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Google scholar: <https://scholar.google.com/citations?user=OFVr2Y8AAAAJ&hl=en>

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1. Professional preparation

Institution	Area of study	Year
Rovira I Virgil University, Spain	Chemical, Environmental and Process Engineering	Ph.D 2011
Rovira I Virgil University, Spain	Chemical and Process Engineering	M.Sc. 2007
Addis Ababa University, Ethiopia	Process Engineering	M.Sc. 2004
Bahir Dar University, Ethiopia	Chemical Engineering	B.Sc, 2001

Awards and Honors

1. Best paper award 11th EAI International Conference on Advancements of Science and Technology, Bahir Dar, Ethiopia, November 2023
2. Best Technology Project Award – Bahir Dar University's Diamond Jubilee outstanding recognition, June 2023
3. Third prize of the scholastic award of the year 2000/2001 from the Ethiopian Society of Chemical Engineering
4. Four-month scholarship award for European mentioned doctorate from Ministry of Education of Spain, June, 2010 to September 2010

Professional member ship

- Ethiopian Society of Chemical Engineer (**Serve as Secretary and vice president position**)

2. Academic position

- **June 2023 to Date:** Professor (**Chemical and Environmental Engineering**) in the Faculty of Chemical and Food Engineering, Bahir Dar University, Bahir Dar, Ethiopia
- **July 2017 – June 2023;** Associate professor (**Chemical, Environmental and Process Engineering**) in the Faculty of Chemical and Food Engineering, Bahir Dar University, Bahir Dar, Ethiopia
- **June 2011 – June 2017;** Assistant professor (**Chemical, Environmental and Process Engineering**) in the Faculty of Chemical and Food Engineering, Bahir Dar University, Bahir Dar, Ethiopia
- **October 2006 – May 2011;** Teaching assistantship at University of Rovira I Virgili, Tarragona, Spain
- **November 2004 – September 2006;** Lecture in the department of chemical engineering, Bahir Dar University, Bahir Dar, Ethiopia
- **September 2002 – October 2004;** Teaching assistantship at Addis Ababa University, Chemical engineering department, Addis Ababa, Ethiopia
- **July 2001 – August 2002;** Assistant lecturer in the department of chemical engineering, Bahir Dar University, Bahir Dar, Ethiopia

3. Appointments and leadership:

- **December 2023 to date:** Corporate/Executive Director for Community Engagement and Industry Linkage, Bahir Dar University
- **September 2016 to Date:** Head of Chemical Analysis and Material Characterization Research Lab, Department of Chemical Engineering
- **May 2022 - to Date:** Editor in chief for Poly Journal of Engineering and Technology
- **October 2020 – February 2022:** Project Manager, Africa Center of Excellence for Water Management, College of natural and computational sciences, Addis Ababa University

- **June 2019v- June 2020:** Director for Physical Projects and Consultancy Service Office, Bahir Dar Institute of Technology, Bahir Dar University
- **September 2013- September 2018:** Scientific Director (**Vice president**) for the Bahir Dar Institute of Technology, Bahir Dar University.
- **July 2013 - August 2013;** Dean for Faculty of Chemical and Food Engineering
- **July 2012 - June 2013;** Dean for research, postgraduate studies, and Community Service in Bahir Dar Institute of Technology, Bahir Dar University.
- **August 2011 - July 2012;** Associate Dean for Research and Postgraduate office of Bahir Dar Institute of Technology, Bahir Dar University.
- **June 2006 - October 2006;** Department head of Chemical Engineering at Bahir Dar University.

4. Reviewed Publications:

1. Muktar Abdu Kalifa, **Nigus Gabbiye Habtu**, Addis Lemessa Jembere, Melkamu Birlie Genet; **2024;** Characterization and evaluation of torrefied sugarcane bagasse to improve the fuel properties; Current Research in Green and Sustainable Chemistry
2. Fitfety M. Teshager, **Nigus G. Habtu**, Kibret Mequanint; **2024;** Coupled adsorption–phytoremediation treatment of cellulose-reactive blue dye in a sustainable multi-step pilot-scale process; Environmental Science and Pollution Research
3. Azeb Gebre Meskel, Muhajir Mussa Kwikima, Beteley Tekola Meshesha, **Nigus Gabbiye Habtu**, S.V. Chinna Swami Naik, Bhanu Prakash Vellanki; **2024;** Malachite green and methylene blue dye removal using modified bagasse fly ash: Adsorption optimization studies; Environmental Challenges
4. Habtamu Gebremichael Daba, Mulugeta Admasu Delele, Solomon Workneh Fanta, **Nigus Gabbiye Habtu** & Metadel Kassahun Abera; **2024;** Impact of traditional processing conditions and methods on the aflatoxin content of cooked maize; Cogent Food & AgriCulture, 2024, Vol. 10
5. Fitfety M. Teshager, Kalin I. Penev, **Nigus G.Habtu**, Kibret Mequanint; **2023;** In situ heterogeneous oxidative degradation of adsorbed cellulose-reactive anionic dye; Case Studies in Chemical and Environmental Engineering.
6. Beauty Banda, **Nigus Gabbiye Habtu**, Getachew Dagnew Gebreeyessus and Beteley Tekola Meshesha; **2023;** Vermicomposting as an effective approach to municipal sewage sludge management through optimization of the selected process variables; Water science and Technology
7. Zenebe Nigussie and **Nigus Gabbiye Habtu***; **2023;** Performance evaluation of biocoagulant for the effective removal of turbidity and microbial pathogens from drinking water; Journal of Water and Health

8. Talbachew Tadesse, Mestawot Keana, Tsegaye Sisay, Belay Getye and **Nigus Gabbiye Habtu**; **2023**; Synthesis of activated carbon from banana peels for dye removal of an aqueous solution in textile industries: optimization, kinetics, and isotherm aspects; Water Practice & Technology, IWA
9. Solomon Kebede Asefa, Venkata Ramayya Ancha, **Nigus Gabbiye Habtu** and Lingala Syam Sundar; **2023**; Experimental evaluation on the effect of biochar addition with anaerobic digestion of the tannery wastewater to improve biogas production; Journal of Water Reuse, IWA
10. Azimera Abriha, **Nigus Gabbiye Habtu***, Temesgen Debello, Ababay Ketema; **2023**; Synthesis and characterizations of Al-doped ZnO photocatalyst for removal dyes; Poly Journal of Engineering and Technology
11. Fikiru Temesgen Angerasa, Chia-Yu Chang, Endalkachew Asefa Moges, Wei-Hsiang Huang, Keseven Lakshmanan, Yosef Nikodimos, Jyh-Fu Lee , **Nigus Gabbiye Habtu****, Meng-Che Tsai, Wei-Nien Su, Bing Joe Hwang; **2023**; One-pot hydrothermal synthesis of Pt-TiO₂-Carbon as a highly active and stable electrocatalyst for Oxygen Reduction Reaction; Materials Today: Energy
12. Gashaw Muluken Tessera, **Nigus Gabbiye Habtu***, Metadel Kassahune Abera; **2023**; Process Optimization for Aqueous Ethanosolv Pretreatment of Coffee Husk Biomass Using Response Surface Methodology; Journal of Natural Fibers
13. Negese Yazie, Delele Worku, **Nigus Gabbiye**, Addisu Alemayehu; **2023**; Zerihun Getahun Optimization of the glass transition temperature of polyvinyl pyrrolidone/polyacrylamide blend films using response surface methodology; Applied Polymer
14. Fentahun Adamu Getiea, Delele Worku Ayele*, **Nigus Gabbiye Habtua***, Fantahun Aklog Yihune, Temesgen Atnafu Yemataa, Mehary Dagnaw Ambawe and Ababay Ketema Workua; **2023**; Binary glycerol-based deep eutectic solvents containing zinc nitrate hexahydrate salt for rechargeable zinc air batteries applications with enhanced properties; Helyon
15. Lulseged Belay Addis, Zenamarkos Bantie Sendekie, **Nigus Gabbiye Habtu**, Dominique de Ligny, Judith A. Roether, Aldo R. Boccaccini; **2023**; Optimization of process parameters for the synthesis of class F fly ash-based geopolymers binders; Journal of Cleaner Production
16. Yirdaw Meride Teshome, **Nigus Gabbiye Habtu**, Mikias Biazen Molla, Mihret Dananto Ulsido; **2023**; Energy Production Potential of Municipal Solid Waste and Statistical Modeling: The Case of Yirgalem Town, Ethiopia; Biomass Conversion and Biorefinery
17. Messenbet Geremew, Aynadis Molla, **Nigus Gabbiye**, Jaggar Harvey, Rizana Mahroof, Fetien Abay; **2023**; Effects of threshing and storage conditions on post-harvest insect infestation and physical characteristics of maize grain; Journal of Stored Products Research
18. Asab Fetene Alem, Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu**, Mehary Dagneu Ambaw, Temesgen Atnafu Yemata; **2023**; Enhancing pseudocapacitive properties of cobalt oxide hierarchical nanostructures via iron doping; Heliyon
19. Gedefaw AsmareTafete, **Nigus Gabbiye Habtu***; **2023**; Reactor Configuration, Operations and Structural Catalyst Design in Process Intensification of Catalytic Reactors: A Review; Chemical Engineering and Processing - Process Intensification; V-184; pp-109290
20. Daiki Maruyama, Shinichi Akizuki, Mutsumi Sekine, Akinori Fujita, **Nigus Gabbiye Habtu**, Shinjiro Sato, Tatsuki Toda; **2023**; Enhancement of water hyacinth juice treatment in an anaerobic sequential batch reactor with coffee husk-derived biochar; BioEnergy Research

21. Gemechu Gusu Lemess, **Nigus Gabbiye Habtu**, Esayas Alemayehu; **2023**; Waste to resource: utilization of waste bagasse as an alternative adsorbent to remove heavy metals from wastewaters in sub-Saharan Africa: A review; Water Practice & Technology (IWA)
22. Negese Yazie, Delele Worku, **Nigus Gabbiye**, Addisu Alemayehu, Zerihun Getahun, Mehary Dagne; **2023**; Development of polymer blend electrolytes for battery systems: recent progress, challenges, and future outlook; Materials for Renewable and Sustainable Energy
23. Negese Yazie, Delele Worku Ayele, **Nigus Gabbiye Habtu**, Ganesh Thothadri, Mehary Dagne; **2023**; Insights into the use of polyepichlorohydrin polymer in lithium battery energy storage/conversion devices: review; SN Applied Sciences 5(1)
24. Tesfaye Alamirew, Solomon W Fantaa, **Nigus Gabbiye**, and Delele Worku; **2023**; Graphen Based Nanocomposites for Glucose and Ethanol Enzymatic Biosensor **Fabrication**; Biosensors & Bioelectronics
25. Admasu Fanta Workua, Karta Kaske Kalsa , **Nigus Gabbiye Habtu**, Tenagashaw Mesfin Wogayehu, Merkuza Abera, HadushTsehaye, Fetien Abay, Bhadriraju Subramanyam, Helge Skinnis; **2022(Dec.)**; Dynamics of mycotoxin occurrence in farm-stored maize in Merawi district, Ethiopia; Poly Journal of Engineering and Technology; 1(1)
26. Tayachew Nega, **Nigus Gabbiye Habtu**, Assefa Tesfaye, Getahun Tassew Melesse, Ermias Aswossie; **2022(Dec.)**; Biomass energy conversion in a gasifier for injera baking mitad application; Heliyon
27. Wondimu Kebede, Beteley Tekola Meshesha, **Nigus Gabbiye Habtu**, Yikal Gebeyehu Mekonnen ; **2022(Nov)**; Anthropogenic nitrate contamination of water resources in Ethiopia: an overview; Water Science & Technology, IWA
28. Assefa Tesfaye, **Nigus Gabbiye Habtu**; **2022(Octo.19)**; Fabrication and Performance Evaluation of Solar Tunnel Dryer for Ginger Drying; International Journal of Photoenergy (Hindawi)
29. Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu***, Mehary Dagne; **2022(Octo.10)**; Ambaw; Engineering nanostructured Ag doped α -MnO₂ electrocatalyst for highly efficient rechargeable zinc-air batteries; Heliyon;
30. Fentahun Adamu Getie, Delele Worku Ayele, **Nigus Gabbiye Habtu***, Fantahun Aklog Yihun; Temesgen Atnafu Yemata; **2022**; Development of electrolytes for rechargeable zinc-air batteries: current progress, challenges, and future outlooks; SN Applied Sciences; 4:270
31. Tesfaye Alamirew Dessie, Wei-Hsiang Huang, Dessalew Berihun Adam, Yohannes Ayele Awoke, Chia-Hsin Wang, Jeng-Lung Chen, Chih-Wen Pao, **Nigus Gabbiye Habtu***, Meng-Che Tsai*, Wei-Nien Su*, and Bing Joe Hwang*; **2022**; Efficient H₂ Evolution Coupled with Anodic Oxidation of Iodide over Defective Carbon-Supported Single-Atom Mo-N₄ Electrocatalyst; Nano Letters
32. Y. M. Teshome, **N. G. Habtu**, M. B. Molla, M. D. Ulsido; **2022**; Municipal solid wastes quantification and model forecasting; Global Journal of Environmental Science and Management; v-9(2)
33. Yalaw Woldeamanuel Sitotaw, **Nigus G. Habtu**, Abaynesh Yihdego Gebreyohannes, Tom Van Gerven; **2022**; Effect of alkaline combined with ultrasonic pretreatment to enhance enzymatic saccharification of sugar cane bagasse and Enset fiber (Ensete Ventricosum); Biomass Conversion and Biorefinery

34. Pranshu Bhatia, Shinichi Akizuki, Masatoshi Kishi, **Nigus Gabbiye Habtu**, Solomon Addisu Legesse; **2022**; Biomethane from microalgae; 3rd Generation Biofuels: Disruptive Technologies to Enable Commercial Production; Biomethane from microalgae; ISBN;978-0-323-90971-6
35. Fitfety M. Teshager, **Nigus G. Habtu**, Kibret Mequanint; **2022**; A systematic study of cellulose-reactive anionic dye removal using a sustainable bioadsorbent; Chemosphere
36. Befkadu Ayalkie Gizaw, **Nigus Gabbiye Habtu**; **2022**; Catalytic wet air oxidation of azo dye (Reactive red 2) over copper oxide loaded activated carbon catalyst; Journal of Water Process Engineering
37. Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu**, Bimrew Tamrat Admasu, Getu Alemayehu, Biniyam Zemene Taye, and Temesgen Atnafu Yemata; **2022**; Energy Storage Technologies; Recent Advances, Challenges, and Perspectives; **Book chapter** in Planning of Hybrid Renewable Energy Systems, Electric Vehicles and Microgrid; Springer
38. Tsegahun Mekonnen Zewdie, **Nigus Gabbiye Habtu**, Abhishek Dutta Bart Van der Bruggen; **2022**; Flat sheet metakaolin ceramic membrane for water desalination via direct contact membrane distillation; Journal of Water Reuse and Desalination; 12(1)
39. Yalew Woldeamanuel Sitotaw, **Nigus G. Habtu**, Tom Van Gerven; **2022**; Intensification of low concentration alkaline pretreatment with planetary ball milling for efficient enzymatic saccharification of enset fiber (*Ensete ventricosum*); Biomass Conversion and Biorefinery;12(1)
40. Admasu Fanta Worku, Karta Kaske Kalsa, Merkuza Abera, Mesfin Wogayehu Tenagashaw, **Nigus Gabbiye Habtu**; **2022**; Evaluation of various maize storage techniques on total aflatoxins prevalence and nutrient preservation; Journal of Stored Products Research; 95, pp-101913
41. **Nigus Gabbiye Habtu**, Ababay Ketema Worku, Delele Worku Ayele, Minbale Admas Teshager, Zerihun Getahun Workineh; **2021**; Facile Preparation and Electrochemical Investigations of Copper-Ion Doped α -MnO₂ Nanoparticles;(Book chapter) 9th EAI International Conference on Advancements of Science and Technology;Springer (<https://doi.org/10.1007/978-3-030-43690-2>)
42. Eshetu Getahun, **Nigus Gabbiye***, Mulugeta A. Delele, Solomon W. Fanta, Maarten Vanierschot; **2021**; Two-Stage Solar Tunnel Chili Drying: Drying Characteristics, Performance, Product Quality, and Carbon Footprint Analysis; Solar Energy; Volume 230; Pp-79 - 90
43. Agegnehu Alemu, **Nigus Gabbiye** and Brook Lemm; **2021**; Evaluation of Tannery Wastewater Treatment by Integrating Vesicular Basalt with Local Plant Species in a Constructed Wetland System; Frontiers in Environmental Science; Volume 9
44. Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu***, Temesgen Atnafu Yemata; **2021**; Engineering Co₃O₄/MnO₂ nanocomposite materials for oxygen reduction Electrocatalysis; Heliyon;
45. Jemal Beshir Belay, **Nigus Gabbiye Habtu***, Venkata Ramayya Ancha, Ali Seid Hussen; **2021**; Alkaline hydrogen peroxide pretreatment of cladodes of cactus (*Opuntia ficus-indica*) for biogas production; Heliyon;(7): page 1 -7
46. Eshetu Getahun, Mulugeta A. Delele, **Nigus Gabbiye**, Solomon W. Fanta, Maarten Vanierschot; **2021**; Studying the drying characteristics and quality attributes of chili pepper at different maturity stages: Experimental and mechanistic model; Case Studies in Thermal Engineering

47. Yalew Woldeamanuel Sitotaw, **Nigus G. Habtu**, Abaynesh Yihdego Gebreyohannes, Suzana P. Nunes & Tom Van Gerven; **2021**; Ball milling as an important pretreatment technique in lignocellulose biorefineries: a review; *Biomass Conversion and Biorefinery*:
48. Dargie Halei, **Nigus Gabbiye**; **2021**; The applications of Canadian water quality index for ground and surface water quality assessments of Chilanchil Abay watershed: The case of Bahir Dar city waste disposal site; *Water Science & Technology Water Supply*
49. Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu***; **2021**; Influence of nickel doping on MnO₂ nanoflowers as electrocatalyst for oxygen reduction reaction; *Journal of SN Applied Sciences*; V-3; 764
50. Kassa Wudineh Liyew, **Nigus Gabbiye Habtu**, Yoann Louvet, Dawit Diriba Guta, Ulrike Jordan; **2021**; Technical design, costs, and greenhouse gas emissions of solar Injera baking stoves; *Renewable and Sustainable Energy Reviews*; V-149; pp-111392
51. Tsegahun Mekonnen Zewdie, Indah Prihatiningtyas, Abhishek Dutta, **Nigus Gabbiye Habtu**, Bart Van der Bruggen; **2021**; Characterization and beneficiation of Ethiopian kaolin for use in fabrication of ceramic membrane; *Journal of Research Square*
52. Ababay Ketema Worku, Delele Worku Ayele, **Nigus Gabbiye Habtu***, Getu Alemayehu Melas, Temesgen Atnafu Yemata, Negese Yayu Mekonnen, Minbale Admas Teshager ; **2021**; Structural and thermal properties of pure and chromium doped zinc oxide nanoparticles; *SN Applied Sciences*; pp-3699
53. Ababay Ketema Worku, Delele Worku Ayele , **Nigus Gabbiye Habtu***, Minbale Admas Teshager, and Zerihun Getahun Workineh; **2021**; Enhancing oxygen reduction reaction activity of ϵ -MnO₂ nanoparticles via iron doping; *Journal of Physics and Chemistry of Solids*
54. Dargie Halei, **Nigus Gabbiye***; **2021**; Groundwater Quality Assessment of Chilanchil Abay Watershed: the Case of Bahir-Dar City Waste Disposal Site; *Journal of Environmental Engineering and Landscape Management*; Volume 29 Issue 2: 123–134
55. Ababay Ketema Worku , Delele Worku Ayele, **Nigus Gabbiye Habtu*** , Minbale Admas Teshager, and Zerihun Getahun Workineh ; **2021**; Recent progress in MnO₂-Based Oxygen Electrocatalysts for Rechargeable Zinc-Air Batteries; *Materials Today Sustainability*
56. Eshetu Getahun, Mulugeta A Delele, **Nigus Gabbiye Habtu**, Solomon Workneh Fanta, Maarten Vanierschot; **2021**; Importance of integrated CFD and product quality modeling of solar dryers for fruits and vegetables: A review: *Solar Energy*; 220, 88 - 110
57. Ababay Ketema. Worku, Delele Worku. Ayele, **Nigus Gabbiye Habtu***; **2021**; Recent advances and future perspectives in engineering of bifunctional electrocatalysts for rechargeable zinc-air batteries; *Material Today Advance*; Volume 9; pp 1-19
58. Tsegahun Mekonnen Zewdie, **Nigus Gabbiye Habtu**, Abhishek Dutta and Bart Van der Bruggen; **2020**; Solar-assisted membrane technology for water purification: a review; *Journal of Water Reuse and Desalination*; Volume 11, Issue 1
59. Abebe Reda Woldu, Delele Worku Ayele, **Nigus Gabbiye Habtu**, Yeshitila Asteraye Tsigie; **2020**; Anthocyanin components for dye-sensitized solar cells extracted from

- Teclea Shimperi fruit as light-harvesting materials; Material science for energy technology; volume 3, pp 889–895
60. Eshetu Getahun, **Nigus Gabbiye Habtu**, Mulugeta A Delele, Solomon Workneh Fanta, Mekonnen Gebreslasie Gebrehiwot , Maarten Vanierschot; **2020**; Effect of maturity on the moisture sorption isotherm of chili pepper (Mareko Fana variety); Heliyon, volume 6(8)
 61. Moges Admasie Mengstie and **Nigus Gabbiye Habtu**; **2020**; **Synthesis and Characterization of 5-Hydroxymethylfurfural from Corncob Using Solid Sulfonated Carbon Catalyst**; International Journal of Chemical Engineering <https://doi.org/10.1155/2020/8886361>
 62. Aynadis M. Asemu, **Nigus G. Habtu**, Mulugeta A. Delele, Bhadriraju Subramanyam, Sajid Alavi; **2020**; Effects of Grain Drying Methods on Post-Harvest Insect Infestation and Physicochemical Characteristics of Maize Grain; Journal of Food Process Engineering;43(7)
 63. Agegnehu Alemu, **Nigus Gabbiye** and Brook Lemma; **2020**; Application of Integrated Local Plant Species and Vesicular Basalt Rock for the Treatment of Chromium in Tannery Wastewater in a Horizontal Subsurface Flow Wetland System; Journal of Environmental Chemical Engineering; pp-103940
 64. Mariye Majo Shute, Teka Girmay Hishe, Eusman Ebrahim Shumey, **Nigus Gabbiye Habtu**; **2019**; Assessment of Water Quality Parameters in the Bikolo Watershed, Tana Basin, Ethiopia; Journal of Environment and Earth Science; Vol.10, No.1, 2020
 65. Aynadis M. Asemu, **Nigus G. Habtu**, Mulugeta A. Delele, BhadrirajuSubramanyam, Sajid Alavi; **2019**; Drying characteristics of maize grain in solar bubble dryer; Journal of Food Process Engineering; pp- 1-19
 66. Agegnehu Alemu, Brook Lemma and **Nigus Gabbiye**; **2019**; Adsorption of chromium (III) from aqueous solution using vesicular basalt rock; Cogent Environmental Science, 5
 67. Worku AF, Merkuz A, Kalsa KK, Tenagashaw MW and **N. G Habtu**; **2019**; OCCURRENCE OF MYCOTOXINS IN FARM-STORED WHEAT IN ETHIOPIA; African Journal of Food, Agriculture, Nutrition and Development; 19(4): 14829-14847
 68. Admasu F. Worku, Karta K. Kalsa, Merkuz Abera and **Habtu G. Nigus**; **2019**; Effects of storage strategies on physicochemical properties of stored wheat in Ethiopia; ; AIMS Agriculture and Food; 4 (3); 578–591
 69. Karta Kaske Kalsa, Subramanyam Bhadriraju, Girma Demissie, Rizana Mahroof, Admasu Worku, **Nigus Gabbiye**, Solomon Workneh, Fetien Abay; **2019**; Susceptibility of Ethiopian wheat varieties to granary weevil and rice weevil infestation at optimal and sub-optimal temperatures. Journal of Stored Products Research, 83 : 267-274
 70. Admasu Fanta Worku , Merkuz Abera, Karta Kaske Kalsa , Bhadriraju Subramanyam , **Nigus Gabbiye Habtu**; **2019**; Occurrence of Mycotoxins in Stored Maize in Ethiopia; Ethiop. Journal of Agricultural Science; 29(2); 31-43
 71. Karta K. Kalsa, Subramanyam Bhadriraju, Girma Demissie, Admasu F. Worku, Rizana Mahroof, **Nigus Gabbiye**; **2019**; Evaluation of post-harvest preservation strategies for wheat seed in Ethiopia. Journal of Stored Products Research, 81:53-61
 72. Kalsa, K. K., Subramanyam, B., Demissie, G., Mahroof, R., Workneh, S., & **Gabbiye, N.**; **2019**; Mortality of *Sitophilus granarius* (L .) and *Rhyzopertha dominica* (F .) Adults Exposed to Different Concentrations of Filter Cake in Stored Wheat. Ethiopian Journal of Agricultural Sciences, 29(1), 99–107.

73. Agegnehu Alemu, Brook Lemma, **Nigus Gabbiye**, Melisew Tadele, Minyahil Teferi: **2018**; Removal of chromium (VI) from aqueous solution using vesicular basalt: A potential low-cost wastewater treatment system; *Journal of Heliyon*; 4(2018)
74. Fikiru Temesgen , **Nigus Gabbiye**, Omprakash Sahu; **2018**; Biosorption of Reactive Red Dye (RRD) on Activated Surface of Banana and Orange Peels: Economical Alternative for Textile Effluent; *Surfaces and Interfaces*, 12(2018), 151-1599
75. Gemechu Kassayea, **Nigus Gabbiye** and Agegnehu Alemu; **2017**; Phytoremediation of chromium from tannery wastewater using local plant species; *Water Practice & Technology Vol 12 No 4*
76. Omprakash Saha, Dubasi Govardhana Rao, **Nigus Gabbiye**, Addis Engidayehu, Firomsa Teshale;**2017**; Sorption of phenol from synthetic aqueous solution by activated saw dust: Optimizing parameters with response surface methodology; *Biochemistry and Biophysics Reports*; 12 (2017) 46–53
77. Tsegay G.Kidan and **Nigus G. Habtu**; **2017**; Activated carbon supported CaO for conversion of palm oil to biodiesel: Kinetic experiment; *Ethiop. J. Sci. & Technol.* 10(3) 193-208
78. Tesfaye Alamirew¹, V. Balaji, **Nigus Gabbiye**; Comparison of PID Controller with Model Predictive Controller for Milk Pasteurization Process: *Bulletin of Electrical Engineering and Informatics*; 6(1), 24-35
79. Mebrahtom Gebresemati, **Nigus Gabbiye**, Omprakash Sahu; Sorption of cyanide from aqueous medium by coffee husk: Response surface methodology; *Journal of Applied Research and Technology*; 15 (2017) 27–35
80. Agegnehu Alemu, **Nigus Gabbiye**; Assessment of chromium contamination in the surface water and soil at the riparian of Abbay River caused by the nearby industries in Bahir Dar; city, Ethiopia *Water Practice & Technology Vol 12 No 172* doi: 10.2166/wpt.2017.012
81. Mamaru A. Moges, Seifu A. Tilahun, Essayas K. Ayana, Michael M. Moges¹, **Nigus Gabbiye**, Shree Giri and Tammo S. Steenhuis; Non-point Source Pollution of Dissolved Phosphorus in the Ethiopian Highlands: The Awramba Watershed near Lake Tana; *CLEAN – Soil, Air, Water*; DOI: 10.1002/clen.201500131; 2016
82. Lulseged Belay, **Nigus Gabbiye**; Investigating the Performance of Vertical Carbonizing Kiln for Briquette Production; *Zed Journal of Engineering and Architects*; Vol. 33, 2015
83. Adhena Ayaliew Werkneh, **Nigus Gabbiye Habtu**, Hayelom Dargo Beyene; Removal of hexavalent chromium from tannery wastewater using activated carbon primed from sugarcane bagasse: Adsorption/desorption studies; *American Journal of Applied Chemistry*; 2014; 2(6): p.128-135
84. Haylom Dargo, **Nigus Gabbiye**, Adhena Ayaliew: Removal of Methylene Blue Dye from Textile Wastewater using Activated Carbon Prepared from Rice Husk; *International Journal of Innovation and Scientific Research*; Vol. 9 (2), 2014, P 317–325

85. Molla Asmare, **Nigus Gabbiye**: Synthesis and characterization of biodiesel from castor bean as alternative fuel for diesel engine; International Journal of Renewable and Sustainable Energy; Vol. 2, No. 1, 2014, pp. 1-15
86. Eshetu Getahun, **Nigus Gabbiye**; Experimental investigate and characterization of biodiesel production from leather industry fleshing wastes: International Journal of Renewable and Sustainable Energy; 2013; 2(3): 120-129
87. **N. Habtu**, J. Font, A. Fortuny, C. Bengoa, A. Fabregat, P. Haure, A. Ayude, F. Stuber; Heat Transfer in Trickle Bed Column with Constant and Modulated Feed Temperature: Experiments and Modeling, Chemical Engineering Science; 66 (14), Page 3358-3368
88. **Nigus Gabbiye**, Josep Font, Agusty, Fortuny, Christophe Bengoa, Azael Fabregat, Frank Stuber. Performance of Trickle Bed Reactor and Active Carbon in the Liquid phase oxidation of phenol; International Journal of Chemical Reactor Engineering; 8; A76; 2010
89. **N. Gabbiye**, F. Stber, J. Font, C. Bengoa, A. Fortuny, A. Fabregat, P. Haure, A. Ayude; Feed Temperature Modulation in Trickle Bed Reactor: Experiments and Modelling. In Proceedings of the 8th World Congress of Chemical Engineering, 2009, Montral, Quebec, Canada
90. **Nigus Gabbiye**, Nurelegn Tefera, V. Narasaiha. Numerical Analysis of Interface Mass Transfer with Chemical Reaction; Zede Journal; Vol. 23, Page 7-18; 2006

5. Conference Contribution

1. Messebet G Kassa, Nigus G. Habtu, Admasu F Worku, Biresaw D. Abera, Aynadis M. Asemu; Effect of Threshing and Storage Conditions on Mold Contamination of Stored Maize Grain (*Zea mays L.*); 11th EAI International Conference on Advancements of Science and Technology, November 24-26, **2023**; Bair Dar, Ethiopia
2. Habtamu G. Daba, Mulugeta A. Delele, Solomon W. Fanta, Nigus G. Habtu, Metadel K. Abera, Admasu F. Worku; Effects of Initial Moisture Content and Storage Duration on Physical and Chemical Characteristics of Stored Maize (*Zea mays L.*) Grain ; 11th EAI International Conference on Advancements of Science and Technology, November 24-26, **2024**; Bair Dar, Ethiopia
3. Messebet G Kassa, Nigus G. Habtu, Aynadis M. Asemu; 2024; Performance Evaluation of Grain Pro Collapsible Natural Convection Solar Dryer for Maize Grain Drying in Ethiopia ; 11th EAI International Conference on Advancements of Science and Technology, November 24-26, **2024**; Bair Dar, Ethiopia
4. Yalew Woldeamanuel Sitotaw, **Nigus Gabbiye Habtu**, Tom Van Gerven; **2023**; Evaluation of Planetary Ball Milling and Mild-Alkaline Pretreatment for Enhanced Fermentable Sugar Production from Sugarcane Bagasse; 10th EAI International Conference on Advancements of Science and Technology, October 2-4, **2023**; Bair Dar, Ethiopia
5. Jemal Beshir Belay, **Nigus Gabbiye Habtu**, Venkata Ramayya Ancha; **2023**; Economic Feasibility Study of Biogas Production from Cladodes of Cactus (*Opuntia ficus-indica*); 10th EAI International Conference on Advancements of Science and Technology, October 2-4, 2022; Bair Dar, Ethiopia
6. Lulseged Belay Addis, Zenamarkos Bantie Sendekie, **Nigus Gabbiye Habtu**, Dirk W. Schubert, Judith Anna Roether, Aldo R. Boccaccini; **2023**; Characterization of False

- Banana Fiber as a Potential Reinforcement Material for Geopolymer Composites; 10th EAI International Conference on Advancements of Science and Technology, October 2-4, 2022; Bair Dar, Ethiopia
7. Fentahun Adamu, Delele Worku Ayele, **Nigus Gabbiye Habtu**, Temesgen Yemata, Fantahun Aklog Yihun; **2023**; Zn(NO₃)₂·6H₂O/Urea Composite Deep Eutectic Solvents Derived Through Facile and Green Synthesis Approach as an Electrolyte for Rechargeable Zinc Air Batteries; 10th EAI International Conference on Advancements of Science and Technology, October 2-4, 2022; Bair Dar, Ethiopia
 8. Negese Yazie, Delele Worku Ayele, **Nigus Gabbiye Habtu**; **2023**, Investigation and Optimization of the Energy Band Gap of PAM/PVP/Al₂O₃ Composites; 10th EAI International Conference on Advancements of Science and Technology, October 2-4, 2022; Bair Dar, Ethiopia
 9. Zelalem M. Salehudress, **Nigus Gabbiye Habtu**, Bimrew T. Admasu , Mulugeta Admasu Delele, Aynadis Molla Asem; **2023**; Drying Characteristics and Kinetic Study of Coffee Cherries (Coffee arabica) in Convective Hot Air Dryer; 10th EAI International Conference on Advancements of Science and Technology, October 2-4, 2022; Bair Dar, Ethiopia
 10. Jemal Beshir Belay, **Nigus Gabbiye Habtu***, Venkata Ramayya Ancha; **2021**; kinetic study of the anaerobic digestion of cladodes of cactus (opuntia ficus indica); Oral presentation; **9th Environmental protection and Energy Conference**, December 10th , 2021; Poland
 11. Wubayehu Mesfin, Hailemariam Zewdu, **Nigus G. Habtu**, Solomon Addisu, Masatoshi Kishi, Shinich Akizuki, Shinjiro Sato; **2021**; Anaerobic digestion of water hyacinth juice in upflow bubble column bioreactor for production of biogas and nutrient recovery; **Oral Presentation**; 18th World Lake Conference, November 9th - 11th ; Mexico
 12. Anas Hijazi, Pranshu Bhatia, Masaaki Fujiwara, Shinich Akizuki, **Gabbiye Habtu Nigus**, Tatsuki Toda; **2021**; Effect of sedimentation time on methane generation rate of compressed water hyacinth juice; **Oral Presentation**; 18th World Lake Conference, November 9th - 11th ; Mexico
 13. Kassa W. Liyew, Yoann Louvet, **Nigus G. Habtu**, Ulrike Jordan; **2021**; A techno-economic analysis of solar Injera baking systems; **Oral presentation**; ISES Solar World Congress; October 25th - 29th , Freiburg, Germany
 14. **Habtu, Nigus Gabbiye**, Worku, Ababay Ketema, Ayele, Delele. Worku . **2021**; Facile preparation and electrochemical investigations of copper-ion doped α-MnO₂ nanoparticle (**Oral Presentation**); 9th EAI International Conference on Advancements of Science and Technology, August 27-29; Bair Dar, Ethiopia
 15. Gemechu Kassaye, Fikru Temesgen, **Nigus Gabbiye**; **2021**; Correlation of UV Assisted Fenton Process and Fenton Process for Removal of Reactive Red 2(RR2) Dye Color

- from Wastewater; **(Oral Presentation)**; 9th EAI International Conference on Advancements of Science and Technology, August 27-29; Bair Dar, Ethiopia
16. Dargie Haile, **Nigus Gabbiye; 2021**; Assessment of Nutrients and Heavy Metals in the Groundwater and Surface Water in the Zeber Watershed: The Case of the Bahir - Dar City Waste Disposal Site; **(Oral Presentation)**; 9th EAI International Conference on Advancements of Science and Technology, August 27-29; Bair Dar, Ethiopia
 17. Dargie Haile and **Nigus Gabbiye; 2020**; Groundwater Quality Assessment of Chilanchil Abay Watershed: The Case of Bahir-Dar City Waste Disposal Site: **Book chapter of the 8th EAI International Conference on Advances of Science and Technology, ICAST 2020**; Bahir Dar, Ethiopia, October 2-4, 2020
 18. Netsanet Alemayehu, Yalew W/Amanuel, and **Nigus Gabbiye; 2020**; Effect of Alkaline Pre-treatment on Fermentable Sugar Yield of Ethiopian Bamboo (Yushania Alpine); **Book chapter of the 8th EAI International Conference on Advances of Science and Technology, ICAST 2020**; Bahir Dar, Ethiopia, October 2–4, 2020
 19. Muluken Mengist, Belay Woldeyes, and **Nigus Gabbiye; 2020**; Production and Characterization of Sawdust Briquettes for Firewood Substitution; **Book chapter of the 8th EAI International Conference on Advances of Science and Technology, ICAST 2020**; Bahir Dar, Ethiopia, October 2–4, 2020
 20. Tsegahun Mekonnen Zewdie, **Nigus Gabbiye Habtu**, Abhishek Dutta, and Bart Van der Bruggen; **2019**; Fabrication and Characterization of Metakaolin Based Flat Sheet Membrane for Membrane Distillation; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
 21. Mequanint Demeke and **Nigus Gabbiye; 2019**; Organic Biofertilizer from BreweryWastewater Sludges via Aerobic Composting Process; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
 22. Chirotaw Getem and **Nigus Gabbiye; 2019**; Synthesis and Characterization of β -Wollastonite from Limestone and Rice Husk as Reinforcement Filler for Clay Based Ceramic Tiles **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
 23. Eshetu Getahun, Maarten Vanierschot, **Nigus Gabbiye**, Mulugeta A. Delele, Solomon Workneh, and Mekonnen Gebreslasie; **2019**; Computational Fluid Dynamic Modeling and Simulation of Red Chili Solar Cabinet Dryer; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
 24. Feleke K. Sishu, Elisabeth K. Thegaye, Petra Schmitter³, **Nigus G. Habtu**, Seifu A. Tilahun, and Tammo . Steenhuis; **2019**; Endosulfan Pesticide Dissipation and Residue Levels in Khat and Onion in a Sub-humid Region of Ethiopia; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019

25. Gemechu Kassaye, Agegnehu Alemu, and **Nigus Gabbiye; 2019**; Pilot-Scale Horizontal Subsurface Flow Constructed Wetland for Removal of Chromium from Tannery Waste Water with Suitable Local Substrate Material; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
26. Karta Kaske Kalsa, Bhadriraju Subramanyam, Girma Demisse, Admasu Worku, Solomon Workneh, and **Nigus Gabbiye; 2019**; On-Farm Performance and Assessment of Farmers' Perceptions of hermetic Bags for Farm-Stored Wheat and Maize in Northwestern Ethiopia; **Book chapter of the 7th EAI International Conference on Advances of Science and Technology, ICAST 2019**; Bahir Dar, Ethiopia, August 2–4, 2019
27. Yonas Desta , **Nigus Gabbiye** , Agegnehu Alemu; **2019**; Hydrothermal Synthesis of Na-P1 Zeolite from Pumicite To Enhance Moisture Content and Water Retention Capacity of Sandy Soil; **Book chapter of the 6th International conference on Advances of Science and Technology-ICAST-2018**; October 5-7; Bahir Dar, Ethiopia.
28. Samuel Gemeda, **Nigus Gabbiye** , Agegnehu Alemu; **2019**; Phytoremediation Potential of Free Floating Plant Species for Chromium Wastewater: The Case of Duckweed, Water Hyacinth, and Water Lilies; **Book chapter of the 6th International conference on Advances of Science and Technology-ICAST-2018**; October 5-7; Bahir Dar, Ethiopia.
29. Aynadis Molla, Sajid Alavi, Bhadriraju Subramanyam, Solomon Workneh, **Nigus Gabbiye; 2019**; Performance Comparisons of Solar Mixed and Indirect Dryers for Maize Grain Drying; **Book chapter of the 6th International conference on Advances of Science and Technology-ICAST-2018**; October 5-7; Bahir Dar, Ethiopia.
30. Eshetu Getahun, Dawit Tessema, **Nigus Gabbiye**; Design and Development of Household Gasifier Cooking Stoves: Natural Versus Forced Draft; **Book chapter of the 6th International conference on Advances of Science and Technology-ICAST-2018**; October 5-7; Bahir Dar, Ethiopia.
31. Fitfety Melese, Ayalew Wondie, **Nigus Gabbiye**; The Role of Natural Ecosystem in Purifying Municipal Wastewater in Bahir Dar Metropolitan City; **Book chapter of the 6th International conference on Advances of Science and Technology-ICAST-2018**; . October 5-7; Bahir Dar, Ethiopia.
32. Kefale Wagaw, **Nigus Gabbiye** Anaerobic co digestion of cafeteria leftover food and toilet wastes for biogas production and kinetic experiment; Proceedings of international conference: " SUSTAINABLE DEVELOPMENT CONFERENCE 2016"; 7- 9 JULY 2016; KUCHING; MALAYSIA
33. Assefa Tesfaye, **Nigus Gabbiye**; Experimental investigation and Performance Evaluation of Solar Tunnel Dryer for Ginger Drying; Proceedings of the 12th IEEE African International conference: Green Innovation for African Renaissance; 978-1-4799-7498-6/15/\$31.00 ©2015 IEEE 2015
34. Getu Alemayehu, **Nigus Gabbiye**; Optimization of composite mitad and biogas stove for injera baking application; 2nd International conference on Science and Technology towards the Development of East Africa; **May 17-18th**, Bahir Dar, Ethiopia

35. Eshetu Getahun, **Nigus Gabbiye**; Experimental investigation and characterization of biodiesel production from leather industry fleshing wastes;; 2nd International conference on Science and Technology towards the Development of East Africa; **Oral Presentation, May17-18th**, Bahir Dar, Ethiopia.
36. Hayelom Dargo, **Nigus Gabbiye**; Removal of Methylene Blue Dye from Textile Wastewater using Activated Carbon Prepared from Rice Husk. 2nd International conference on East Africa
37. Eshetu Getahun, Menilk gebeyehu, Fitfite Melese, **Nigus Gabbiye**; Modeling and simulation of biodiesel production from oil and leather industrial wastes using aspen plus 2006 : Nation conference on Science, Technology and Innovation; **Oral Presentation, May17-19th**, 2012, Bahir Dar, Ethiopia
38. **N. Habtu**, J. Font, A. Fortuny, C. Bengoa, A. Fabregat, P. Haure, A. Ayude, F. Stuber; Heat Transfer in Trickle Bed Column with Constant and Modulated Feed Temperature: Experiments and Modeling; 10th international conferences on Gas-Liquid and Gas-Liquid-Solid reactor Engineering; Oral Presentation, June, 26-29-2011, Braga, Portugal.
39. **N. Habtu**, J. Font, A. Fortuny, C. Bengoa, A. Fabregat, P. Haure, A. Ayude, F. Stuber; Heat Transfer in Trickle Bed Column with Constant and Modulated Feed Temperature: Experiments and Modeling, Asociacin Argentina de Ingenieros Qumicos(AAIQ), Bounasaires, Argentina; Oral Presentation, VI CAIQ 2010.
40. **N. Habtu**, J. Font, A. Fortuny, C. Bengoa, A. Fabregat, F. Stuber; Periodic Operation of Trickle Bed Reactor for Improving the Stability of Activated Carbon in CWAO Processes. Oral Presentation. 19th International Congress of Chemical and Process Engineering and 7th European Congress of Chemical Engineering, Prague (Czech Republic), 28 Aug 1 Sept 2010.
41. G. Mezohegyi, F. Goncalves, J. J. M. Orfao, C. Bengoa, F. Stuber, F. Font, A. Fortuny, A. Fabregat, **N. G. Habtu**; Activated carbon as catalyst in the anaerobic removal of azo colourants: Inuence of the surface chemistry. Poster Presentation. 19th International Congress of Chemical and Process Engineering and 7th European Congress of Chemical Engineering, Prague (Czech Republic), 28 Aug 1 Sept 2010.
42. **N. Gabbiye**, F. Stuber, J. Font, C. Bengoa, A. Fortuny, A. Fabregat, P. Haure, A. Ayude; Feed Temperature Modulation in Trickle Bed Reactor: Experiments And Modelling. Oral Presentation; 8th World Congress of Chemical Engineering, August 23 - 27, 2009, Montral, Quebec, Canada.
43. **N. Gabbiye**, J. Font, A. Fortuny, C. Bengoa, A. Fabregat, F. Stuber: Trickle Bed Reactor for The Oxidation of Phenol over Active Carbon Catalyst. 2nd international congress of Green Process Engineering; and 2nd European Congress Process Intensi_cation Conference; Oral Presentation; 14-17 June, 2009; Venice, Italy.
44. **Nigus Gabbiye**, Nurelegn Tefera, V. Narasaiha. Modelling and Simulation of Interface Mass Transfer with Chemical Reaction; 2nd NationalWorkshop on Technology and Sustainable Development (NWTSD); Oral Presentation. May 2006, Bahir Dar, Ethiopia.

45. **Nigus Gabbiye**, Modelling and Simulation of Interface Mass Transfer with Chemical Reaction: Oral Presentation, 9th annual congress of the Ethiopian Society of Chemical Engineers, March 2006, Addis Ababa, Ethiopia
46. **Nigus Gabbiye**, Cleaner Production Option for Oil Industries, **Oral Presentation**: 6th annual congress of the Ethiopian Society of Chemical Engineers, August 2001, Addis Ababa, Ethiopia

6. Projects, Community engagement and professional activities

1. PI for Capacity Building on Student-Centered Energy Education in Cameroon, Ethiopia, Mauritius and Mozambique: 101082957 — EDU-ABCM (**2023 – 2025**)
2. **Team Leader** for Eco-Engineering for Agricultural Revitalization towards Improvement of Human Nutrition: **Development of nutrient and energy recovery techniques from water hyacinth** in collaboration with Soka University (Japan), Funded by Japan government (**2021 - 2024**)
3. **Scientific Director (Project leader)** since March 2020 for research project on Sustainable Energies, Entrepreneurship, and Development in the Global South which is a collaborative capacity building project of nine Universities lead by Technical University of Munich, Germany and funded by DAAD (**2021 – 2025**)
4. **Co-PI since November 2019 for research project on Higher Education-Industry Partnership in Sub Saharan Africa** (Power and Energy Sector) which is a collaborative capacity building project of University of Oxford (UK) and Addis Ababa University. It Funded by Anglo American Group Foundation and the UK Government through the Global Challenges Research Fund (GCRF)(**2019 -2021**)
5. **PI since January 2015 for research project on Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification** to support Appropriate-Scale Mechanization Consortium to the local farmers which is a collaborative research project of University of Illinois at Urbana-Champaign. It is funded by USAID (**2015 – 2017**)
6. **PI of a research project on Feed the Future Innovation Lab for Post-harvest Loss Reduction on Solar Grain Drying Research**: This is funded by USAID through Feed the future innovation lab since January 2014 to date. So far, the project produced one book of abstracts from a conference, three briefing notes, assist five PhD students for their research and stipend costs, published four papers on journals so far and producing documentary film: This is funded by USAID through Feed the future innovation lab (**2014 - 2022**)

7. **Co-PI since 2014** for project on Development of a **Microgrid Research center in Ethiopia to Support USAID's Power Africa Program (Sept, 2014 - Aug, 2017)**: This is funded by USAID through PEER Science program since Sept, 2014 to date, Bahir Dar University in collaboration with University of Wisconsin-Madison
 8. **November 2019 - February 2022**; Secretary for Ethiopian society of chemical engineers (Executive members) and since February 2022 serve as a vice president
 9. Participating on mentoring of Global Education, Awareness and Research Undergraduate Program (9GEARUP), Howard University, USA; July – August 2016
 10. Project advisor team leader for Tana Pulp and Paper Factor, Bahir Dar, Ethiopia **(2012- 2018)**
11. **Participation in University Affairs and Committees**
1. **April 2021** – to – Date: Strategic Advisory team for Bahir Dar University
 2. **August 2022 – Date**; Graduate council member
 3. **June 2022 – Date**: Chief editor for Poly Journal of Engineering and Technology
 4. **October 2020 – December 2021**; International Accreditation of Academic Programs (5 MSc and 3 PhD) Committee member (**Chairperson**) at Africa Center of Excellence for Water Management, Addis Ababa University
 5. **December 2018 – December 2020**; Research, Publications, Community Service and Technology Transfer Committee
 6. **November 2021 – March 2022**; Research University organizational structure study team member - Ministry of Education
 7. **June 2021 – November 2021**; Advisory committee for Governance and Management Framework for Hosting the African Centre of Excellence for Water Management (ACEWM) in Addis Ababa University
 8. **October 2017 – September 2020**; Faculty Graduate Committee for Faculty of Chemical and Food Engineering
 9. **June 2018 – September 2018**; Serve as mentor to participate from University Calgary for Canadian Queen Elizabeth II Diamond Jubilee Scholarship for research undergraduate program
 10. **October 2017 – December 2019**; Developing partnership guideline and initiating dual degree PhD program in Chemical and Industrial engineering in collaboration with Taiwan Science and Technology University
 11. **September 2019 – April 2020**; Editorial for the 7th EAI International Conference proceedings on Advancement of Science and Technology (ICAST -2019) – **Springer Published** -<https://doi.org/10.1007/978-3-030-43690-2>

12. **November 2018 – October 2019**; Organizing Committee (Technical chair) for the 7th EAI International Conference on Advancement of Science and Technology (ICAST -2019)
13. **January 2015 to Dec. 2015**; Strategic committee for BiT five-year plan
14. September 2011 to June 2013, Chair for Procurement Endorsing committee for Bahir Dar Institute of Technology, Bahir Dar University
15. **June 2012 – July 2014**; Staff Promotion and development committee of BiT-BDU
16. **November 2014 – June 2015**; Organizing Committee of international conference (ICST-2014)
17. Participating as trainer on “Watershed based integrated Land Resources Management for Sustainable Livelihood Improvement of Debre-Mewi Community; April to June 2013
18. **November 2012 – June 2013**; Organizing Committee of international conference (ICST-2013)

10.1. Project development and execution

S. No	Project title	Duration	Source budget
1	Capacity Building on Student-Centered Energy Education in Cameroon, Ethiopia, Mauritius and Mozambique	3	European Commission
2	Eco-engineering on Agricultural Revitalization Towards Human Health Improvement (EARTH): Transforming Water Hyacinth to Energy and Nutrition, JICA	5	JICA, Japan Government
3	Sustainable Energy and Entrepreneurship in Global South	5	DAAD + BDU
4	Higher Education Partnerships in sub-Saharan African (HEPSSA 1921/3/95)	2	Royal Academy of Engineering, UK
5	Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss	8	USAID
6	Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification: Appropriate Scale Mechanization	5	USAID

	Consortium		
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10.2. Participation in Doctoral program curriculum review process (External reviewer)

No.	Degree Nomenclature	Host University	Year
1	Master in Sustainable Energy Engineering		
2	PhD in Chemical Engineering	University of Gonder	2021
3	PhD in Textile Engineering	Bahir Dar University	2020
4	PhD in Chemical Engineering	Addis Ababa Science and Technology University	2018
6	Master in Chemical Engineering	Addis Ababa Science and Technology University	2018
7	1. Master in Chemical Engineering (Nuclear Science and Engineering) 2. Master in Chemical Engineering (Electrochemical Engineering)	Defense University	2017
8	PhD Curriculum in Engineering and Technology	Mekelle University	2019

10.3. Participation in PhD Dissertation Examinations

No.	Name of the Student	Study Program	Dissertation Topic	Year
1	Mohammed Kelif Ibro	Sustainable Energy Engineering, (Jimma University)	Enhanced Biogas Production from Co-digestion of Lignocellulosic Biomass with Food Waste: An Experimental Study with Coffee Husk and Water Hyacinth	2024
2	Agidew Sewnet Admas	Materials Science and Engineering (Jimma University)	Synthesis, Characterization and Photocatalytic Performance of g-C3N4/Ag-Doped TiO2 Based Nanocomposites for Organic Pollutants Degradation	2024
3	Stan Wehbe	Water science and Technology, ACEWM,	Efficacy of Pesticide Removal in Vertical-Flow Constructed Wetlands for Application in the	2023

		Addis Ababa University	Floriculture Industry	
4	Wondimu Musie	Chemical Engineering (Process Design and Product Development) - AASTU	Comparative investigation of bentonite And bean seed husk for reduction of Salinity from moderately saline water	2023
5	Tesfaye Alamirew	Chemical Engineering-National Taiwan University of Science and Technology	Molybdenum based single atom electro-catalysts for hybrid water electrolysis and electrochemical CO2 reduction applications	2023
6	Adamu Esubalew	Chemical Engineering (Process Design and Product Development) - AASTU	Synthesis of Polyaluminum Chloride from Ethiopian Kaolinite for Water Treatment: Process Parameters Optimization, Kinetics Analysis And Characterization	2023
7	Alemu Gizaw	Water science and Technology, ACEWM, Addis Ababa University	Nitrate and Phosphate Removal and Recovery from Municipal Wastewater Using Silicate Material	2022
8	Jemal Beshir	Sustainable Energy Engineering – Jimma University	Biogas production from cladodes of cactus (opuntia ficus-indica (L.) Mill.): pretreatment, kinetic modeling and economic evaluation	2022
9	Yalew Woldeamanuel	Chemical Engineering Department, KU Leuven, Belgium	Physico-Chemical Deconstruction Techniques for Enhanced Fermentable Sugar Recovery through Enzymatic Saccharification of Agro-industrial Residues	2022
10	Aysanew Gorems	Chemical Engineering (Environmental Engineering), Addis Ababa University	Studies on nitrification-denitrification and sludge granulation processes in sequencing batch airlift reactor for the removal of nitrogen from tannery wastewater	2021
11	Desta Solomon	Chemical Engineering (Environmental Engineering), Addis Ababa University	Integration of Fenton oxidation and biological process with sequencing batch reactor for the treatment of textile wastewater	2020
12	Amare Shibru	Chemical Engineering (Environmental Engineering), Addis Ababa University	Assessment and Modeling of Surface Water Quality Dynamics in Awash River basin, Ethiopia	2019

10.4. Participation in academic affairs of the universities

S. NO.	Graduate student supervised	Number of students
1	Total number of MSc student supervised to date	105
2	Number of MSc student supervised since last promotion	65
3	Total number of PhD student supervised to date	28
4	Number of PhD students completed their dissertation	11

10.5. Published summary by the candidate

S.No	Publication categories	Number	Remark
1	Total number of publications to date,	90	
2	Total number of articles in web of science indexed journals	75	
3	Number of book chapters and conference proceedings	50	

10.6. Participation in research article reviewing process in different journal

Serial No.	Journal Title	Numbers of Articles reviewed	Web of science Indexing	Impact Factor	Publisher
1	Journal of Bioresource Technology	6	Science Citation Index Expanded	9.642	ELSEVIER SCI LTD
2	Journal of Biomass Conversion and Biorefinery	2	Science Citation Index Expanded	4.987	Springer
3	Journal of Waste and Biomass Valorization	2	Science Citation Index Expanded	3.703	Springer
4	Journal of Cogent Engineering	1	Emerging Sources Citation Index	1.69	TAYLOR & FRANCIS AS

5	International Journal of Chemical Engineering	3	Science Citation Index Expanded	2.257	HINDAWI LTD
6	EIA – ICAST Conference proceeding	20	Scopus	0.5 – Citation score	Springer

12. Training and professional development

S.No.	Title of the Training	Organized by	Duration (...to....)	Funded by
1.	CREST Online Training Course for Supervisors of Doctoral Candidates at African Universities	Center for research on evaluation, science and technology, Stellenbosch University, South Africa	September 2021 – January 2022	DAAD
2.	One day training workshop on cross discipline platforms: Scopus, ScienceDirect and Mendeley	MathTech Thinking Foundation in collaboration with (Punjabi &Poornima Universities, INDIA) and Bahir Dar University	11 March, 2022	Punjabi &Poornima Universities, INDIA) and Bahir Dar University
3.	Scientific and Statistical Data Analysis Tools using R-Statistical software	Bahir Dar Institute of Technology, Bahir Dar University	12 -17 July, 2017	Bahir Dar, Ethiopia
4.	Higher Education Leadership and Management	University of Applied Science Osnabruck, Germany	6 March – 17 June 2017	GIZ and Ministry of Education
5.	Food Extrusion Applications for Food Security	Kansas State University, USA	10-12 May 2016	USAID
6.	Training on Transformational Leadership	Ethiopian Management Institute, Addis Ababa	July 20 – 24/2015	BDU
7.	Scientific Research Method and Statistical Data Analysis Tools (Using SPSS 20),	Bahir Dar Institute of Technology, Bahir Dar University	18-25 February, 2013	BDU
8.	Training of Trainers (TOT) Workshop for Leadership and Management Capacity Development	Bahir Dar University	, 30 January – 03 February 2012	BDU

Research Interest and Focus

Process intensification and process modeling; advanced catalytic reactor systems applied to waste degradation and energy conversion; Heterogeneous catalyst and characterization; Hydrodynamics of three phase catalytic reactors and structural catalyst; Microreactors; Dynamic operation of multi-phase reactors for process intensification strategy; Ultrasound and microwave assisted process intensification for bioenergy conversion; Separator reactor (pressure and temperature swing reactors) and sorption process; Reactive and membrane separation process intensification; Bioenergy process intensification (Biochemical and thermochemical biomass conversion). Water and wastewater engineering (Advanced oxidation process); CFD modeling of Mass and heat transfer process