Curriculum Vitae– Dr. Balendu Shekher Giri

Name	BALENDU SHEKHER GIRI (PhD; PDF; MNASc; FLS London)
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Office	Dr. Balendu Shekher Giri, Sustainability Cluster, School of Engineering, University of Petroleum and Energy Studies, Dehradun, Uttarakhand 248007, India

Professional Experience

Position	**Duration**	**University / Institute**
Assistant Professor (Selection Grade)	February 2023 -Till date	University of Petroleum and Energy Studies, Dehradun
Deputy Quality Manager	March 2023 - Till date	or testing laboratory for NABL accreditation @ UPES
Visiting Faculty	July 2023	National Kaohsiung University of Science and Technology, (NKUST) Taiwan Feng Chia University (FCU), Taiwan
Advisory Board Member	September 2024	Runway Incubator, UPES Dehradun, India

Academic Qualification

Degree	**Year**	**Subjects**	**University / Institute**
Ph. D.	2014	Microbiology	RTM University & CSIR-NEERI, Nagpur, India
M. Sc.	2006	Microbiology	Barkatullah University, Bhopal, Madhya Pradesh, India
B. Sc.	2003	Biology, Chemistry	VBS Poorvanchal University, Jaunpur, UP, India

PhD (Title	**Supervisors (Co)**	**University**	**Institute**
Studies on Bio-treatment of Waste Gas Emissions Containing Dimethyl Sulfide (DMS)	Dr. (Mrs.) Asha Juwarkar Dr. R A Pandey	RTM Nagpur University, Nagpur, Maharashtra, India	CSIR-NEERI, Nagpur, and Maharashtra, India

Membership of Professional Societies

1. **Awarded top 2% of researchers globally by the Elsevier Publication and Stanford University**
2. **Fellow, Linnean Society of London, (FLS London) United Kingdom**
3. **Member, National Academy of Science India (NASI India)**
4. **Life Member of the Biotech Research Society (BRSI), India**
5. **International Forum of Industrial Bioprocess (IFIBIOP), France**

Ph.D. Students

1. Shiwangi Dogra (UPES Dehradun); Registration Number (SAP ID): 500113625; Topic: Antimicrobial Resistance
2. Sanjeev Kumar Singh (IET; Dr. AKTU and RDSO, Lucknow); Registration Number: Topic: Solar cooker/wastewater treatment
3. Diksha Dangwal (UPES Dehradun); Registration Number (SAP ID): 500125368; Topic: Wastewater treatment
4. Shivani Nigam, HBTU Kanpur, Uttar Pradesh, India (Tentative Topic: Modelling in wastewater) (Awaited for approval)

Editorial Board Member

- Guest Editor Environmental Science and Pollution Research (Impact Factor: 5.8 for the Year 2020-2022)
- Guest Editor Environmental Science and Pollution Research (Impact Factor: 5.8 for the Year 2023-2025)
- Advisory editorial board: Heliyon (Impact Factor: 4.0)
- Review Editor Frontiers in Environmental Science and Technology
- Review editor Frontiers in Microbiology
- Review editor in Frontiers Group
- Editor-in-Chief Sustainable Resource
- Associate Editor Springer Nature Discover Applied Sciences (Previously SN Applied Science) (IF: 2.6)

Startup

Established one startup namely Biojagat Private Limited which has been signed one MoU with IIT Guwahati under the Umbrella leadership of CRTDH, DSIR, Government of India. The startup is registered at the Ministry of Commerce and Industry, MSME certification, Udyam Certification and GST certification.

This startup works mainly on the mushroom cultivation and production of its value-added products like edible food powder, biscuits, bakery, cookies, cake, and pickles using biodegrading sustainable polymer materials.

Professional Experience as Post-Doctoral Fellow (10 Years)

SN	Research Group	Duration	University/Institute	Output
1	Prof Vimal Katiyar	Oct 2020 to Dec 2022	I I T Guwahati, Assam 781039	• Working on biodegradable polymers and Biochar applications • Working in a team and published 10 publications from the group
2	Dr. Preeti Chaturvedi	Sept 2019 to Sept 2020	CSIR-IITR, Lucknow, U P 226001	• Wastewater treatment using Biochar. • Published 6 papers from this group. • Working in a team for nation pride project NAMAMI GANGE
3	Prof Ram Sharan Singh	July 2016 – July 2019	I I T (BHU), Varanasi – 221005	• Worked on project entitled bioremediation of various kinds of pollutants including VOCs and Dyes • Supervised and helped around 50 students of Summer Interns, B Tech, M Tech and PhDs • Published around 36 papers
4	Prof Samir Kumar Khanal,	March 2015-March 2016	University of Hawaii at Manoa, USA, United State Department of Agriculture (USDA)	• Worked on project entitled "Application of novel Biochar in removal of hydrogen sulfide and enhancement production of biogas containing CH_4 and CO_2 in an anaerobic digester. • Supervised and helped students of graduates and PhDs. • Published 2 high quality papers and one book chapter
5	Prof Ashok Pandey	March 2014 to March 2015	CSIR-NIIST, Trivandrum, Kerala, India	• Worked on project entitled "Integrated Technology for economically sustainable bio – based energy, Indo-Australia program on biofuels, DST, New Delhi AND Acidic pretreatment of lignocellulosic biomass to enhance the biofuel production." • Published 2 papers in highly reputed journals

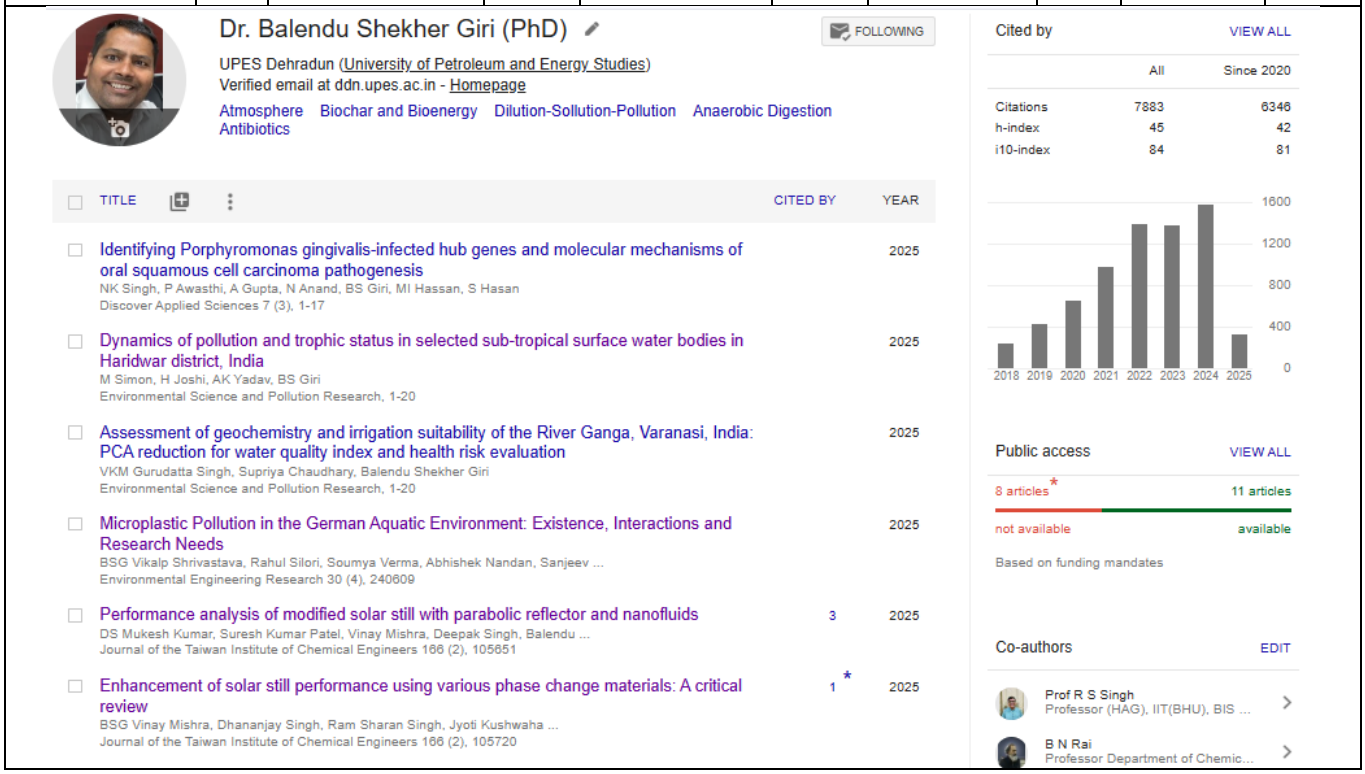
6	Prof Ki-Hyun Kim	April 2013-February 2014	Sejong and Hanyang University, South Korea	• Worked on a project entitled Analysis of VOCs includes VFAs from wastewater. • Published 2 papers in highly reputed journals

Current and completed projects during the overall career.

SN	Project Title	Funding Agencies	Cost (Lakh)	Period	Role
1	Development of prototype for production of potable water through solar desalination unit integrated with heat exchanger and water-based nanofluids	Council of Science and Technology, Uttar Pradesh	7.80	February 2024-Ongoing	Co-PI
2	Biochar preparation using Himalayan lignocellulosic biomass and its application for wastewater treatment	SEED Grant, UPES Dehradun	5.00	March 2023 – ongoing	PI
3	Removal of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) using Adsorption and Bioremediation	SPARC, MHRD, GOI	72.0	March 2019-2021	Post Doc Fellow
4	Wastewater treatment (removal of color; pesticides; VOCs waste) using a hybrid bioreactor system (Electrolysis and Bioreactor system)	IIT (BHU), Varanasi	17.9	July 2016-2019	Post Doc Fellow
5	Development of a hybrid system for pesticide removal from soil	IIT (BHU), Varanasi	10.0	July 2018-Dec 2019	Co-PI
6	Development of a hybrid system for the decolorization of dye-containing wastewater	IIT (BHU), Varanasi	8.00	July 2017-Dec 2018	Co-PI

Publication Highlights with Citations as Per Google Scholar Citations

Total Publication	~150	Total Impact Factor	~1000	Total Co-Authors	~500	Total Citations	~7883	h/i-10-index	45 / 85



Research Details and Experience

- ✓ Research Experience 18 (10 Years POST Ph.D.) Years
- ✓ Area of Interest Bioremediation; Bioenergy; CO_2 Sequestration; Waste-to-Energy; Industrial & Environmental Biotechnology; Sustainability; Net Zero Emissions; Biomass Utilization; Sustainable Agriculture; Bioenergy; Renewable Energy
- ✓ Nature of Work Research and Development (R&D)
- ✓ Publications 150 in international peer-reviewed journal
- ✓ 40–Research Communications (in international conferences/symposia)
- ✓ 10–Research Communications (in National conferences/symposia)
- ✓ Book Chapters 08

Visit Abroad for the oral presentation at International Conferences

- ✓ 2011 Taiwan –Oral Presentation, International conferenceICCE-2011, Taiwan [November 2-5] sponsored by Feng Chia University, Taiwan
- ✓ 2017 China-Oral presentation at International Conference in Challenges in Environmental Science & Engineering (CESE 2017), Yunnan University, Kunming, China [November 11-15, 2017], sponsored by DST, Government of India

***Honors/Awards/Fellowship*:**

- ✓ Post Doctorate Fellowship at IIT Guwahati, Assam, (October 2020-December 2022)
- ✓ Post Doctorate Fellowship at CSIR IITR, Lucknow, Uttar Pradesh (September 2019- September 2020)
- ✓ The Scheme for Promotion of Academic and Research Collaboration (SPARC) fellowship for the travel support grant for collaborating the research work at Hanyang University, Seoul, South Korea
- ✓ Awarded international travel support grant for the oral presentation in an international conference at Kunming China during November 11-15, 2017.
- ✓ Post-doctoral fellowship, IIT (BHU), Varanasi, UP (July 2016- July 2019)
- ✓ Post-doctoral fellowship, University of Hawaii at Manoa, USA (March 2015- March 2016)
- ✓ Post-doctoral fellowship, Sejong and Hanyang University, Seoul, South Korea (2013-2014)
- ✓ Sr. Research Fellowship, CSIR, New Delhi (2010-13)
- ✓ Awarded "Third prize" in a group work title by the 8thTechnology Leadership Entrepreneurship Program – Council of Scientific and Industrial Research (8thTLEP-CSIR), Ministry of Science & Technology, India supported by IIM Bangalore (July 2011)

List of Publications as First and corresponding authors
[Most Recent Listed First]

SN	Authors	Title	Complete Reference
60	NK Singh, P Awasthi, A Gupta, N Anand, **BS Giri**, MI Hassan, S Hasan	Identifying Porphyromonas gingivalis-infected hub genes and molecular mechanisms of oral squamous cell carcinoma pathogenesis	Discover Applied Sciences 7 (3), 1-17. 2025
59	Monika Simon, Himanshu Joshi, Akhilesh Kumar Yadav, **Balendu Shekher Giri**	Dynamics of pollution and trophic status in selected sub-tropical surface water bodies in Haridwar district, India	Environmental Science and Pollution Research, 1-20. 2025

58	Gurudatta Singh, Supriya Chaudhary, **Balendu Shekher Giri,** Virendra Kumar Mishra	Assessment of geochemistry and irrigation suitability of the River Ganga, Varanasi, India: PCA reduction for water quality index and health risk evaluation	Environmental Science and Pollution Research, 1-20. 2025.
57	Vikalp Shrivastava, Rahul Silori, Soumya Verma, Abhishek Nandan, Sanjeev Kumar, **Balendu Shekher Giri**	Microplastic Pollution in the German Aquatic Environment: Existence, Interactions and Research Needs	Environmental Engineering Research 30 (4), 240609. 2025.
56	Vinay Mishra, Dhananjay Singh, Ram Sharan Singh, Jyoti Kushwaha, Anshuman Mishra, Sudeep Yadav, Rahul Dev, Reeta Rani Singhania, **Balendu Shekher Giri**	Enhancement of solar still performance using various phase change materials: A critical review	Journal of the Taiwan Institute of Chemical Engineers, 166 (2), 105720. 2025.
55	Mukesh Kumar, Suresh Kumar Patel, Vinay Mishra, Deepak Singh, **Balendu Shekher Giri,** Dhananjay Singh	Performance analysis of modified solar still with parabolic reflector and nanofluids	Journal of the Taiwan Institute of Chemical Engineers, 166 (2), 105651. 2025
54	Mahendra Choudhary, Sourabh Kumar, Santosh Onte, Vijendra Kumar Meena, Dhruba Malakar, Kamal Garg, Sanjeev Kumar, Mahendra Vikram Singh Rajawat, Mukesh Kumar Awasthi, **Balendu Shekher Giri,** Durgesh Kumar Jaiswal, Shiva Dhar, Elisa Azura Azman, Sanjivkumar Angadrao Kochewad	Optimizing crop quality and yield: Assessing the impact of integrated potassium management on Chinese Cabbage (Brassica rapa L. subsp. chinensis)	Heliyon e36208, (2024)
53	Dhananjay Singh, Mukul Sengar, Tanya Gupta, Sunita Singh, Deepak Singh, Vinay Mishra, Rahul Dev, **Balendu Shekher Giri**	Natural wax recovery from Musa Acuminata biomass using organic solvents	Chemosphere 363, 142919 (2024)
52	Sudeep Yadav, Dan Bahadur Pal, Rajendra Prasad Singh, Parag Madhukar Dhakate, **Balendu Shekher Giri**	Barriers to sustainable biowaste-to-energy solutions: An analytical hierarchy process based methodical analysis	Biomass Conversion and Biorefinery (2024)
51	Chun-Yung Huang, Reeta Rani Singhania, Anil Kumar Patel, **Balendu Shekher Giri**, Chiu-wen Chen, Cheng-Di Dong	Assessing and optimizing the bioactivities of diverse enzyme-derived protein hydrolysates from Porphyra yezoensis: unlocking the health potential	Journal of Food Science and Technology, 1-11 (2024)
50	Pitchurajan Krishna Perumal, Chiu-wen Chen, **Balendu Shekher Giri**, Reeta Rani Singhania, Anil Kumar Patel, Cheng-Di Dong	Graphene-based functional electrochemical sensors for the detection of chlorpyrifos in water and food samples: A review	Journal of Food Science and Technology 61 (4), 631-641 (2024)

49	Rupika Sinha Jairam Selvam, Joyabrata Mal, Sukhendra Singh, Ashish Yadav, **Balendu Shekher Giri**, Ashok Pandey	Bioprospecting marine microalgae as sustainable bio-factories for value-added compounds	Algal Research 79, 103444 (2024)
48	Vinay Mishra, Dhananjay Singh, Ram Sharan Singh, Deepak Singh, Eldon R. Rene, Sarthik Sharma, Anurag Mishra, Harishchandra Shukla, **Balendu Shekher Giri**	Potable water production through low-cost single chamber solar still in north India	Environmental Science and Pollution Research (2024)
47	Mahendra Choudhary, Kamal Garg, Marthala Bhuvaneswar Reddy, Babu Lal Meena, Biswajit Mondal, Mangal Deep Tuti, Sudhir Kumar, Mukesh Kumar Awasthi, **Balendu Shekher Giri**, Sanjeev Kumar, Mahendra Vikram Singh Rajawat	Unlocking growth potential: Synergistic potassium fertilization for enhanced yield, nutrient uptake, and energy fractions in Chinese cabbage	Heliyon 10 (7) (2024)
46	Dhananjay Singh, Deepak Singh, Vinay Mishra, Jyoti Kushwaha, Mukul Sengar, Shishir Sinha, Sunita Singh, **Balendu Shekher Giri**	Strategies for biological treatment of waste water: A critical review	Journal of Cleaner Production, 142266 (2024)
45	Shikha Dubey, Rakesh K. Mishra, Savaş Kaya, Eldon R. Rene, **Balendu Shekher Giri**, Yogesh Chandra Sharma	Microalgae derived honeycomb structured mesoporous diatom biosilica for adsorption of malachite green: Process optimization and modeling	Chemosphere 355 (2024)
44	Mukul Sengar, Dhananjay Singh, Pradeep Kumar Mishra, Deepak Singh, **Balendu Shekher Giri**	Computational study of the performance of a solar dryer for improvement in the shelf life of the food materials	Environmental Science and Pollution Research, (2024)
43	Heena, Nishant Kumar, Rakhi Singh, Ashutosh Upadhyay, **Balendu Shekher Giri**	Application and Functional Properties of Millet Starch: Wet Milling Extraction Process and Different Modification Approaches	Heliyon 10 (2024) e25330
42	Dhananjay Singh, Sunita Singh, Deepak Singh, Jyoti Kushwaha, Vinay Mishra, Suresh Kumar Patel, Sanjay Tewari, **Balendu Shekher Giri***	Sustainable pathways for solar desalination using nanofluids: A critical review	Environmental Research 241, 117654 (2024)
41	Shaniv Kumar Tiwari, Ki-Hyun Kim, Ram Sharan Singh, Jechan Lee, Taejin Kim, Jurgen Mahlknecht, **Balendu Shekher Giri*,** Manish Kumar	A critical review on CO2 sequestration using construction and demolition waste: Future scope and perspective	Environmental Engineering Research 29 (3), 230256 (2024)
40	Dhananjay Singh, Deepak Singh, Vinay Mishra, Jyoti Kushwaha, Rahul Dev, Suresh Kumar Patel, Ravi Shankar, **Balendu Shekher Giri***	Sustainability issues of solar desalination hybrid systems integrated with heat exchangers for the production of drinking water: A review	Desalination Volume 566, 15 November 2023, 116930
39	Manish Choudhary, Sandesh Kumar Jain, Dhananjay Singh, Keerti Srivastava, Anil Kumar Patel, Jürgen Mahlknecht, **Balendu Shekher Giri*,** Manish Kumar	Determination of thermal degradation behavior and kinetics parameters of chemically modified sun hemp biomass	Bioresource Technology Volume 380, July 2023, 129065
38	Arun Sharma, Rajasree Ranjit, Pratibha, Nishant Kumar, Manish Kumar, **Balendu Shekher Giri**	Nanoparticles Based Nanosensors: Principles and their Applications in	Biochemical Engineering

		Active Packaging for Food Quality and Safety Detection	Journal 193, 108861 (2023)
37	Mahendra Singh, Deepak Singh, Piyush Pal, Sunita Singh, Dhananjay Singh, **Balendu Shekher Giri**	Synthesis and performance evaluation of Beta vulgaris based dye-sensitized organic solar cell	Environmental Technology & Innovation 31, 103220 (2023)
36	Mukul Sengar, Reeta Rani Singhania, Deepak Singh, Pradeep Kumar Mishra, Dhananjay Singh, Manish Kumar, **Balendu Shekher Giri**	Drying kinetics, thermal and morphological analysis of starchy food material: Experimental investigation through an induced type solar dryer	Environmental Technology & Innovation 31, 103221 (2023)
35	Shaniv Kumar Tiwari, Ki-Hyun Kim, Ram Sharan Singh, Jechan Lee, Taejin Kim, Jurgen Mahlknecht, **Balendu Shekher Giri,** Manish Kumar	A critical review on CO2 sequestration using construction and demolition waste: Future scope and perspective	Environmental Engineering Research (2023)
34	Manish Choudhary, Dhananjay Singh, Sandesh K. Jain, Deepak Singh, G.L. Devnani, Sunita Singh, Anil Kumar Patel, Reeta Rani Singhania, **Balendu Shekher Giri,** Manish Kumar	Thermal and mechanical investigation of chemically treated hybrid biomass epoxy bio-composite: An approach of pyrolysis kinetics	Bioresource Technology Reports; 23, September 2023, 101589
33	Priyanka Yadav, Sudeep Yadav, Dhananjay Singh, **Balendu Shekher Giri***, Pradeep Kumar Mishra	Barriers in biogas production from the organic fraction of municipal solid waste: A circular bio economy perspective	Bioresource Technology, Volume 362, 127671, (2022)
32	Arijit Dutta Gupta, Harinder Singh, Sunita Varjani, Mukesh Kumar Awasthi, **Balendu Shekher Giri**, Ashok Pandey	A critical review on Biochar-based catalysts for the abatement of toxic pollutants from water via Advanced Oxidation Processes (AOPs)	Science of the Total Environment, Volume 849, 25 157831, (2022)
31	P Yadav, S Yadav, D Singh, RM Kapoor, **BS Giri**	An analytical hierarchy process-based decision support system for the selection of biogas up-gradation technologies	Chemosphere 302, 134741 (2022)
30	P Yadav, S Yadav, D Singh, **BS Giri**	Sustainable rural waste management using biogas technology: An analytical hierarchy process decision framework	Chemosphere 301, 134737 (2022)
29	**B S Giri**, R K Sonwani, Sunita Varjani, Thivaharan Varadavenkatesan, Preeti Chaturvedi, Vimal Katiyar, R S Singh, Ashok Pandey	Highly efficient bio-adsorption of Malachite green using Chinese Fan-Palm Biochar (Livistona chinensis)	Chemosphere 287 (Part 3), 132282 (2022)
28	Parul Shukla, **Balendu Shekhar Giri**, Rakesh K. Mishra, Preeti Chaturvedi, Ashok Pandey	Lignocellulosic biomass-based engineered biochar composites: A facile strategy for abatement of emerging pollutants and utilization in industrial applications	Renewable and Sustainable Energy Reviews 152, 111643, (2021)
27	Birendra Nath Rai Ravi Kumar Sonwani, Soumya Pandey, Santosh Kumar Yadav, **Balendu Shekhar Giri**, Vimal Katiyar, Ram Sharan Singh	Construction of integrated system for the treatment of Acid orange 7 dye from wastewater: Optimization and growth kinetic study	Bioresource Technology 337, 125478, (2021)
26	**BS Giri**, S Geed, K Vikrant, SS Lee, KH Kim, SK Kailasa, M Vithanage, Preeti Chaturvedi, Birendra Nath Rai, Ram Sharan Singh	Progress in bioremediation of pesticide residues in the environment	Environmental Engineering Research 26 (6), 77-100, (2021)

25	Anees Ahmad, Arun Pratap Singh, Nawaz Khan, Pankaj Chowdhary, **Balendu Shekher Giri**, Sunita Varjani, Preeti Chaturvedi	Bio-composite of Fe-sludge biochar immobilized with Bacillus Sp. in packed column for bio-adsorption of Methylene blue in a hybrid treatment system: Isotherm and kinetic evaluation	Environmental Technology & Innovation 23, 101734, (2021)
24	Ravi Kumar Sonwani, Ki-Hyun Kim, Ming Zhang, Yiu Fai Tsang, Sang Soo Lee, **Balendu Shekher Giri**, Ram Sharan Singh, Birendra Nath Rai	Construction of platforms for biological treatment of aromatic hydrocarbons and their future perspectives	Journal of Hazardous Materials 416, (2021)
23	DS Aradhya Dev Srivastav, Vireshwar Singh, Deepak Singh, Balendu Shekher Giri	Analysis of natural wax from Nelumbo nucifera leaves by using polar and non-polar organic solvents	Process Biochemistry 106 (20), 96-102 (2021)
22	R K Gautam, Mandavi Goswami, R K Mishra, Preeti Chaturvedi, M K Awashthi, R S Singh, **Balendu Shekhar Giri** Ashok Pandey	Biochar for remediation of agrochemicals and synthetic organic dyes from environmental samples: a review	Chemosphere 272, 12991, (2021)
21	Shiyi Qin, **B S Giri**, A K Patel, Taner Sarb, Huimin Liu, Hongyu Chen, Ankita Juneja, Zengqiang Zhang, M K Awasthi, Mohammad J.Taherzadeh	Resource recovery and biorefinery potential of apple orchard waste in the circular bioeconomy	Bioresource Technology 2021
20	Priyanka Yadav, Sudeep Yadav, Dhananjay Singh, **Balendu Shekher Giri**	An analysis on generic barriers to bioenergy technologies adoption in context of rural India	Bioresource Technology Reports 14, 100671, (2021)
19	S K Tiwari, **B S Giri***, Varadavenkatesan Thivaharan, AK Srivastava, Sunil Kumar, R P Singh, Rajesh Kumar, R S Singh	Sequestration of simulated carbon dioxide (CO2) using churning cementations waste and fly-ash in a thermo-stable batch reactor (TSBR)	Environmental Science and Pollution Research (2020)
18	VK Bharti, Kumar Vikrant, Mandavi Goswami, Jechan Lee, Daniel Tsang, KH Kim, BN Rai, **B S Giri***, RS Singh	Biodegradation of methylene blue dye in a batch and continuous mode using biochar as packing media	Environmental Research, 171, 356–364 (2019)
17	**B. S. Giri***, Yeshaswi Kaushik, Anugunj Pal, Abhishek Jaiswal, V Thivaharan, R. S. Singh	Indoor potted plant based biofilter: performance evaluation and kinetics study	Indian Journal of Experimental Biology (2019)
16	Munna Kumar, **B S Giri*,** Ki-Hyun Kim, R P Singh, E R. Rene, Estefanía López, BN Rai, Harinder Singh, RS Singh	Performance of a biofilter with compost and activated carbon-based packing material for gas-phase toluene removal	Bioresource Technology, Volume 285, 121317 (2019)
15	MK. Rai, **BS Giri*,** Y Nath, H Bajaj, S Soni, RP Singh, RS Singh, BN Rai	Adsorption of hexavalent chromium from aqueous solution by activated carbon prepared from almond shell: Kinetics, equilibrium and thermodynamics study	Journal of Water Supply: Research and Technology-Aqua (2018)
14	Kumar Vikrant, Harshil Nagar, Raja Anand, Anjney Sharma, Sang-Hun Lee, **BS Giri***, Ki-Hyun Kim, RS Singh	Biodegradation of toluene vapor by evaporative cooler model based biofilter	Analytical Science & Technology (2018)
13	MA Talha, M Goswami, **BS Giri***, BN Rai, RS Singh	Bioremediation of Congo red dye in immobilized batch and continuous packed bed bioreactor by Brevibacillus parabrevis using coconut shell biochar	Bioresource Technology 252, 37-43 (2018)

12	Kumar Vikrant, **BS Giri**[#], Nadeem Raza, KH Kim, BN Rai, RS Singh	Recent advancements in bioremediation of dye: Current status and challenges	Bioresource Technology 253, 355-367 (2018)
11	Kangkan Roy, Mandavi Goswami, Kumar Vikrant, BN Rai, Kowsalya Vellingiri, KH Kim, **BS Giri*,** RS Singh	Removal of Patent Blue (V) dye using Indian Bael Shell Biochar: Characterization, application and kinetic studies	Sustainability, 10(8), 2669 (2018)
10	**BS Giri*,** Mandavi Goswami, RS Singh,	Review on Application of Agro-Waste Biomass Biochar for Adsorption and Bioremediation Dye	Biomedical Journal of Scientific & Technical Research, (2017)
9	J Kanjanarong, **BS Giri**[#]**,** FR Oliveira, P Boonsawang, S Chaiprapat, R.S. Singh, A Balakrishna, DP Jaisi, SK Khanal	Removal of hydrogen sulfide generated during anaerobic treatment of sulfate-laden wastewater using biochar: Evaluation of efficiency and mechanisms	Bioresource Technology, 234, 115-121 (2017)
8	V Bharti, BN Rai, S Kumar, **BS Giri***, RS Singh	Biodegradation of reactive orange 16 by dye in packed bed bioreactor using seeds of Ashoka and Casuarina as packing media	Indian Journal of Biotechnology, 16(2), 216-221 (2017)
7	Kumar Vikrant, SH Lee, KH Kim, JE Szulejko, SK Pandey, **BS Giri***, Richard Brown, RS Singh	Bio-filters for the treatment of VOCs and odors – A review	Asian Journal of Atmospheric Environment, (2017)
6	**BS Giri*,** M Goswami, RA Pandey, KH Kim	Kinetics and biofiltration of dimethyl sulfide emitted from P&P Industry	Biochemical Engineering Journal (2015)
5	**BS Giri,** KH Kim, RA Pandey, J Cho, H Song	Review of biotreatment techniques for volatile sulfur compounds with an emphasis on dimethyl sulfide	Process Biochemistry (2014)
4	**BS Giri**, RA Pandey	Biological treatment of gaseous emissions containing dimethyl Sulphide generated from pulp and paper industry	Bioresource Technology 142, 420-427 (2013)
3	**BS Giri**, Juwarkar Asha, Mudliar S N, Pandey R A	Treatment of waste gas containing low concentration of dimethyl Sulphide (DMS) in a high-performance bio trickling filter	Indian Journal of Experimental Biology (2013)
2	**BS Giri,** AA Juwarkar, DB Satpute, SN Mudliar, RA Pandey	Isolation and characterization of Dimethyl Sulfide (DMS)-degrading bacteria from soil and biofilter treating waste gas containing DMS from the laboratory and pulp and paper industry	Applied Biochemistry & Biotechnology 167 (6), 1744-1752 (2012)
1	**BS Giri**, SN Mudliar, SC Deshmukh, S Banerjee, RA Pandey	Treatment of waste gas containing low concentration of dimethyl sulphide (DMS) in a bench-scale biofilter	Bioresource Technology (2010)

*Corresponding author; #Contributed as first author

Patent [Most Recent Listed First]

Sr.	Application Number	Title	Inventors	Status	Filed Date
1	202411009031 A	Induced-type solar dryer system to enhance shelf life of foods and its working method thereof	Dhananjay Singh, Deepak Singh, Mukul Sengar, **Balendu Shekher Giri,** Dharm Pal, Sunita Singh, Vinay Mishra	Published	10/5/2024
2	202411057300	Hybrid solar still with waste heat recover	Dhananjay Singh, Vinay Mishra, Suresh Kumar Patel, Dharm Pal, Deepak Singh, Ravi Shankar, Sunita Singh, Mukul Sengar, Anshuman Mishra, **Balendu Shekher Giri**	Published	29/07/2024
3	**202411057301**	Hybrid type TSM and polycarbonate wall-based solar dryer system for food preservation and method thereof	Dhananjay Singh, Mukul Sengar, Deepak Singh, Dharm Pal, Vivek Kumar Gaba, Sunita Singh, Vinay Mishra, Vijay Singh, **Balendu Shekher Giri**	Published	29/07/2024

1. Sequestration of simulated carbon dioxide (CO_2) using cementations Construction and Demolition waste and fly-ash in a thermo-stable batch reactor (TSBR); Inventors: **Balendu Shekher Giri**, Shaniv Kumar Tiwari, Satish Mishra, Ram Sharan Singh (2023).

Book Chapters: [Most Recent Listed First]

1. Shiwangi Dogra, **Balendu Shekhar Giri** & Manish Kumar, 2023. Crucial Effects of COVID-19 on Antimicrobial Resistance. Part of the Handbook of Environmental Chemistry book series. In: The Handbook of Environmental Chemistry. Springer, Berlin, Heidelberg. https://doi.org/10.1007/698_2023_1035.

2. Shaniv Kumar Tiwari, **Balendu Shekher Giri***, Sonam Tantuvoy, S. M. Shiva Nagendra, Vimal Katiyar; 2023. Chapter 16: CO_2 removal using construction and demolition waste as a solid adsorbent: Challenges and forthcoming directions, Page 399-411, Giannakoudakis - Novel Materials for Environmental Remediation Applications. Editor Dimitrios A. Giannakoudakis,
3. Arti Mishra, Arun Pratap Singh, Simran Takkar, Anjney Sharma, Smriti Shukla, Kartikeya Shukla, **Balendu Shekher Giri***, Vimal Katiyar, Ashok Pandey; 2022. Chapter 10: Phytoremediation of dyes wastewater, Pandey - Current

Developments in Biotechnology and Bioengineering - Advances in Phytoremediation Technology; Editors: Ashok Pandey. (In Press).

4. **Balendu Shekher Giri*,** Priyanka Tripathi, Rakesh Kumar Gurjar, Ram Sharan Singh, **2020**. Ecological and environmental aspects of aquatic weeds and their growing biotechnological prospects in "Weed Biomass and its Management", Springer Publication (In Press)
5. Kumar Vikrant, Kangkan Roy, Mandavi Goswami, Himanshu Tiwari, **Balendu Shekher Giri**, Ki-Hyun Kim, Yui Fai Tsang, Ram Sharan Singh; 2020. The Potential Application of Biochars for Dyes with an Emphasis on Azo Dyes: Analysis Through an Experimental Case Study Utilizing Fruit-Derived Biochar for the Abatement of Congo Red as the Model Pollutant. In the book "Biochar Applications in Agriculture and Environment Management pp 53-76". Springer Publications.
6. RR Singhania, AK Patel, L Thomas, M Goswami, **BS Giri,** A Pandey; **2015**. Industrial enzymes in "Industrial Bio refineries& White Biotechnology", Elsevier Publication, 473-497.
7. SK Khanal, **B Giri,** S Nitayavardhana, V Gadhamshetty; **2017**. Anaerobic bioreactors/digesters: design and development in "Current Developments in Biotechnology and Bioengineering", Elsevier publication, 261-279.

Organization of Meetings/Symposia/Conferences

A. IN NATIONAL SYMPOSIA/CONFERENCES

1. Conference on **Toxic-exposure related biomarker: Genome and health effects** during January 10-11, 2008, at CSIR-NEERI, Nagpur

2. Workshop on **Advancement in Disinfection Technologies** on August 27, 2008, from Indian Water Work Association, Nagpur Centre, Nagpur

3. National Seminar on **Biotechnological Approach in Cleaner Environment** on March 13, 2008 at Sevadal Mahila Mahavidyalaya and Research Academy, Nagpur

B. HANDS ON TRAINING

1. Microbial Genome Typing at Madurai Kamraj University, Tamil Nadu, India during December 10-24, 2008 sponsored by UGC networking resources centre in biological sciences
2. Trainer's training programme on "Development of Value-Added Products from fresh Mahua Flowers" catalyzed and supported by Science for Equity, Empowerment and Development (SEED) Division, DST, New Delhi, India during February 4-5, 2011, at Centre for Rural Development and Technology, IIT, New Delhi, India
3. Certificate of training in initial biosafety principles and practices at University of Hawaii, USA, 2015
4. 10 days' biogas substrate analysis training program during June 29 to July 13, 2018 jointly organized by Department of Chemical Engineering and Technology, Indian Biogas Association and biogas, Oberfranken, Germany at IIT(BHU), Varanasi

C. ONLINE COURSES AND EXPERIMENTAL DEMONSTRATION

1. Online Video Course on (*CL-0662)* ***Computational Biology*** *during* January – April 2009 from Centre for distance engineering education programmed (C-DEEP) remote Centre, VNIT, Nagpur & IIT Bombay
2. Live unit Demonstration in ***1st Science Expo – An interface of science and society*** during January 19-21, 2012 at Raman Science Centre & Planetarium, Nagpur, Maharashtra and in Agro-Vision during January 26-30, 2012 at Resham Bagh, Nagpur, Maharashtra

D. ATTENDED IN INTERNATIONAL CONFERENCES [Most Recent First]

1. Invited Lecture: Dr. Balendu Giri, UPES "Antimicrobial Properties of Pyrolysis products of Chinese Fan Palm (Livistona chinensis) fruit" in the International Symposium on Environmental Dimensions of Antimicrobial Resistance & COVID-19 for One Health in Asia – 2023 (END-AMR-Asia-2023) 24-28th March 2023.
2. Paper presentation in an international conference on Frontiers in Desalination, Energy, Environment and Material Science for Sustainable Development (FEEMSSD-2023) and Annual Congress on InDA (InDACON-2023) during March 16-17, 2023, entitled "Selection Optimum techniques for the production of portable water ……process" authors by Balendu Shekher Giri, Suresh K. Patel, G L Devnani, Dhananjay Singh.
3. Paper presentation in an international conference on Frontiers in Desalination, Energy, Environment and Material Science for Sustainable Development (FEEMSSD-2023) and Annual Congress on InDA (InDACON-2023) during March 16-17, 2023, entitled "Performance analysis of induced type solar dryer using polymethyl ……polymeric sheet" authors by Mukul Senger, D Singh, D. Singh, P K Mishra, Balendu Shekher Giri.
4. Invited lecture in VII International Conference on Sustainable Energy & Environmental Challenges (16th-18th December 2022) on the topic "Biochar-Based Catalysts for The Abatement of Toxic Pollutants from Water Via Advanced Oxidation Processes" at Indian Institute of Technology (BHU) Varanasi, IIT BHU, Varanasi, Uttar Pradesh 221005; Email: iseesconference@gmail.com
5. Poster presentation at CSIR-Platinum Jubilee International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD 2018) XV BRSI Convention, 22-25 November 2018
6. Poster presentation at Bio-Innovation for Environmental and Health Sustainable Developments" (BEHSD-2018), November 27-28, 2018, CSIR-Indian Institute of Toxicology Research (CSIR-IITR), Lucknow, India in association with the Biotech Research Society (BRSI), India
7. Oral presentation at International Conferences in Challenges in Environmental Science & Engineering (CESE 2017, 11-15 November, Kunming), China, jointly Organized by Yunnan Minzu University, China and LJS Environment, Australia, University of Technology, Sydney (Abstract Accepted for Oral Presentation)
8. Oral presentation at International Conference on "Emerging Trends in Biotechnology for Waste Conversion (ETBWC – 2017)" to be held on 8th -10th October 2017, XIV Annual Convention of Biotech Research Society India at CSIR-NEERI, Nagpur.
9. Oral presentation at International Conference on "Integrated Solid Waste Management Practice in Developing Countries-2017" to be held on April11-12, 2017at CSIR-NEERI, Nagpur, Maharashtra, India

10. Poster presentation at International Conference on Current trends in Biotechnology" (ICCB16) to be held on 8th to 10th December 2016 at VIT University, Vellore and11th Annual Convention of the BRSI during November 21-23, 2016, at Vellore Institute of Technology, Vellore, Tamil Nadu, India
11. Oral presentation at International Conference on Emerging Trends in Biotechnology (ICETB-2014), November 6-9, 2014, at Jawaharlal Nehru University, New Delhi, India (Oral Presentation)
12. Poster presentation at International Conferences on Industrial Biotechnology (ICIB-2012) & 9th Annual Convention of the BRSI during November 21-23, 2012, at Punjabi University, Patiala, Punjab
13. Poster presentation at International Conferences on New Horizon in Biotechnology (NHBT-2011) & 8th Annual Convention of BRSI during November 21-24, 2011, at CSIR-NIIST, Trivandrum, Kerala
14. Oral presentation on the topic entitled "Microbial degradation of dimethyl sulfide (DMS) using a strain of the genera Bacillus sp." at International Conferences on 11th International Conference on Clean Energy (ICCE-2011) during November 2-5, 2011, at Feng Chia University, Taichung, Taiwan
15. Attended the International Conferences on Bioenergy from wastes: green chemistry intervention during November 25-26, 2010, at CSIR- NEERI, Nagpur

E. ATTENDED IN INTERNATIONAL CONFERENCES [Most Recent First]

1. Expert invited talk on the topic "Biotreatment of volatile organic sulfurous compounds" in A Week Long Faculty Development Program On "Microbes' Potential to Bail out the Energy Crisis" December 15th – 20th, 2022 Organized by Department of Biochemical Engineering, School of Chemical Technology, Harcourt Butler Technical University Kanpur-208002
2. Expert talk at IPS ACADEMY, INSTITUTE OF ENGINEERING & SCIENCE CIVIL ENGINEERING DEPARTMENT, on the topic "Hybrid treatment system for the remediation of volatile organic sulphurous compounds and dyes containing wastewater" for One Week Online Short-Term Training Program On "Water Quality Complication, Restoration and Environmental Conservation of Existing Water Bodies" Module II Sponsored by AICTE (22nd Nov to 27th Nov 2021).
3. Expert Lecture in AICTE sponsored online Two-Week Short-Term Training Program (STTP) on "Water Quality Complication, Restoration and Environmental Conservation of Existing Water Bodies" from 26th July to 7th Aug 2021. Civil Engineering Department of our institute IPS Academy, Institute of Engineering & Science, Indore is organizing AICTE approved online Two-Week Short-Term Training Program (STTP) on "Water Quality Complication, Restoration and Environmental Conservation of Existing Water Bodies" from 26th July to 7th Aug 2021.
4. BIET, Jhansi, Uttar Pradesh invited talk on Biochar and its applicability during the Faculty Development Program, 2021.
5. Expert talk in one week online Short-Term Course on 'Sustainable Trends in Energy & Environment (STEE-2021)' organized by the Department of Chemical Engineering, IET Lucknow during 06-10 February 2021 on topic "Application of Biochar for the Control of Air and Water Pollution".

6. Invited lecture at Department of Biotechnology and Department of Chemical Engineering, MNNIT Allahabad, for a short-term course on **"Biotechnological approaches for Industrial Waste Management and Renewable Energy "IWMRE-2019"** from April 1-7, 2019.

7. Invited lecture at Department of Biotechnology and Department of Chemical Engineering, MNNIT Allahabad, for a short-term course on "**Recent Advances in Biomass Utilization & Fermentation Technology" (SFC-BUFT 2017)** from January 9-15, 2017.

I, the undersigned, hereby state that the above-mentioned information is true and correct to the best of my knowledge.

February 25, 2025

Dehradun, India (Balendu Shekher Giri)

References

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Mobile: 09415372465

Details of academics from Graduation to PhD

Degree / Exam Passed	School / College	Board / University	Passing Year	Marks	Total	%	Subjects / Title
BSC	SMMTPG College, Ballia, Uttar Pradesh	Veer Bahadur Singh Poorvanchal University, Jaunpur, Uttar Pradesh	2003	1008	1800	56.0	Botany, Chemistry, Zoology
MSC	Rajiv Gandhi College, Bhopal, Madhya Pradesh	Barkatullah University, Bhopal, Madhya Pradesh	2006	743	1200	61.9	Microbiology [Dissertation Title: Bioleaching of Copper from chalcopyrite ore]
PhD	CSIR-NEERI, Nagpur, Maharashtra	Rastrasant Tukadojee Maharaj Nagpur University, Nagpur, Maharashtra	2014			Not Applicable	Studies on Bio-treatment of Waste Gas Emissions Containing Dimethyl Sulphide (DMS)
Diploma	All India Institute of Management Studies, Chennai, Tamil Nadu	The Board of Academic and Executive Council, Chennai, Tamil Nadu	2009	294	400	73.5	Elements of Managements, Environment, and Industrial Safety

All Publication List

SN	Name of Author(s)	Paper Title	Journal/Conference Details (name, month & year, volume, page nos., publishers)
134	NK Singh, P Awasthi, A Gupta, N Anand, **BS Giri,** MI Hassan, S Hasan	Identifying Porphyromonas gingivalis-infected hub genes and molecular mechanisms of oral squamous cell carcinoma pathogenesis	Discover Applied Sciences 7 (3), 1-17. 2025.
133	Monika Simon, Himanshu Joshi, Akhilesh Kumar Yadav, **Balendu Shekher Giri**	Dynamics of pollution and trophic status in selected sub-tropical surface water bodies in Haridwar district, India	Environmental Science and Pollution Research, 1-20, 2025
132	Gurudatta Singh, Supriya Chaudhary, **Balendu Shekher Giri,** Virendra Kumar Mishra	Assessment of geochemistry and irrigation suitability of the River Ganga, Varanasi, India: PCA reduction for water quality index and health risk evaluation	Environmental Science and Pollution Research, 1-20, 2025
131	Rahul Silori, Vikalp Shrivastava, Soumya Verma, Abhishek Nandan, Sanjeev Kumar, **Balendu Shekher Giri**	Microplastic Pollution in the German Aquatic Environment: Existence, Interactions and Research Needs	Environmental Engineering Research, 2025 (Accepted)
130	Vinay Mishra, Dhananjay Singh, Ram Sharan Singh, Jyoti Kushwaha, Anshuman Mishra, Sudeep Yadav, Rahul Dev, Reeta Rani Singhania, **Balendu Shekher Giri**	Enhancement of solar still performance using various phase change materials: A critical review	Journal of the Taiwan Institute of Chemical Engineers, 166 (2), 105720. 2025.
129	Mukesh Kumar, Suresh Kumar Patel, Vinay Mishra, Deepak Singh, **Balendu Shekher Giri,** Dhananjay Singh	Performance analysis of modified solar still with parabolic reflector and nanofluids	Journal of the Taiwan Institute of Chemical Engineers, 166 (2), 105651. 2025.
128	Mahendra Choudhary, Sourabh Kumar, Santosh Onte, Vijendra Kumar Meena, Dhruba Malakar, Kamal Garg, Sanjeev Kumar, Mahendra Vikram Singh Rajawat, Mukesh Kumar Awasthi, **Balendu Shekher Giri,** Durgesh Kumar Jaiswal, Shiva Dhar, Elisa Azura Azman, Sanjivkumar Angadrao Kochewad	Optimizing crop quality and yield: Assessing the impact of integrated potassium management on Chinese Cabbage (Brassica rapa L. subsp. chinensis)	Heliyon e36208, (2024)
127	Dhananjay Singh, Mukul Sengar, Tanya Gupta, Sunita Singh, Deepak Singh, Vinay Mishra, Rahul Dev, **Balendu Shekher Giri**	Natural wax recovery from Musa Acuminata biomass using organic solvents	Chemosphere 363, 142919 (2024)

126	SS Askari**, BS Giri,** F Basheer, T Izhar, SA Ahmad, N Mumtaz	Enhancing Sequencing Batch Reactors for Efficient Wastewater Treatment across Diverse Applications: A Comprehensive Review	Environmental Research, 119656 (2024)
125	Dhananjay Singh Sunita Singh, Mukul Sengar, Vinay Mishra, Deepak Singh, Suresh Kumar Patel, Anshuman Mishra, **Balendu Shekher Giri**	Sustainable Pathways for Current and Future Preventions of Diabetes: A Critical Review	African Journal of Biological Sciences 6 (13), 3169-3200 92024)
124	Kamal Garg, Shiva Dhar, Sanjeev Kumar, Elisa Azura Azman, V.K. Sharma, Rajendra Prasad Meena, Mohammad Hashim, Mukesh Kumar Awasthi, Sourabh Kumar, Santosh Onte, Dileep Kumar, **Balendu Shekher Giri,** Mahendra Vikram Singh Rajawat	Enhancing agricultural output: Investigating the impact of advanced organic formulations on crop productivity, nutrient use efficiency, and profitability in a multi-crop system	Journal of Environmental Management 366, 121759 (2024)
123	Vivek Kumar Jaiswal, Arijit Dutta Gupta, Ravi Kumar Sonwani, **Balendu Shekher Giri,** Ram Sharan Singh	Enhanced biodegradation of 2, 4-dichlorophenol in packed bed biofilm reactor by impregnation of polyurethane foam with Fe3O4 nanoparticles: Bio-kinetics, process optimization, performance evaluation and toxicity assessment	Bioresource Technology Volume 406, 131085 (2024)
122	Dhananjay Singh, Vinay Mishra, Suresh Kumar Patel, Dharm Pal, Deepak Singh, Ravi Shankar, Sunita Singh, Mukul Sengar, Anshuman Mishra, **Balendu Shekher Giri**	HYBRID SOLAR STILL WITH WASTE HEAT RECOVERY	IN Patent App. 202411057300 (2024)
121	Dhananjay Singh, Mukul Sengar, Deepak Singh, Dharm Pal, Vivek Kumar Gaba, Sunita Singh, Vinay Mishra, Vijay Singh, **Balendu Shekher Giri**	HYBRID TYPE TSM AND POLYCARBONATE WALL-BASED SOLAR DRYER SYSTEM FOR FOOD PRESERVATION AND METHOD THEREOF	IN Patent App. 202411057301 (2024)
120	Dhananjay Singh, Deepak Singh, Mukul Sengar, **Balendu Shekher Giri,** Dharm Pal, Sunita Singh, Vinay Mishra	INDUCED-TYPE SOLAR DRYER SYSTEM TO ENHANCE SHELF LIFE OF FOODS AND ITS WORKING METHOD THEREOF	IN Patent App. 202411009031 A (2024)
119	Sudeep Yadav, Dan Bahadur Pal, Rajendra Prasad Singh, Parag Madhukar Dhakate, **Balendu Shekher Giri**	Barriers to sustainable biowaste-to-energy solutions: An analytical hierarchy process based methodical analysis	Biomass Conversion and Biorefinery (2024)
118	Chun-Yung Huang, Reeta Rani Singhania, Anil Kumar Patel, **Balendu Shekher Giri**, Chiu-wen Chen, Cheng-Di Dong	Assessing and optimizing the bioactivities of diverse enzyme-derived protein hydrolysates from Porphyra yezoensis: unlocking the health potential	Journal of Food Science and Technology, 1-11 (2024)

117	Pitchurajan Krishna Perumal, Chiu-wen Chen, **Balendu Shekher Giri**, Reeta Rani Singhania, Anil Kumar Patel, Cheng-Di Dong	Graphene-based functional electrochemical sensors for the detection of chlorpyrifos in water and food samples: A review	Journal of Food Science and Technology 61 (4), 631-641 (2024)
116	Rupika Sinha Jairam Selvam, Joyabrata Mal, Sukhendra Singh, Ashish Yadav, **Balendu Shekher Giri**, Ashok Pandey	Bioprospecting marine microalgae as sustainable bio-factories for value-added compounds	Algal Research 79, 103444 (2024)
115	Vinay Mishra, Dhananjay Singh, Ram Sharan Singh, Deepak Singh, Eldon R. Rene, Sarthik Sharma, Anurag Mishra, Harishchandra Shukla, **Balendu Shekher Giri**	Potable water production through low-cost single chamber solar still in north India	Environmental Science and Pollution Research (2024)
114	Mahendra Choudhary, Kamal Garg, Marthala Bhuvaneswar Reddy, Babu Lal Meena, Biswajit Mondal, Mangal Deep Tuti, Sudhir Kumar, Mukesh Kumar Awasthi, **Balendu Shekher Giri**, Sanjeev Kumar, Mahendra Vikram Singh Rajawat	Unlocking growth potential: Synergistic potassium fertilization for enhanced yield, nutrient uptake, and energy fractions in Chinese cabbage	Heliyon 10 (7) (2024)
113	Dhananjay Singh, Deepak Singh, Vinay Mishra, Jyoti Kushwaha, Mukul Sengar, Shishir Sinha, Sunita Singh, **Balendu Shekher Giri**	Strategies for biological treatment of waste water: A critical review	Journal of Cleaner Production, 142266 (2024)
112	Shikha Dubey, Rakesh K. Mishra, Savaş Kaya, Eldon R. Rene, **Balendu Shekher Giri**, Yogesh Chandra Sharma	Microalgae derived honeycomb structured mesoporous diatom biosilica for adsorption of malachite green: Process optimization and modeling	Chemosphere 355 (2024)
111	Mukul Sengar, Dhananjay Singh, Pradeep Kumar Mishra, Deepak Singh, **Balendu Shekher Giri**	Computational study of the performance of a solar dryer for improvement in the shelf life of the food materials	Environmental Science and Pollution Research, (2024)
110	Heena, Nishant Kumar, Rakhi Singh, Ashutosh Upadhyay, **Balendu Shekher Giri**	Application and Functional Properties of Millet Starch: Wet Milling Extraction Process and Different Modification Approaches	Heliyon 10 (2024) e25330
109	Dhananjay Singh, Sunita Singh, Deepak Singh, Jyoti Kushwaha, Vinay Mishra, Suresh Kumar Patel, Sanjay Tewari, **Balendu Shekher Giri***	Sustainable pathways for solar desalination using nanofluids: A critical review	Environmental Research 241, 117654 (2024)
108	Dhananjay Singh, Sunita Singh, Deepak Singh, Jyoti Kushwaha, Vinay Mishra, Suresh Kumar Patel, Sanjay Tewari, **Balendu Shekher Giri**	Sustainable pathways for solar desalination using nanofluids: A critical review	Environmental Research 213, 117654 (2024)

107	Dhananjay Singh, Deepak Singh, Vinay Mishra, Jyoti Kushwaha, Rahul Dev, Suresh Kumar Patel, Ravi Shankar, **Balendu Shekher Giri**	Sustainability issues of solar desalination hybrid systems integrated with heat exchangers for the production of drinking water: A review	Desalination 566, 116930 (2023)
106	Anamika Roy, Mamun Mandal, Sujit Das, Manoj Kumar, Robert Popek, Amit Awasthi, **Balendu Shekher Giri**, Kartick Chandra Mondal, Abhijit Sarkar	Non-exhaust particulate pollution in Asian countries: A comprehensive review of sources, composition, and health effects	Environmental Engineering Research 29 (3), 2023384
105	Shaniv Kumar Tiwari, Ki-Hyun Kim, Ram Sharan Singh, Jechan Lee, Taejin Kim, Jurgen Mahlknecht, **Balendu Shekher Giri**, Manish Kumar	A critical review on CO_2 sequestration using construction and demolition waste: Future scope and perspective.	Environmental Engineering Research (2023)
104	Manish Choudhary, Dhananjay Singh, Sandesh K. Jain, Deepak Singh, G.L. Devnani, Sunita Singh, Anil Kumar Patel, Reeta Rani Singhania, **Balendu Shekher Giri,** Manish Kumar	Thermal and mechanical investigation of chemically treated hybrid biomass epoxy bio-composite: An approach of pyrolysis kinetics	Bioresource Technology Reports (2023)
103	Mahendra Singh, Deepak Singh, Piyush Pal, Sunita Singh, Dhananjay Singh, **Balendu Shekhar Giri**	Drying kinetics, thermal and morphological analysis of starchy food material: Experimental investigation through an induced type solar dryer	Environmental Technology & Innovation 31, 103221 (2023)
102	Rahul Silori, Jian Zang, Nirav P Raval, **Balendu Shekher Giri,** Jürgen Mahlknecht, Abrahan Mora, Jaime Dueñas-Moreno, Syed Mohammad Tauseef, Manish Kumar	Adsorptive removal of ciprofloxacin and sulfamethoxazole from aqueous matrices using sawdust and plastic waste-derived biochar: A sustainable fight against antibiotic resistance	Bioresource Technology, 129537 (2023)
101	Dhananjay Singh Sunita Singh, Deepak Singh, Manish Choudhary, Vinay Mishra, Shiv C. Prajapati, Anshuman Mishra, **Balendu Shekher Giri**	Phyto-Pharmacognostical and Hypocholesterolemic activity of Marus alba L.	European Chemical Bulletin (ISSN 2063-5346) (2023)
100	P Krishna Perumal, C Chen, **BS Giri,** RR Singhania, AK Patel, CD Dong	Graphene-based functional electrochemical sensors for the detection of chlorpyrifos in water and food samples: a review	Journal of Food Science and Technology, 1-11 (2023)
99	Dhananjay Singh Sunita Singh, Mukul Sengar, Deepak Singh, Vinay Mishra, Jyoti Kushawaha, **Balendu Shekher Giri**	Antidiabetic Activity and Biochemical Parameter Estimation of Morus nigra in SD Rat	Journal of Pharmaceutical Sciences and Research (JPSR) 15 (06), 1150-1155 (2023)
98	Vinay Mishra, Anshuman Mishra, Dhananjay Singh, Ram Sharan Singh, Deepak Singh, **Balendu Shekher Giri**	Effect of noble bacteria Ochrobactrum intermedium (Alhpa-22) on decolorization of methyl orange dye in a bioreactor	International Journal of Chemical Reactor Engineering, (2023).

97	Manish Kumar Manish Choudhary, Sandesh Kumar Jain, Dhananjay Singh, Keerti Srivastava, Anil Kumar Patel, Jürgen Mahlknecht, **Balendu Shekher Giri**	Determination of thermal degradation behavior and kinetics parameters of chemically modified sun hemp biomass	Bioresource Technology (2023)
96	Deepak Singh, Mukul Sengar, Suresh Kumar Patel, Dilip Kumar, Dharm Pal, **Balendu Shekher Giri**, Dhananjay Singh	Drying characteristics of thin layer of Potato (Solanum tuberosum): Experimental and computational studies	Environmental Science and Pollution Research, Springer Accepted 2023
95	Mahendra Singh, Deepak Singh, Piyush Pal, Sunita Singh, Dhananjay Singh, **Balendu Shekher Giri**	Synthesis and performance evaluation of Beta vulgaris based dye-sensitized organic solar cell	Environmental Technology & Innovation 31, 103220 (2023)
94	Manish Choudhary, Sandesh Kumar Jain, Dhananjay Singh, Keerti Srivastava, Anil Kumar Patel, Jürgen Mahlknecht, **Balendu Shekher Giri,** Manish Kumar	Determination of thermal degradation behavior and kinetics parameters of chemically modified sun hemp biomass	Bioresource Technology (2023)
93	Arun Sharma, Rajasree Ranjit, Pratibha, Nishant Kumar, Manish Kumar, **Balendu Shekher Giri**	Nanoparticles Based Nanosensors: Principles and their Applications in Active Packaging for Food Quality and Safety Detection	Biochemical Engineering Journal 193, 108861 (2023)
92	Yumin Duan, Ayon Tarafdar, Vinay Kumar, Prabakaran Ganeshan, Karthik Rajendran, **Balendu Shekhar Giri**, Ricardo G´omez-García, Huike Li, Zengqiang Zhang, Raveendran Sindhu, Parameswaran Binod, Ashok Pandey, Mohammad J. Taherzadeh, Surendra Sarsaiya, Archana Jain, Mukesh Kumar Awasthi	Sustainable biorefinery approaches towards circular economy for conversion of biowaste to value-added materials and future perspectives	Fuel, Volume 325, 1 October 2022, 124846
91	Priyanka Yadav, Sudeep Yadav, Dhananjay Singh, **Balendu Shekher Giri**	Sustainable rural waste management using biogas technology: An analytical hierarchy process decision framework	Chemosphere 2022, 301, 134737
90	Aradhya Dev Srivastav, Vireshwar Singh, Deepak Singh, Sunita Singh, Suresh Kumar Patel, Dilip Kumar, Sudeep Yadav, **Balendu Shekher Giri,** Dhananjay Singh	Nelumbo nucifera leaves as source of water-repellent wax: Extraction through polar and non-polar organic solvents	Journal of the Indian Chemical Society, Volume 99, Issue 8, August 2022, 100632
89	Priyanka Yadav, SudeepYadav, Dhananjay Singh, **Balendu Shekher Giri**, P K Mishra	Barriers in biogas production from the organic fraction of municipal solid waste: A circular bio economy perspective	Bioresource Technology Volume 362, October 2022, 127671
88	Arijit Dutta Gupta, Harinder Singh, Sunita Varjani, Mukesh Kumar Awasthi,	A critical review on Biochar-based catalysts for the abatement of toxic pollutants from water	Volume 849, 25 November 2022, 157831

	Balendu Shekher Giri, Ashok Pandey	via Advanced Oxidation Processes (AOPs)	
87	P Yadav, S Yadav, D Singh, RM Kapoor, **BS Giri**	An analytical hierarchy process-based decision support system for the selection of biogas up-gradation technologies	Chemosphere 2022, 302, 134741
86	Agrahari, Büşra Bayar, Haris Nalakath Abubackar, **Balendu Shekher Giri**, Eldon R.Rene, Radha Rani Roma	Advances in the development of electrodes material for improving reactor kinetics in Microbial Fuel Cells	Chemosphere, 2022, 133184
85	Anamika Kushwaha, Nidhi Hans, **Balendu Shekher Giri,** Eldon R Rene, Radha Rani	Uncovering the phytochemicals of root exudates and extracts of lead (Pb) tolerant Chrysopogon zizanioides (L.) Roberty in response to lead contamination and their effect on the chemotactic behavior of rhizospheric bacteria	Environmental Science and Pollution Research, Volume 29, pages 44998–45012 (2022)
84	**Balendu Shekher Giri**, Ravi Kumar Sonwani, Sunita Varjani, Deepshi Chaurasia, Thivaharan Varadavenkatesan, Preeti Chaturvedi, Sudeep Yadav, Vimal Katiyar, Ram Sharan Singh, Ashok Pandey	Highly efficient bio-adsorption of Malachite green using Chinese Fan-Palm Biochar (Livistona chinensis)	Chemosphere 2022, 287 (Part 3), 132282, Elsevier
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