



## **Dr. LAVAKUSA BANAVATU**

**Lecturer in Chemistry  
Government Degree College**

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**Pin : 534460**

### **Educational Qualifications**

#### **Under Graduation**

2012 - **B.Ed, Acharya Nagarjuna University**

2008 - **B.Sc, Kakatiya University**

#### **Post Graduation**

2010 - **M.Sc Analytical Chemistry, Acharya Nagarjuna University**

### **Doctoral Details**

Received **Ph.D** degree From **Andhra University** for work on “ Development of Graphene Oxide and Graphite based Bismuth molybdate nanocomposites for Photocatalytic degradation of Organic Pollutants, Reduction of Nitrophenols and Anti microbial Application” under **Prof. K. Basavaiah** Awarded on **06-06-2019**.

### **Scholarships, Honors & Awards**

- Basic Scientific Research Fellowship (BSR) From UGC, New Delhi
- National Fellowship for Higher Education (NFST) From UGC, New Delhi and Ministry of Tribal Welfare, Government of India

## Professional Experience

- Guest Faculty, Andhra University from 10-07-2014 to 27-12-2016.
- Lecturer in Chemistry (Regular), V.K.R. Degree College, Buddhavaram from 10-08-2017 to 09.09.2021
- Lecturer in Chemistry (Regular), Government Degree College, Chintalapudi from 10.09.2021 to till date

## Academic Guidance/ Students Project Work

1. Synthesis of graphene oxide by modified hummers method and characterization – 2019 Batch , VI Semester.
2. Water Quality analysis of Water pond at Chikkavaram, Gannavaram Mandal - 2018 Batch, VI Semester
3. Synthesis and Characterization of Graphene Oxide Nanocomposites – 2020 Batch , VI Semester

## Journal Publications

1. *Synthesis and Photocatalytic Activity of GO/Bi<sub>2</sub>FeMoO<sub>6</sub> Composite under Visible Light Irradiation*., **Lavakusa Banavatu**, P. Durga Prasad, A. V. Ramesh, K. Basavaiah., International Journal of Science and Research (IJSR), Volume 5 Issue 12 (2016) ,1731-1735.
2. “ *Facile Synthesis and Characterization of Tetraaniline Nanostructures via Self-Assembly Method*”., Y. PAVAN KUMAR, A.V. RAMESH, **B.LAVAKUSHA**, B. SATISH MOHAN,NEWAY BELACHEW1, D.

RAMADEVI and K. BASAVAIAH., Chemical Science Transactions., Volume 5 Issue 4, 2016

3. “ *FACILE SYNTHESIZE OF GRAPHENE OXIDE BY MODIFIED HUMMER’S METHOD AND DEGRADATION OF METHYLENE BLUE DYE UNDER VISIBLE LIGHT IRRADIATION*”., **B. Lavakusa**, B. Sathish Mohan, P.Durga Prasad, Neway Belachew and K.Basavaiah., International Journal of Advanced Research (IJAR)., Volume 5, Issue 3 (2016),405-412.
4. “*Synthesis of  $\gamma$ -Bi<sub>2</sub>MoO<sub>6</sub> by Co-precipitation method and evaluation for photocatalytic degradation of Rhodamine B, Crystal violet and OrangeII dyes under Visible light irradiation*”.**Lavakusa Banavatu**,D.Srinivasarao and K. Basavaiah., Asian Journal of Chemistry, Vol 30 No 1(2018) 97-102.
5. *A Facile Plant Mediated Synthesis of Magnetite Nanoparticles Using Aqueous Leaf Extract of Ficus Hispida L. for Adsorption of Organic Dye* A.V.Ramesh , **B.Lavakusa** , B. Satish Mohan ,Y. Pavan Kumar , D.RamaDevi , K.Basavaiah, IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736.Volume 10, Issue 7 Ver. I (July. 2017), PP 35-43
6. *Enhancement of Photocatalytic activity of  $\gamma$ - Bi<sub>2</sub>MoO<sub>6</sub> with Graphite flake under Visible light irradiation* **Lavakusa Banavatu** , A.V.Ramesh , N.Srinivasa Rao and K.Basavaiah, IOSR Journal of Applied Chemistry (IOSR-JAC) e-ISSN: 2278-5736.Volume 10, Issue 7 Ver. I (July. 2017), PP 11-17
7. *A FACILE GREEN SYNTHESIS OF ZnO NANORODS USING LEAF EXTRACT OF FICUS HISPIDA L.* A.V.Ramesh, Y.Pavankumar, **B.Lavakusa**, K.Basavaiah., International Journal of Engineering Applied Sciences and Technology, 2017 Vol. 2, Issue 4, ISSN No. 2455-2143, Pages 256-260.

8. *Selective synthesis of visible light active  $\gamma$ -Bismuth Molybdate nanoparticles for efficient photocatalytic degradation of methylene blue, reduction of 4-nitrophenol and antimicrobial activity.*, **B. Lavakusa**, Ramadevi Dharmasoth; Belachew Neway; K. Basavaiah. RSC. Adv, 2020, 10,36636.
9.  $\gamma$ -Bi<sub>2</sub>MoO<sub>6</sub> @ GRAPHENE OXIDE NANOCOMPOSITE SYNTHESIZED BY PRECIPITATION METHOD FOR THE DEGRADATION OF ORGANIC POLLUTANT AND INHIBITION OF MICROBIAL GROWTH UNDER VISIBLE LIGHT DRIVEN., **B. Lavakusa** and K. Basavaiah., RSC Adv (Communicated )

### **Books/ Book Chapter**

1. **Graphene Importance in Nanoscience – Communicated, Scieng publication**

### **Refresher Course/Induction Programme/FDP**

2. **Orientation course** held from 25-05-2018 to 21-06-2018 ( 4 Weeks) at **UGC-HRDC**, Andhra University
3. **Online Refresher Course in Chemistry for Higher Education** through **ARPIT – SWAYAM**, Exam held on 16.02.2020
4. **Faculty Development Programme** on Recent Trends in Teaching Learning Methodologies Using ICT in Higher Education Institutions held from 24-10-2019 to 30-10-2019 ( 7 Days ) at Sir C.R.Reddy College, Eluru.
5. **All India Faculty Development Programme** on Emerging Trends in Online Education held from 01-07-2021 to 14-07-2021 ( 2 weeks ),

organized by **UGC-HRDC**, Bhagat Phool Singh Mahila Viswavidyalaya University, Haryana through Virtual/Online mode.

6. **One week virtual Faculty Development programme** on Research Design, Ethics & Metrics held from 18-10-2021 to 23-10-2021 organized by K.B.N. College, Vijayawada
7. Skill Development Programme on Add-On Course on Petroleum Chemistry and Processing held from 08-12-2015 to 12-12-2015 ( 5days ) organized by College of Science and Technology, Andhra University.
8. Skill Development Programme on Value based Add-On Course on Pharmaceutical Quality Management held from 26-10-2010 to 30-10-2015 ( 5 Days ) organized by College of Science and Technology, Andhra University.

### **Conference/Seminars - Paper presentation**

1. International Conference on Recent Advances in Chemical, Pharmaceutical and Life Processes, **Oral presentation paper** entitled “ *Facile Synthesis and Characterization of Bismuth Molybdate nanocomposite Via Co-precipitation method; Influence of  $P^H$  for the formation of various phases and evaluation of photocatalytic activity under visible light Irradiation*” Organized by Andhra University, during 13-07-2019 to 15-07-2019.
2. International Conference on Materials for Energy and Environmental Protection, **Presented a paper** entitled “ *Synthesis of Bismuth Molybdate via co-precipitation method at different PH condition and photocatalytic degradation of methylene blue dye under visible light irradiation*” Organised by Sir C.R.Reddy College, Eluru during 12, 13 February, 2018.

3. Two-Day National Conference on Advanced Molecular Spectroscopic Techniques, **Presented a paper** entitled “*A Facile L-Methionine mediated synthesis of biocompatible super paramagnetic magnetite nanoparticles*” Organized by the Department of Chemistry, Government College(A), Rajahmundry during 21 & 22 August 2015.
4. Two Day National Seminar on Recent Advances and Challenges in Chemistry, **Presented a paper** entitled “*Dielectric and Magnetic studies of Sol-Gel synthesized  $Fe_3O_4$  nanoparticle*” Organized by Department of Chemistry, Dr. V. S. Krishna Government Degree College (A), Visakhapatnam, during from 31-01-2017 to 01-02-2017.
5. National Seminar on Recent Trends in Chemical Speciation, Kinetics and Nanomaterials (RTCSKN 2017), **Poster entitled** “*synergy effect of Bismuth molybdate different phases for dyes degradation for water treatment process*” Organized by Department of Inorganic and Analytical Chemistry, Andhra University during 3<sup>rd</sup> & 4<sup>th</sup> March, 2017.
6. The 104<sup>th</sup> Indian Science Congress held at S. V. University, Tirupathi from January 3 to 7, 2017, **Poster entitled** “*Enhancement of Photocatalytic activity of Bismuth molybdate with Graphite flake under visible light Irradiation.*”
7. Two Day National Seminar on Recent Trends in Chemistry and Physics of Materials ( RTCPM 2017), **Presented a Paper** entitled “*Facile synthesis and characterization of Bismuth molybdate nanocomposite via Co-precipitation method*” Organized by Department of Chemistry, SRR & CVR Govt. Degree College (A), Vijayawada during 15<sup>th</sup> & 16<sup>th</sup> September, 2017.
8. Two Day National Seminar on Environmental Pollution-Public Responsibility, **Presented a Paper** entitled “*Synthesis of reduced graphene oxide ( rGO) based bismuth molybdate nanocomposite and removal of*

*organic dyes from pollutant water”* Organized by Department of Chemistry, Andhra Layola College during 31<sup>st</sup> January & 1<sup>st</sup> February 2018.

9. National Seminar on Chemical Speciation in Biology and Marine Environment (CSBME 2019), **Oral entitled** “*Synthesis and Characterization of r-GO for adsorption of water contained organic pollutants*” Organized by School of Chemistry, Andhra University during 29<sup>th</sup> & 30<sup>th</sup> September, 2019.

### Conference/Seminars – Participation

1. One day International Seminar on Chemical Physics and Engineering (ISOCPE 2019) held during 16<sup>th</sup> July, 2019 Organized by the Department of Engineering Physics and Chemistry, AUCE (A), Andhra University.
2. One day International Conference on Domestic Violence held during 13<sup>th</sup> December, 2018 organized by Women Empowerment Cell & IQAC, Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijayawada.
3. National Seminar on Importance of Cultural Change in Other Languages held on 5<sup>th</sup> & 6<sup>th</sup> of August, 2017, Organized by Central Institute of Indian Languages, Mysore at V.K.R.College, Gannavaram.
4. National Seminar on Perspective on Solid Waste Management (NSSWM-2017), Organized by Department of Biosciences & Biotechnology, Krishna University, Machilipatnam. Held during 12<sup>th</sup> – 13<sup>th</sup> October 2017.
5. Two day National Seminar on The Role of Chemist for Sustainable Environment, Organized by the Department of Chemistry, KBN College in collaboration with Krishna University, Machilipatnam on 13<sup>th</sup> & 14<sup>th</sup> December, 2017.

## Workshop

1. Two day Science Academies Lecture workshop on Application of quantum mechanics to optics organized by the Department of Physics & Electronics, K.B.N. College, Vijayawada during 1<sup>st</sup> & 2<sup>nd</sup> February, 2019.
2. Two day National workshop on Planning of Smart City – Waste Management – Pollution Control held during 5<sup>th</sup>-6<sup>th</sup> June, 2015, Sponsored by APPCB & Organized by Department of Chemistry, Chemical Engineering & Civil Engineering, ANITS, Sangivalasa, Visakhapatnam.
3. National Workshop on Advanced Analytical and Molecular Techniques held on 30<sup>th</sup> November & 1<sup>st</sup> December, 2015 at Advanced Analytical Laboratory, DST – PURSE Programme, Andhra University, Visakhapatnam.
4. One day State Level Workshop on CLUSTER ELECTIVES of CBCS held on 16-12-2017, Organized by SRR & CVR Government Degree College (A), Vijayawada.
5. National Workshop on SPACE DYNAMICS (NWSD) on the Occasion of World Space Week 4<sup>th</sup> – 10<sup>th</sup> October, 2017, Organized by Sir C.R. Reddy College (A), Eluru.
6. International Workshop (Online) on Exploring the Science of Atmosphere from Space held on 26<sup>th</sup> August 2020, Organized by the Department of Physics, K.L.University, Vijawada.

## Webinar/Virtual Conference/Seminar



1. National Webinar Series on Innovation to Start-Up session titled Design thinking and Innovation Contest Organized by Institution Innovation Council, Kumaraguru College of Technology, Conducted on 14 June 2021.
2. National Webinar on Covid-19; Issues and Challenges, Organized by Operant Pharmacy Federation & M.T.B College Campus, Surat, held on 29<sup>th</sup> August, 2020.
3. Three Day Faculty Training Programme on the topic ‘ Writing Research Papers and Anti-Plagiarism software – Open Access tools ( Research Methodology) held on 9<sup>th</sup> – 11<sup>th</sup> August 2020.
4. Two Day International FDP on High Impact Teaching Skills and Mind Mapping for Better Teaching held on 19<sup>th</sup> – 20<sup>th</sup> August 2020, Organized by International Center for Business Studies, Manipal Academy of Higher Education, Manipal.
5. Faculty Development Programme, National Webinar on ‘ICT Enabled Higher Education in India; Challenges and Opportunities’ Organized by Guru Angad Dev Teaching Learning Center, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of MHRD held on April 15, 2020.
6. Faculty Development Programme, National Webinar on ‘Challenges and Opportunities before Indian Higher Education due to Covid 19’ Organized by Guru Angad Dev Teaching Learning Center, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of MHRD held on May 2, 2020.
7. Faculty Development Programme, National Webinar on ‘ Corona Pandemic and Economic Challenges in India’ Organized by Guru Angad Dev

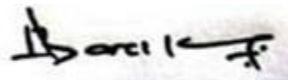
Teaching Learning Center, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of MHRD held on May 4, 2020.

### Research Area

- ✚ Graphene based Metal Oxide Nanocomposite
- ✚ Bimetallic and Metal Oxide Nanocomposite
- ✚ Photocatalytic activity and Water Purification by using Nanocomposites
- ✚ Material Science and Nano-Technology
- ✚ Inorganic Chemistry

### Membership

- ❖ Life Member of Indian Science Congress Association, Kolkata.



( Dr. B. LAVAKUSA )