MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 3 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	November 2025

First name	Blanca		
Family name	Bauluz Lázaro		
Gender (*)	Female	Birth date	
ID number			
e-mail		https://sideral.unizar.es/sideral/CV/blanca-bauluz-lazaro	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-4970-6333	

(*) Mandatory

A.1. Current position

Position	Full Professor of Crystallography and Mineralogy		
Initial date	21/05/2019		
Institution	Universidad de Zaragoza		
Department/Center	Earth Sciences	Faculty of Sciences	
Country	Spain	Telephone	
Key words	Clays, geochemistry, industrial minerals, mineralogy, paleoclimate.		

A.2. Previous positions (research activity interuptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
19/12/2001	Tenured Professor (Titular de Universidad). Univ. Zaragoza
01/10/1995	Associate professor (Profesor Asociado TC).Univ. Zaragoza
01/10/1991	Pre-doctoral fellow (Becario Pre-doctoral). Univ. Zaragoza

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Geological Sciences	Universidad de Zaragoza (Spain)	1997
Degree in Geological Sciences	Universidad de Zaragoza (Spain)	1991

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

I am Full Professor and researcher at the Earth Sciences Department of the University of Zaragoza.

I have been responsible of four research projects (2013-2025) granted by competitive tendering financed by the Spanish ministry of Science, two scientific dissemination projects financed by FECTY, and six contracts financed by private companies. I have also been the main researcher of the Government of Aragon consolidated group "*Mineral resources*" during the 2011-2014 period. Now I belong to the Excellence research group "*Aragosaurus: Geological resources and Paleoenviroments*".

Throughout my career, I have published 124 JCR articles in collaboration with researchers from Spanish and foreign universities. I have supervised three PhDs.

Currently, I am involved in the following research lines:

- ***Mineral transformations in low-temperature environments*.**

I am interested in the crystallization of clays and associated phases in sedimentary environments, diagenesis, very low-grade metamorphism and hydrothermal processes. Currently, with my research group I am focused on the investigation of clay-rich paleosoils with Spanish researchers and from other countries (Drs. Do Campo, del Papa and Brlek, Argentina and Croatia). Our studies clearly show that clays are a powerful tool to infer paleoclimate and tectonic conditions in Mesozoic materials as we show in different studies on the Jurassic-Cretaceous boundary in NE Iberian Peninsula, Paleocene-Eocene boundary in N Argentina and Paleocene in Dinaric Alps (eg. Do Campo et al., 2018, 2021, Laita, 2020, 2021a, 2021b, Brlek et al., 2021, Yuste et al., 2020).

- ***Crystal chemistry of clays***. I am interested on the structure of the clays and its relation with their crystallization in different geological environments. For these studies, we have used high-resolution TEM in order to define the presence of interlayering and intergrowths among different clays (Bauluz et al., 2021, Nieto et al., 2021).

- ***Industrial clays and ceramics*.** I am skilled in the characterization of industrial clays and ceramic products. Collaboration with mining companies makes me to specialize in these subjects to solve specific problems during the manufacturing process, since the crystal chemical characteristics of the clays control the plasticity of the raw materials and the manufacturing processes. We also investigatedthe ceramic behavior of aluminium-rich clays in order to evaluate their refractory properties (Laita & Bauluz, 2018, Laita et al., 2019, 2021).

- Biominerals. We collaborate with the paleontologist of Unizar in the crystallization of dinosaur eggs to determine the species and the crystallization process (Ezquerro et al., 2024).

For our research, we use different techniques such as XRD, FESEM, HRTEM, electron microprobe, spectroscopies IR and Raman, XRF and ICPMs, and isotopic geochemistry.

Part C. RELEVANT MERITS

C.1. Selected Publications *(underlined foreign authors)*

- Laita, E. Lorenzo, A., De la Horra, R., Muñoz, B., **Bauluz**, B. Fregenal-Martinez, M. (2025). Multi-episodic bauxitization in a karstic and rifted setting (Early Cretaceous, South-western Iberian Basin, Spain): An interdisciplinary approach Sedimentary Geology, 48,106981. doi.org/10.1016/j.sedgeo.2025.106981

- Laita, E., Bauluz, B., Yuste, A. (2024): The role of clay minerals in the concentration and distribution of critical metals in lateritic palaeosols from NE Iberia. ACS, 249, 1077264, doi.org/10.1016/j.clay.2024.107264.

Laita, E., Subirana M.A., Schaumoloffel, D., Yuste. A., Bauluz, B. (2023). NanoSIMs as an analytical tool for measuring oxygen and hydrogen isotopes in clay mienrals from paleosols: Analytical procedure and preliminary results. Chemical Geology, 121213, doi.org/10.1016/j.chmegeo. 2022.121213.

Do Campo, M., **Bauluz, B.,** Papa del, C., Payrola, P., Yuste, A., Mayayo, M.J. (2021). Terrestrial record of cyclic early Eocene warm-humid events in clay mineral assemblages from the Salta basin, Northwestern Argentina**.** Sedimentary Geology, 425. doi.org/10.1016/j.sedgeo.2021.106004.

Brlek, M., Gaynor, S.P., Mongelli, G., Schaltegger, U., (2021): Karst bauxite formation during Miocene Climatic Optimum (central Dalmatia, Croatia): mineralogical, compositional and geochronological Perspectives. International Journal of Earth Sciences, 110, 2899–2922. doi.org/10.1007/s00531-021-02091-z. Number of authors: 16. **Bauluz** position nº 5.

Laita, E., **Bauluz, B.,** Mayayo, M.J., Yuste, A. (2021a). Mineral and textural transformations in mixtures of Al-rich Al-K-rich clyas with firing: Refractory potential of the fired products. Ceramics International, 47, ISSN 0272-8842. 14527–14539. doi.org/10.1016/j.ceramint.2021.02.032

Laita, E., **Bauluz, B**., Aurell, M., Bádenas, B., Yuste, A. (2021). Weathering events recorded in uppermost Hauterivian–lower Barremian clay-dominated continental successions from the NW Iberian Range: climatic vs. tectonic controls. J of Iberian Geology. Doi.org/10.1007/s41513-021-00181-0.

Nieto, F., Abad, I, **Bauluz, B.,** Reolid, M. (2021): Textural and genetic relationships between glauconite and celadonite at the nanoscale: two different structural-compositional fields. Eur. J. Mineral., 33, 503–517. doi.org/10.5194/ejm-33-503-2021.

Laita, E., **Bauluz, B.**, Aurell, M., Bádenas, B., Canudo, J. Yuste, A. (2020). A change from warm/humid to cold/dry climate conditions recorded in lower Barremian clay-dominated continental successions from the SE Iberian Chain (NE Spain). Sedimentary Geology,403, pp. 105673 1-17. doi.org/10.1016/j.sedgeo.2020.105673.

Yuste, A., Camacho, I., Bauluz, B., Mayayo, M.J., Laita, E. (2020). Palaeoweathering events recorded on siliciclastic continental deposits (Albian, Lower Cretaceous) in NE Spain. Applied Clay Science, 190, pp.105598 1-16. https://doi.org/10.1016/j.clay.2020.105598

Laita, E**.**, **Bauluz, B**., Yuste, A. (2019). High-Temperature Mineral Phases Generated in Natural Clinkers by Spontaneous Combustion of Coal. Minerals, 9 (4), 213. doi:10.3390/min9040213

Bauluz, B., del Papa, C., White, T., Yuste, A., Mayayo, M.J. (2018). Evidence of cyclic climatic changes recorded in clay mineral assemblages from a continental Paleocene-Eocene sequence, northwestern Argentina. Sedimentary Geology, 368 (2018) 44–57.

Ezquerro, L., Coimbra, R., **Bauluz, B**., Núñez-Lahuerta, C., Román-Berdiel, T., Moreno-Azanza, M. (2024) Geoscience Frontier,9. DOI: 10.1016/j.gsf.2024.101872

C.2. Congress and conferences

I have presented more than 150 papers at research conferences**.**

Laita, E., Bauluz, B., Yuste, A., Subirana, M.A., Schaumlöffel, D. (2025). Concentration and distribution of critical metals in laterites, bauxites and red muds. XVIII International Clay Conference. Programme and abstracts, pp. 459.

Bauluz, B., Do Campo, M., Yuste, A., Laita, E., Arranz, E. (2025). Formation of laterites through the alteration of basalts. XVIII International Clay Conference programme and abstracts, pp. 502.

Bauluz. B. (2021): "Analysis of clay-rich paleosoils: from the macro- to the nanoscale"**.** VII Argentinian meeting of Sedimentology – VIII Sedimentological Latin American, Paraná (Argentina). Invited Conference, September 2021.

Bauluz, B. (2020). "Electron Microscopy on Clay Science". Technical University of Darmstadt. Invited Conference, January 2020.

C.3. Research projects

- Aluminum clays: from the genesis to the recycled. REGENERA**.** PID2021-123127OB-I00. Spanish Government. 2022-2025. Research group + Work team: 3 + 3 Main researcher: B. Bauluz. Funding: 85.000€
- Mineral and Chemistry characterization clay rich paleosols: Paleoclimatic and Industrial implications. Ministry of Science and Innovation 2019-2022 (3 years). RTI2018-093419-B-I00. Participant entities: Universidad de Zaragoza. Research group + Work team: 3 + 3 Main researcher: B. Bauluz. Funding: 84700 Euros.
- Phyllosilicate analysis in the study of continental sedimentary facies: Geological, Paleoclimatic and Industrial implications. Funding: Spanish Goverment. CGL2013-46169-C2-1-P. Participant entities: Universidad de Zaragoza (coordinator) - Universidad de Sevilla. Term: 2014-2017 (3 years). Main researcher: B. Bauluz. Number of UZ participant researchers: 6. Funding: 55650€.

C.4. Contracts, technological or transfer merits

Field Emission microprobe with four WDS and spectrometer to determine oxidation states in transition metals. Funding Ministry of Science and Innovation. EQC2021-007154-P. Participant entities: Universidad de Zaragoza. Main Researcher: B. Bauluz. Number of UZ participant researchers: 6. Funding: 1499228.52€