

Part A. Personal Information

DATE	06/12/2022
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Surname(s)	Pérez
Forename	Nemesio M.

A.1. Current position

Post/ Professional Category	Division Director		
UNESCO Code	2301.01, 2301.03, 2501.05, 2503.03, 2503.08, 2506.04, 2508.04, 2511.01, 2511.04, 2511.09		
Key Words	Gas Geochemistry, Volcanology, Volcano Monitoring and Volcanic Risk Reduction, Geothermal Exploration, Underground Water Resources, Environmental Quality, Atmospheric Pollution, Outreach and Education.		
Name of the University/Institution	Instituto Tecnológico y de Energías Renovables (ITER)		
Department/Centre			
Full Address	Polígono Industrial de Granadilla, s/n, 38600, Granadilla de Abona, Spain		
Email Address	nperez@iter.es		
Phone Number	+34922747700		
Start date	22/01/1997		

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

Year	University	Degree	Title
1986	<i>The University Autónoma of Madrid</i>	<i>Licenciado in Chemistry (speciality Geochemistry) 5 years</i>	
1992	<i>The University of La Laguna</i>	<i>Doctorado in Chemistry (Geochemistry)</i>	<i>Estudio geoquímico de las descargas volcánico-magmáticas-hidrotermales de la caldera de Rabaul, Papua Nueva Guinea</i>

A.3. Indicators of Quality in Scientific Production (See the instructions)

Citations and H-index:

Google Scholar

- Citations: 3.489 (total) 1.713 (since 2017)
- h-index: 34 (total) 23 (since 2017)
- i10-index: 89 (total) 60 (since 2017)

Scopus

- h-index: 25
- Total citations: 1.719
- Average number of cites/year during the last 5 years: 149

ResearchGate

- Research Interest Score 1.911
- Citations 3.273
- h-index: 33

Total publications: 166 = 117 (SCI Journals) + 18 (other peer-reviewed Scientific Journals) + 31 (Book Chapters)

Ph.D. Thesis supervised: 11 (6 since 2010)

Ph.D. Thesis supervised (in progress): 5

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

I, Nemesio M. Pérez Rodríguez, graduated in Chemistry (Geochemistry) from the University Autónoma of Madrid (UAM) in 1986. During 1986-88, I was a graduated assisstant researcher at the Instituto de Recursos Naturales y Agrobiología de Canarias (IRNA-CSIC) working on environmental geochemistry. After this two years period, I moved to Louisiana State University (LSU) for my Ph.D. research on volcanic gas geochemitrsy under the superivision of Dr. Stanley N. Williams. I defended my Ph.D. in Chemistry (Geochemistry) at the University of La Laguna (ULL) in 1992. After the defense of my Ph.D., I moved back to the USA as a Fulbright PostDoc to do research on hydrogeochemistry of oceanic volcanic islands with Dr. Jeffrey S. Hanor (LSU) from 1994 to 1996. Later and because of Fulbright regulations, I had to leave USA and moved to Japan as EU-STF Research Fellow to work with Dr. Hiroshi Wakita at the Laboratory for Earthquake Chemistry of the University of Tokyo during the period 1995-96. I returned to Spain in 1997 after 8 years doing research in USA and Japan. Since then, I am acting as Director of the Environment Research Division of the Instituto Tecnológico y de Energías Renovables (ITER). In addition to my research position at ITER, I am also the scientist-in-charge of the Instituto Volcanológico de Canarias (INVOLCAN) since the end of 2010.

My research interest are mainly related to volcanic gases, environmental geochemistry, groundwater studies in oceanic volcanic islands, surface geothermal exploration using geochemical and geophysical methods, earthquake prediction research using geochemical methods. I have a total of 138 publications of which 91 (65,94%) are published in SCI Journals, 18 (13,04%) in other peer-reviewed scientific Journals and 29 (21,01%) are book chapters. I have been also involved in the presentation of more than 350 communications (oral and posters) in international meetings. I have been the main supervisor (Director) of 11 Ph.D. Dissertations which had been defended at the Universidad de La Laguna (6), Universidad Complutense de Madrid (2), Universitat de Barcelona (1), Universidad Autónoma de Madrid (1), Universitat Politècnica de Catalunya (1). By the time being, I am acting as Director and Co-Director of 5 additional Ph.D. Dissertations which will be defended at Universidad de La Laguna (3), Universidad Complutense de Madrid (1), Universidad Politécnica de Madrid (1) y University of Glasgow, United Kingdom (1). In addition I had supervised 20 Tesis de Licenciatura, Diplomas de Estudios Avanzados (DEA) y Trabajos Fin de Master (TFM) which had been defended at Universidad de La Laguna (15), Universidad de Las Palmas de Gran Canaria (1), Universidad Europea de Canarias (1), Universidad Nacional de Educación a Distancia (1) y Università degli Studi di Firenze, Italia (2).

I have carried out research activities in volcano-geothermal systems of Antarctica, Azores (Portugal), Canary Islands (Spain), Cape Verde, Costa Rica, Ecuador, El Salvador, Equatorial Guinea, France, Galápagos (Ecuador), Germany, Guatemala, Iceland, Italy, Japan, Papua New Guinea, Philippines and Rwanda.

Part C. Relevant accomplishments

C.1. Publications (from 2022)

1. Cabrera-Pérez I., Soubestre J., D'Auria L., Martínez van Dorth D., Ledo J., Piña-Varas P., Cervigón-Tomico G., Padilla G. D., Barrancos J. and **Pérez N. M.** (2023). Ambient noise tomography of Gran Canaria island (Canary Islands) for geothermal exploration. Geothermics, <https://doi.org/10.1016/j.geothermics.2022.102609>

2. **Pérez N. M.**, Melián G. V., Hernández P. A., Padrón E., Padilla G. D., Baldago M. C., Barrancos J., Rodríguez F., Asensio-Ramos M., Alonso M., Arcilla C. and Lagmay A. M. (2022). Diffuse CO₂ degassing precursors of the January 2020 eruption of Taal volcano, Philippines. *Scientific Reports*, <https://doi.org/10.1038/s41598-022-22066-7>
3. Amonte C., Melián G. V., Asensio-Ramos M., **Pérez N. M.**, Padrón E., Hernández P. A. and D'Auria L. (2022). Hydrogeochemical temporal variations related to the recent volcanic eruption at Cumbre Vieja volcano, La Palma, Canary Islands. *Frontiers in Earth Science*, <https://doi.org/10.3389/feart.2022.1003890>.
4. D'Auria, L., Koulakov, I., Prudencio, J., Cabrera-Perez, I., Ibáñez, J., Barrancos, J., Garcia-Hernández, R., Martínez van Dorth, D., Padilla, G.D., Przeor, M., Ortega, V., Hernández, P.A. & **Pérez, N.M.** (2022). Voluminous Storage and Rapid Magma Ascent Beneath La Palma Revealed by Seismic Tomography. *Scientific Reports*, 12, 17654, <https://doi.org/10.1038/s41598-022-21818-9>
5. Padrón E., **Pérez N. M.**, Hernández P. A., Sumino H., Melián G. V., Alonso M., Rodríguez F., Asensio-Ramos M. and D'Auria L. (2022). Early precursory changes in the 3He/4He ratio prior to the 2021 Tajogaite eruption at Cumbre Vieja volcano, La Palma, Canary Islands. *Geophysical Research Letters*, <https://doi.org/10.1029/2022GL099992>
6. Hernández W., Dóniz-Páez J. and **Pérez N. M.** (2022). Urban Geotourism in La Palma, Canary Islands, Spain. *Land* 11, no. 8: 1337. <https://doi.org/10.3390/land11081337>
7. Coldwell B., **Pérez N. M.**, Cordero Vaca M., Pankhurst M. J., Hernández P. A., Melián G. V., Padrón E., Asensio-Ramos M., Ribeiro S. and Santos J. F. (2022). Strontium isotope systematics of Tenerife wines (Canary Islands): tracing provenance in ocean island terroir. *Beverages*, <https://doi.org/10.3390/beverages8010009>
8. Pankhurst M.J., Scarrow J.H., Barbee O.A., Hickey J., Coldwell B.C., Rollinson G.K., Rodríguez-Losada J.A., Martín-Lorenzo A., Rodríguez F., Hernández W., Calvo Fernández D., Hernández P.A. and **Pérez N.M.** (2022). Rapid response petrology for the opening eruptive phase of the 2021 Cumbre Vieja eruption, La Palma, Canary Islands. *Volcanica*, doi:10.30909/vol.05.01.0110
9. Alonso M., **Pérez N. M.**, Hernández P. A., Padrón E., Melián G. V., Rodríguez F., Padilla G., Barrancos J., Asensio-Ramos M., Fridriksson T. and Sumino H. (2022). Thermal energy and diffuse 4He and 3He degassing released in volcanic-geothermal systems. *Renewable Energy*, 182, 17-31, doi.org/10.1016/j.renene.2021.10.016.
10. Romero, J., Burton, M., Cáceres, F., Taddeucci, J., Civico, R., Ricci, T., Pankhurst, M.J., Hernández, P.A., Bonadonna, C., Llewellyn, E.W., Pistolesi, M., Polacci, M., Solana, C., D'Auria, L., Arzilli, F., Andronico, D., Rodríguez, F., Asensio-Ramos, M., Martín-Lorenzo, A., Hayer, C., Scarlato, P., and **Pérez, N. M.** (2022) Magmatically induced edifice collapse during the 2021 Cumbre Vieja eruption: implications for newly formed small-volume volcanoes. *Journal of Volcanology and Geothermal Research*, 10.1016/j.jvolgeores.2022.107642.
11. Civico R., Ricci T., Scarlato P., Taddeucci J., Andronico D., Del Bello E., D'Auria L., Hernández P. A. & **Pérez N. M.** (2022). High-resolution Digital Surface Model of the 2021 eruption deposit of Cumbre Vieja volcano, La Palma, Spain. *Scientific Data* 9, 435, <https://doi.org/10.1038/s41597-022-01551-8>
12. Wadsworth, F.B., Llewellyn, E.W., Farquharson, J.I., Gillies, J.K., Loisel, A., Frey, L., Ilyinskaya, E., Thordarson, T., Tramontano, S., Lev, E., Pankhurst, M.J., Rull, A.G., Asensio-Ramos, M., **Pérez, N. M.**, Hernández, P.H., Calvo, D., Solana, M.C., Kueppers, U., Polo Santabarbara, A.P (2022). Crowd-sourcing observations of volcanic eruptions during the 2021 Fagradalsfjall and Cumbre Vieja events. *Nature Communications*, 13, 2611, doi: 10.1038/s41467-022-30333-4.
13. Amonte C, **Pérez N. M.**, Melián G., Asensio-Ramos M., Padrón E., Hernández P.A. (2022) Temporal evolution of dissolved gases in groundwater of Tenerife Island. *Journal of Volcanology and Geothermal Research*, <https://doi.org/10.1016/j.jvolgeores.2022.107512>

C.2. Research Projects and Grants (selected)

1. **VOLRISKMAC II**, Fortalecimiento de las capacidades de I+D+i para el desarrollo de la resiliencia frente emergencias volcánicas en la Macaronesia - VOLRISKMAC II (Ref.: MAC2/3.5b/328). Financing entity: INTERREG V-A Spain-Portugal MAC Cooperation Program 2014-2020, European Comission. Row leader: Instituto Volcanológico de Canarias (INVOLCAN). Period: 2020-2022. Budget: 1.609.702,52€.

2. **VOLTURMAC**, Fortalecimiento del volcán turismo en la Macaronesia - VOLTURMAC (Ref.: MAC2/4.6c/298). Financing entity: INTERREG V-A Spain-Portugal MAC Cooperation Program 2014-2020, European Comission. Row leader: Instituto Volcanológico de Canarias (INVOLCAN). Period: 2020-2022. Budget: 1.964.660,94€.
3. **CANgeotermia_01**, Impulso a la energía geotérmica de alta entalpía en Canarias Financing entity: Dirección General de Energía de la Consejería de Transición Ecológica, Lucha contra el Cambio Climático y Planificación Territorial, Gobierno de Canarias. Entity: Instituto Volcanológico de Canarias (INVOLCAN). Period: 2020-2021. Budget: 135.000,00 €
3. **TERMOVOLCAN**, Diseño y desarrollo experimental de una metodología multiparamétrica para la exploración de recursos geotérmicos ocultos de alta entalpía en Canarias (Ref.: RTC-2017-6627-3). Row leader: Instituto Volcanológico de Canarias (INVOLCAN). Programa Estatal de Investigación, Desarrollo e Innovación Orientada a los Retos de la Sociedad, Retos-Colaboración. Date of start: 06/2018. Period: 4 years. Budget: 1.649.644,43 €.
5. **LPgeotermia_01**, Desarrollo de la geotermia en La Palma. Financing entity: Cabildo Insular de La Palma. Entity: Instituto Volcanológico de Canarias (INVOLCAN). Period: 2018-2019. Budget: 150.000,00 €
6. **VOLRISKMAC**, Fortalecimiento de las capacidades de I+D+i para la monitorización de la actividad volcánica en la Macaronesia (Ref.: MAC/3.5b/124). Financing entity: Fondo Europeo de Desarrollo Regional INTERREG. Row leader: Instituto Volcanológico de Canarias (INVOLCAN). Period: 2017- 2019. Budget: 1.351.527€.

C.5, C.6, C.7... Other

C.5 Undergraduated Research Program

In addition to the supervision of graduated students, I am the person in-charge of a strong undergraduated research program which has allowed that 436 undergraduated university students to carry out training in my research group: 44.72% of these undergraduated students were from the University of La Laguna (ULL) and 14.22% were from 13 other spanish universities while 41.05% of these 436 university students were from foreign universities; more specifically of 96 universities located in 9 different countries (Brazil, Canada, Denmark, USA, France, Italy, United Kingdom, Senegal and Trinidad & Tobago).

C.6 Scientific outreach and public awareness programs

In addition to my research work, I would like to highlight my commitment to bring science closer to society through several scientific outreach and public awareness programs, such as (1) PLANETA VIVO RADIO, a radio program with RNE in the Canary Islands of 30 minutes that is emitted weekly and uninterruptedly since October 2008 by Radio 5 for the Canary Islands and by Radio Exterior of Spain for the whole world in order to contribute to a better relationship between Humanity and the Planet Earth. This radio program is followed by approximately 100,000 listeners in the Canary Islands as well as listeners in 53 different countries; (2) CANARY ISLANDS: A VOLCANIC WINDOW IN THE ATLÁNTICO, an initiatived which has visited all the 88 municipalities of the Canary Islands with the purpose of informing and educating about the volcanic phenomenon and the management of volcanic risk to the residents of the Canary Islands; and (3) TELEPLANETA, a 20-minute television program with TVE in the Canary Islands that is broadcast weekly by Channel 24 hours of TVE and the Channel TVE International in order to raise awareness about the impact of natural hazards.