of tatzazine and methylene blue, International Conference on Modern Trends in Chemistry (MTC-25), 23<sup>rd</sup> February, 2018, Vivekananda College, Tiruvedakam.
10. S. Kamatchi Kanmani, R. Arunadevi, **B. Kavitha**, Facile and sonochemical synthesis of  $\text{WO}_3$  supported  $\text{CoV}_2\text{O}_8$  for high visible-light photocatalytic activity and stability, , International Conference on Modern Trends in Chemistry (MTC-25), 23<sup>rd</sup> February, 2018, Vivekananda College, Tiruvedakam.
11. P. Parthipan, R. Arunadevi, **B. Kavitha**, Green synthesis of Tin oxide nanoparticles using leaf extract of *Solanumnigrumas* a highly efficient photocatalyst for degradation of congo red under solar light irradiation, International Conference on Modern Trends in Chemistry (MTC-25), 23<sup>rd</sup> February, 2018, Vivekananda College, Tiruvedakam.
12. R. Rajkumar, R. Arunadevi, **B. Kavitha**, Preparation and characterization of Copper phosphate/fly-ash and its exploitation as a catalyst in the degradation of phenol under solar radiation, International Conference on Modern Trends in Chemistry (MTC-25), 23<sup>rd</sup> February, 2018, Vivekananda College, Tiruvedakam.
13. S. Devi, E. Pitchaimani, **B. Kavitha**, R. Arunadevi, Biogenic production of CaO nanoparticles using *Murraya Koenigiisparg* leaf extract for adsorptive removal of crystal violet dye, International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University, Madurai.
14. S. Gayathri, P. Muthulakshmi, A. Malathy, R. Arunadevi, **B. Kavitha**, Activated carbon modified NiO nanoparticles: Fabrication, characterization and photocatalytic degradation of Rhodamine – B, International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University-Madurai.
15. G. Kavitha, P. Hemavathi, R. Arunadevi, **B. Kavitha**,  $\text{CaV}_3\text{O}_7/\text{CuO}$  nanocomposites with highly improved activity for photodegradation of Amaranth under visible light, International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University, Madurai.
16. A. Kowsalya, S. Sharumathi, R. Arunadevi, **B. Kavitha**, *Terminalia Chebula* seeds extract assisted green synthesis of BaO nanoparticles and photocatalytic degradation of methylene blue, International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University, Madurai.
17. S. Krishnaveni, G. Baminipriya, **B. Kavitha**, R. Arunadevi, Fabrication of  $\text{C}_3\text{N}_4/\text{Fe}_3\text{O}_4$  photocatalyst with enhanced visible-light photocatalytic activity,

- International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University, Madurai.
18. A. Muthupandiyammal, R. Arunadevi, **B. Kavitha**, Enhanced photocatalytic degradation of Cu, Zn decorated ZrO<sub>2</sub> nanoparticles under solar light irradiation, International Conference of Nanomedicine (ICON-2019), February 25 & 26, 2019, Madurai Kamaraj University, Madurai.
  19. **B. Kavitha**, R. Arunadevi, S. Sivakumar, Removal of direct yellow dye using SnO<sub>2</sub> nanoparticles embedded on activated carbon: Equilibrium, kinetic studies and artificial neural network modeling, International conference on recent trends in chemistry and biosciences (ICRTCB-2019), 16<sup>th</sup> & 17<sup>th</sup> May 2019, Madurai Kamaraj University, Madurai.
  20. S. Sharumathi, **B. Kavitha**, S. Sivakumar, Fabrication of MnWO<sub>4</sub> modified ZnS nanocomposite as an Effective Nanoadsorbent : Experimental Investigation and Neural Network Modeling, International Conference on Advances in Chemistry with Specific reference to catalysis, Sensors, Drug Delivery and Energy Materials [ICACSEM – 2020], 9-10 January 2020, University of Madras, Chennai.
  21. **B. Kavitha**, R. Durga, Green Synthesis of ZrO<sub>2</sub> Nanoparticles using Pedalium Murex Plant Extract and its Antimicrobial Activity, Three-Day International E-Conference organized by Department of Natural Products Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai, Tamil Nadu, India, 20-22<sup>nd</sup> January, 2022.
  22. **B. Kavitha**, S. Sivakumar, Evolvulus Alsinoïdes plant mediated synthesis of Ag<sub>2</sub>O nanoparticles for removal of Cr(VI) ions from aqueous solution: Modelling of experimental data using Artificial Neural Network, ICTSGS-1 conference, Yamagata University, Japan November 2022.
  23. V. Nithyapriya, **B. Kavitha**, Biosynthesis of BaO nanoparticles using Clitoria ternatea leaf extract and its antimicrobial activity Three-days International Workshop /Summer School & Course Preparation on “Solar Water Splitting and Artificial Photosynthesis” SWAP 2023 at Madurai Kamaraj University, Madurai from 05- 07, June 2023.
  24. **B. Kavitha**, K. Eswaran, R. Manikandan, S. Sivakumar Adsorptive Removal of Rhodamine B from Aqueous Environment using Green-synthesized V<sub>2</sub>O<sub>5</sub> nanoadsorbents from Dodonaea viscosa Leaf Extract: Optimization of Experimental Data using Artificial Neural Networks modeling”, International Conference on Next Generation Materials and Devices, Kalasalingam Academy of Research and Education Krishnankoil, August 1 to 3, 2024.

1. Y. Yesu Thangam, S. Chandravathanam, **B. Kavitha**, Effect of sulfonic acid functionalization of Vulcan -XC 72 carbon black support of Pt/Vulcan-XC 72 catalyst for methanol electro-oxidation studies, National conference on advanced functional materials and applications (NCAFMA-2011), 16<sup>th</sup> and 17<sup>th</sup> December 2011, Kalasalingam University, Krishnankoil.
2. Y. YesuThangam, S. Chandravathanam, **B. Kavitha**, Synthesis and characterization of semiconductor Cadmium Sulfide nanoparticles by Sol – Gel Method, National seminar on Modern trends in chemistry (MTC-2012) green chemistry, February 23-24, 2012. Department of chemistry, PSNA college of Engineering and technology Dindigul. TamilNadu.
3. **B. Kavitha**, J. Dhanamary, S. Sennammal, M. Vijayalakshmi, Morphology Controlled synthesis and Characterization of lead sulfide nanoparticles by Sol – Gel method, National conference on Recent Trends in Chemistry, 15<sup>th</sup> and 16<sup>th</sup> March, 2012, HKRH College, Uthamapalayam.
4. **B. Kavitha**, R. Hariharan, M. Velmurugan, A. Suganthi, M. Rajarajan, Investigation of optical properties of CdS nanoparticles embedded in silica matrix, Second National conference on advanced functional materials and applications (NCAFMA-2013), 22<sup>nd</sup> and 23<sup>rd</sup> March 2013, Kalasalingam University, Krishnankoil.
5. D. Sarala Thambavani, **B. Kavitha**, Sorption of chromium ions from aqueous solution onto riverbed sand, National conference on Recent Advances in Water and Waste water Treatment (RAWWT-2014), 21<sup>st</sup> and 22<sup>nd</sup> March 2014, The Gandhigram Rural Institute Deemed University, Gandhigram.
6. **B. Kavitha** and D. Sarala Thambavani. Adsorption of chromium (VI) ions on riverbed sand: effect of agitation time, pH, concentration and spectrometric investigation, National seminar on Modern trends in chemistry (MTC-2014) green chemistry, 24-25 July, 2014, Department of chemistry, PSNA college of Engineering and technology Dindigul, TamilNadu.
7. **B. Kavitha** and D. Sarala Thambavani. Adsorption of chromium (VI) ions from its aqueous solution by riverbed sand: Modelling of experimental results using artificial

- neural networks, National Seminar on Water Crisis: The challenges ahead of Global Governance, 27 – 28 August, 2014, PSG Krishnammal College for Women, Coimbatore.
8. **B. Kavitha**, R. Karthiga, K. Vignesh, M. Rajarajan and A. Suganthi, Visible light driven photocatalytic degradation of congo red dye using Ni/CdS/SiO<sub>2</sub> nanoparticles, National Conference on Advanced Developments of Medicinal Chemistry in Target Drug Design, 11-12 September, 2014, Kongunadu Arts and Science College, Coimbatore.
  9. **B. Kavitha**, R. Karthiga, K. Vignesh, M. Rajarajan and A. Suganthi, Visible Light Driven Photodegradation of crystal violet using ZnO/Bi<sub>2</sub>Mo<sub>3</sub>O<sub>12</sub>nanocomposites, National Seminar on Emerging Trends in Chemistry – 05, 18 – 19 September, 2014, Cardamom Planters Association College, Bodinayakanur.
  10. **B. Kavitha**, R. Karthiga, M. Rajarajan, A. Suganthi, Artificial neural network modeling of photodegradation of rose Bengal using CuWO<sub>4</sub> modified SnO<sub>2</sub> nanoparticles under visible light irradiation, National conference on Frontier Areas in Chemistry, Feb 26 – 27, 2015, Thiagarajar College, Madurai.
  11. **B. Kavitha** and D. Sarala Thambavani, Neural network model and isotherm study for removal of Ni (II) from aqueous solution by riverbed sand, National Seminar on Emerging Trends in Chemistry (ETC-16), January 6, 2016, Sadakathullah Appa College, Tirunelveli.
  12. **B. Kavitha** and D. SaralaThambavani, Optimization and modelling of adsorptive removal of Cu(II) and Ni(II) using Levenberg-Marquart algorithm by quartz/feldspar/wollastonite, National seminar on Recent Trends in Chemistry (RTC – 7), January 11 – 12, 2017, Jayaraj Annapackiam College for Women, Periyakulam.
  13. P. Kalaivani, S. Kamatchi Kanmani, R. Arunadevi, **B. Kavitha**, Synthesis, optical, morphological and photocatalytic properties of SrWO<sub>4</sub> nanoparticles, National seminar on Recent Trends in Chemistry (RTC – 8), January 23, 2018, Jayaraj Annapackiam College for Women, Periyakulam.
  14. R. Rajkumar, R. Arunadevi, **B. Kavitha**, Enhanced photocatalytic performance of Copper phosphate modified with Cetyltrimethyl ammonium bromide nanoparticles under solar light irradiation, National seminar on Recent Trends in Chemistry (RTC – 8), January 23, 2018, Jayaraj Annapackiam College for Women, Periyakulam.



15. D. Inbarathi, R. Arunadevi, **B. Kavitha**, Study of photocatalytic activities of  $C_3N_4$  decorated NiS nanoparticles synthesized by microwave-assisted method, National seminar on Recent Trends in Chemistry (RTC – 8), January 23, 2018, Jayaraj Annapackiam College for Women, Periyakulam.
16. P. Parthipan, R. Arunadevi, **B. Kavitha**, Biogenic production of Tin Oxide nanoparticles using *Phyllanthus Niruri* plant extract, National seminar on Recent Trends in Chemistry (RTC – 8), January 23, 2018, Jayaraj Annapackiam College for Women, Periyakulam.
17. R. Savitha, **B. Kavitha**, Synthesis, optical, structural and morphological properties of  $Bi_2O_3$  nanoparticles and its photocatalytic activity, Materials in Sustainable Chemistry (NCMSC'19), 27 – 28 September, 2019, Sadakathullah Appa College, Tirunelveli.
18. R. Savitha, **B. Kavitha**, Facile fabrication of  $NiWO_4$  nanoparticles and its photocatalytic degradation of methylene blue under visible light irradiation, National seminar on Recent Trends in Chemistry (RTC – 10), December 2019, Jayaraj Annapackiam College for Women, Periyakulam.

### *Participation*

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1. Three weeks online workshop on Electrochemical data analysis during 05 – 23 June 2023, Organized by Guru Nanak Dev University Amristar, India and SIAS Research Forum, Kohinoor, Kerala.
2. Teacher Development Programme of “ENHANCING TEACHERS COLLECTIVE EFFICACY DURING PANDEMIC”, March 17, 2022, Cardamom Planters Association College, Bodinayakanur.
3. Two weeks FDP Course on “Directions and Dimensions of Accreditation Criteria in the light of NEP for HEIs” organized by the Electronics and ICT Academy at PDPM IIITDM, Jabalpur in association with Sri Sankara Arts and Science College, Kanchipuram during 3 Feb to 12 Feb, 2022.
4. International level Three Day International E-Conference on “Electrochemical Techniques and their Applications in the Development of Sensors ”, January 20-22, 2022, Madurai Kamaraj University, Madurai.

5. State level Webinar on " Advance Materials - Webinar Series 2021 - EVENT 2: Materials Characterization Using Non Destructive Testing ", September 20, 2021, St. Joseph College, Trichy.
6. National level Webinar on " webinar on "Higher Education Service Offered by INFLIBNET Centre, IUC of UGC" ", August 5, 2021, VIGNAN'S Foundation for Science Technology and Research, Vadlamudi, Guntur, Andhra Pradesh, INDIA.
7. Webinar on "International Webinar on semiconductor Photocatalysis ", July 14, 2020, Cardamom Planters Association College, Bodinayakanur.
8. State level Webinar on "Webinar on Fluorescent inorganic nanoparticles for optical sensing and energy applications ", July 13, 2020, Latha Madavan Arts and Science College, Kidaripatti.
9. Faculty Development Programme on "Faculty development Programme on E-content development ", June 6-8, 2020, Cardamom Planters Association College, Bodinayakanur.
10. State level Webinar on "webinar on "Nano Structured Metal Oxide and Its Hybrids for Environmental and Biological Application", June 4, 2020, PSNA college of Engineering and technology, Dindigul.
11. Three Days Faculty Development Programme on "Advanced Molecular Chemistry, June 1-3, 2020, Arulmigu Palaniandavar College of Arts & Culture, Palani.
12. State level Faculty Development Programme on "BEYOND ACADEMIC EXCELLENCE - A REALITY SHOW ", May 20-26, 2020, NALLAMUTHU GOUNDER MAHALINGAM COLLEGE, Pollachi.
13. Faculty Development Programme on Professional Ethics II: 'A Teacher - A Leader' and Innovative Teaching, January 5, 2019, Cardamom Planters Association College, Bodinayakanur.
14. State level Workshop on "Two days technical workshop on Intellectual Property Rights", December 7-8, 2018, Thiravium College of Arts and Science for Women, Kailasapatti, Theni (Dt).
15. Faculty Development Programme on "Enhancing Learning through Innovative Strategies and Digital Technologies ", April 12, 2018, Cardamom Planters Association College, Bodinayakanur.

16. Workshop on "UGC sponsored workshop on Applications of Analytical Instruments and Career Guidance", August 19, 2015, Cardamom Planters Association College, Bodinayakanur.
17. Seminar on "One day seminar on Emerging Trends in Medicinal Plants and natural products (ETMPNP) ", August 4, 2015, Cardamom Planters Association College, Bodinayakanur.
18. State level Workshop on "Indian Academies of Sciences sponsored Lecture - Workshop on Recent Trends in Chemistry (RTC - 05) ", December 15-16, 2011, Jayaraj Annapackiam College for Women, Periyakulam.

### *Programmes Organized*

<b>S.No</b>	<b>Position</b>	<b>Programme</b>	<b>Date</b>	<b>Name</b>	<b>Institution</b>
1	Convener	International seminar	4.08.2023	International Seminar on C-H Activation And Functionalization	C.P.A. College, Bodinayakanur
2	Organizing Committee Member	Young Student Scientist Programme - 2022	18.05.2022 to 01.06.2022	Young Student Scientist Programme - 2022	C.P.A. College, Bodinayakanur
3	Convener	Skill Development Programme	10 <sup>th</sup> May 2022 to 13 <sup>th</sup> May 2022	ISPD Programming	C.P.A. College, Bodinayakanur
4	Organizing Secretary	Webinar	December 18, 2021	Webinar on Conducting Polymer based composites for Biosensor Applications	C.P.A. College, Bodinayakanur
5	Convener	Skill Development Programme	September 20-26, 2021	One Week Employability Skill Development Programme	C.P.A. College, Bodinayakanur
6	Member	Seminar	September 18 -20, 2021	Emerging Trends in Chemistry (ETC - 05, 2014)	C.P.A. College, Bodinayakanur

### *Software skills*

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- Software's : Origin, ChemDraw, orguslab, Matlab, SPSS

### *Areas of Interest*

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- Photocatalytic degradation of pollutants for environmental remediation
- Adsorption of heavy metal ions by natural adsorbents
- Artificial neural networks

### *Instruments Handled*

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- UV – Visible Spectroscopy
- FT-IR Spectroscopy
- X – Ray Diffractometer
- Cyclic Voltammeter
- Spectrofluoremeter
- UV-vis-DRS
- Heber photoreactor
- COD Analyzer
- BOD Incubator

Date : 13.08.2024

Place : Bodinayakanur.

(Dr. B. KAVITHA)