

## CURRICULUM VITAE (CV)

Name	Dr. Ajay Kumar Jha
Date of Birth	01 Dec 1975
Citizenship	Nepal
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Google Scholar	h-index: 20; i10-index:26, Citations:1323; <a href="https://scholar.google.com/citations?user=q9spoIoAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=q9spoIoAAAAJ&amp;hl=en</a> <a href="https://www.adscientificindex.com/scientist.php?id=356457">https://www.adscientificindex.com/scientist.php?id=356457</a>

### Education:

Degree obtained	Academic year	University	Country
Doctor of Philosophy in Environmental Science and Engineering	July 2012	Harbin Institute of Technology, Harbin	China
Master of Science in Renewable Energy Engineering	March 2005	Pulchowk Campus, Institute of Engineering, Tribhuvan University	Nepal
Bachelor of Engineering in Mechanical Engineering	September 2000	Pulchowk Campus, Institute of Engineering, Tribhuvan University	Nepal
Intermediate of Science	1995	R. R. M. Campus, Janakpur Dham, Tribhuvan University	Nepal
School Leaving Certificate	1992	Shree Jan Jyoti Secondary School, Lalabandi, Sarlahi, Nepal Education Board	Nepal

### Employment Record

Period	Position, Organization	Country	Name of assignment performed
August 05, 2019 – Till date	Associate Professor, Pulchowk Campus, Institute of Engineering, Tribhuvan University Director, Center for pollution Studies	Nepal	<ul style="list-style-type: none"> <li>• Teaching classes to Bachelor and Master level students</li> <li>• Supervision of project/thesis of Bachelor and Masters students as well as Ph.D Scholars</li> <li>• Conduction of research works</li> </ul>
April 2014 - August 2019	Assistant Professor, Pulchowk Campus, Institute of Engineering, Tribhuvan University, Nepal	Nepal	<ul style="list-style-type: none"> <li>• Teaching bachelor and masters level classes</li> <li>• Supervision of thesis of Bachelor,</li> </ul>

Period	Position, Organization	Country	Name of assignment performed
	Program Coordinator of M.Sc. Engineering in Renewable Energy Engineering		Masters and Ph.D. Level students <ul style="list-style-type: none"> <li>• Conduction of research works</li> </ul>
Nov 2012 – March 2014	Assistant Professor cum Researcher, Harbin Institute of Technology, Harbin	China	<ul style="list-style-type: none"> <li>• Teaching classes</li> <li>• Conduction of research works</li> </ul>
July 2005 - August 2009	Assistant Professor, Kathmandu Engineering College, Affiliated to Tribhuvan University	Nepal	<ul style="list-style-type: none"> <li>• Teaching classes to B.E. level students</li> <li>• Developing teaching learning materials</li> </ul>
November 2002 to July 2005	Assistant Professor, Star Engineering College (Now changed to HIST-Engineering College), affiliated to Purbanchal University	Nepal	<ul style="list-style-type: none"> <li>• Teaching bachelor level classes</li> </ul>
October 2000 - November 2002	Mechanical Engineer, Janal Syakar Textiles Pvt Ltd., Parsa	Nepal	<ul style="list-style-type: none"> <li>• Production and maintenance</li> </ul>

#### Membership of Professional Associations:

- Board Member, Nepal Engineering Council (692 Mechanical)
- Life Member, Nepal Engineers' Association (5823)
- Life Member, Society of Mechanical Engineers' Nepal
- Executive Member, Tribhuvan University Teachers' Association, Pulchowk Campus
- Life Member and former president, Nepal Terai Engineers' Society
- Ex-TWAS Young Affiliate, 2013-2017, The World Academy of Sciences (TWAS)
- World Society of Sustainable Energy Technologies

#### Books:

1. Hari B. Darlami and **Ajay Kumar Jha** (2019). Fundamental of Biogas Plant's Accessories and Performance Test, Heritage Publishers and Distributors Pvt. Ltd.
2. Hari B. Darlami and **Ajay Kumar Jha** (2019). Biomass Cookstoves, Heritage Publishers and Distributors Pvt. Ltd.
- 3.

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#### Sample Publications (Journal Papers):

1. **Ajay Kumar Jha**, Hari Bahadur Darlami, Nawraj Bhattarai, Subir Karn, Ganesh Neupane (2025). Projecting Energy Demand and GHG Reduction with Electric Vehicle Adoption in Nepal, Applied Engineering Letters, 10(3): 160-170. <https://doi.org/10.46793/aeletters.2025.10.3.4>
2. Hari Bahadur Darlami, **Ajay Kumar Jha**, and Kshitiz Ghimire (2025). A critical review of recent dewatering technologies: Performance and applications, Asian Journal of Water, Environment and Pollution, 22(5): 55-64. doi: 10.36922/AJWEP025130093.

3. **Ajay Kumar Jha**, Hari Bahadur Darlami, Nawraj Bhattarai, Subir Karn, Ganesh Neupane (2025). International Journal of Energy Economics and Policy, 15(4), 272-281.
4. Saddam Husain Dhobi, Kishori Yadav, Suresh Prasad Gupta, Jeevan Joyti Nakarmi, **Ajay Kumar Jha** (2025). Non-monochromatic laser assist scattering in thermal environment, Journal of the Nigerian Society of Physical Sciences, 7:1-8.
5. **Ajay Kumar Jha**, Hari Bahadur Darlami, Rajesh Gautam, Keshab Pun (2024). Production of Clean Energy from Duckweed, International Journal on Engineering Technology, 2(1): 80-95 (<https://doi.org/10.3126/injet.v2i1.72523>)
6. **Ajay Kumar Jha**, Sujan Jojiju, Hari Darlami, Bijay Basnet (2024). Performance evaluation of dewatering systems for bio-digestate for developing countries, Energy Storage and Conversion 2(3): 1431. (<https://doi.org/10.59400/esc.v2i3.1431>).
7. Sanjay Lal Karna, **Ajay Kumar Jha**, Kishori Yadav and Jiwan Kumar Mallik (2024). Performance evaluation of solar PV mini grid system in Nepal: a case study Thabang and Sugarkhal, Frontiers in Energy Research, DOI: <https://doi.org/10.3389/fenrg.2023.1321945>.
8. Shashwat Adhikari and **Ajay Kumar Jha** (2024). Electricity Demand Creation in Residential Sectors of Nepal, Journal of advance College of Engineering, 9: 153-178.
9. Saddam Husain Dhobi, Jeevan Jyoti Nakarmi, Suresh Prasad Gupta, Kishori Yadav and **Ajay Kumar Jha** (2024). Effect of Thermal Quantum Species Screening Around Fuel Cell Anode Performance, Nepal Physical Society. (DOI: <https://doi.org/10.3126/jnphysoc.v10i1.72847>).
10. **Ajay Kumar Jha**, Hari Bahadur Darlami , Aavas Pokharel, Narayan Rai (2024). Waste Water Treatment Using Duckweed, NEA 16th Convention for Engineers, 164-174.
11. Salony Rajbhandari, Shubha, Laxmi Shrestha, Ramchandra Bhandari, **Ajay Kumar Jha** and Hari Bahadur Darlami (2024). Contribution to the Net-Zero Emissions Target from the Transport Sector through Electric Mobility-A Case of Kathmandu Valley, *Sustainability*, 2024, 16(3): 1-23.
12. Sunil Yadav, **Ajay Kumar Jha**, Hari Bahadur Darlami (2023). Design and Improvement of Dewatering System Implemented for Biogas Slurry , International Journal For Multidisciplinary Research, 5(6):1-27.
13. Hemanta Bhandari, Hari Bahadur Darlami and **Ajay Kumar Jha** (2023). Climate land energy and water system nexus optimization modelling for Nepal, Journal of Advanced College of Engineering and Management, 8(1): 167-178.
14. Rupesh Pandey, **Ajay Kumar Jha**, Laxman Motra (2023). Assessment of municipal solid waste management and socio-economic challenges in integrated solid waste management Journal of Innovations in Engineering Education.
15. Shekhar Aryal, Sailesh Chitrakar, Rajendra Shrestha and **Ajay kumar Jha** (2022). Credibility of Rotating Disc Apparatus for investigating sediment erosion in guide vanes of Francis turbines, IOP Conf. Series: Earth and Environmental Science.
16. Shekhar Aryal, Sailesh Chitrakar, Rajendra Shrestha and **Ajay kumar Jha** (2022). Coating technology in hydro-turbines for sediment affected power plants: A review, IOP Conf. Series: Earth and Environmental Science.
17. Pawan Subedi, Dinesh Rawal, Saroj Khadka, Dinesh KC, **Ajay Kumar Jha** (2021). Design, Fabrication and Testing of Inclined Car Parking Lift Mechanism, International Research Journal of Engineering and Technology, 7:1551-1557.
18. **Ajay Kumar Jha**, Subir Karn (2021). Challenges and barriers for sustainable use of electric vehicles in Nepal, International Journal of Engineering and Technical Research, 11(12):30-34.
19. Shubhash Joshi, **Ajay Kumar Jha** (2021). Computational and Experimental Study of the Effect of Solidity and Aspect Ratio of a Helical Turbine for Energy Generation in a Model Gravitational Water Vortex Power Plant, Journal of Advanced College of Engineering and Management, 6:213-219.
20. **Ajay Kumar Jha**, Rabin Shrestha (2021). Impact Analysis of Electric Vehicles on Distribution System, International Journal of Engineering and Applied Sciences, 8(11): 26-33.
21. Nawraj Bhattarai, Puspaa Baral and **Ajay Kumar Jha** (2021). Non-Linear Steady State Heat Conduction using Element-Free Galerkin Method, Research Journal of Applied Sciences, Engineering and Technology, 18:20-25.

22. Khem Raj Bhatta, Rupesh Lal Karna, **Ajay Kumar Jha**, Surya Prasad Adhikari (2021).,Performance and Emission Characteristics of Jatropha Biodiesel Blends in a Direct Injection CI Engine, *Himalayan Journal of Applied Science and Engineering*, 24-33.
23. Govinda P. Pandey, Bijen Mali, Ashish Shrestha, Ajay Singh, **Ajay K. Jha** (2021). Performance Enhancement of Radial Distribution System via NetworkReconfiguration: A Case Study of Urban City in Nepal, *Journal of Renewable Energy, Electrical, and Computer Engineering*, 1(1):1-11.
24. Ram Dayal Yadav, **Ajay Kumar Jha** and Nawraj Bhattarai (2020). Thermodynamics Analysis of Rice Husk Fired Furnace, *International Journal of Photoenergy (SCIE, Accepted)*.
25. Shekhar Aryal, Sailesh Chitrakar, Rajendra Shrestha and **Ajay Kumar Jha** (2020). A case study of wear in a high head Francis turbine due to suspended sediment and secondary flow in a hydropower plant of Nepal, *International Journal of Fluid Machinery and Systems (SCI, Accepted)*.
26. Nabin Thapa, **Ajay Kumar Jha** (2020). Enhancement of HVAC Load, Energy Consumption and Energy Cost for a Proposed Residential Building, *International Journal of Scientific Research and Engineering Development*, 3(3):987-994.
27. Nawraj Bhattarai, Puspa Baral and **Ajay Kumar Jha** (2020). Non-linear steady state heat conduction using element-free Galerkin method, *Research Journal of Applied Sciences, Engineering and Technology*
28. Bashu Gautam and **Ajay Kumar Jha** (2020). *Performance Analysis of Home Biogas and Comparison with Modified GGC-2047 Model Biogas Plant*, *Artech Journal of Effective Research in Engineering and Technology*, 1-6.
29. Ashutosh Poudel and **Ajay Kumar Jha** (2020). *Techno-Economic Assessment of Gravitational Water Vortex Power Plant: A Case Study of Sunsari-Morang Irrigation Project*, *Artech Journal of Effective Research in Engineering and Technology*, 34-41.
30. Deepa Upadhyaya Subedi and **Ajay Kumar Jha** (2020). Determination of Optimal Number and Placement of Phasor Measurement Units in Transmission Networks, *Energy Research*, 4(1): 1-10 (DOI: <https://doi.org/10.31058/j.er.2020.41001>).
31. Basant Pancha, Rajendra Shrestha and **Ajay Kumar Jha** (2020). Optimal Integration of Distributed Generation in Distribution System: A Case Study of Sallaghari Feeder from Thimi Switching Station, Bhaktapur, Nepal, *Journal of the Institute of Engineering*, 15(1): 242-249 ([10.3126/jie.v15i1.27641](https://doi.org/10.3126/jie.v15i1.27641)).
32. Ram Dayal Yadav, Nawraj Bhattarai, **Ajay Kumar Jha** (2019). Thermodynamics Analysis of Solar - Rice Husk Hybrid Power Plant, *Research Journal of Applied Sciences, Engineering and Technology* 16(5):194-203.
33. Ritavrat Joshi and **Ajay Kumar Jha** (2019). *Analysis of Psychrophilic alternatives for production of biogas at colder temperature range*, *Scholars Journal of Engineering and Technology*, 302-310.
34. Sanjaya Neupane, **Ajay Kumar Jha** and Anirudh Prasad Sah (2019). Financial Analysis of 18kW Solar Photovoltaic Baidi Microgrid at Baidi, Tanahun, Nepal, *Journal of the Institute of Engineering*, 15(1): 229-236 (<https://doi.org/10.3126/jie.v15i1.27739>).
35. Suraj Dahal, **Ajay Kumar Jha** and Nawraj Bhattarai (2019). Determining the Hosting Capacity of Solar Photovoltaic in a Radial Distribution Network Using an Analytical Approach, *Journal of Advanced College of Engineering and Management* ([10.3126/jacem.v5i0.26673](https://doi.org/10.3126/jacem.v5i0.26673)).
36. Mahesh Dahal, **Ajay Kumar Jha** and Rudra Mani Ghimire (2019). Impact of Renewable Distributed Generation on Protection Coordination of Distribution System, *International Journal of Engineering and Applied Sciences*, 6(4) ([10.31873/IJEAS/6.4.2019.17](https://doi.org/10.31873/IJEAS/6.4.2019.17)).
37. Ayush Parajuli, Saurabh Agrawal, Janak Kumar Tharu, Anil Kumar Kamat, **Ajay Kumar Jha**, Hari Bahadur Darlami (2019). A simplified model for understanding the performance of two-pot enclosed mud cookstoves, *Clean Energy*, 3(4): 288–306 (<https://doi.org/10.1093/ce/zkz020>).

38. Niroj Dahal, Radha Krishna Shrestha, Sajjan Sherchan, Sanam Milapati, Shree Raj Shakya, **Ajay Kumar Jha** (2019). Performance Analysis of Booster based Gravitational Water Vortex Power Plant, *Journal of the Institute of Engineering*, 15(3):90-96.
39. Basanta Pancha, Rajendra Shrestha, **Ajay Kumar Jha** (2019). Islanding Detection in Distributed Generation Integrated Thimi-Sallaghari Distribution Feeder Using Wavelet Transform and Artificial Neural Network, *Journal of the Institute of Engineering*, 15(2):55-61.
40. Ram Dayal Yadav, **Ajay Kumar Jha**, Nawraj Bhattarai (2018). Electricity Generation Potential through Solar-Rice Husk Hybrid Power Plant in Nepal and its Major Paddy Producing Districts, *Engineering and Applied Sciences*, 3(3): 74-87 ([10.11648/j.eas.20180303.13](https://doi.org/10.11648/j.eas.20180303.13)).
41. **Ajay Kumar Jha**, Deepa Upadhyaya and Ashesh Babu Timilsina (2018). *Assessment of Gravitational Water Vortex Hydropower Plant in Nepal*, *International Research Journal of Engineering and Technology*, 5(7): 2679-2691.
42. **Ajay Kumar Jha** and Sanjeev Ray (2018). *Grid Integration Analysis for Cogeneration and Captive Plant in Sugar Industry: A case Study of Indushankar Sugar Industry Pvt. Ltd., Sarlahi, Nepal*, *Journal NX-A Multidisciplinary Peer Reviewed Journal*, 4(7): 10-16.
43. **Ajay Kumar Jha** and Saroj Shrestha (2018). *Application of High Capacity Conductors for Uprating of Existing Transmission Lines in Nepal*, *Journal NX-A Multidisciplinary Peer Reviewed Journal*, 4(8): 32-37.
44. **Ajay Kumar Jha** (2018). *Dry Anaerobic Co-digestion of Cow Dung with Excess Sludge at Low Temperature*, *International Journal of Engineering and Applied Sciences (IJEAS)*, 5(7):69-73.
45. Jiwan Nyoupane and **Ajay Kumar Jha** (2018). Energy Efficiency Analysis of Software Defined Network in Backbone Transmission Network of Kathmandu Valley of Nepal Telecom, *Journal of Advanced College of Engineering and Management*, 4:65-73 (<https://doi.org/10.3126/jacem.v4i0.23181>).
46. Amar Adhikari and **Ajay Kumar Jha** (2018). *Ranking Approach to M.Sc. Programs at Mechanical Department, Pulchowk Campus, Institute of Engineering, Tribhuvan University, Nepal using Analytic Hierarchy Process*, *International Journal of Biological Sciences and Research*, 1(1): 50-63.
47. Binod Bhandari, Shreeraj Shakya and **Ajay Kumar Jha** (2018). Short Term Electric Load Forecasting of Kathmandu Valley of Nepal using Artificial Neural Network, *Kathford Journal of Engineering and Management* 1(1):43-48 ([10.3126/kjem.v1i1.22022](https://doi.org/10.3126/kjem.v1i1.22022)).
48. **Ajay Kumar Jha**, Prativa Gautam and Sadeep Acharya (2016). *Feasibility Study of Waste to Energy Potential with the Focus on Bio Digester Optimization*, *Journal of Environment Science*, 2: 81-88.
49. Zhang JingRui, Zhu Gefu, Pan Xiaofang, **Jha Ajay Kumar**, Liu Lin, Huang Xu, Liu Chaoxiang (2016). *Effects of Hydraulic Retention Time and Influent Alkalinity on the Performance of Bio-electrochemical system Assisted Anaerobic Baffled Reactor, Desalination and Water Treatment*, 1-12 (**SCImago, SCI IF: 1.631**).
50. Kulchandra Panthee, **Ajay Kumar Jha** (2016). *Estimation of Global Solar Radiation using Artificial Neural Network in Kathmandu, Nepal*, *International Journal of Engineering Research & Science (IJOER)*, 2(1):62-70.
51. **Ajay Kumar Jha** (2016). *Prospects and Performance Characteristics of Semi-Dry Anaerobic Digestion Process of Cow Dung in Nepal*, *International Journal of Electrical, Electronic, Computer Science and Engineering (IJECESE)*, 2(1):1-14.
52. Nawa Raj Bhattarai and **Ajay Kumar Jha** (2015). *Commercial Sector Energy Demand Projections of Nepal for Sustainable Sectoral Energy Planning*, *Journal of Environment Protection and Sustainable Development*, 1 (3): 165-177.
53. Nawa Raj Baral, Jianzheng Li and **Ajay Kumar Jha** (2015). *Fermentable Sugars and Microbial Inhibitors Formation from Two-stage Pretreatment of Corn Stalk with Variation in Particle Size and Severity Factor*, *African Journal of Biotechnology*, 14(39): 2800-2811 (SCImago, SCI IF=0.45).
54. **Ajay Kumar Jha**, Jianzheng Li, Yixing Yuan, Nawraj Baral and Binling Ai (2014). *A Review on Bio-Butyric Acid Production and its Optimization*, *International Journal of Agriculture & Biology*; 16:1019-1024 (SCImago, SCI IF: 0.869).

55. Zou Ran, Zhu Gefu, **JhaAjay Kumar**, Liu Chaoxiang, Huang Xu and Liu Lin (2014). *Hydrogen and methane production in a bio-electrochemical system assisted anaerobic baffled reactor*. International Journal of Hydrogen Energy, 39:13498-13504 (SCImago, **SCI IF: 4.229**).
56. Jianzheng Li, **Ajay Kumar Jha**, Tri Ratna Bajracharya(2014). *Dry Anaerobic Co-digestion of Cow Dung with Pig Manure for Methane Production*. Applied Biochemistry and Biotechnology, 173: 1537-1552 (SCImago, **SCI IF: 1.797**).
57. Jianzheng Li, Nawa Raj Baraland **Ajay Kumar Jha**(2014). *Acetone–butanol–ethanol Fermentation of Corn Stover by Clostridium Species: Present Status and Future perspectives*. World Journal of Microbiology and Biotechnology, 30: 1145-1157. DOI 10.1007/s11274-013-1542-7 (**SCImago, SCI IF: 2.10**).
58. Nawa Raj Baral, Jianzheng Li and **Ajay Kumar Jha**(2014). *Perspective and prospective of Pretreatment of Corn Straw for Butanol Production*. Applied Biochemistry and Biotechnology, 172: 840-853. DOI 10.1007/s12010-013-0548-9 (**SCImago, SCI IF: 1.797**).
59. Gefu Zhu, Ran Zou, Ajay Kumar Jha, Xu Huang, Lin Liu, and Chaoxiang Liu (2014). *Recent Developments and Future Perspectives of Anaerobic Baffled Bioreactor for Wastewater Treatment and Energy Recovery*, Critical Reviews in Environmental Science and Technology, 45: 1243-1276 (**SCImago, SCI IF: 7.683**).
60. Binling Ai, Jianzheng Li, Xue Chi, JiaMeng, Ajay Kumar Jha, Chong Liu, and En Shi (2014). *Effect of pH and Buffer on Butyric Acid Production and Microbial Community Characteristics in Bioconversion of Rice Straw with Undefined Mixed Culture*, Biotechnology and Bioprocess Engineering, 19: 676-686. (**SCImago, SCI IF: 1.226**).
61. Gefu Zhu, Tingting Wu, **Ajay Kumar Jha**, Ran Zou, Lin Liu, Xu Huang and Chaoxiang Liu (2014). *Review of bio-hydrogen production and new application in the pollution control via microbial electrolysis cell*, Desalination and Water Treatment, 52: 5413-5421 (**SCImago, SCI IF: 1.631**).
62. Gefu Zhu, Jianzheng Li, **Ajay Kumar Jha** (2014). *Anaerobic Treatment of Organic Waste for Methane Production under Psychrophilic Conditions*, International Journal of Agriculture and Biology, 16:1025-1030 (**SCImago, SCIF:0.869**).
63. Jin Chun-jiu, Zhang Jian-qiao, Zhang Yi, Li Na, Peng Jun, **Jha Ajay Kumar**, Liu Chong (2014). *Research on the Watershed Ecological Risk Management*. Applied Mechanics and Materials, 448-453, 272-276 (**EI**).
64. Jin, Chun-Jiu; Lu, Hai Feng; Zhang, Yi; **Jha, Ajay Kumar**; Liu, Shu-Li (2014). *Study on advanced management of water resource*. Applied Mechanics and Materials, 448-453: 1046-1050 (**EI**).
65. **Ajay Kumar Jha**, Jianzheng Li, Qiaoying Ban, Liguozhang, Jin Yu (2013). *Comparison between Dry and Wet Anaerobic Digestions of Cow Dung for Methane Production*, Advances in Water Resource and Protection, 1 (2): 28-38.
66. Tingting Wu, Gefu Zhu, **Ajay Kumar Jha**, Ran Zou, Lin Liu, Xu Huang and Chaoxiang Liu (2013). *Hydrogen Production with Effluent from an Anaerobic Baffled Reactor (ABR) using a Single-chamber Microbial Electrolysis Cell (MEC)*. International Journal of Hydrogen Energy, 38: 11117- 11123 (SCImago, **SCI IF: 4.229**).
67. Gefu Zhu, **Ajay Kumar Jha** (2013). *Psychrophilic Dry Anaerobic Digestion of Cow Dung for Methane Production: Effect of Inoculum*. ScienceAsia, 39: 500-510 (**SCImago, SCI IF: 0.447**).
68. Ban, Qiaoying, Li, Jianzheng, Zhang, Liguozhang, **Jha Ajay Kumar**, Zhang, Yupeng (2013). *Quantitative Analysis of Previously Identified Propionate-Oxidizing Bacteria and Methanogens at Different Temperatures in an UASB Reactor Containing Propionate as a Sole Carbon Source*. Applied Biochemistry and Biotechnology, 171(8):2129-2141 (**SCImago, SCI IF: 1.797**).
69. Qiaoying Ban, Jianzheng Li, Liguozhang, **Ajay Kumar Jha**, Binling Ai and Yupeng Zhang (2013). *Microbial Community Composition and Response to Temperature Shock of a Mesophilic Propionate-degrading Methanogenic Consortium*. International Journal of Agriculture and Biology, 15: 915–920 (**SCImago, SCI IF=0.869**).
70. Qiaoying Ban, Jianzheng Li, Liguozhang, **Ajay Kumar Jha**,Yupeng Zhang and Binling Ai (2013). *Syntrophic Propionate Degradation Response to Temperature Decrease and Microbial Community Shift in an UASB Reactor*. Journal of Microbiology and Biotechnology. 23(3), 382–389(**SCImago, SCI IF: 1.650**).

71. Qiaoying Ban, Jianzheng Li, Liguozhang, Yupeng Zhang and **Ajay Kumar Jha** (2013). *Phylogenetic Diversity of Methanogenic Archaea and Kinetics of Methane Production at Slightly Acidic Conditions of an Anaerobic Sludge*. International Journal of Agriculture & Biology, 15(2), 347-351 (**SCImago, SCI IF: 0.869**).
72. **Ajay Kumar Jha**, Jianzheng Li and Nawa Raj Baral(2013). *Prospects of Dry Anaerobic Digestion of Organic Solid Wastes for Biogas Production in Nepal*. Journal of Current Research in Science, 1(4): 231-234.
73. Guochen Zheng, Shuli Liu, Li Wei, **Ajay Kumar Jha**, Liguozhang, Duoying Zhang (2013). *The Advancement of Algal Biomass: A Review*. Advanced Materials Research, 724-725:319-322 (**EI, SCImago**).
74. Ban Qiaoying, Li Jianzheng, Zhang Liguozhang, Zhang Yupeng, **Ajay Kumar Jha** and Ai Binling (2013). *Effect of Propionate Concentration on Degradation Characteristics of a Propionate Enriched Culture*, Journal of Harbin Institute of Technology, 45(12):44-47 (**EI, SCImago**).
75. Qiaoying Ban, Jianzheng Li, Liguozhang, **Ajay Kumar Jha**, LoringNies (2013). *Linking Performance with Microbial Community Characteristics in an Anaerobic Baffled Reactor*. Applied Biochemistry and Biotechnology, 169 (6), 1822-1836. (**SCImago, SCI IF: 1.797**).
76. **Ajay Kumar Jha**, Jianzheng Li, Qiaoying Ban, Liguozhang, Bowei Zhao (2012). *Dry Anaerobic Digestion of Cow Dung for Methane Production: Effect of Mixing*. Pakistan Journal of Biological Sciences, 15(23): 1111-1118 (SCImago).
77. Zhang Liguozhang, Jianzheng Li, Qiaoying Ban, Junguo He, **Ajay Kumar Jha** (2012). *Metabolic Pathways of Hydrogen Production in Fermentative Acidogenic Microflora*. Journal of Microbiology and Biotechnology. 22(5): 668-673 (**SCImago , SCI IF: 1.650**).
78. Jianzheng Li, Zhang Liguozhang, Qiaoying Ban, **Ajay Kumar Jha**, XuYuping(2012). *Diversity and Distribution of Methanogenic Archaea in an Anaerobic Baffled Reactor (ABR) Treating Sugar Refinery Wastewater*. Journal of Microbiology and Biotechnology, 22(5): 668-673 (**SCImago, SCI IF: 1.650**).
79. Jianzheng Li, Qiaoying Ban, Liguozhang, **Ajay Kumar Jha** (2012). *Syntrophic Propionate-Oxidation in Anaerobic Digestion: A Review*. International Journal of Agriculture and Biology, 14(5): 843-850 (**SCImago, SCI IF: 0.869**).
80. Guo-chen Zheng, Jian-zheng Li, Li Wei, Feng Zhao, Shuang-shi Dong, **Ajay Kumar Jha**, Zhao-han Zhang and Yong-sheng Zhao (2012). *Survey of Combined Hydrogen-Methane Production in Anaerobic Baffled Reactor (ABR)*. Advanced Materials Research 550-553, 3180-3183 (**EI**).
81. Guo Chen Zheng, Zhu Jun Tian, Jian Zheng Li, Li Wei, **Ajay Kumar Jha**, Jing Bo Guo, Hai Feng Lu, Yu Jin (2012). *The Performance Characteristics of Anaerobic Baffled Reactor (ABR) for Hydrogen Production*. Advanced Materials Research, 610-613, 347-351 (**EI**).
82. **Ajay Kumar Jha**, Jianzheng Li, Sushama Pradhan and Mike Hoover (2011). *Current Practices of Solid Waste Management and a Sustainable Perspective in Kathmandu Valley, Nepal*. Waste Management, 31: 2647-2651 (SCImago, **SCI IF: 4.723**).
83. Jianzheng Li, **Ajay Kumar Jha**, Junguo He, Qiaoying Ban, Sheng Chang and Peng Wang (2011). *Assessment of the Effects of Dry Anaerobic Co-digestion of Cow Dung with Waste Water Sludge on Biogas Yield and Biodegradability*. International Journal of the Physical Sciences, 6(15):3679-3688 (SCImago).
84. **Ajay Kumar Jha**, Jianzheng Li, Loring Nies and Zhang Liguozhang (2011). *Research Advances in Dry Anaerobic Digestion Process of Solid Organic Wastes*. African Journal of Biotechnology 10(65):14242-14253 (**SCImago, SCI IF=0.45**).
85. **Ajay Kumar Jha** and Suvita Jha (2010). *Potential Biogas Resources in Nepal*, Technical Journal of Nepal Engineers' Association (ISSN 2091-0592-1), XLII-EC28 (1): 16-22.
86. GuochenZheng, Junguo He, Jianzheng Li, **Ajay Kumar Jha** and Liguozhang (2010). *Optimization of Detecting Hydrogenase Activity for Acidogenic Fermentation of Activated Sludge*. Journal of Harbin Institute of Technology (New Series), 17(5): 721-725 (**EI, SCImago**).
87. **Ajay Kumar Jha**, Jianzheng Li, Junguo He and Chang Sheng (2010). *Optimization of Dry Anaerobic Fermentation of Solid Organic Wastes*. Advanced Materials Research, 113-114:740-743 (**EI, SCImago**).

88. **Ajay Kumar Jha** and Jianzheng Li (2009). *Waste Management and Energy Recovery by Anaerobic Digestion Process*, Technical Journal of Nepal Engineers' Association, p. 1-9.
89. **Ajay Kumar Jha** and Nawraj Bhattarai (2009). *Waste Water Treatment in Nepal*, E-vision, 5: 24-27.
90. **Ajay Kumar Jha** and Barun Lal Karna (1999). *Engineering Introduction*, E-Vision, 2:79-80.

#### Publications (Conference papers)

1. **Ajay Kumar Jha** (2019). Enhancing Semi-Dry Anaerobic Digestion Process of Cow Dung, CAS-TWAS Green Technology Symposium, the 8<sup>th</sup> International Congress on Ionic Liquids, May 13-17, Beijing, China.
2. Amish Joshi and Ajay Kumar Jha (2019). Performance Evaluation of Up-flow Anaerobic Sludge Blanket Reactor and Aerobic Digester of Raj Brewery, Bhairahawa, Nepal, Proceedings of IOE Graduate Conference, 7: 229-233.
3. Kushal Shrestha and Mahesh Chandra Luintel and Ajay Kumar Jha (2019). Theoretical Study of Twin-tube Damper, Proceedings of IOE Graduate Conference, 7: 187-193.
4. Rabindra Kumar Mahatha and Ajay Kumar Jha (2019). Effect of Maximum Level of PV Injection in Low Voltage Network: A Case Study of Baluwatar Feeder, Proceedings of IOE Graduate Conference, 7: 243-249.
5. Trilok Singh Tukuria and **Ajay Kumar Jha** (2019). Use of Energy Alternatives for the Optimization of active energy consumption in rural residential building: A Case study of Tadi-2 Rural Municipality, Nuwakot, Nepal, Proceedings of IOE Graduate Conference, 6: 867-872.
6. Sanjay Mahat and **Ajay Kumar Jha** and Kamal Darlami (2019). Study of Fog Water Collector Mesh with Different Shade Coefficients, Proceedings of IOE Graduate Conference, 6: 389-394.
7. Vijay Raj Giri and **Ajay Kumar Jha** and Tri Ratna Bajracharya (2019). Numerical and Experimental Analysis of Efficiency Enhancement in Fire Tube Boiler using Turbulators, Proceedings of IOE Graduate Conference, 6: 221-230.
8. Asbina Baral, Rabindra Nath Bhattarai and **Ajay Kumar Jha** (2019). Life Cycle Cost Analysis of Hybrid Solar Thermal VRF System for Space Conditioning: A Case Study of Hall in Dhunche, Proceedings of IOE Graduate Conference, 6: 39-44.
9. **Ajay Kumar Jha** (2018). Status and Prospects of Renewable Energy Technologies in Nepal, International Workshop on Renewable Energy Waste and Recycling, December 3-4, University of Kota and Durham University, UK.
10. **Ajay Kumar Jha** (2017). Waste to Energy Potential Mapping for Commercial Waste in Nepal, 1<sup>st</sup> International Conference of TWAS Young Affiliates Network, Rio de Janeiro, Brazil.
11. Bhoj Raj Tiwari, Nawraj Bhattarai, **Ajay Kumar Jha** (2017). *Performance analysis of a 100 kWp grid connected Solar Photovoltaic Power Plant in Kharipati, Bhaktapur, Nepal*, Proceedings of IOE Graduate Conference, pp. 629 – 636, Nepal.
12. Anil Kumar Chaudhary, **Ajay Kumar Jha** (2017). *Reliability Evaluation of Gaighat Radial Distribution Feeder with Distributed Generation Impacts*, Proceedings of IOE Graduate Conference, pp. 489 – 495, Nepal.
13. Ram Bali Mahato and **Ajay Kumar Jha** (2016). *Estimation of Biogas Potential and Sizing of Anaerobic Digester for Malanwa Municipality, Sarlahi, Nepal*, Proceedings of IOE Graduate Conference, pp. 163-169, Nepal.
14. Pushpa Poudyal and **Ajay Kumar Jha** (2016). *Experimental Study on the Properties of Concrete with the Partial Replacement of Sand by Rice Husk*, Proceedings of IOE Graduate Conference, pp. 191-195, Nepal.
15. HariharBhatta, Bijaya Raj Khanal, **Ajay Kumar Jha**, Bhakta Bahadur Ale (2015). *Co-Digestion of Tannery Waste Blended with Cow Dung and Rice Straw: A Case of Asian Leather Arts and Tanning Industry*, Proceedings of IOE Graduate Conference, Nepal, pp. 287-292.
16. **Ajay Kumar Jha** and Tri Ratna Bajracharya (2014). *Wastewater Treatment Technologies in Nepal*, Proceedings of IOE Graduate Conference, Nepal, 76-81.

17. Sanjaya Neupane, Ajay Kumar Jha (2017). *Performance Evaluation of 18kW Solar Photovoltaic Baidi MicroGrid at Baidi, Tanahun, Nepal*, Proceedings of IOE Graduate Conference, pp. 537 – 542, Nepal.
18. Bijaya Raj Khanal and **Ajay Kumar Jha** (2014). *Comparative Analysis of Fiber Reinforced Plastic Biogas Plant with Existing Modified GGC-2047 Model Biogas Plant*, Proceedings of IOE Graduate Conference, Nepal, pp. 178-183.
19. Kabita Sharma, **Ajay Kumar Jha** and Jagan Nath Shrestha (2014). *Scope of Large Scale Biogas in Livestock Farming: A Case Study in Bhadrakali Cow Farm*, Proceedings of IOE Graduate Conference, Nepal, pp. 532-535.
20. Gaurab Singh Hamal, Jagannath Shrestha, **Ajay Kumar Jha** (2014). *Strategizing Demand Side Management on Residential sector of Nepal and its Impact on Electricity Planning*, Proceedings of IOE Graduate Conference, Nepal, 516-52
21. **Ajay Kumar Jha**, Jianzheng Li, Nawraj Bhattarai, Bingling Ai and Cheng Liu (2011). *Biomethanation of Organic Waste under Psychrophilic Conditions*. Proceedings of Third International Conference on Addressing Climate Change for Sustainable Development through Up-scaling
22. **Ajay Kumar Jha**, Junguo He, Jianzheng Li and Guocheng Zheng (2010). *Effect of Substrate Concentration on Methane Fermentation of Cattle Dung*. Proceedings of 2010 International Conference on Challenges in Environmental Science and Computer Engineering, 6-7 March, Wuhan, China, p. 512-515 (EI).
23. **Ajay Kumar Jha**, Sushma Pradhan, Li Jianzheng and Mike Hoover (2010). *Utilization of Municipal Solid Waste for Renewable Energy (Biogas and Heat-electricity) Production*. The Fifth International Conference on Environmental Science and Technology, July 12-16. Houston, Texas, USA.
24. **Ajay Kumar Jha** and Jagan Nath Shrestha (2006). *Feasibility Study and Economical Analysis of Solar Powered Battery-Operated Boat*. Proceedings of First National Conference on Renewable Energy Technology for Rural Technology, October 12-14, Kathmandu, Nepal. Pvt. 179-186.

### Training

- Black carbon monitoring instrument operation, maintenance and applications, ICIMOD, 12-13 sept 2024
- Operation, maintenance and calibration of environmental dust monitoring instruments, ICIMOD, 9-11 sept 2024
- Air Quality Management, ICIMOD, 18 July-4 aug 2022
- Technical Auditors' Training, Nepal Vigilance Center, March-April, 2020.
- Sustainability, SDGs and Global Challenges, Gebze, Turkey, TUBITAK & TWAS, 3-5 December, 2019.
- Preparation of White Paper on Energy Policies, TWAS Science and Diplomacy, Italy; December 9-13, 2013.
- E- Learning Policies; Asian Development Bank Institute; Japan; 4- month in 2007.
- Training of Trainers on Biogas for Partners; Biogas Sector Partnership Nepal; 3 days in Sept., 2007
- Orientation Training Program to Surveyors and Designers of Micro Hydropower Projects; Alternative Energy Promotion Center; Nepal; Nov. 6-8, 2006.
- Teaching Approaches & Techniques; Kathmandu Engineering College, Nepal; 1 week in Oct., 2005.
- Training on Energy Efficiency for Engineers (A case study: Energy Audit of Sita Ram Dairy, Lalitpur); Institute of Environmental Management; Kathmandu, Nepal; Dec. 10-27, 2003 (3 weeks).
- Tests of Solar Components; Solar Energy Tests Station; Lalitpur, Nepal; 1-week in 2004.
- A training on Material Testing Multilab; Kathmandu, Nepal; Poush 10 – Magh 14, 2059 B. S. (7 weeks).
- Textile Production and Management; Two Brothers Textiles Pvt. Ltd; Noida, India; Oct. 7 - Dec. 6, 2000.
- Orientation course on Refrigeration and Air Conditioning plant; SOALTEE CROWN PLAZA; Kathmandu, Nepal; Jan.16-28, 2000.
- National Development Volunteer Service; National Planning Commission, Nepal; Kathmandu, Nepal; Sept. 11-15, 2000.
- ISO 9000 Quality System: Concepts, Methods and Implementation; Pulchowk Campus; Lalitpur; Nepal Dec. 1- 3, 1999.
- Auto-Cad Training Course; Pulchowk Campus; Lalitpur; Nepal; Nov.17 – Dec.1, 1999 (48 hours).

- Total Quality Management; Pulchowk Campus; Lalitpur; Nepal; Nov., 28–30, 1999.
- Orientation Course on Hydropower, Khimti Hydropower Station, Nepal; (3 days in 1998).

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**Languages:**

Languages:	Speaking	Reading	Writing
Nepali	Excellent	Excellent	Excellent
English	Very good	Very good	Very good
Hindi	Very good	Very good	Very good
Maithili	Mother Tongue	Mother Tongue	Mother Tongue