

CURRICULUM VITÆ

TCHEDELE LANGOLLO YANNICK, PhD

Age: 32

Profession: Researcher

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EDUCATION

Ph.D. in Eco-Materials at School of Geology and Mining Engineering (EGEM)

February 2020 to September 2024

Degree of Master in Mining Engineering at EGEM-University of Ngaoundere

March 2019 to December 2019

Degree of Graduate Engineer in Mining-Mining Processing-Environment at EGEM

November 2012 to December 2017

PROFESSIONAL EXPERIENCE

Nov 2024 – Jan 2025 & Sept 2025 – Present Postdoctoral Researcher, University Laboratory of Applied Sciences of Cherbourg (LUSAC), France

- Project development for mobility and funding: Design, optimization, and recycling of low-carbon cellular concretes using local materials for thermal comfort in housing.

Dec 2020 – Aug 2025 Research Officer, Mission for the Promotion of Local Materials (MIPROMALO), Cameroon

- Development and implementation of PhD project: Use of glass waste as supplementary cementitious materials and predictive modeling of mortar mechanical behavior using Artificial Neural Networks (4 published articles).
- Head of Control, Maintenance, and Operations Section at the Pilot Unit for Fired Brick Production.
- Focal point for Geology, Environment, and related fields within MIPROMALO's Scientific Monitoring Committee.
- Geological Consultant for the Dja Loop Development Project (PADI-DJA).
- Project lead: Exploration, estimation, and valorization of local materials in Cameroon (11 published articles).
- Consultant and Trainer at MUCHOTECH Training, SMEG Academy, AGIS SARL: Geotechnics, Eco-Materials and Development Minerals, Data Analysis, Field Campaigns, Research Methodology, Environmental Impact Studies, Environmental Management Systems and Audits.
- Supervision of 23 students, including 22 final-year engineering students and 1 research master's student.

Apr 2018 – Nov 2020 Research Associate, MIPROMALO

- Consultant and Trainer.
- Collaboration on refractory concrete development project (2 published articles).
- MIPROMALO representative on the drafting committee for the Terms of Reference of the Cameroon Geotechnical Order.
- Project lead: Extraction of valuable minerals from electronic waste (resulted in a completed research master's thesis).
- Field missions for prospecting, sampling, and characterization of local materials in Efock (Centre Region), Meiganga and Nyambaka (Adamawa Region), and Njimom (West Region), Cameroon.
- Supervision of 15 students, including 14 final-year engineering students and 1 research master's student.

May 2017 – Sept 2017 Intern, Mission for the Promotion of Local Materials (MIPROMALO)

- Characterization and valorization of materials.

BRIEF DESCRIPTION OF DUTIES

My work involves the design and implementation of research projects, the publication of articles, books, and various communications, securing research funding, participating in seminars and conferences, drafting reports for institutional leadership, and presenting research findings to colleagues. Collaborative efforts have led to the publication of 17 scientific articles on diverse topics such as Supplementary Cementitious Materials (natural and waste-derived), stabilization of lateritic and clay soils, development of a geostatistical estimator, and the study of refractory materials. These studies have employed a wide range of analytical techniques, including scanning electron microscopy (SEM), X-ray diffraction (XRD), thermogravimetric analysis (TGA), X-ray fluorescence spectrometry (XRF), infrared spectroscopy (IR), optical microscopy, mechanical strength testing, and evaluations of thermal, physical, and thermophysical properties, as well as fire and acid

resistance. Statistical analysis, MATLAB and Python programming, regression methods, machine learning, and deep learning are routinely used for modeling, estimation, and prediction. A significant portion of this research has been self-funded. Recently, I was awarded a Postdoctoral Fellowship (MOPGA 2025) and a research mobility grant under the PHC BANTOU 2024 project, both funded by the French government. I am also a recipient of the JERSIC 2023 award for Best Senior Researcher at my institution and earned my PhD with the distinctions. In parallel with my research activities, I serve as Head of the Control, Maintenance, and Operations Section at MIPROMALO's pilot unit for fired brick production, overseeing staff supervision, maintenance scheduling, and both preventive and corrective equipment servicing.

SKILLS

Engineering Sciences: Materials science, geotechnics, geology, environmental science, mineralogy, mineral processing, data analysis.

Laboratory Work: Experimental design, mechanical, physical, chemical, mineralogical, and thermal characterization of materials.

Environmental Management: Environmental impact assessments, life cycle analysis, water and waste management.

Software Proficiency: Microsoft Office Suite, OriginLab, Xpert HighScore Plus, Match!, PowDLL, Adobe, Azurad, Ellistat, SimaPro, ArcGIS, 3DEM, Surfer, MATLAB, AutoCAD, etc. Teaching and Training; Teamwork and Leadership, etc.

CERTIFICATIONS

Monitoring and Evaluation of a Development Project – Delivered by CAMPUS AFD.

GRANTS & FELLOWSHIPS

MOPGA 2025 (€30,500): Research Fellowship funded by the French Ministry for Europe and Foreign Affairs, for the project Development, Optimization, and Recycling of Low-Carbon Cellular Concretes Using Local Materials for Thermal Comfort in Housing, conducted at the LUSAC Laboratory, University of Caen Normandy, France (Sept 2025 – Sept 2026).

PHC BANTOU 2024 (€2,900): Research mobility grant funded by the French Ministry for Europe and Foreign Affairs, for the project Study of Fiber-Reinforced Cellular Concrete, conducted at the LUSAC Laboratory, University of Caen Normandy, France (Oct 2024 – Jan 2024).

JERSIC 2023 (€1,525): Award for Best Senior Research Team at MIPROMALO, granted by the Ministry of Scientific Research and Innovation.

MIPROMALO Budget 2023 (€450): Seed funding for the project Study for the Production of Sand-Lime Bricks.

MEMBERSHIP IN SCHOLARLY SOCIETIES

Asian Council of Science Editors (ACSE).

International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM).

LANGUAGES

French: Native Language.

English: Proficient in comprehension, reading, speaking, and writing.

PUBLICATION LIST

1. Aboubakar, A., Manefouet, I. B. K., Azefack, L. R. M., Tchedele, Y. L., Adoulko, D., Ntomb, D. Y., Mahamat, A., Wadjou, W.J., & Fotze, Q. M. A. (2025). Morphological, mineralogical and geochemical characterization of Ngaoundal soils (Adamawa-Cameroon): Implications for weathering mechanisms and trajectories in tropical zones. *Geosystems and Geoenvironment*, 100450.
2. Tchedele, L. Y., Bilkissou, A., Mohamadou, A. A., Djobo, Y. J. N., Lemougna, N., Tchamba, A. B., Ngounouno, I., & Houivet, D. (2025). Characterization and strength prediction of a Belite cement matrix incorporating micro glass powder. *Discover Civil Engineering*, 2(1), 132.
3. Tiegoum Wembe, J., Mambou Nguayep, L. L., Tchognia Nkuissi, H. J., Tchedele Langollo, Y., Tchioffo Tiwa, I. C., Pliya, P., ... & Ndjaka, J. M. B. (2024). Mineralogical, chemical and physico-mechanical properties of fired bricks for refractory industry applications. *Discover Soil*, 1(1), 5.

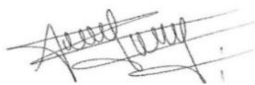
4. Arnold, L. L., Raoul, T. T. D., Ghislain, F. C., Duna, L. L., Yannick, T. L., & Luc, N. J. (2024). Valorization of Fired Clay Bricks Debris (grog) Using Egg Shell and Coconut Shell in the Synthesis of an Ecological Compressed Earth Blocks: Microstructure and Engineering Properties. *Sustainable Chemical Engineering*, 530-549.
5. Yannick, T. L., Fleure, M. J., Eboe, R. M., Japhet, T. D., Sandrine, A. D., Reynolds, A. S. Y., & Hermann, K. T. J. (2024). Properties of waste gneiss powder used to design eco-friendly cement mortar. *JMST Advances*, 6(1), 1-21.
6. Yannick, T. L., Constant, E. E. J., Gael, E. P. B., William, B. A., Leroy, M. N. L., Bruno, T. A., & Ismaïla, N. (2024). Durability, thermo-physical characteristics, and mechanical strength prediction of green Portland cement matrix incorporating recycled soda-lime glass and lead glass. *Heliyon*, 10(4).
7. Yannick, T. L., Alim, B., Abdou Nasser, N. M., Taïga, O. A., Jalil, N. M., Raphael, B. E. B., & Jacques Richard, M. (2023). Comparative Study of Mortars Made with Sands of Different Geological Origin. *Advances in Materials Science and Engineering*, 2023(1), 5139325.
8. Taypondou, D. J., Tchouata, J. H. K., Langollo, Y. T., Sam-Tunsa, A. A., Moudoh, M. B., & Ngon, G. F. N. (2023). Lateral Evolution and Modeling of Garoua-Boulai Soil Properties for Use in Earthen Constructions. *Journal of Materials Engineering and Performance*, 1-20.
9. Yannick, T. L., Arnold, L. L., Japhet, T. D., Leroy, M. N. L., Bruno, T. A., & Ismaïla, N. (2023). Properties of eco-friendly cement mortar designed with grounded lead glass used as supplementary cementitious material. *Heliyon*, 9(7).
10. Moctar, I. B., Yannick, T. L., Albertine, A. S. T., Mache, J. R., & Mominou, N. (2023). Physico-chemical, mineralogical characterization, and ceramic properties of clay materials from South Mindif (Far North, Cameroon). *JMST Advances*, 5(1), 13-26.
11. William, B. A., Lawou, S. K., Kuiekem, D., Langollo, Y. T., & Ngounouno, I. (2022). Development of a 3D variogram using the analytical geometry of the plane and space: application in Nkout Center iron deposit (South Cameroon). *Arabian Journal of Geosciences*, 15(6), 477.
12. Yannick, T. L., Molay, T. G. G., Japhet, T. D., Donald, S. M. A., Therèse, A., Soualiou, N. M., & Leroy, M. N. L. (2022). Suitability of the soils of Monatélé (Centre Cameroon) in the production of fired compressed earth bricks, statistical analysis, and modeling of the mechanical behavior. *JMST Advances*, 4(2), 25-44.
13. Yannick, T. L., Ali, T. O., Taypondou, D. J., Kom, M. I. L. F., Luc, A. L., Ngueyep, L. L. M., & Mache, J. R. (2022). Statistical analysis of Nkoulou soils properties and suitability for earthen constructions. *Heliyon*, 8(10).
14. Darman, J. T., Tchouata, J. H. K., Ngôn, G. F. N., Ngapgue, F., Ngakoupain, B. L., & Langollo, Y. T. (2022). Evaluation of lateritic soils of Mbé for use as compressed earth bricks (CEB). *Heliyon*, 8(8).
15. Tchamba, A. B., Elambo Nkeng, G., Randy, N. C., Guidana, M., Zenabou, N. N., Tchedele Langollo, Y., ... & Bier, T. A. (2021). Influence of lithium carbonate and superplasticizer as admixtures on low calcium dialuminate cement castable submitted to thermal shock. *Journal of Asian Ceramic Societies*, 9(1), 404-411.
16. Yannick, T. L., Luc Leroy, M. N., Liliane Van Essa, K. S., Arlin Bruno, T., Ismaïla, N., & Thomas, A. B. (2020). Mechanical and Microstructural properties of Cameroonian CPJ NC CEM II/BP 42.5 R cement substitution by glass powder in the cement paste and mortar. *SN Applied Sciences*, 2, 1-12.
17. Tchamba, A. B., Mbessa, M., Langollo Yannick, T., Waida, S., Elimbi, A., Melo, U. C., & Bier, T. A. (2020). Reactivity of calcium dialuminate (CaAl₄O₇) refractory cement with lithium carbonate (Li₂CO₃) admixture. *Journal of Asian Ceramic Societies*, 8(2), 223-233.

SPORTS, HOBBIES & OTHER INTERESTS

Internet browsing, chess, football, basketball, video games, cinema, travel, valid driver's license.

Declaration: I hereby declare that the particulars furnished herein by me are true to the best of my knowledge and belief.

Place: Cherbourg-France 09/10/2025



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