

Education

- **Polytechnique Montreal, Montreal, QC, Canada** (since 2021)
Ph.D. Student, Department of Chemical Engineering

- **National Taiwan University of Science and Technology, Taipei, Taiwan** (2019-2020)
M.Sc. Degree, Department of Mechanical Engineering

Thesis: Chemical looping gasification of Spent Coffee Grounds via CO₂ and steam gasification medium in Semi-fluidized bed reactor

- **Jimma University, Jimma, Ethiopia** (2013-2016)
M.Sc. Degree, Department of Sustainable Energy Engineering

Thesis: Design, Fabrication and Sensitivity Testing of an Efficient Bone Pyrolysis Kiln and Biochar based Indigenous Fertilizer Pelletizing Machine for Linking Renewable Energy with Climate Smart Agriculture

- **MfM Agro-Technical and Technology College, Harar, Ethiopia** (2008-2011)
B.Sc. Degree, Department of Manufacturing Technology

Research Interests

- Renewable energy
- Biomass thermochemical conversion
- Chemical looping process
- Computational modeling and Fluid dynamics
- Reactor design
- Hydrogen energy & Fuel cell
- Plasma technology for energy generation
- Climate change mitigation and carbon sequestration
- Ammonia synthesis via Atmospheric Pressure Plasma.
- Thermodynamics and Heat transfer

Work Experience

- **Institute of Technology,** Community Service Team Leader 2017- 2019
Ambo University, Ethiopia
- **Mechanical Engineering Department** Lecturer 2016 – 2019
Ambo University, Ethiopia
- **Mechanical Engineering Department** Assistance Lecturer 2011 - 2013
Ambo University, Ethiopia

Research Background

- Chemical looping combustion and gasification
- Biomass pyrolysis and gasification
- Reactor design
- Bio-fertilizer development
- Bio-char production and carbon sequestration
- Flue gas denitration via chemical looping process.

Journal publications

- **Kibret, H.A.,** Nesin, B. Pan Pelletization of Bone Char Fertilizer: An Evaluation of Process Parameters and Their Effect on Granule Strength. Waste Biomass Valor (2021). <https://doi.org/10.1007/s12649-021-01387-0>
- **Henok Atile Kibret,** Yu-Lin Kuo, Ting-Yu Ke, Yao-Hsuan Tseng, Gasification of spent coffee grounds in a semi-fluidized bed reactor using steam and CO₂ gasification medium, Journal of the Taiwan Institute of Chemical Engineers, 2021, <https://doi.org/10.1016/j.jtice.2021.01.029>

Conference Publication

- **Henok A. Kibret,** A. Venkata Ramayya, Berhanu B., Design, Fabrication, and Sensitivity Testing of an Efficient Bone Pyrolysis Kiln and Biochar based Indigenous Fertilizer Pelletizing Machine Design for Linking Renewable Energy with Climate Smart Agriculture. ARPN Journal of Engineering and Applied Sciences. 2016, 11 (12). ISSN 1819-6608. (www.arpnjournals.com)