

Curriculum Vitae

1. Personal Data

Name: Berhanu Assefa Demessie
Date of birth: 08 January 1967
Place of birth: Selale, Oromia, Ethiopia
Nationality: Ethiopian
Marital status: Married
Address: Addis Ababa University, Institute of Technology
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Languages: English, Amharic, Oromiffa
Has very good command in speaking and writing using all three languages!

2. Education:

Norwegian University of Science and Technology

- Ph.D. Degree in Chemical Engineering, August 2002
- M.Sc. Degree in Petroleum Engineering, January 1997

Addis Ababa University

- B.Sc. Degree in Chemical Engineering, December 1991

3. Employment and work experience

Academic work experience:

Since my graduation in 1991 I have been working at Addis Ababa University as academic staff with different ranks:

- Employed and served as assistant graduate in 1991 to 1992;
- Promoted to Assistant lecturer 1992 and served until 1995;
- Promoted to Assistant Professor Rank in November 2002 and served until February 2015;
- Promoted Associate professor since February 2015 and serving with the same position to till now.

Leadership and coordination experience:

- Acting Scientific Director, Addis Ababa Institute of Technology, June 2015 to February 2016.
- Deputy Scientific Director, Addis Ababa Institute of Technology, December 2014 to February 2016.
- Director, Transformation and Change Management, July 2014 to December 2014.
- Dean, School of Chemical and Bio Engineering, December 2012 to present
- Head of Chemical Engineering Department, June 2011 to December 2012.
- Chair holder of Environmental Engineering, October 2011 to June 2011
- Associate Dean for Distance and Continuing Education Program for Faculty of Technology, Addis Ababa University from November 2007 to 2009

Research experience:

- Local co-coordinator and researcher of international research consortium entitled “Income generation and climate protection by utilizing Municipal Solid Waste in a sustainable way in emerging mega- cities”, Addis Ababa (IGNIS project); funded by German Government from June 2008 and 2013.
- Co-principal investigator of regional consortium research project entitled ”Sustainable Utilization agro-industrial waste integrated bio-energy and mushroom production”; fund by sida through BioInnovate program, ILRI, Nairobi, Kenya from January 1, 2011, to March 30, 2015.

4. Relevant work experience on strategic plan or roadmap development

- Coordinator of Construction Inputs Materials Industry Development Strategic Plan July 2014 to November 2014. Client: Ministry of Industry.
- Coordinator of Fruit and Vegetable Industry Development Strategic Plan July 2014 to November 2014. Client: Ministry of Industry
- Coordinator of Corn processing plant feasibility study July 2014 to November 2014. Client: Ministry of Industry
- Coordinator of Performance Evaluation LIDI-CLRI winning program from August 2011 to December 2013. Client: Ministry of Industry.

5. Publications in Peer reviewed Journal

- Ahmed, S., Mandhan, B. and Demessie, Less-salt preservation study of raw goat skins based on ethiopian plant material *rumex abyssinicus* (mekmeko): approach for cleaner leather manufacture, *Journal of Cleaner Production*, Submitted (accepted).
- Gebreyessus, G. D. and B. A. Demessie (2014), Towards a sustainable use of food waste: influence of urea on biogas production potentials of selected fruit

wastes in Addis Ababa, Ethiopia, *Int. J. Environment and Sustainable Development*, 13 (2).

- Gebreeyessusm G. D. and B. A. Demissie (2013), Quantification of the potential for biogas and biogas manure from the selected fruit wastes in Addis Ababa city, Ethiopia, *African Journal of Environmental Science and Technology*, 7(12).
- Asmare, A. M. B. A. Demessie, G. S. Murthy (2013), Baseline Study on the Dairy Wastewater Treatment Performance and Microalgae Biomass Productivity of an Open Pond Pilot Plant: Ethiopian Case, *J. Algal Biomass Utiln.* 4 (4).
- Abraham M. Asmare¹, Berhanu A. Demessie², Ganti S. Murthy (2013) Theoretical Estimation of Algal Biomass Potential and Lipid Productivity for Biofuel Production in Ethiopia, *International Journal of Science and Research*, 2 (6).
- Asmare, A. M., B. A. Demessie and G. S. Murthy (2013), Theoretical Estimation the Potential of Algal Biomass for Carbon Sequestration and Biofuel Production in Ethiopia, *International journal of renewable energy research*, 3 (3).
- Demessie, B. A. (2007), Defluoridation of the ERVR water using RO membranes, *Zede Journal of Architect and Engineers*, 22.

6. Theses advised and supervised

PhD thesis supervised:

- Abreham Mebrate (2014). “Investigation of the potential of Microalge Consortium for Algal Biomass Productivity, CO₂ Sequestration and Nutrient Recovery from Dairy Manure, PhD Dissertation, Addis Ababa University, Addis Ababa, Ethiopia.

Titles of PhD thesis under supervision

- Studies on the application of Ethiopian plant species of mekmeko (*Rumex Abyssinicus*) in Leather Processing
- *Studies on Treatment of Post Tanning Wastewater Using Immobilized Cell Nanoporous Activated Carbon Reactors with Minimum Sludge Production*
- *Studies on partial Nitrification-Anammox processes in granular sludge reactors for the removal of Nitrogen from tannery wastewater*
- *Life cycle inventory modelling of Ethiopian Electric Grid System and its application in Environmental Products Development*

M.Sc. Thesis advised

- Daniel Aberra (2014). “Reuse of Textile dye house Wastewater by Removal of Reactive dye Using Nanomembrane”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Gizachew Assefa (2014). “Upgrading Biogas Produced from Biogas Pilot Plant through Absorption”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Takele Uma (2014). “Investigation of Environmental and Economic Benefits of Bioslurry Relative to Chemical Fertilizer”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Habtamu Hailu (2013). “Conversion of selected Municipality Solid waste to organic fertilizer (A case study in Haramaya University)”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Tariku G/Tsadik (2013). “Performance Evaluation of Drinking Water Treatment Plant (A case study of Gambella Town Water Treatment Plant)”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Getachew Dagne Gebreeyessus (2012). “Effect of adding urea on biogas production potentials of selected fruit wastes”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Mengistu Gessesse (2012). “House Hold Solid Waste Characteristics Correlation with Socioeconomic Profile of Addis Ababa (A case study in Gukkele Sub- City), M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Getnet Sewnet Kassahun (2012). “Predictive modeling of kaliti waste water treatment plant performance using artificial neural networks”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Kenatu Angassa (2011). “Evaluation of the Performance of Constructed Wetland System for the Treatment of Brewery Wastewater”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Zerihun Abate (2011). “Comparison of environmental performance and economic benefit of municipal solid waste compost and chemical fertilizer”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Gizachew Assefa (2011). “Optimum production of biogas from bio-municipal solid wastes using two stages anaerobic digester”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Yared G/Michael (2010), “Energy production options from treatment of health care solid waste at the armed force teaching general hospital in Addis Ababa”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Anteneh Maregn (2010). “Dye house wastewater treatment using membrane separation technology”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Asnake Berhane (2010). “Natural organic matter removal by enhanced coagulation the case of Gefersa surface water treatment plant”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Mesfin Agide (2009). “Neural network predictive process modeling application to food processing”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Mosissa M. Gamtessa (2008). “Pressure modeling for leakage reduction in Addis Ababa water supply systems mains - Saint Paul and Rafael district sub systems”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.

- Taffere A. Wassie (2008). “Comparative Study of Macro-invertebrates and Diatoms as Bio-indicators of River Water Quality in Addis Ababa”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Ahmedin Hassen (2007). “Selection of clay adsorbents and determination of the optimum condition for defluoridation of ground water in rift valley region”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Fitum Tsegaye (2007). “Assessment of Management options for Domestic solid waste in Addis Ababa case study of French Legation area”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Abebe Worku (2007). “Environmentally Sound Waste water Management, A Case in Addis Ababa Abattoirs Enterprise”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Belay Teffera (2007). “Cleaner Production Assessment in the Ethiopian Alcohol Industries, A Case Study in Sebeta Alcohol and Liquor Factory”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Natnael Tesfaye Hunda (2007). “Mathematical Modeling of Point Source Pollutant Transport in the Little Akaki River”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.
- Alemayehu Ambaw (2004). “Modeling chemical engineering processes using Artificial Neural networks”, M.Sc. Thesis, Addis Ababa University, Addis Ababa, Ethiopia.

Reference

1. Gregory Beaucage, PhD FAPS, Professor of Materials Science and Engineering, Department of Biomedical, Chemical, and Environmental Engineering, University of Cincinnati, USA. Email: gbeaucage@gmail.com
2. Getachew Assefa, PhD, P. Eng., Associate Professor and Athena Chair in Life Cycle Assessment in Design Fellow of Institute for Sustainable Energy, Environment and Economy, Faculty of Environmental Design, University of Calgary, Canada, Email: gassefa@ucalgary.ca
3. Kibret Mequanint, PhD, P.Eng, Department of Chemical and Biochemical Engineering, University of Western Ontario, London, ON, N6A5B9, Canada. Email: mequani@uwo.ca