

Part A. Personal Information

DATE	05/05/2023
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Surname(s)	Morales	
Forename	Juan	
ID number	70985739B	
Sex	Male	
Age	42	
Researcher codes	WoS Researcher ID (*)	ABP-8009-2022
	SCOPUS Author ID(*)	12786352100
	Open Researcher and Contributor ID (ORCID)	0000-0003-4016-7094

(*) At least one of these is mandatory

A.1. Current position

Professional Category	Lecturer	
UNESCO Code	2203, 2211, 2301, 2506	
Key Words	Spectroscopy, Material characterization, Mineral Deposits	
Name of the University/Institution	Universidad de Salamanca	
	Department/Centre	Departamento de Geología
	Full Address	Pza. de la Merced s/n, 37008 Salamanca
	Email Address	juan.morales@usal.es
	Phone Number	923294400 (ext.6063)
Start date	05/02/2018	

A.2. Education (title, institution, date)

Year	University	Degree	Title
2005	U. Salamanca	First degree	BSc in Geology
2009	U. Complutense de Madrid	Masters	MSc in Environmental Geology and Geological Resources
2013	U. Complutense de Madrid	PhD	European PhD Doctor

A.3. Indicators of Quality in Scientific Production

- 122 citations during the last five years,
- 13 publications in the first quartile (Q1) and 8 publications within the first decile (D1)
- h-index 8

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

JM obtained his BSc in Geology at the University of Salamanca in 2005. After two years working as a geologist in a private company, he studied an MSc and got the chance to start a doctorate at the Complutense University of Madrid. The topic of his PhD was about the relationships between sulphate minerals surfaces and aqueous solutions, and the environmental control of these interaction processes. After that, JM obtained two Postdoc positions in Karlsruhe, Germany, working for a project, studying the hydrothermal synthesis and growth of Calcium Silicate Hydrate (CSH) phases, which are the precursors used in the manufacture of environmentally friendly cement materials. Later on, he moved to Granada, Spain, where he studied the growth of the so-called "biomorphs", which are inorganic material with life-like morphologies. Then, JM moved to Chile, to work at the Applied and Economic Geology Institute (GEA) at the University of Concepción, where he started studying the interaction of As(aq) and some minerals from an environmental point of view. In 2018, JM moved back to the *alma mater*, Salamanca, where he wants to continue his research interests which are materials characterization and development of techniques of characterization. In every step of his different projects, JM needed the best resolution techniques of materials characterization. This is the only way to do cutting-edge research nowadays. It can be assumed that research preference is mainly experimental.

Part C. Relevant accomplishments

C.1. Publications (last 5 years)

1. Suárez, M., García-Rivas, J., Morales, J., Lorenzo, A., García-Vicente, A., & García-Romero, E. (2022). Review and new data on the surface properties of palygorskite: A comparative study. *Applied Clay Science*, 216, 106311. <https://doi.org/10.1016/j.clay.2021.106311>
2. Suárez, M., Lorenzo, A., García-Vicente, A., Morales, J., García-Rivas, J., & García-Romero, E. (2021). New data on the microporosity of bentonites. *Engineering Geology*, 106439. <https://doi.org/10.1016/j.enggeo.2021.106439>.
3. García-Romero, E., Lorenzo, A., García-Vicente, A., Morales, J., García-Rivas, J., & Suárez, M. (2021). On the structural formula of smectites: a review and new data on the influence of exchangeable cations. *Journal of Applied Crystallography*, 54(1). <https://doi.org/10.1107/S1600576720016040>
4. Gerding, J., Novoselov, A. A., & Morales, J. (2021). Climate and Pyrite: Two factors to control the evolution of abandoned tailings in Northern Chile. *Journal of Geochemical Exploration*, 221, 106686. <https://doi.org/10.1016/j.gexplo.2020.106686>.
5. Forjanés, P., Gómez-Barreiro, J., Morales, J., Astilleros, J. M., & Fernández-Díaz, L. (2020). Epitactic growth of celestite on anhydrite: substrate induced twinning and morphological evolution of aggregates. *CrystEngComm*, 22(35), 5743-5759.
6. Cuesta Mayorga, I., Astilleros, J. M., Fernández-Díaz, L., Morales, J., Prieto, M., Roncal-Herrero, T., & Benning, L. G. (2018). Epitactic Overgrowths of Calcite (CaCO₃) on Anhydrite (CaSO₄) Cleavage Surfaces. *Crystal Growth & Design*, 18(3), 1666-1675. <https://doi.org/10.1021/acs.cgd.7b01610>
7. Suárez, M., García-Rivas, J., Morales Sánchez-Migallón, J., García-Romero, E. (2018) Spanish palygorskites: geological setting, mineralogical, textural and crystal-chemical characterization. *European Journal of Mineralogy*, 30. <https://doi.org/10.1127/ejm/2018/0030-2753>
8. Opel, J., Kellermeier, M., Sickinger, A., Morales, J., Cölfen, H., & García-Ruiz, J. M. (2018). Structural Transition of Inorganic Silica–Carbonate Composites Towards Curved Lifelike Morphologies. *Minerals*, 8(2), 75. <https://doi.org/10.3390/min8020075>

C.2. Research Projects and Grants

- Name of the project: Teledetección hiperespectral para optimizar la extracción de materias primas: rocas carbonatadas (HYPOPROCKS; PDC 2021-121352-I00). Agencia Estatal de Investigación. PI: Eduardo García Meléndez. 2021-2023.
- Name of the project: Aplicación de Espectroscopía VNIR-SWIR a la Identificación y Cuantificación de Filosilicatos de Interés Económico (SA107P20). Junta de Castilla y León (cofinanced by Fondos FEDER). PI: Mercedes Suárez. 2020-2023.
- Name of the project: Identificación y cuantificación de arcillas especiales mediante VNIR-SWIR (PID2019-106504RB-I00). PI: Mercedes Suárez. Agencia Estatal de Investigación 2020-2023.
- Name of the project: In situ monitoring of the stabilization of crystalline vaterite (and an amorphous phase) by arsenic (CR-19-367). Funding Entity: European Union-CSIC- Institut Laue-Langevin (ILL). PI: Juan Morales. 2019.
- Name of the project: Texture-induced anisotropy as a seismic tectonic flow fingerprint (1-02-233@D20). European Union - Institut Laue-Langevin (ILL; 168h experiments). PI: J. Gómez Barreiro. 2018-19.
- Name of the project: Understanding extreme anisotropy in slate. European Synchrotron Radiation Facility (ESRF; Grenoble), Beamline ID11 (ES-698). ESRF-UE program (Unión Europea; 48h experiments) PI: J. Gómez Barreiro.
- Name of the project: Genesis and deformation processes. Funding Entity: European Union-CSIC- Institut Laue-Langevin (ILL; CRG-2559@D1B; 72h experiments). PI: J. Gómez Barreiro. 2018-2019.

- Name of the project: Dauphiné Twinning in quartz revisited (Easy-384@D1B) European Union-Institut Laue-Langevin (ILL). PI: J. Gómez Barreiro. 2019.
- Name of the project: Interaction of common minerals and arsenic-contaminated waters: environmental implications (CONICYT 11170755). FONDECYT Iniciación (Chile). PI: Juan Morales. 2017
- Name of the project: Modelización molecular de los mecanismos de orientación cristalográfica preferente durante el reemplazamiento entre calcita y fases minerales de sulfato cálcico (MODEL-SULCAL). Universidad de Oviedo. PI: Pedro Álvarez Lloret. 2018
- Name of the project: Pattern Formation and Mineral Self-Organization in Highly Alkaline Environments, PROMETHEUS (FP7-IDEAS-ERC). PI Juan Manuel García Ruiz. European Research Council.
- Name of the project: Un estudio a multiescala de procesos de disolución-cristalización significativos en biomineralización y medioambiente: hacia un modelo cinético integral. Ministerio de ciencia e Innovación. Universidad Complutense de Madrid.
- Name of the project: Control del crecimiento cristalino en sistemas hidrogel: aplicación a la morfogénesis biomineral Ministerio de ciencia e Innovación. Universidad Complutense de Madrid.
- Name of the project: Procesos de interacción entre sulfatos y disoluciones acuosas: implicaciones mineralógicas y medioambientales. Ministerio de ciencia e Innovación (MEC-07-CGL2007-65523-C02-02). Universidad Complutense de Madrid.

C.3. Research Contracts, scientific & technological transfer

- Servicio Promoción Cultural. Analisis petrografico y difraccion de RX de bienes culturales 1: materiales ceramicos historicos del patrimonio de Castilla y Leon. Se pretende analizar la procedencia y dar informacion del proceso de fabricacion. (Contrato Art. 83 L.O.U.-Cód. 2019/00376/001) 2019-2020. 1.596€.
- Salinas de Navarra S.A. Caracterización mineralógica de materiales arcillosos. Universidad de Salamanca (Contrato Art. 83 L.O.U.) 2018. 580€.
- Diputación Foral de Álava. Caracterización mineral avanzada DRX, FRX y microscopía de muestras minerales pertenecientes al Museo de Ciencias Naturales de Álava. Contrato Art. 83 L.O.U.- Ref. 2021/00225/001).
- Estudio petrográfico de áridos. Consejo Superior de Investigaciones Científicas (CSIC). (Contrato Art. 83 L.O.U.-Expdte. 4109).
- Caracterización mineralógica y propiedades de aplicación de un subproducto de cantera. Areixca S.L. (Contrato Art. 83 L.O.U.-Expdte. 4108).
- Análisis petrográfico, realización e interpretación de datos de DRX de bienes culturales: materiales cerámicos históricos del Patrimonio de Castilla y León. Servicio Promoción Cultural. (Contrato Art. 83 L.O.U.- Expdte. 3962)
- Caracterización petrológica/mineral mediante técnicas de DRX, FRX, SEM y petrografía de muestras minerales pertenecientes al Museo de Ciencias Naturales de Álava. Contrato Art. 83 L.O.U.- Ref. 2019/00370/001).
- 36-2017 SRK-CONSULTING. Caracterización mediante XDR. Instituto de Geología Económica Aplicada (GEA-UdeC, Chile) 2017. 1,7M \$CLP.
- 50-2017-MINERA GOLDFIELDS. XRD Characterisation. Instituto de Geología Económica Aplicada (GEA-UdeC, Chile) 2017. 0,8M \$CLP.
- 37-2017-CSIRO. XRD Characterisation. Instituto de Geología Económica Aplicada (GEA-UdeC, Chile) 2017. 0,9M \$CLP.

- 69-2017-CodelcoTech. Caracterización de fases minerales y fracción arcillas. Instituto de Geología Económica Aplicada (GEA-UdeC, Chile) 2017. 1,2M \$CLP.

C.3. Other merits

- Member of the “Topics Board Editors” of Crystals (MDPI). Since 2018.
- Member of the evaluation committee of the Agencia Española de Investigación (AEI). Since 05/2021.
- Member of the evaluation committee of the Dirección de Evaluación y Acreditación de la Agencia Andaluza del Conocimiento (DEVA-AAC). Since 30/06/2020.
- Board member of the Sociedad Española de Mineralogía (SEM). Since 10/2020.
- Board member of the Sociedad Española de Arcillas (SEA). Since 11/2020.