# **CURRICULUM VITAE**

Name and first name: KAGONBE PAGNA BERTIN, Ph.D.

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#### PERSONAL STATEMENT

I am a Cameroonian researcher; my work focuses on the exploration and application of local georesources (clay, laterite, sand, and vegetal fiber) in the construction and ceramics sectors. I am involved in research on environmental protection. My career objective is to contribute to bringing nature-based solutions to the housing problem in Africa, and more particularly in Cameroon. My career objective is to contribute to bringing nature-based solutions to the housing problem in Africa and more particularly in Cameroon. I intend to contribute to the development of new materials for ecological construction while protecting the environment. I have extensive experience in the characterization (mineralogy, geochemistry, physico-chemical properties, infrared, ATG-ATD) of clayey, lateritic, and sandy materials and specific training in geosciences and the environment. As a researcher in local projects, I have demonstrated the importance of proposing solutions based on nature. I have co-supervised numerous research projects of several MSc and PhD students in this field and have successfully collaborated with local and international researchers, leading to the production of several peer-reviewed publications. As a result of my experience, I am aware of the importance of developing a realistic research plan, timetable and budget. In short, I have the expertise, leadership, training, experience and motivation to become a research leader.

#### **EDUCATION**

**2021**: Ph.D in soils sciences, University of Maroua, Cameroon.

Advisor: Prof. Ngoss III Simon and Tsozué Désiré

**Doctoral Research Project:** Physic-chemical and mineralogical study of clay materials in the Benue valley (North, Cameroon) and sustainable for their use in ceramics.

**2015:** Master's degree in geosciences and environement, University of Dschang, Cameroon.

2008: Bachelor's degree, University of Ngaoundéré, Cameroon.

## **RESEARCH EXPERIENCE**

**2016-** (in progress) Researcher at Local Material Promotion Authority (MIPROMALO).

#### **Role and achievements:**

- Conducted the research aiming to explore and application of local resources (clay, laterite, sand, gravel, and vegetal fiber) in construction and ceramics sector.
- Acted as a mentor for multiple doctoral students from Cameroon.
- Supervised the training of multiple Bachelors and Master's students
- Assisted in the execution of multiple research projects.
- Wrote and published multiples research and reviews articles in peer-reviewed journals.

## **AWARDS**

Top researcher at Local Material Promotion Authority, 2025.

Top researcher at Local Material Promotion Authority Regional Center of Maroua, 2020.

## **REFEREES**

**Juvenal Giogetti Deutou Nemaleu:** Postdoctoral Fellow at University of Tokyo (Department of Architecture): Tokyo and Senior researcher at Local Material Promotion Authority, Cameroon. Email: <a href="mailto:giogetti@live.fr">giogetti@live.fr</a>, Tel: +237 697338650.

**Cedric Djeutchou:** Department of Earth Science, Khalifa University of Sciences and Technology, P.O. Box 127788, Abu Dhabi, UNITED ARAB EMIRATES. Email: djeutchoucdric@gmail.com, Tel: +97 1567973105.

Özgür Cengiz: Assist. Prof. Afyon Kocatepe University, Faculty of Technology Department of Metallurgy and Materials Engineering 03200, ANS Campus, Afyonkarahisar, Turkiye/Turkey; Fine Arts Facultly, Ceramic Department 03200,

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**Bruno MALET-DAMOUR** Maître de conférences – CNU60 Université de La Réunion Laboratoire PIMENT – UFR Sciences de l'Homme et de l'Environnement, <u>bruno.malet-damour@univ-reunion.fr</u>, +262 (0) 692 81 95 96.

## **SKILLS**

## Soft skills

- 1- Mentoring and Leadership:
  - Since 2016, I have mentored and trained 10 of young Cameroonian scientists, including one (01) who is waiting to defend his PhD, and dozens of Masters students.
  - I currently organize training courses (courses on the use of cartographic software such as QGIS, ARGIS, Ilstrator, etc.) to help students analyses data for their dissertations.

#### Research skills

- Prospecting and development of geomaterials in the construction sector;
- Mineralogy, geochemistry, physico-chemical and mechanical properties of soils;
- Evaluation of the technological properties of ceramic products;
- Qualitative and quantitative assessment of the environmental aspects of the use of construction materials;
- Qualitative valuation of geohazards;
- Characterisation and valorisation of bioresources in construction;
- Agronomy: soil inventory, fertility, restoration and conservation.

# Languages skills

- Native user of French.
- Usage of English.
- Native user of 2 different dialects languages spoken (Moundang, Fulfuldé) in Far North, Cameroon

## **RESEARCH INTERESTS**

- Soil Mineralogy
- Soil Geochemistry
- Geotechnical properties of soil material

- Environmental implications of the use of building materials
- Ceramic (terracotta, pottery)
- Building material.

#### SELECTED PUBLICATIONS

- Kagonbé P. B., Klamadji M.N., Özgür Cengiz, Djenabou Fadil, Bakaïné V. D., Yanné E., Djoda F. P., (2025). The potential use of clay soil from Benue valley (North, Cameroon) as raw materials for field of Traditional Ceramics, Sientific repports (accepted).
- 2. **Kagonbé P. B.,** Klamadji M.N., Özgür Cengiz, Djoulaiyatou D., Soureiyatou Fadil-Djenabou, Bakaïné V. D., Yanné E., Djoda F. P. Bandeya D. (2025). Suitability of clays from Maroua (Far North Cameroon) and physical properties of their adobe bricks reinforced with staff waste powder for eco-friendly construction. *Journal of Ceramic* Processing Research. 26, (4), 547~558 (2025). https://doi.org/10.36410/jcpr.2025.26.4.1.
- Allahdoumbaye, I., Djoda, P.F., Kagonbé, P.B., Hambaté, G.V. and Danwé, R. (2025)
   Prediction of Physic-Mechanical Properties of Geopolymers Based on Recycled
   Thermoplastic Materials for Stabilizing Buildings: Case of Mara and Toukra Sites of
   N'Djamena. Materials Sciences and Applications, 16, 327-347.
   https://doi.org/10.4236/msa.2025.166019.
- 4. Bakaïné D. V., Dawoua K. M., **Kagonbé P. B.**, Babé C., Kola B., Djongyang N. (**2025**) Properties of Adobe Bricks Manufactured from Vertisol Reinforced with Brewer's Spent Grains: Case Study in Sudano-Sahelian Region of Cameroon. *International Journal of Sustainable and Green Energy*, 14, (1), 53-65, https://doi.org/10.11648/j.ijsge.20251401.15.
- 5. Nafissatou M., **Kagonbé, B. P.,** Mouthe A.G.A., Nafissa B., Bakaïné D. V., Yanné E., Likiby B., · Kagou D. A. (**2025**) Potential use of the Maroua (Far North, Cameroon) river sand as construction materials and degreasing agent for earthenware ceramics. *Discover Applied Sciences*. 7:92. https://doi.org/10.1007/s42452-024-06255-9.
- 6. Bebbata W., Pagoré, F. D., Madjihingam, N., **Kagonbé, B. P.,** Raïdandi, D. (**2024**). Geochemistry and Microstructure of Construction Materials from the Eastern Districts of N'djamena Chad with a View to Their Stabilization in the Building and Pottery. *Materials Sciences and Applications*, 15, 43-449. https://doi.org/10.4236/msa.2024.1510029.
- 7. **Kagonbé, B. P.,** Nafissa, B., Djeutchou, C., Hamdja, A. N., Djoda, P., Loabé, A. P., Yanné, E., Venyité, P. (2024). Gravel and River sand mining activities in Maroua (Far-

- North Region, Cameroon): Environmental and Socioeconomic aspects. *Archives of Agriculture and Environmental Science*, 9(1), 126-133. https://doi.org/10.26832/24566632.2024.0901018.
- 8. Madjihingam, N., Pagoré, D., Maché, J.R., Warabi, B., **Kagonbe, B.P.** and Kouotou, P. M., (2024). Clay Materials for Ceramics Application from N'Djamena in the Chad Republic: Mineralogical, Physicochemical and Microstructural Characterization. *Journal of Materials Science and Chemical Engineering*, 12, 31-48. https://doi.org/10.4236/msce.2024.122003.
- 9. Ngoniri, A. H., Ntouda, O, A., Seukep, T.F., Bekono, A.C.J., Lissouck, L.C., Leumbe, O and **Kagonbé**, **P.B.**, (2024). Flood risk mapping in the urban center of Meiganga (Adamawa, Cameroon), Bulletin de l'Institut Scientifique, *Rabat*, *Section Sciences de la Terre*, 46, 1-13.
- 10. Kagonbe, B. P., Souleymanou, B., Bakaine, V.D., Belinga, R.E.B., Aziwo, B.T., Hamdja, A.N. and Boubakar, L. (2023b). Assessment of Soils Developed on Various Formations in Maroua (Far North, Cameroon) for Production of Compressed Earth Bricks. *Open Journal of Applied Sciences*, 13, 874-887. https://doi.org/10.4236/ojapps.2023.136070.
- 11. **Kagonbé B. P.,** Guidana M., Djépaze II Y., Loabé P. A., Yaboki E., Hamdja N. A. Alioum P. S., (**2023a**). Environmental Implications of Artisanal Fired Brick Manufacture in Kaélé and Yagoua, Far North Region of Cameroon, *J. Mater. Environ. Sci.*, 14. 548-559.
- 12. Atourakai M. R.A.; Basga D. S, Tsozué D., Nzeukou A. N., **Kagonbé B. P.,** Bitom D. L., (2023). Soil organic carbon accumulation in dry tropical mountainous zone of Cameroon, *Arabian Journal of Geosciences*, *16:158*. https://doi.org/10.1007/s12517-023-11248-w.
- 13. Tsozué D., Nzeukou A. N., **Kagonbé B. P.,** Madi B. A., Mache R. J., Bitom D. L., · Fagel N., **(2022)**. Genesis and assessment of clay materials suitability for earthenware production in northern Cameroon, *Arabian Journal of Geosciences*, 15:1376. https://doi.org/10.1007/s12517-022-10603-7.
- 14. Issiné A., Tsozué D., Nzeukou A. N., Yongue F. R., Kagonbé B. P., (2022). Soil characteristics and pedoclimatic evaluation of Rainfed Sorghum (Sorghum bicolor (L.) Moench) in the Mayo-Lemié Division, South-Western Chad, *Hindawi, Applied and Environmental Soil Science*, 2022: 1-2. https://doi.org/10.1155/2022/7394260.
- 15. **Kagonbé B. P.,** Tsozué D., Nzeukou A. N., Ngos III S., (**2021a**). Mineralogical, geochemical and physico-chemical characterization of clay raw materials from three clay deposits in Northern Cameroon, *Journal of Geoscience and Environment Protection*, 9. 86-99. https://doi.org/10.4236/gep.2021.96005.

- 16. **Kagonbé B. P.,** Tsozué D., Nzeukou A. N., Ngos III S., (**2021b**). Mineralogical, physicochemical and ceramic properties of clay materials from Sekandé and Gaschiga (North, Cameroon) and their suitability in earthenware production. *Heliyon*, 7. 1-10. https://doi.org/10.1016/j.heliyon.2021.e07608.
- 17. Nzeukou N. A., · Tsozué D., **Kagonbé P. B.,** Balo M. A., Fankam D., Ngos III S., Nkoumbou C., Fagel N., **(2021)**. Clayey soils from Boulgou (North Cameroon): geotechnical, mineralogical, chemical characteristics and properties of their fired products, *SN Applied Sciences*, 3. 551. https://doi.org/10.1007/s42452-021-04541-4.
- 18. Loabé A. P., Tcheumi H. L., Zirté, Kagonbé B. P., (2020). Perceptions of pesticides impacts on agricultural soils in three localities of northern Cameroon (Sanguéré-Paul, Djalingo and Babla), *International Journal of Innovation Scientific Research and Review*, 2. 431-434.
- 19. Djépaze II Y., **Kagonbé B. P.,** Balo A. M., Kamseu E., Ntamack G. E., (**2022**). Influence of the fineness modulus of sand on the compressive strength of its corresponding mortar: a mathematical model proposal. Science and technology publishing (Sci & Tech), 4. 308-315.
- 20. Kagonbé P. B, Tsozué D., Djépaze II Y., Nzeukou N. A., Likiby B., Ngoss III S., (2020b). Physical characterization and optimization of finesse modulus of the sand of Babla and Sanguéré Ngal rivers (North, Cameroon) for better use in construction. J. Sustain. Construct. Mater. Technol., 5. 407-419. https://doi.org/10.29187/jscmt.2019.45.
- 21. Kagonbé B. P., Tsozué D., Nzeukou A. N., Basga S. D., Belinga R. E., Likiby B., S. Ngos III., (2020a). Suitability of lateritic soils from Garoua (North Cameroon) in Compressed Stabilized Earth Blocks production for low-cost housing construction. *J. Mater. Environ. Sci.*, 11. 658-669.

## PARTICIPATION IN CONFERENCES AND SCIENTIFIC MEETINGS

- Selected Participant, 9<sup>th</sup> Edition of the Excellence Days of Scientific Research and Innovation in Cameroon (JERSIC 2025), Yaoundé, Cameroon, 2025, 15 to 17 jully, 2025.
- Presenter, 5<sup>th</sup> Edition of the Kawtal of Engineering Sciences (KSI), National Advanced School of Engineering, University of Maroua, Cameroon, June 12-13, 2025.
- Selected Participant, 3<sup>rd</sup> Geosciences Conference, Faculty of Science, University of Dschang, 8-11 December, 2021, Cameroon.

- Participation to the scientific days, Faculty of Science, University of Maroua, 15 -17 April 2021, Cameroon.
- Participation to the scientific days, , Faculty of Science, University of Maroua, from 5 6 April 2018, Cameroon.

# **DECLARATION OF HONOR**

I do hereby declare that the information given above is true to the best of my knowledge.

**Dr KAGONBE PAGNA BERTIN**