Dr. BASAVARAJU MANU

Associate Professor,
Department of Civil Engineering,
NITK, Surathkal
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PROFESSIONAL EXPERIENCE

Associate Professor, Department of Civil Engineering, NITK Surathkal (May 2018-present).
Assistant Professor, Department of Civil Engineering, NITK Surathkal (October 2009– May 2018).
Lecturer, Department of Civil Engineering, NITK Surathkal (December 2007 – September 2009)
Reader, Department of Civil Engineering, MIT Manipal (August 2007- December 2007)
Lecturer, Department of Civil Engineering, MIT Manipal (February 2006- July 2007)

h-index:13 and i-10 index:14 (https://scholar.google.co.in/citations?user=MI5BPHwAAAAJ&hl=en)
ORCID ID: 0000-0002-0814-1612
Scopus Author ID: 54788060500

TEACHING AND RESEARCH INTERESTS

(i) Principles of environmental engineering, (ii) Application of biological processes and advanced oxidation processes for water and wastewater treatment and (iii) Environmental management system

B.Tech., M.Tech. and Ph.D. Thesis Guidance

Ph.D. Thesis
11 Awarded, 4 ongoing.
M.Tech. Thesis
86 completed and 5 ongoing.
B.Tech. Major Project
13 completed (54 students) and 2 ongoing (05 students)

Book/Monograph

1. Basavaraju Manu and Sanjeev Chaudhari, "Sequential Anaerobic-aerobic Treatment of Azo Dye Wastewater", Scholar's Press, Germany, 2014, 172 pages
2. B.M. Sunil, Basavaraju Manu and Raviraj H.M. Edited International Conference proceedings, "Green Highway Construction – A Sustainable Approach", INSC Publishing House (IPH), Karnataka, 2021, 159 pages, ISBN: 978-1-954461-54-3

Consultancy Project:
Mahadayi River Water Diversion Project, EIA study, Government of Karnataka

Industry Sponsored Research Project: Development of Effluent Treatment Techniques for Cashew Nut Shell Liquid Effluent, Phenalkamine Condensate and Development of Method for Stabilizing Colour of Cashewnut Shell Liquid". 2019-2020, 1 lakh

ACADEMIC CREDENTIALS

Doctor of Philosophy (2006): Center for Environmental Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai, India.
Title of thesis is "Sequential Anaerobic-Aerobic Treatment of Azo Dye Wastewater".

Master of Technology (2000): Center for Environmental Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai, India
M.Tech thesis on "Physico-Chemical Treatment of Denim Process Wastewaters."
Result: Cumulative Performance Index (CPI): 8.42/10 (First class with distinction)
Bachelor of Engineering (1996): Department of Civil Engineering, Malnad College of Engineering, Hassan, Karnataka, India.
Project: "Layout, Analysis and Design of a Multi-Storeyed High School Building".
Result: Passed in First class with distinction (77%)

PERSONAL INFORMATION

Date of birth: 10/02/1974 Age: 47 yrs.
Place of birth: T.Narasipur, Mysore district, Karnataka, India
Sex: Male
Marital status: Married and having two sons
Languages known: English, Kannada and Hindi (to read and write)

ACADEMIC ACHIEVEMENTS

1. MHRD, GOI Fellowship for pursuing masters degree during July1998-January2000
2. MHRD, GOI Fellowship for pursuing doctoral studies during January2000-January2005
3. Merit incentive award for securing highest marks in an elective in final semester B.E examination – Industrial Wastes and Air Pollution.

PROFESSIONAL ACHIEVEMENTS

1. Joint Secretary of India Chapter of International Association for Coastal Reservoir Research (IACRR)
2. 2016 IEAE Young Achiever Award/Research Exellence for 246 citations of the research article - Manu B and Sanjeev Chaudhari,"Anaerobic Decolorisation of Simulated Textile Wastewater Containing Azo Dyes ", Bioresource Technology,Vol. 83, No.3, pp. 225-233, 2002
3. Visited Professor Eakalak Khan, Environmental Engineering Division of North Dakota State University (NDSU), Fargo, North Dakota, USA during November 16 – December 01, 2008 as a part of research interaction of TEQIP I program
4. Visited Professor Roger West and Professor Laurence Gill, Trinity College Dublin, Ireland during 04/06/2014 – 14/06/2014 as a part of research interaction of TEQIP II program
5. Reviewed a book entitled "Principles of Environmental Engineering Science" authored by M.L. Davis and Susan J Masten, 2nd Edn., 2009, McGraw-Hill Publishers, New-Delhi.
6. Reviewer for research article submitted to various Journal of Elsevier publishers, England, IWA, UK.
7. Reviewed manuscripts submitted to 2nd International Conference on Current Trends in Technology NUiCONE 2011 held at Institute of Technology, Nirma Univeristy, Ahmedabad, India during December 8-10, 2011.
8. Ph.D. and M.Tech. thesis examiner (external) for VTU, Karnataka, MIT, Manipal, SJCE, Mysore, and Anna University
9. District Level Environmental Appraisal Committee (DEAC) for Udupi and Karwar Districts, Karnataka, Since June 2016

PROCEEDINGS IN BOOK CHAPTER

1. Sumit Kumar Gautham, VV Dhaneesh, Basavaraju Manu (2018), "Fenton's Treatment of Pulp and Paper Mill Effluent" Water Quality Management, Springer, Singapore, 241-246.
2. S. Bhaskar, Basavaraju Manu and M. Y. Sreenivasa (2021), "Green Synthesis of Bioleached Flyash Iron Nanoparticles (GBFFeNP) Using Azadirachta Indica Leaves and Its Application as Fenton's

Catalyst in the Degradation of Dicamba" Lecture Notes in Civil Engineering book series (LNCE, volume 105), Recent Trends in Civil Engineering pp 365-371

3. G.B. Mahesh and Basavaraju Manu (2021), "Anaerobic Co-digestion of 2,4-Dichlorophenoxyacetic Acid with Starch Followed by Aerobic Post-treatment and Identification of Dominant Bacteria", Lecture Notes in Civil Engineering book series (LNCE, volume 99), Trends in Civil Engineering and Challenges for Sustainability pp 495-506.

4. Mallela Mukesh Raj and Basavaraju Manu (2021)," Effectiveness of Green Wall for Improving Air Quality near Toll Plaza", B.M. Sunil, Basavaraju Manu and Raviraj H.M (Editors), Online International Conference on Green Highway Construction – A Sustainable Approach, pp 09-16, INSC (IPH) Selfypage Developers Private Limited, Karnataka, ISBN: 978-1-954461-54-3

5. Theres Charly, Basavaraju Manu and Raviraj H.M (2021)," Combined CO and CO_2 Pollution from Road Traffic near Toll Plaza", ", B.M. Sunil, Basavaraju Manu and Raviraj H.M (Editors), Online International Conference on Green Highway Construction – A Sustainable Approach, pp 17-22, INSC (IPH) Selfypage Developers Private Limited, Karnataka, ISBN: 978-1-954461-54-3

PUBLICATIONS IN INTERNATIONAL JOURNALS

1. Manu B and Sanjeev Chaudhari,"Anaerobic Decolorisation of Simulated Textile Wastewater Containing Azo Dyes ", Bioresource Technology,Vol. 83, No.3, pp. 225-233, 2002 (cited by 271 times in www.scopus.com ; world's largest database for scientific and technical articles).

2. Manu B and Sanjeev Chaudhari,"Decolorization of Indigo and Azo Dyes in Semi-Continuous Reactors With Long Hydraulic Retention Time ", Process Biochemistry,Vol. 38, No.8, pp. 1213-1221, 2003 (cited by 179 times in www.scopus.com ; world's largest database for scientific and technical articles).

3. Manu B, "Physico-Chemical Treatment of Indigo Dye Wastewater", Coloration Technology, Vol. 127, No. 3, pp. 197-202, 2007. (cited by 38 times in www.scopus.com ; world's largest database for scientific and technical articles)

4. Manu, B., Mahamood, Vittal, H and Shrihari, S. (2011). "A novel catalytic route to degrade paracetamol by Fenton process." *Int. J. Res. Chem. Environ.,* 1 (1), 157-164.

5. Manu, B. and Mahamood. (2011). "Enhanced degradation of paracetamol by UV-C supported photo-Fenton process over Fenton oxidation." *Water Sci. Technol.*, 64 (12), 2433 - 2438.

6. Manu, B. and Mahamood. (2011). "Degradation of Paracetamol in Aqueous Solution by Fenton Oxidation and Photo-Fenton Oxidation Processes Using Iron from Laterite Soil as Catalyst." *Int. J. Earth sci. Eng.*, 4 (6), 1103 - 1110.

7. Shrikant, S. J., S. Shrihari and B. Manu. (2012). "Reuse of Textile Mill Sludge in Cement Based Solid Blocks", International J. of Engg. Research & Indu. Appls., 5 (3), 213-224.

8. Basavaraju Manu and Mahamood (2012), "Degradation Kinetics of Diclofenac in Water by Fenton's Oxidation", Journal of Sustainable Energy & Environment, 3, 173-176

9. Rahul Karale, Basavaraju Manu and S.Shrihari (2013), "Degradation of Toxic 2-Aminopyridine Pharmaceutical Compound from Aqueous Environments Using Advanced Fenton and Photo-Fenton Oxidation Processes", International Journal of Advanced Technology in Civil Engineering, 2(1), 34-38.

10. Rahul Karale, Basavaraju Manu and S.Shrihari (2013), "Catalytic Use of Laterite Iron for Degradation of 2-Aminopyridine Using Advanced Oxidation Processes", International Journal of Scientific & Engineering Research, 4(5), 207-210.

11. Vijay Kumar Pujar and B.Manu (2013), "Biodegradation of Bromopyridine Using Sequential Batch Reactors", International Journal of Environmental Research and Development, 3(7), 73-77.

12. Rahul S.Karale, Basavaraju Manu, S.Shrihari (2014), "Fenton and Photo-Fenton Oxidation Processes For Degradation of 3-Aminopyridine From Water", APCBEE Proceedia, 9, 25-29

13. Vinayak Patki, S.Shrihari and B.Manu (2013), "Fuzzy system modelling for forecasting Water Quality Index in Municipal Distribution System", Urban Water, DOI: 10.1080/1573062X.2013.820333.

14. Vinayak K. Patki, S. Shrihari and B. Manu (2013), "Water Quality Index in Municipal Distribution System for Solapur city, Maharashtra State, India", International Journal of Environmental Protection, 3(6), 16-23.
15. Shrikant S Jahagirdar, S. Shrihari and B. Manu, (2013) "Reuse of Textile Mill Sludge in Burnt Clay Bricks", International Journal of Advanced Technology in Civil Engineering, 2(1), 96-99.
16. Shrikant S Jahagirdar, S. Shrihari and B. Manu, (2013) "Utilization of Textile Mill Sludge in Burnt Clay Bricks", International Journal of Environmental Protection, 3 (5), 6-13
17. Patki V.K., Shrihari S and Manu, B (2013) "Water Quality Prediction in Distribution System Using Feed Forward Neural Network", International Journal of Advanced Technology in Civil Engg., 2(1), 84-91
18. Shrikant S Jahagirdar, Surathkal Shrihari , and Basavaraju Manu (2015), "Reuse of Incinerated Textile Mill Sludge as Adsorbent for Dye Removal", KSCE Journal of Civil Engineering, DOI 10.1007/s12205-015-0731-3
19. TN Shridhara, DM Chethan, B Manu, N Indresh (2014), "Degradation of Para-Phenylenediamine in Aqueous Solution by Photo-Fenton Oxidation Processes", Science, Technology and Arts Research Journal 3 (2), 88-92.
20. Basavaraju Manu and Karthik M (2016), "Biodegradation of an Antiobiotic Cephalaxin Using Aerobic Batch Reactor", Life Sciences International Journal, 3(2), 22-23.
21. Amritha A.S. and B.Manu, (2016), "Low cost Fenton's oxidative degradation of 4-nitroaniline using iron from laterite", Water Science and Technology, 74(4), **DOI: 10.2166/wst.2016.371**
22. Sanjeev Sangami and Basavaraju Manu, (2016), "Fenton's Treatment of Actual Agriculture Runoff Water Containing Herbicides", Water Science and Technology, 75 (2), 451-461
23. Sanjeev Sangami and Basavaraju Manu, (2017), "Optimization of Fenton's oxidation of herbicide dicamba in water using response surface methodology", Applied Water Science, 1-12
24. Sanjeev Sangami and Basavaraju Manu, (2017)," Synthesis of Green Iron Nanoparticles using Laterite and their application as a Fenton-like catalyst for the degradation of herbicide Ametryn in water", Environmental Technology & Innovation 8, 150-163
25. AS Amritha, B Manu (2016), "FENTON AND PHOTO FENTON OXIDATION OF 2-NITROANILINE", International Journal of Research in Engineering and Technology, 5(18), 102-104
26. Rekha Rao, Basavaraju Manu, Arun Kumar Thalla (2017), "Behavioral, Physical and Biochemical Responses of Cyprinus Carpio for Paracetamol Exposure", International Journal of Emerging Research in Management &Technology, 6(2), 215-219
27. Sanjeev Sangami, Basavaraju Manu, (2018) "Catalytic efficiency of laterite-based FeNPs for the mineralization of mixture of herbicides in water", Environmental Technology, 1-13
28. Hepsiba Niruba Catherine, Ming-Han Ou, Basavaraju Manu and Yang-hsin Shih(2018), "Adsorption mechanism of emerging and conventional phenolic compounds on graphene oxide nanoflakes in water", Science of the Total Environment, 635, 629-638.
29. AS Amritha and B Manu (2018)," Degradation of nitroaromatic compounds: a novel approach using iron from laterite soil", Applied Water Science, 8(5), 135-142.
30. S Bhaskar, Basavaraju Manu, MY Sreenivasa (2019), "Bacteriological synthesis of iron hydroxysulfate using an isolated Acidithiobacillus ferrooxidans strain and its application in ametryn degradation by Fenton's oxidation process", Journal of Environmental Management, 232, 236-242.
31. B Manu and S Mahamood (2019), "Photo-Fenton Degradation of Paracetamol—Evaluation of Iron Extracted from Laterite Soil as Catalyst", Advanced Science, Engineering and Medicine 11 (1-2), 127-132.
32. GB Mahesh, B Manu (2019), "Biological Treatment of 3, 6-Dichloro-2-Methoxybenzoic Acid Using Anaerobic-Aerobic Sequential Batch Reactor", Environmental Processes 6 (2), 493-509.
33. GB Mahesh, B Manu (2019), "Biodegradation of ametryn and dicamba in a sequential anaerobic-aerobic batch reactor: A case study", Water Practice and Technology 14 (2), 423-434.
34. GB Mahesh, B Manu (2019), "Removal of ametryn and organic matter from wastewater using sequential anaerobic-aerobic batch reactor: A performance evaluation study", Journal of environmental management 249, 109390.

35. D Nagappa, B Manu (2019)," Nano-scale Iron Oxide as Heterogeneous Fenton Catalyst for Organic Pollution Degradation and Heavy Metal Remediation in Water Sample of Byramangala Lake, Karnataka", Asian Journal of Water, Environment and Pollution 16 (3), 25-33.
36. M Yaseen, B Manu, N Kudri, HS Govardhanaswamy (2019), "Use of redox mediators for the enhanced degradation of selected nitrophenols", Applied Water Science 9 (8), 194.
37. GB Mahesh and B Manu (2020)," ENHANCEMENT OF AMETRYN BIODEGRADATION EFFICIENCY USING ANTHRAQUINONE-2,6-DISULPHONATE IN ANAEROBIC-AEROBIC TREATMENT", Environmental Engineering and Management Journal.
38. Bhaskar S, B Manu and Sreenivasa MY (2020)," Bioleaching of iron from fly ash using a novel isolated Acidithiobacillus ferrooxidans strain and evaluation of catalytic role of leached iron in the Fenton's oxidation of Cephalexin", J. Indian Chem. Soc., 97, 360-367.
39. Bhaskar S ,Basavaraju Manu,Sreenivasa MY (2021), "Bioleaching of iron from laterite soil using an isolated Acidithiobacillus ferrooxidans strain and application of leached laterite iron as Fenton's catalyst in selective herbicide degradation", PLOS ONE, https://doi.org/10.1371/journal.pone.0243444
40. Mahesh Gajanuru Basappa and Basavaraju Manu (2021)," Aerobic sludge granulation and enhanced dicamba removal efficiency in the presence of AQS redox mediator in a lab-scale anaerobic–aerobic treatment method", Wastewater Treatment Reactors Microbial Community Structure, 413-434, https://doi.org/10.1016/B978-0-12-823991-9.00018-6

PUBLICATIONS IN NATIONAL JOURNALS

1. Basavaraju Manu and Mahamood. (2012), "Fenton's oxidation of amoxicillin in water", NITK Research Bulletin, 21 (2), 30-38.
2. Rahul Karale, Basavaraju Manu and S.Shrihari. (2013), "Treatment Options for Pharmaceutical Wastewater Containing Toxic Pyridine Compounds: A Review", NITK Research Bulletin, 22(1), 42-52

PROCEEDINGS IN INTERNATIONAL CONFERENCE

1. Manu B and Sanjeev Chaudhari,"Anaerobic and Hydrogen Peroxide Decolourization of Azo Dyes: A Comparative Evaluation", Proceedings of the 28th WEDC International Conference on Sustainable Environmental Sanitation and Water Services, 18-22nd November, Kolkata, India, 2002 (Oral presentation)
2. Ganesha A and Manu B, "Characterisation and Treatment of a Fish Processing Industry Wastewater: A Case Study", Third International Ground Water Conference (IGC-2007) on Water, Environment and Agriculture – Present Problems and Future Challenges, 7-10th February, Coimbatore, India, 2007 (Oral presentation).
3. Manu B, "Performance Evaluation of an Anaerobic Sequencing Batch Reactor Fed with Rice Mill Industry Wastewater", International Conference on New Horizons in Biotechnology (NHBT 2007), NIST, Trivandrum, Kerala, India 26-29 November, 2007. (Poster presentation).
4. Manu B, "Environmental Implications of an Inverted Ecological Pyramid", Role of Engineering Towards a Better Environment 08 (RETBE08),Faculty of Engineering, Alexandria University, Egypt, 20-22 December 2008.
5. B. Manu and Sujay S, "Laterite Soil As A Source of Iron Catalyst During Fenton's Oxidation of Nitrophenol Containing Aqueous Solutions", International Conference on Recent Trends in Materials and Characterization (RETMAC 2010), NITK, Surathkal during 14-15th February 2010.
6. *Sanjeev* .S. and Basavaraju. Manu, "Treatment of 2- *Fluorophenol* Containing Aqueous Solutions Using. Fenton's Reagent, International Conference on "Emerging Technologies for Sustainable Environment" held at Aligarh Muslim University, during October 29-30, 2010.
7. Mohd Omair, Mahamood and Basavaraju Manu, "Biodegradation of Selected Pharmaceutical Chemicals Using SBR", 3rd International Geography Congress, held at CWRDM, Calicut, Kerala, India during 6-8th May, 2011.

8. Riyaz Ahammed and Basavaraju Manu, "Biodegradation of 2-Chlorophenol and 2.4-Dichlorophenol using Sequential Batch Reactor", 3rd International Geography Congress, held at CWRDM, Calicut, Kerala, India during 6-8th May, 2011.
9. Basavaraju Manu and Mohammed Yaseen, "Degradation of Nitrophenol in Water by sequential Anaerobic-Aerobic Treatment", International conference on Ecological, Environmental and Biological Sciences (ICEEBS 2012), Dubai, UAE, 7-8th January, 2012
10. Basavaraju Manu and Nagaraj K, "Biodegradation of Acetaminophen by Microbial Consortium of Domestic Sewage Sludge", IV International Conference on Environmental, Industrial and Applied Microbiology (BIOMICROWORLD 2011) Malaga Spain, 14-16th September, 2011.
11. Rahul.S. Karale, Basavaraju Manu and S.Shrihari, "Fenton and Photo-Fenton Oxidation Processes to Degrade 3-Aminopyridine from Aqueous Environments -Novel Catalytic Use of Laterite Iron" International conference on recent advances in material science & technology-2013 (ICRAMST-13) January 17 to 19 , 2013**,** NITK, Surathkal, Karnataka, India.
12. Evaluation of Impact of Genotoxic Pollutants in the Term of DNA Integrity in *Nerita Chamaeleon* along the Goa Coast Vipin Singh, B.Manu, Madhyastha MN and A.Sarkar International conference on recent advances in material science & technology-2013 (ICRAMST-13) January 17 to 19 , 2013**,** NITK, Surathkal, Karnataka, India.
13. Basavaraju Manu and Dibya Ranjan Dash, Biodegradation of fluorophenol using sequential batch reactor, 4th IWA Asia Pacific Young Water Professional (APYWP 2012) conference, Miraikan, Tokyo, Japan during 7-10, December, 2012.
14. Basavaraju Manu and Udaya A.K. "Photo-Fenton's Oxidation of Chlorophenols Containing Aqueous Solution", 2nd International conference on Advanced Oxidation Processes, 2012 held at Kottayam, Kerala from 5-8th October 2012.
15. Rahul Karale, Basavaraju Manu and S.Shrihari, "Degradation of Toxic 2-Aminopyridine Pharmaceutical Compound From Water Matrix Using Advanced Fenton and Photo-Fenton Oxidation Processes", 2nd International Conference on Recent Trends in Engineering and Technology (ICTRET 2013) held at SNJB's Late Sau. Kantabai Bhavarlalji Jain College of Engineering , Chandwad, Nashik, Maharashtra, India during 22nd to 24th February, 2013.
16. Rekha Rao, B.Manu and C.V.Rao, "Toxicity Study of Amoxicillin in Freshwater Fish *Cyprinus Carpio*", Environmental Health, 3-6th March, 2013, Boston, USA.
17. Vijay Kumar Pujar and B.Manu, "Biodegradation of Bromopyridine Using Sequential Batch Reactor", International Conference on Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE 2013) held at JNU, New Delhi during 5-6th June, 2013.
18. Vipin Singh, B.Manu, M.N. Madhyastha, Gaurav Sarker and A.Sarkar "Catalase Activity and Level of Lipid Peroxidation in Nerita Chameleon as an indicator of oxidative stress in marine Environment", International conference on Development and Prosperity of Nation Through Young Minds, held at Bhopal, (M.P), India during 12-13 December, 2013 {2nd prize for Best paper}.
19. Rahul S Karale, Basavaraju Manu and S.Shrihari, " Enhanced Degradation of Pharnaceutical Halogenated 2-Bromopyridine Compound From Water Using Photo-Fenton Oxidation Process", International Symposium on Halogenated Persistent Organic Pollutant (IEEP) 2014, January, 16-17, 2014, NEERI, Nagpur, Maharastra, India.
20. B.Manu and N.Piraiyyamutham, "Sequential Anaerobic-Aerobic Batch Reactor Setup for the Degardation of 2-Nitroaniline and 3-Nitroaniline", International Symposium on Halogenated Persistent Organic Pollutant (IEEP) 2014, January, 16-17, 2014, NEERI, Nagpur, Maharastra, India.
21. Sumit Kumar Gautham, Dhaneesh V.V and Basavaraju Manu, "FENTON'S TREATMENT OF PULP AND PAPER MILL EFFLUENT", International Conference on Water, Environment, Energy and Society, AISECT University, Bhopal, M.P. India, 15-18, march, 2016
22. B. Manu and Dangmei A.P., " TREATMENT OF METHOXYANILINE CONTAINING SOLUTION USING ANAEROBIC- AEROBIC SEQUENTIAL BATCH REACTOR", 4th International Engineering Symposium 2015 (IES 2015), Kumamoto University, Japan, March 4-6, 2015.

23. Amritha A.S and B.Manu, " Fenton and Photo-Fenton Oxidation of 2-Nitroaniline", International Conference and Exhibition on Best Practices in Sustainable Water, Wastewater and Energy Management, 17-19th August 2016, IISC, Bangalore, India.

24. Basavaraju Manu and Karthik M, " Biodegradation of an Antibiotic Cephalaxin Using Aerobic Batch Reactor, International Conference on Microbiology, Agriculture and Environmental Sciences, 01-02, September, 2016, Hyderabad, India

25. Sumit Kumar Gautham , Dhaneesh V.V and Basavaraju Manu," FENTON'S TREATMENT OF PULP AND PAPER MILL EFFLUENT", ICWEES 2016, March 15-18, 2016, Bhopal, India

26. Basavaraju Manu and Mahamood, "Photo-Fenton Degradation of Paracetamol—Evaluation of Iron Extracted from Laterite Soil as Catalyst", International Conference on Recent Trends in Environment Sustainable Development (RTESD-2018), 23-25 February, 2018, Vivekananda Global University, Jaipur

27. Bhaskar S, Basavaraju Manu and Sreenivasa M Y, "Green synthesis of Bioleached Laterite Iron Nanoparticles (GBLFeNP) using Azadirachta indica leaves and evaluation of its catalytic role in Fenton's oxidation of dicamba", CE Asia Pacific conference, NUS Singapore, August 28-September 01, 2019

28. Basavaraju Manu and Varghese PP," Removal Of Endosulfan From Water By Fenton's Oxidation", IWA WDCE 2019, 1-5 December 2019, BMICH, Colombo, Srilanka

29. Vishnu Damodar, B.Manu Aswathy, K,R, and Chaitra, K.,V (2019)," Coagulation/Flocculation and Aerobic Treatment of Fenton pre-treated Phenalkamine Condensate". Proceedings of Second International Conference on Emerging Trends In Science & Technologies For Engineering Systems (ICETSE-2019) S J C Institute of Technology, Chickballapur, Karnataka, India 17th and 18th May 2019

30. Varsha M, Basavaraju Manu and Dhitosh Kumar Sahoo (2019)," Fenton's oxidation of Phenalkamine condensate using Aluminium dross and laterite Iron nanoparticle as a catalyst", Proceedings of Second International Conference on Emerging Trends In Science & Technologies For Engineering Systems (ICETSE-2019) S J C Institute of Technology, Chickballapur, Karnataka, India 17th and 18th May 2019

31. Basavaraju Manu and Rudolf Mathews (2020)," Removal of Nitrate From Waste-Water by Using Advanced Reduction Method", INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY TECHNOLOGIES & CHALLENGES IN INDUSTRY 4.0, 27-28 August 2020, East Point College of Engineering and Technology, Bangalore, Karnataka, India (Bronze Medal)

PROCEEDINGS IN NATIONAL CONFERENCE

1. Manu B, "Municipal Solid Waste Management Options for a Newly Formed and Rapidly Growing Indian Urban City/Municipality, Enviro 2006 National Conference on Environmental Degradation and Pollution Control and 23rd National Convention of IPHE on Environmental Engineering (23NCEE), 28-30th December, Coimbatore, India, 2006. (Oral presentation, Also chaired a technical session).

2. Manu B and Vineet VijayKumar, "Enviro-Health Impacts of Manufacture and Use of Cell Phones", MACRO-08: National Conference on Eco-Friendly Plastics and Rubber Systems (NCEPRS), SJCE, Mysore, Karnataka, India, 19-20th May, 2008.

3. Manu B, "Potable Water Management of a Coastal City: A Unique Case Study of Mangalore", Indian Engineering Congress, NIT Warangal, Andhra Pradesh, India, 11-14 December 2008.

4. S. Sanjeev and B.Manu, "Treatment of Fluorophenol containing Aqueous Solution Using Fenton's Reagent", The National Conference on Sustainable Water Resources Management (SWaRM2010), held at NITK, Surathkal during 7-9th January 2010.

5. Manu, B. and Mahamood. "Advanced Oxidation of Diclofenac in Aqueous Solution by Fenton Process: Use of Iron Extracted from Lateritic Soil as Catalyst." 27th Convention of Environmental Engineers on "Green Technology", Institution of Engineers (India), Mangalore, Karnataka State, India, 24 – 25 January, 2012, 1 – 9.

6 .Manu, B. and Mahamood, "Fenton's Oxidation of Diclofenac in Water: A Kinetic Study." National Conference on Contemporary Civil Engineering Research & Practices (CCERP – 2012), Manipal Institute of Technology, Manipal, Karnataka State, India, 20 – 21 April, 2012, 508 – 517.

7.Vinyak Patki, S.Shrihari and B.Manu, "Soft Computing for Water Quality Assessment and Prediction", 27th Convention of Environmental Engineers on "Green Technology", Institution of Engineers (India), Mangalore, Karnataka State, India, 24 – 25 January, 2012.
8. B. Manu and Anupama, "Treatment of Coffee Wastewater Using Sequential Anaerobic-aerobic-Advanced Oxidation Processes for Possible Reuse/Recycle", Conference on Water Conservation and Management (WCM-2011) held at NITK, Surathkal on March 22nd 2011.
9. Indresh N and B.Manu, "Fenton's Oxidation for the Treatment of Water containing Phenlyenediamines", Conference on Water Conservation and Management (WCM-2011) held at NITK, Surathkal on March 22nd 2011.
10. Arindam Sinha Roy, B. Manu, S. Shrihari, Rahul Karale, "Degradation of 2-Pyridineamine Using Photo-Fenton Oxidation", National Coference on New Horizons in Civil Engineering – NHCE 2013, April 12-13, 2013, M.I.T, Manipal

CONFERENCES, WORKSHOPS, TRAINING PROGRAMMES: ORGANISED, ATTENDED, PARTICIPATED

1. Organising Secretary, Two Day Online International Conference on "Green Highway Construction – A Sustainable Approach, Organised at NITK Surathkal in association with IEI Mangalore local chapter, September 14-15, 2020.
2. Coordinator, TEQIP-III sponsored Online Faculty Development Programme on " Recent Advances in Construction and Demolition Waste Management", organised at NITK, Surathkal during February 22-26, 2021.
4. Co-ordinator, "Two Day Workshop on "Training of Environmental Science and Engineering Professor (How to conduct courses in Environmental Management and Sustainability)", September 20-21, 2013, sponsored by TEQIP-II, NITK, Surathkal.
5.Co-ordinator, "Two-Day Workshop on "Disaster Management of Floods and Consequences Thereof in Coastal Regions and Food and Water Security", February 4-5, 2013 jointly organized by NITK, Surathkal and IEI Mangalore Local centre.
6. WORLD WATER DAY-2007, "Coping With Water Scarcity", A Half-day Technical Programme held at MIT, Manipal on 23th March, 2007. (Co-organiser)
7. IIT Bombay National Conference on Advances in Environmental Science and Engineering, Organised by Centre for Environmental Science and Engineering (CESE), December 8-9, 2003, Indian Institute of Technology, Bombay, Mumbai. (Organizing committee member).
8. "Sustainable Development for Smaller Footprint", National seminar organized by Department of Civil Engineering, MIT, Manipal, March 8-9, 2007 (Organizing committee member).
9.Two-Day workshop on Geoinformatics for Natural Resources Management, Department of Applied Mechanics and Hydraulics, NITK, Surathkal, 30-31st Januray, 2013
10. One Day Workshop on "Workplace Sensitization" organised by NITK, Surathkal on 22/11/2013 at NITK, Surathkal.

Number of short term courses conducted

1. CCE-NITK refresher course "Low Cost Design of Wastewater Treatment"
for PWD engineers, Government of Karnataka (17 participants) at NITK, Surathkal during 26/07/2010 to 30/07/2010.
2. CCE-NITK refresher course "Environmental Impact Assessment" for PWD engineers, Government of Karnataka (12 participants) at NITK, Surathkal during 08/08/2011 to 12/08/2011.
3. CCE-NITK refresher course "RURAL AND URBAN WATER SUPPLY, SEWAGE LINE, SANITATION WORK CONSTRUCTION AND MAINTENANCE, POLLUTION CONTROL AND QUALITY MANAGEMENT" for PWD engineers, Government of Karnataka (12 participants) at NITK, Surathkal during 28/08/2017 to 1/09/2017.

4. CCE-NITK Refresher Course on "Water Supply and Rainwater Harvesting", for PWD engineers, Government of Karnataka (11 participants) at NITK, Surathkal during 30/07/2018 to 03/08/2018

Number of AICTE short term courses attended

1. AICTE and ISTE, New-Delhi sponsored Summer School on Recent Development in Advanced Materials, Department of Mechanical Engineering, NITK, Surathkal during 16-21 june, 2008 and Faculty Awareness Camp on Entrepreneurship during 22-24, june 2008.
2. AICTE-MHRD, New Delhi sponsored Summer School on Water Resources Development and Management, Department of Applied Mechanics and Hydraulics, NITK, Surathkal during 28th July to 8th August, 2008.
3. AICTE sponsored Faculty Development Program on Environmental Impact Assessment of Infrastructural Projects, NIT Calicut during 25-30th May, 2009.
4. AICTE-MHRD sponsored Summer school on Soft Computing Techniques in Water Resources Engineering, Department of Applied Mechanics and Hydrulics, NITK, Surathkal during 5-9th July, 2010.
5. AICTE-MHRD sponsored Summer school on Fuzzy Logic, Genetic Algorithm with Wavelet Transformation in Civil Engineering, Department of Applied Mechanics and Hydrulics, NITK, Surathkal during 27th June to 1st July, 2011.

Invited expert/guest lectures delivered

1. Colour Removal of Azo Dye Wastewater Using Biological Methods For Possible Reuse/Recycle – A guest lecture delivered on 20/08/2007 in department of Civil engineering at College of Kopargaon, Kopargaon, Maharashtra.
2. Sequential Anaerobic-Aerobic Treatment of Azo Dye Wastewater for Possible Reuse/Recycle on 25/11/2008, North Dakota State University, USA.
3. Environmental Quality Monitoring Using Software Technology on 18/02/2009 at ESCI Hyderabad
4. Advanced Environmental Management during 16-18/03/2009 at SDMCET, Dharwad.
5. "Vehicular Air Pollution" - Vehicular Air Pollution Control Week, Organised by RTO, Mangalore at St. Aloysius College, Mangalore on 7/11/2011
6. Guest lecture on "Anaerobic Treatment of Wastewater", NIT Trichy on 12/11/2013
7. Introduction to Rural and Urban Water Supply, Sources of Water" on 17 th August 2015, "Rural and Urban Water Supply" sponsored by KERS, Krishnarasagara from 17-08-2015 to 21-08-2015, UBDTCE, Davangere, Karnataka, India
8. Guest Lecture on "Environmental Engineering Practices", AIET, Moodbidre, 12/08/2016
9. Guest Lecture on Advanced Wastewater Treatment and Solid Waste Management in "Two day workshop on Solid waste and waste water management in Urban and Rural India -Present Scenario and Challenges" held on 26 th and 27 th August 2016 at Rao Bahadhur Y Mahabaleswarappa Engineering College. Bellary, India
10. Introduction to Rural and Urban Water Supply, Sources of Water, IS 10500 on 29 th August 2016 at "Rural and Urban Water Supply" sponsored by KERS, Krishnarasagara from 29-08-2016to 02- 09-2016, UBDTCE, Davangere, Karnataka, India
11. Guest lecture titled "Environmental Impact Assessment of all-weather Roads" on 17/10/2019 for Continuing Education Programme on DESIGN CONSTRUCTION AND MAINTENANCE OF ALL-WEATHER ROADS For Working Engineers from Karnataka Public Works and Irrigation Departments Sponsored by Engineering Staff College, Krishnarajasagara
12. Guest lecture titled "Environmental Quality Management Systems – ISO 14000" on 26/09/2019 for Continuing Education Programme on Quality Management Systems in Civil Engineering For Working Engineers from Karnataka Public Works and Irrigation Departments Sponsored by Engineering Staff College, Krishnarajasagara
13. Invited lecture on "Alternate sources of Potable water" delivered on 22/03/2019 at Sahyadri college of Engineering and Management.
14. Webinar on ""Efficient, Economical and Environmental Friendly Use of Fenton's Oxidation IN WASH and Waste Management for COVID 19 Virus". On 27/05/2020 at JCE Belgaum

15. Webinar on "'Efficient, Economical and Environmental Friendly Use of Fenton's Oxidation IN WASH and Waste Management for COVID 19 Virus". On 23/06/2020 held at St. Joseph College of Engineering, Mangalore
16.

TECHNICAL SKILLS

Working experience of instruments related to sampling and analysis of water and wastewater including High-Performance Liquid Chromatograph (HPLC), Gas Chromatograph (GC), Atomic Absorption Spectro-Photometer (AAS), Fourier-Transformed Infra Red Spectroscopy (FT-IR), UV-Visible Spectrophotometer, etc.
Design Effluent treatment plants for fish meal industry, plywood manufacturing industry, town municipal corporation.

COMPUTER SKILLS

Knowledge of C, C++, Fortran, Windows and Unix, Windows applications such as MS Office, Water Supply Design Software packages and Wastewater Treatment Design Software packages.

EXTRA-CURRICULAR ACTIVITIES

a) Attended and participated in various workshops and conferences organized at the department and institute level.
b) Efficient in technical report writing and presenting it.
c) Would like to lead a team and/or would like to work in a team in executing a project or organizing an event.
d) Practicing yoga/meditation, public speaking and watching nature related programs on TV.

AFFILIATIONS

1. Member (1060497), International Water Association, UK
2. Fellow (1279838), Institution of Engineers, India
3, Member (2017-2020), International Union for Conservation of Nature (IUCN) – Commission on Ecosystem Management (CEM).
4. Senior Member (100194 – 2011) – Asia-Pacific Chemical, Biological and Environmental Engineering Society (APCBEES), Singapore.
5. Senior Member (SNM1005464) – Universal Association of Civil, Structural and Environmental Engineers (UACSE), The institute of Research Engineers and Doctors, USA .
6. Life Member (LM.No.133), Society of Environmental Chemistry and Allied Sciences, Kottayam, Kerala, India.
7. Life Member (LM 57065), Indian Society for Technical Education, New-Delhi, India
8. Life Member (LM 6754), Indian Water Works Association, Mumbai, India.
9. Life Member (LM-1087), National Environmental Science Academy, New Delhi, India
8. Member, World Academy of Science, Engineering and Technology
9. Life Member (027-KAR21-L09125) – Youth Hostels Association of India, New-Delhi, India