

# CARACTERIZACIÓN DE AEROSOLES ATMOSFÉRICOS EN LA ANTÁRTIDA



Ref. CTM2017-82929-R  
Jesús Anzano & Jorge Cáceres

**REUNIÓN FIN DE CAMPAÑA ANTÁRTICA 2020-2021**

Madrid, 27 de mayo de 2021

# Objetivos científicos de la campaña

Prioridad	Objetivo	Resultados alcanzados	% Completado
Alta	Toma de muestras de aire en la Isla Livingston	Satisfactorios a la espera de los análisis	100%
Alta	Toma de muestras de aire en la Isla Decepción	Satisfactorios a la espera de los análisis	100%

# Despliegue instrumental

- Vértice Baliza, Isla Decepción-ET



- Monte Sofía, Isla Livingston-CSIC



Contador de partículas- KUNAK

# Logros Científicos Proyecto 2018 -2021

Science of the Total Environment 665 (2019) 125–132



Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: [www.elsevier.com/locate/scitotenv](http://www.elsevier.com/locate/scitotenv)



Quantification of particulate matter, tracking the origin and relationship between elements for the environmental monitoring of the Antarctic region

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## HIGHLIGHTS

- Particulate matter PM<sub>10</sub> in Antarctic region (Deception Island) was analyzed.
- Low volume sampler was used to capture the aerosol particles (PM<sub>10</sub>).
- Enrichment factors of the elements were determined.

## GRAPHICAL ABSTRACT



Local and Remote Sources of Airborne Suspended Particulate Matter in the Antarctic Region

Volume 11 • Issue 4 | April 2020



[mdpi.com/journal/atmosphere](http://mdpi.com/journal/atmosphere)  
ISSN 2073-4433

Science of the Total Environment 721 (2020) 137702

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: [www.elsevier.com/locate/scitotenv](http://www.elsevier.com/locate/scitotenv)



Heavy metal transport and evolution of atmospheric aerosols in the Antarctic region

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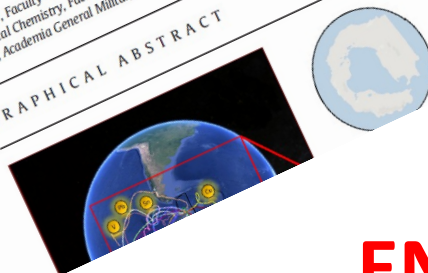
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## HIGHLIGHTS

- Atmospheric aerosols PM<sub>10</sub> in Antarctic region were analysed by ICP-MS.
- Particulate matter (PM<sub>10</sub>) was captured through a low volume sampler in filters.
- PCA Analysis was used to determine the correlations between the elements.
- Enrichment factors of Hf, Zr, V, As, Mn.

## GRAPHICAL ABSTRACT



Spectrochimica Acta Part B: Atomic Spectroscopy

Volume 180, June 2021, 106191



Analytical note

Multielemental analysis of Antarctic soils using calibration free laser-induced breakdown spectroscopy ☆

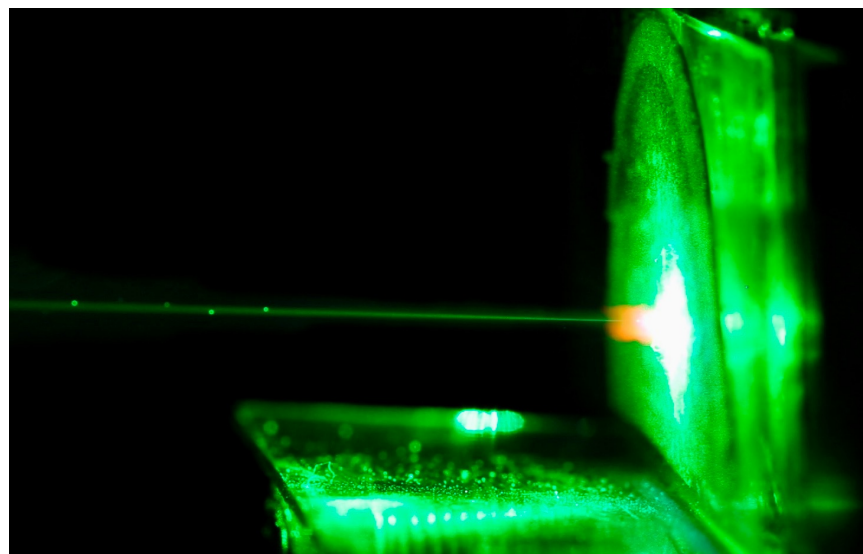
Jesús M. Anzano <sup>a</sup> ✉, Andrés Cruz-Conesa <sup>a</sup>, Roberto J. Lasheras <sup>a</sup>, César Marina-Montes <sup>a</sup>, Luis Vicente Pérez-Arribas <sup>b</sup>, Jorge O. Cáceres <sup>b</sup>, Abrahan I. Velásquez <sup>a,c</sup>, Vincenzo Palleschi <sup>d</sup>

ENVIRONMENTAL POLLUTION

ANALYTICAL CHIMICA ACTA

Objetivos científicos globales del proyecto actualizados a 27 de mayo de 2021

<b>RESULTADOS</b>	<b>Número</b>
<b>PUBLICACIONES CIENTÍFICAS</b>	6
<b>PUBLICACIONES DE DIVULGACIÓN</b>	2
<b>COMUNICACIONES A CONGRESOS</b>	5



# Nuevos retos 2021-2024?

- Caracterización de bio-aerosoles en la Antártida
- Control medioambiental global en la Antártida
- Laboratorio instrumental polar
  - LIBS (tele-LIBS)
  - Raman
  - Imaging

## UNIVERSIDADES

- Universidad de Zaragoza
- Universidad Complutense de Madrid
- Universidad de Málaga
- Universidad del País Vasco
- Universidad de Lyon

