

Ashok Kumar Nadda, Ph.D. *Nanobiocatalysis, Bioenergy, Biomass, CO₂ conversion Biopolymers*

First & Last Name **Ashok Kumar Nadda**
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Google Scholar: https://scholar.google.co.in/citations?hl=en&user=ZdQgyL0AAAAJ&view_op=list_works&sortby=pubdate

Research Gate: <https://www.researchgate.net/profile/Ashok-Nadda>

SUMMARY OF QUALIFICATIONS:

- Strong ability to write research projects and keen to generate research grants from national and international funding organizations.
- Strong interpersonal skills and collaborators in, Denmark, Sweden, Lithuania, Belgium, Finland, Estonia, South Korea, Taiwan, China, Netherland, and Malaysia.
- Experience from high-quality laboratories in a relevant research field.

Research Areas

Microbial Biotechnology/Biocatalysis/Biopolymers/Bioenergy, CO₂ conversion

Job experience

March 2021-onwards	Assistant Professor (Senior Grade), Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Himachal Pradesh India, 173-234
Dec 2017-March 2021	Assistant Professor (Grade II), Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Himachal Pradesh India, 173-234
March 2017-Dec 2017	Assistant Professor (Brain Pool-KU), Department of Chemical Engineering, Konkuk University, Seoul, Gwangjin-Gu, Seoul, Korea, 143701
March 2016- Feb 2017	Visiting Post-Doctoral research associate, Department of Chemical Engineering, Konkuk University, Seoul, Gwangjin-Gu, Seoul, Korea, 143-701.
June 2014-Mar 2016	Post Doctoral Fellow [Enzyme Molecular Engineering Lab] State Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, People's Republic of China.
Current position	Assistant Professor, (Senior Grade) Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Himachal Pradesh, India.
Area of interest	Biocatalysis, Environmental Biotechnology, Industrial Biotechnology

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Education

2013	Ph.D. (Biotechnology) Himachal Pradesh University, Shimla, India [Supervisor: Prof. S.S. Kanwar] Ph.D. Thesis title: "Purification and characterization of a solvent-tolerant thermophilic bacterial lipase and its applications in ester syntheses".
2008	M.Sc. (Microbiology), Jiwaji University, Gwalior, India, Percentage-80.92%
2006	B.Sc. (Medical) with Botany, Zoology, and Chemistry Himachal Pradesh University, Shimla, India, Percentage- 72.03%

RESEARCH EXPERIENCE

02/2009 to 02/2012	Department of Biotechnology, Himachal Pradesh University, Summer Hill, Shimla. Project title: "Lipase-catalyzed the synthesis of medically important esters of ferulic acid"
2012- June2014	Senior Research Fellow, Department of Biotechnology, Himachal Pradesh University, Summer Hill, Shimla. Project title: "Synthesis of antioxidant esters by lipase catalysis and evaluation of their free radical scavenging potential"

Awards and Fellowships

- Major Research Project (UGC-MRP) fellowship by University Grant Commission, New Delhi India from February 2nd, 2009 to 1st February 2012.
- Research fellowship under UGC-SAP DRS-1 scheme by University Grant Commission, New Delhi, India (Not availed).
- Senior Research Fellowship (ICMR-SRF) by Indian Council of Medical Research, New Delhi India.

Contribution to literature/Science/Biotechnology

- Journal papers: **100 published**
- Conference presentations/Abstracts: **74**
- Book chapters: **30**
- Books/Books Edited: **16 books**
- Citations (Google scholar): **2200+**
- H index: **26**
- i10 Index: **53**
- Plenary/Keynote/Invited Lectures/Seminars: 10 presentations

Thesis/Dissertations [Currently supervising/supervised]:

Ph.D. supervised: 1

Ph.D.	M.Sc.	M. Tech	B. Tech Trainee/Intern	Visiting Researchers	Associates/postdocs	
02	04	02	12	00	01	00

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(Please read Ashok Kumar as Ashok Kumar Nadda)*

Books:

1. **Keratin as a Protein Biopolymer: Extraction from Waste Biomass and Applications** (2019) Springer Series on Polymer and Composite Materials Editors; Swati Sharma and Ashok Kumar. Springer Nature Publishing, Switzerland [ISBN 978-3-030-02901-2]. <https://www.springer.com/gp/book/9783030029005>
2. **Microbes and Enzymes in Soil Health and Bioremediation (2019)**. Springer series on Microbes for sustainability. Editors; Ashok Kumar and Swati Sharma. Springer Nature Publishing Singapore. <https://www.springer.com/gp/book/9789811391163>
3. **Lignin Biosynthesis and transformation into industrial products (2020)** Springer Series on Polymer and Composite Materials Editors; Swati Sharma and Ashok Kumar. Springer Nature Publishing, Switzerland [ISBN].978-3-030-40663-9. <https://www.springer.com/gp/book/9783030406622>
4. **Chemo-enzymatic systems for CO₂ utilization (2020)**. CRC Press Taylor and Francis. Editors; Swati Sharma and Ashok Kumar. Taylor and Francis USA, [ISBN] 9780367321932.
5. **Advances in Probiotics for Sustainable Food and Medicine (2020)**.Springer series on Microbes for sustainability. Editors; Gunjan Goel and Ashok Kumar. Springer Nature Publishing Singapore.[ISBN] 9789811567957<https://www.springer.com/gp/book/9789811567940>
6. **Nanomaterials for Bio-Catalysis**, Editors: Guillermo R. Castro, Ashok Kumar, Tuan Anh Nguyen, Xianghui Qi, Ghulam Yasin, March 2021, ISBN: 9780128244371, Elsevier, USA
7. **Smart Nanomaterials for Bioencapsulations**, Editors: Guillermo R. Castro, Ashok Kumar, Tuan Anh Nguyen, Swati Sharma, Ram GuptaDecember 2021, ISBN: 9780323912297Elsevier, USA
8. **Advances in carbon capture and utilization (2020)** Springer series on energy and environment. Editors Deepak Pant, Ashok Kumar, K. K. Pant and Avinash Kumar Agarwal. Springer Nature Publishing, Singapore.10.1007/978-981-16-0638-0;[ISBN-978-981-16-0637-3].
9. **Nanosensors for Smart Agriculture**. Editors: Adil Denizli, Tuan Anh Nguyen, Susai Rajendran, Ghulam Yasin, Ashok Kumar, March 2021,ISBN: 9780323852937 Elsevier, USA
10. **Biopolymeric Nanomaterials: Design, Synthesis And Applications**. Editors: Shamsher. S. Kanwar, Ashok Kumar, Tuan Anh Nguyen,Swati Sharma, Yassine Slimani May 2021,ISBN: 9780323853286 Elsevier, USA
11. **Microbial Exopolysaccharides as Novel And Significant Biomaterials Isolation, Characterization And Applications In** Springer Series On Polymers And Composites' Editors: Ashok Kumar, K V Sajna, Swati Sharma, Springer Nature Publishing, Switzerland 2021 ISBN 978-3-030-75288-0, DOI; 10.1007/978-3-030-75289-7

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12. ***Recent Advances in Nanomaterials for Water Treatment and Remediation***. Srabanti Ghosh, Aziz Habibi-Yangjeh, Swati Sharma, **Ashok Kumar**. CRC Press/Taylor & Francis USA. November 2021.
13. ***Nanomaterial for electrocatalysis***, Editors: T Maiyalagan, Mahima Khandelwal, **Ashok Kumar**, Tuan Anh, Ghulam Yasin October 2021, Elsevier, USA.
14. ***Nanotechnology in the Paper and Pulp industry: Fundamentals And Applications***. Editors: Rajeev Bhat, **Ashok Kumar**, Tuan Anh Nguyen, Swati Sharma, August 2021, Elsevier, USA
15. ***Plant Microbial interactions and smart agribiotechnology***, Swati Tyagi, Robin Kumar, Baljeet Saharan, Ashok Kumar Nadda, CRC Press/Taylor & Francis USA. ISBN 9781032100418; November 2021

Books Under Production

16. ***Bioelectrochemical Systems for Wastewater Management***. Maulin P. Shah, **Ashok Kumar**, Achlesh Davery, Susana Rodríguez-Couto. October 2022, Elsevier, USA
17. ***Biomass derived carbon materials for energy and environmental applications***. Mahima Khandelwal, Ashok Kumar Nadda, Susheel Kalia. December 2022, Elsevier, USA
18. ***Biopolymers from wastes and by-products: Challenges and opportunities***. **Ashok Kumar Nadda**, Swati Sharma, Rajeev Bhat. Springer Nature Publishing, Switzerland January 2022
19. ***Microbes for natural food additives*** (2022) **Springer series on Microbes for sustainability**. Editors; **Ashok Kumar Nadda** and Gunjan Goel. **Springer Nature Publishing Singapore**.
20. ***CO₂-Philic Polymers, Nanocomposites and Solvents: Capture, Conversion and Industrial Products***, Editors: **Ashok Kumar Nadda**, Swati Sharma, Susheel Kalia March 2022, Elsevier, USA.

Upcoming books

21. Nanotechnology in bioprocess engineering (2023). Guillermo R. Castro, Ashok Kumar Nadda, Tuan Anh Nguyen, Swati Sharma, Md Bilal. January 2023, Elsevier, USA
22. Nanotechnology in biofouling and Maritime management (2023) Ram Gupta, Ashok Kumar Nadda, Tuan Anh Nguyen, Swati Sharma, Md Bilal. January 2022, Elsevier, USA

Major Publications (10 selected publications with representative work)

Selected publications

1. **Ashok Kumar**, Gi Dae Park, Sanjay K.S. Patel, Sanath Kondaveeti, Sachin Otari, Muhammad Zahid Anwar, Vipin C. Kalia, Yogendra Singh, Sun Chang Kim, Byung-Kwan Cho, Jung-Hoon Sohn, Dong Rip Kim, Yun Chan Kang, Jung-Kul Lee (2019). SiO₂ microparticles with carbon nanotube derived mesopores as an efficient support for enzyme immobilization. ***Chemical Engineering Journal***. doi.org/10.1016/j.cej.2018.11.052.
2. **Ashok Kumar**, Gaobing Wu, Zuo Wu and Ziduo Liu (2018). Improved catalytic properties of a Serine hydroxylmethyl transferase from *Idiomarina loihiensis* by site directed mutagenesis. ***International Journal of Biological Macromolecules***. <https://doi.org/10.1016/j.ijbiomac.2018.05.003>.
3. **Ashok Kumar**, Gaobing Wu, Ziduo Liu (2018). Synthesis and characterization of cross-linked enzyme aggregates of serine hydroxyl methyltransferase from *Idiomarina loihiensis*. ***International Journal of Biological Macromolecules***. DOI: doi:10.1016/j.ijbiomac.2018.04.106.
4. **Ashok Kumar**, Shaowei Zhang, Gaobing Wu, Cheng Chao Wu, Jun Peng Chen, Baskaran R, Ziduo Liu (2015). Cellulose binding domain assisted immobilization of lipase (GSlip-CBD) onto cellulosic nanogel: characterization and application in organic medium. ***Colloids and Surfaces B: Biointerfaces***. 136, 1042–1050.

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5. **Ashok Kumar***, Alisa Gricajeva, Mikas, Sadauskas, Vilius Malunavicius, Hesam Kamyab, Swati Sharma, Tanvi Sharma, Deepak Pant (2019). Microbial lipolytic enzymes – promising energy-efficient biocatalysts in bioremediation. *Energy*. Accepted <https://doi.org/10.1016/j.energy.2019.116674>
6. **Ashok Kumar** and Shamsheer Singh Kanwar (2011). Synthesis of ethyl ferulate in organic medium using celite-immobilized lipase. *Bioresource Technology*. 102, 2162-2167.
7. **Ashok Kumar**, Shamsheer S Kanwar, Kartik Dhar, Pankaj Kumar Arora (2016). Lipase catalysis in organic solvents: Advantages and applications. *Biological Procedures Online*. 18:2, DOI 10.1186/s12575-0160033-2.
8. Tanvi Sharma, Swati Sharma, Hesam Kamyab and **Ashok Kumar*** (2020). Energizing the CO₂ utilization by Chemo-enzymatic approaches and potentiality of carbonic anhydrases: A review. *Journal of Cleaner Production*. 247, 119138 <https://doi.org/10.1016/j.jclepro.2019.119138>
9. Tanvi Sharma and **Ashok Kumar*** (2020). Bioprocess development for the efficient conversion of CO₂ into calcium carbonate using keratin microparticle immobilized *Corynebacterium flavescens*. *Process Biochemistry*, 100, 171-177.
10. Sanjay K. S. Patel; Raushan Singh; **Ashok Kumar**, Jae-Hoon Jeong; Sung-Hoon Jeong; Vipin C. Vipin C. Kalia; In-Won Kim; Jung-Kul Lee (2017). Biological methanol production by immobilized *Methylocella tundrae* using simulated biohythane as a feed. *Bioresource Technology*. 241, 922-927.

The Year 2022

11. Kriti Sharma,, Young-Kwon Park, Ashok Kumar Nadda* , Priya Banerjee, Pradeep Singh, Pankaj Raizada , Fawzi Banat, G. Bharath, Sang Mun Jeong,* , Su Shiung Lam (2022) Emerging chemo-biocatalytic routes for valorization of major greenhouse gases (GHGs) into industrial products: A comprehensive review. *Journal of Industrial and Engineering Chemistry*. Accepted
12. Kusum Sharma, Shilpa Patial, Pardeep Singh, Aftab Aslam Parwaz Khan, Vipin Saini, **Ashok Kumar Nadda**, Chaudhery Mustansar Hussain, Van-Huy Nguyen Chinh Chien Nguyen, Thi Bach Hac Nguyen, Soo Young Kim, Quyet Van Le Pankaj Raizada (2022). Strategies and perspectives of tailored SnS₂ photocatalyst for solar driven energy applications. *Solar Energy*. 231, 546-565.
13. Giang Van Tran, Rameshprabu Ramaraj, **Ashok Kumar Nadda** and Yuwalee Unpaprom (2022). Simultaneous carbon dioxide reduction and methane generation in biogas for rural household use via anaerobic digestion of wetland grass with cow dung. *Fuel*. Accepted.
14. Satya Eswari Jujjavarapu, Van-Huy Nguyen, **Ashok Kumar Nadda**, Dai-Viet N. Vo (2021). Microbial enzymes for green energy and clean environment. *Journal of Chemical Technology and Biotechnology*. Pages 1-2 DOI 10.1002/jctb.6980
15. Yingji Wu, Yunyi Liang, Chang tong Mei, Liping Cai, **Ashok Kumar Nadda**, Quyet Van Le, Yucheng Peng Su Shiung Lam, Christian Sonne, Changlei Xia (2021). Advanced nanocellulose-based gas barrier materials: Present status and prospects. *Chemosphere*, 131891, doi.org/10.1016/j.chemosphere.2021.131891
16. Alexander Pinky Steffi, Ramachandran Balaji, Natarajan Prakash, Thangavel Pichaiapp, Rajesh Selvarajan, Ethiraj Melvin S. Samuele, **Ashok Kumar Nadda**, Narendhar Chandrasekar (2021). Incorporation of SiO₂ functionalized gC₃N₄ sheets with TiO₂ nanoparticles to enhance the anticorrosion performance of metal specimens in aggressive Cl⁻ environment. *Chemosphere*. 290, 133332
17. Vatika Soni, Pardeep Singh, Aftab Aslam Parwaz Khan, Arachana Singh, **Ashok Kumar Nadda**, Chaudhery Mustansar Hussain, Quyet Van Le, Stanislav Rizevsky, Pankaj Raizada, Van-Huy Nguyen (2021). Photocatalytic transition-metal-oxides based p-n heterojunction materials: Synthesis, sustainable energy and environmental applications, and perspectives. *Journal of Nanostructures in Chemistry*,
18. Kusum Sharma; Shilpa Patial; Pardeep Singh; Van-Huy Nguyen; **Ashok Kumar Nadda**; Satyabrata Mohapatra; Pankaj Raizada, Quyet Van Le (2022). Recent progress on MXene/MOFs hybrid: Structure, Synthetic strategies and Electro- and Photocatalytic applications. *International Journal of Hydrogen Energy*. Accepted.
19. Rohit Jasrotia; Gagan Kumar; Ankit Verma; Bhawna Sharma; Ritesh Verma; Swati Kumari; Sachin Kumar; Virender Pratap Singh; **Ashok Kumar Nadda**, Susheel Kalia (2022). Robust and Sustainable Mg_{1-x}Ce_xNi_yFe_{2-y}O₄ magnetic

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nanophotocatalysts with improved photocatalytic performance towards photodegradation of crystal violet and rhodamine B pollutants. **Chemosphere**.

The year 2021

20. Reva Bhardwaj, Tanvi Sharma, Dinh Duc Nguyen, Chin Kui Cheng, Su Shiung Lam, Changlei Xia, **Ashok Kumar Nadda*** (2021). Integrated catalytic insights into methanol production: Sustainable framework for CO₂ conversion. **Journal of Environmental Management**. **289**, 112468.doi.org/10.1016/j.jenvman.2021.112468.
21. Neslisah Cihan , G. Bharath , **Ashok Kumar Nadda**, Ozge Yuksel Orhan (2021). A hybrid chemo-biocatalytic system of carbonic anhydrase submerged in CO₂-phillic sterically hindered amines for enhanced CO₂ capture and conversion into carbonates. **International Journal of Greenhouse Gas control**. **111**, 103465
22. Bharath, Govindan, Rambabu, K, Aubry, Cyril, Abu Haija, Mohammad, **Ashok Kumar Nadda**; Nagamony, Ponpandian, Banat, Fawzi (2021). Self-assembled Co₃O₄ nanospheres on N-doped reduced graphene oxide (Co₃O₄/N-RGO) bifunctional electrocatalysts for cathodic reduction of CO₂ and anodic oxidation of organic pollutants. **ACS Applied Energy Materials**. Accepted. doi.org/10.1021/acsaem.1c02196
23. M. Guadalupe Sánchez-Otero, Rodolfo Quintana-Castro, Adela-Sofía Rojas-Vázquez, Giselle-Lilian Badillo-Zeferino, Karina Mondragón-Vázquez, Graciela Espinosa-Luna, **Ashok Kumar Nadda**, Rosa María Oliart-Ros (2021). Polypropylene as a selective support for the immobilization of lipolytic enzymes: Hyper-activation, purification and biotechnological applications. **Journal of Chemical Technology and Biotechnology** <https://doi.org/10.1002/jctb.6876>
24. Renata Gudiukaite, **Ashok Kumar Nadda**, Alisa Gricajeva , Sabarathinam Shanmugam , D. Duc Nguyen , Su Shiung Lam (2021) Bioprocesses for the recovery of bioenergy and value-added products from wastewater: A review. **Journal of Environmental Management**. **300**, 113831.
25. Xuan Cuong Nguyen, Dinh Cham Dao, Thi Tinh Nguyen, Quoc Ba Tran, T. Thanh Huyen Nguyen, Tran Anh Tuan, Kieu Lan Phuong Nguyen, Van-Truc Nguyen , **Ashok Kumar Nadda** , Nguyen Thanh-Nho , W. Jin Chung, S. Woong Chang , D. Duc Nguyen (2021). Generation patterns and consumer behavior of single-use plastic towards plastic-free university campuses. **Chemosphere** <https://doi.org/10.1016/j.chemosphere.2021.133059>
26. Rosa-María Oliart-Ros , Giselle-Lilian Badillo-Zeferino, Rodolfo Quintana-Castro, Irving-Israel Ruíz-López , Alfonso Alexander-Aguilera , Jorge-Guillermo Domínguez-Chávez, ,Azmat Ali Khan , Dinh Duc Nguyen , **Ashok Kumar Nadda*** and María-Guadalupe Sánchez-Otero (2021). Production and characterization of Cross-linked aggregates of *Geobacillus thermoleovorans* CCR11 thermoalkaliphilic recombinant lipase. **Molecules**. Accepted.
27. Mozhgan Razzaghi, Ahmad Homaei, Fabio Vianello, Taha Azad, Tanvi Sharma, **Ashok Kumar Nadda**, Roberto Stevanato, Muhammad Bilal & Hafiz M. N. Iqbal (2021). Industrial applications of immobilized nano-biocatalysts. **Bioprocess and Biosystem Engineering**. accepted <https://doi.org/10.1007/s00449-021-02647-y>.
28. Sudabeh Iraninasab , Sana Sharifian, Ahmad Homaei , Mozafar Bagherzadeh Homae, Tanvi Sharma, Ashok Kumar Nadda, John F. Kennedy, Muhammad Bilal, Hafiz M.N.Iqbal (2021). Emerging trends in environmental and industrial applications of microbial carbonic anhydrase: A review. **Bioprocess and Biosystem Engineering**. accepted
29. Thamer Adnan Abdullah, Tatjana Juzsakova, Hadeel Mansoor Ali, Dawood Salman, Rashed Taleb Rasheed, Sana Abdulhadi Hafad Muhammad Ali, Mallah EndrenDomokos Nguyen Xuan Cuong, **Ashok Kumar Nadda**, Soon Woong Chang, Phuoc-CuongLe, Dinh Duc Nguyen (2021). Polyethylene over magnetite-multiwalled carbon nanotubes for kerosene removal from water. **Chemosphere**. Accepted. doi.org/10.1016/j.chemosphere.2021.132310

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30. Xiangjie Wang, Shu Hong, Hailan Lian, Xianxu Zhan, Mingjuan Cheng, Zhenhua Huang, Maurizio Manzo, Liping Cai, **Ashok Kumar Nadda**, Quyet Van Le, Changlei Xia (2021). Photocatalytic degradation of surface-coated tourmaline-titanium dioxide for self-cleaning of formaldehyde emitted from furniture. **Journal of Hazardous Materials**, 420:126565.
31. Yonghong Luo; Yang Wang; Changlei Xia; Awais Ahmad; Rui Yang; Xiaona Li; Sheldon Q. Shi; Jianzhang Li; **Ashok Kumar Nadda** (2021). Eco-friendly soy protein isolate-based films strengthened by water-soluble glycerin epoxy resin. **Progress in Organic Coatings. Accepted**). <https://doi.org/10.1016/j.porgcoat.2021.106566>
32. Kusum Sharma, Pankaj Raizada, Vasudha Hasija, Pradeep Singh, Archana Bajpai, Van-Huy Nguyen, S. Rangabhashiyam, Pawan Kumar, **Ashok Kumar Nadda**, Soo Young Kim, Rajender A Varma, Nhi Le Thi Thanh, Quyet Van Le (2021). ZnS-based quantum dots as photocatalysts for water purification. **Journal of Water Process Engineering** 43(12):102217.
33. Anchal Rana, Anita Sudhaik, Pankaj Raizada, Aftab Aslam Parwaz Khan, Quyet Van Le, Archana Singh, RangabhashiyamSelvasembian, **Ashok Kumar Nadda**, Pardeep Singh (2021). An overview on cellulose-supported semiconductor photocatalysts for water purification. **Nanotechnology for Environmental Engineering**, 6(2):1-38.
34. Dummi MahadevanGurumurthy, Muhammad Bilal, **Ashok Kumar Nadda**, VaddiDamodara Reddy, Ganesh DattatrayaSaratale, UrszulaGuzik, Luiz Fernando Romanholo Ferreira, Sanjay Kumar Gupta, Mohammed Azharuddin Savanur, Sikandar I. Mulla (2021). Evaluation of cell-wall associated direct extracellular electron transfer in thermophilic *Geobacillus* sp. **3Biotech**, 1-21.
35. ChinhVan Tran, Duong Duc La, TH Phuong Nguyen, Ha Duc Ninh, Thu Ha Thi Vu, **Ashok Kumar Nadda**, Xuan Cuong Nguyen, Dinh Duc Nguyen, Huu Hao Ngo (2021). New TiO₂-doped Cu–Mg spinel-ferrite-based photocatalyst for degrading highly toxic rhodamine B dye in wastewater. **Journal of Hazardous Materials**, 420: 126636.
36. Ianny Andrade Cruz, Larissa Renata Santos Andrade, Ram Naresh Bharagava, **Ashok Kumar Nadda**, Muhammad Bilal, Renan Tavares Figueiredo, Luiz Fernando Romanholo Ferreira (2021). Valorization of cassava residues for biogas production in Brazil based on the circular economy: An updated and comprehensive review. **Cleaner Engineering and Technology**, 100196. <https://doi.org/10.1016/j.clet.2021.100196>
37. G. Bharath, J. Prakash, K.Rambabu, G. Devanand, Venkata subbu, **Ashok Kumar**, SeungjunLee Jayaraman Theerthagiri, Myong YongChoi, Fawzi Banat (2021). Synthesis of TiO₂/RGO with plasmonic Ag nanoparticles for highly efficient photoelectrocatalytic reduction of CO₂ to methanol toward the removal of an organic pollutant from the atmosphere. **Environmental Pollution**, 281, 116990.
38. Vatika Soni, Pankaj Raizada, Pardeep Singh, Hoang Ngoc Cuong, S Rangabhashiyam, PhD; Adesh Saini, Reena V. Saini, Quyet Van Le; **Ashok Kumar Nadda**, Thi-Thu Le, Van-Huy Nguyen (2021). Sustainable and green trends in using plant extracts for the synthesis of biogenic metal nanoparticles toward environmental and pharmaceutical advances: A review; **Environmental Research**. 202:111622
39. Vishal Dutta, Sheetal Sharma, Pankaj Raizada, Aftab Aslam Parwaz Khan, Abdullah M. Asiri, **Ashok Kumar Nadda**, Pardeep Singh, Quyet Van Le, Chao-Wei Huang, Dang Le Tri Nguyen, Shreyas Pansambal, and Van-Huy Nguyen (2021). Recent advances and emerging trends in (BiO)₂CO₃ based photocatalysts for environmental remediation: A review. **Surface and Interfaces**. 25, 101273
40. Ianny A.Cruz, Larissa R.S.Andrade, Ram N.Bharagava, **Ashok Kumar Nadda**, Muhammad Bilal, Renan T.Figueiredo, Luiz F.R.Ferreira (2021) An overview of process monitoring for anaerobic digestion. **Biosystems Engineering**, 207, 106-119.
41. Débora da Silva Vilar, Clara Dourado Fernandes, **Ashok Kumar Nadda**, Ram Naresh Bharagava, Muhammad Bilal, Hafiz M. N. Iqbal, Giancarlo Richard Salazar-Bandar, Katlin Ivon Barrios Eguiluz, Luiz Fernando Romanholo Ferreira (2021). Lignin-modifying enzymes: a green and environmental responsive technology for organic compounds degradation. **Journal of Chemical Technology and Biotechnology**. <https://doi.org/10.1002/jctb.6751>
42. Ranganathan Kokila, Balamuralikrishnan Balasubramanian, Krishnan Meenambigaia Kuppusamy Alagirisamy, **Ashok Kumar**, HesamKamyab, Krishna Kumar Yadav, Arjunan Naresh Kumar (2021). A GIS-based tool for the analysis of the distribution

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and abundance of *Chilosacchariphagus indicus* under the influence of biotic and abiotic factors. **Environmental Technology & Innovation**. 2021, 101357.

43. Palanisamy Prakash, Nisha Kumari, Ekambaram Gayathiri, Kuppasamy Selvam, M. G. Ragunathan, Murugesan Chandrasekaran, Munirah Abdullah Al-Dosary, Ashraf Atef Hatamleh, **Ashok Kumar Nadda** and Manu Kumar (2021). In Vitro and in Silico toxicological properties of natural antioxidant therapeutic agent *Azimatetracantha*. **LAM Antioxidants**, 10(8):1307. DOI: 10.3390/antiox10081307
44. Alisa Gricajeva **Ashok Kumar Nadda*** Renata Gudiukaite (2021). Insights into polyester plastic biodegradation by carboxyl ester hydrolases. **Journal of Chemical Technology and Biotechnology**.<https://doi.org/10.1002/jctb.6745>
45. Ankur Rajpal, Anwar Khurshed, **Ashok Kumar**, Vinay Kumar Tyagi Absar Ahmad Kazmi (2021) Influence of Variations in Wastewater on Simultaneous Nutrient Removal in a Pre-anoxic Selector Attached Full-scale Sewage Treating SBR. DOI 10.21203/rs.3.rs-214129/v1
The year 2020
46. Tanvi Sharma and **Ashok Kumar*** (2020). Efficient reduction of CO₂ into calcium carbonate using a novel carbonic anhydrase producing *Corynebacterium flavescens* from cattle saliva. **Environment Engineering Research**. 26(3): 200191. DOI: 10.4491/eer.2020.191.
47. Shuang Shuang Zhang, Muhammad Bilal, Jakub Zdarta, Jiandong Cui, **Ashok Kumar**, Marcelo Franco, Luiz Fernando R.Ferrira, Hafiz M.N. Iqbal (2020). Biopolymers and nanostructured materials to develop pectinase-based immobilized nanobiocatalytic system for biotechnological applications. **Food Research International**.
<https://doi.org/10.1016/j.foodres.2020.109979>
48. Pham Thi Phan, Ba-Son Nguyen, Trong-Anh Nguyen, **Ashok Kumar**, Van-Huy Nguyen (2020). Lignocellulose-derived monosugars: A review of biomass pre-treating techniques and post-methods to produce sustainable biohydrogen. **Biomass Conversion and Biorefinery**. <https://doi.org/10.1007/s13399-020-01161-7>.
49. Priyanka Verma, Kusum Arunachalam, **Ashok Kumar** Achlesh Davery, (2020). Microbial Fuel Cell – A Sustainable Approach for Simultaneous Wastewater Treatment and Energy Recovery. **Journal of Water Process Engineering**. 2020, 101768. doi.org/10.1016/j.jwpe.2020.101768
50. Chanjuan Li, **Ashok Kumar**, Xuan Luo, Hui Shi, Ziduo Liu, Gaobing Wu, (2020). Highly alkali-stable and cellulase-free xylanases from *Fusarium* sp. 21 and their application in clarification of orange juice. **International Journal of Biological Macromolecules**. 155, 572-580 <https://doi.org/10.1016/j.ijbiomac.2020.03.249>
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27. **Ashok Kumar Nadda**, Guillermo R. Castro, **Tuan Anh Nguyen**, Xianghui Qi, Ghulam Yasin Nanobiocatalysis: An Introduction, In book **Nanomaterials for Bio-Catalysis**, Editors: Guillermo R. Castro, **Ashok Kumar**, **Tuan Anh Nguyen**, Xianghui Qi, Ghulam Yasin, August 2021, ISBN: 9780128244371, Elsevier, USA
28. **Ashok Kumar Nadda**, Rajeev Bhat Tuan Anh Nguyen, Swati Sharma, (2021) Nanotechnology in paper and wood engineering: An introduction. In book **Nanotechnology in the Paper and Pulp industry: Fundamentals And Applications**. Editors: Rajeev Bhat, **Ashok Kumar**, Tuan Anh Nguyen, Swati Sharma, October 2021, Elsevier, USA

Invited talks/Guest lectures

1. Dr. Ashok Kumar has been invited for oral presentation in Royal society of Chemistry and British council co-sponsored UK-India Interdisciplinary Workshop on Advanced Biomaterials and Biosensors (ABB-2018) at IIT Ropar Punjab India, 13th - 15th November, 2018.

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2. Dr. Ashok Kumar was invited for oral presentation at a one day seminar at school of Chemistry Indian Institute of Technology, Mandi Himachal Pradesh India, 9th April, 2018.

3. Dr. Ashok Kumar was invited for oral talk at International conference on Bioprocesses for sustainable environment and energy NIT Rourkela, Orissa. March 2020.

Other academic and professional activities

- 1. **Conference(s) organized:** Convener of International Conference on Recent Trends in Biotechnology and Bioinformatics ICBAB - 2019 held at Jaypee University of Information Technology, Waknaghat, Solan Himachal, India from August 01 - 03, 2019.
- 2. Conference organized: Convener of a virtual international conference on technologies for environmental sustainability and smart agriculture 2020, held at Jaypee University of Information Technology, Waknaghat, Solan Himachal, India from September 18-19 2020.
- Contributed to the syllabus development [Biotechnological Processes] for M.Sc. Environmental Science programme developed by Indira Gandhi National Open University, New Delhi India.

Editorial contribution and international recognitions

Guest Editor: Special issue ESPR Springer. Circular economy for global water security, Environmental science and pollution Research, Springer. [Impact factor 3.0]

Guest Editor: Special issue JCTB Wiley. Microbial enzymes for clean energy and green environment. Journal of Chemical technology and Biotechnology. Wiley. [Impact factor 2.75]

Guest Editor: Special Issue Journal of Thermal Science

Guest editor: Special issue in Frontier in Genetics

Editor: Biomed Research International [Impact factor 2.5]

Editor: Frontier in Biotechnology and Bioengineering [Impact factor 5.1]

Collaboration with various reputed institutes in India and abroad [Few names mentioned] • IIT

Mandi, Central University Himachal Pradesh, Central University of Haryana, CSIO Chandigarh, NIPGR JNU New Delhi, CIAB Mohali Chandigarh Himachal Pradesh University Shimla

- Beside these there are various active collaborators in South Korea, China, Spain, Belgium, Finland and Canada sharing the mutual research interest
- Acting as coordinator of Bhutanese students and mentoring them regularly for betterment in career
- Acting as coordinator of virtual Lab in the Department of Biotechnology and Bioinformatics, JUIT Waknaghat Distt Solan. Himachal Pradesh

Acting as a hostel warden at JUIT

Acting as faculty member of office of international affairs

Acting as a faculty coordinator of JUIT Youth club

- Mentoring of students of B.Tech. M.Tech for career development, LOR for student training and admission for higher studies
- Contributed to the syllabus development for lab and theory courses of B.Tech Biotechnology students and M.Sc. Biotechnology students.
- Member in the anti-ragging committee of JUIT Waknaghat Distt Solan. Himachal Pradesh
- Contributed in the induction program and registration committee of JUIT Waknaghat Distt. Solan. Himachal Pradesh
- Contributed in various outreach activities in educational institutions at Distt Bilaspur, Mandi and Solan, Himachal Pradesh
- Contributed in student educational trip at UHF Nauli and DMR Chambaghat Distt Solan. Himachal Pradesh
- Member in mess supervising committee in the Annapurna mess of JUIT Waknaghat Distt Solan. Himachal Pradesh

Papers were presented/abstracted in the national and international conferences

1. 50th Annual Conference of AML organized at National Chemical Laboratory, Pune, India from December 15-18, 2009;
2. 51st Annual Conference of AML organized at Birla Institute of Technology, Ranchi India from December 14-17, 2010;
3. Indian Science Congress, organized at SRM University, Chennai, India from January 3-5, 2011; . 4. 14th Punjab Science Congress organized at Sant Longowal Institute of Engineering & Technology (SLIET) Sangroor Punjab, India from 7-9 February 2011;
5. International Conference on Microbial Fermentation organized at HILS Poanta Sahib India from 24-25 April 2011; pp 102-103.
6. World Science Congress organized at HICC Hyderabad India from 21 March to 23 March 2011; pp 191 doi:10.4172/2157-7013.1000001.
7. 52nd Annual Conference of AML organized at Punjab University Chandigarh, India from November 3-6, 2011; pp 163.
8. A national conference organized at Arni University India from December 2-3, 2011; pp 15.
9. 15th Punjab Science Congress held at Guru Nanak Dev University Amritsar, India from February 7-9, 2012; pp 85-86.
10. 1st International conference on Biosciences and Bioengineering: A collaborative approach, held at IMS engineering collage, Ghaziabad, New Delhi India from July 2012; pp 1-18.
11. 3rd World Science Congress on Biotechnology held at HICC, Hyderabad India from 13-15 September 2012.
12. 2nd International Science Congress (ISC-2012) Conference at Bon Maharaj Engineering College, Vrindavan, Mathura, UP, India from 8th-9th December 2012.
13. 5th international conference on Fermentation Technology for value added agricultural products. At Centara Hotel and convention centre, Khon Kaen, Thailand from 21st August to 23rd August 2013.
14. Annual Conference of AML organized at Maharishi Dayanand University Rohtak, India from November 17-20, 2013
15. 3rd Himachal Pradesh science congress at IIT Mandi October 22-25 2018
16. 13th India- Japan bilateral conference at Biyani group of collage Jaipur November 26-28 2018
17. 10th Indian Science congress at LPU Jalandhar January 3-7th 2019

**Got 1st Prize in poster Presentation in 14th Punjab Science Congress held at Sant Longowal Institute of Engineering and Technology Sangroor in February 2011.*

Membership of Professional bodies

Lifemembership of International Society for Research and Development (ISRDL) London membership id F3140900303 from July 2016 to onwards.

Lifemembership of Association of Biotechnologists of Himachal Pradesh (Registration No. ABHI-LM026) from 2012 onwards

Lifemembership of Indian Science Congress from 2018 onwards

Annual membership of American Society of Microbiology (member ID. 57137119) from 2013-

14. Lifemembership of Genetic Society of China. From 2014 onwards.

REFERENCES

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I hereby declare that I am an Indian national and all the statements given here are true, complete and correct to the best of my knowledge and belief.

Ashok Kumar Nadda