# *Curriculum Vitae*

**João Alfredo Vieira Canário**

**FEBRUARY 2022**

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# IDENTIFICATION

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**Data and Place of Birth:**

Lisbon, 31/01/1968

**Nationality:**

Portuguese

**Professional Websites**

**ORCID:** *http://orcid.org/0000-0002-5190-446X*

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**Google Scholar:** *https://scholar.google.pt/citations?user=NNKFs30AAAAJ&hl=it*

**Personal Website:** *http://jcanario.weebly.com*

## SYNOPSE OF CV

I hold a degree in Technological Chemistry from the University of Lisbon (1994). I also hold a M.Sc. degree in Marine Sciences/Marine Chemistry (2000) and Ph.D. in Environmental Sciences/Environmental Chemistry (2004), all from the New University of Lisbon. In September 2017 I've completed my Habilitation in Chemistry at Instituto Superior Técnico, University of Lisbon. After completing my Ph.D. I was awarded an FCT grant for post-doctoral research at both IPIMAR in Lisbon and Environment Canada in Montréal (2004-2008). I was then employed as a research scientist at IPIMAR under the FCT program C2007 (2008-2013). In January 2014 I got a contract as Principal Researcher (InvFCT 2013) and in June 2019 another contract as Coordinator Researcher (CEEC2019) at Centro de Química Estrutural (CQE) of Instituto Superior Técnico (IST), University of Lisbon. When I moved to CQE in 2013 I have created a research team examining Environmental Polar Chemistry.

My career has been mainly focused on the fate and biogeochemistry of mercury in the environment, although I have also developed a substantial research program in the related field of trace-element biogeochemistry. Consequently, I have garnered an international reputation and developed several productive collaborations with universities and research laboratories worldwide.

In addition to working on multidisciplinary projects in Portugal, in many cases as the principal investigator (PI) (e.g. PROFLUX, PLANTA II, PERMAMERC), I have collaborated on several international projects (e.g. CiCAT, SMART, COBRA, NUNATARYUK), through which I have developed an interest and research expertise in Polar Regions. I was an invited scientist in two International Polar Year (IPY) Projects in the Canadian Arctic (2008-2009), and in 2011 I was PI on a project based in Antarctica (CONTANTARC-1) leading to the first Portuguese environmental chemistry research campaign on that continent. Since 2011 have returned annually to Arctic or Antarctica, most of the time with MSc and PhD students. Due to my interest in biogeochemistry of permafrost and my expertise in contaminant and sulphur biogeochemistry, I have also been invited to join the Canadian ADAPT project (Arctic Development and Adaptation to Permafrost in Transition) and the EU H2020 NUNATARYUK. Through all these nationally and internationally funded projects I have been successful in attracting more than 2M€ in funding to my research program which has given me solid status as an independent researcher.

Since 2009 I've been teaching by invitation at Instituto Superior Técnico. I've started by lectures and field and laboratory classes in the "Sampling and Environmental Methods of Analysis" course from the Environmental Engineering program and since 2014/2015 laboratory classes of the "Chemical Analysis" and "Instrumental Methods of Analysis" courses from the Chemical and Biological Engineering program. Since 2009 I've been also giving lectures about Pollutant Biogeochemical cycles and their role in the food quality in "Master in Food Quality" from the Faculty of Pharmacy/University of Lisbon and Validation and Accreditation of Analytical Methods in the "Master of Chemistry" at Instituto Superior Técnico. In September 2015 I'm also Invited Assistant Professor at the Instituto Superior Técnico and in September 2020 I was promoted to Invited Associated Professor.

I have extensive experience supervising student research including 6 undergraduate students (one in progress), 25 M.Sc. students (four in progress), 8 Ph.D. students (four in progress) and three postdoctoral researchers. Also, visiting researchers have worked in my laboratory for collaborative research mainly on the scope of mercury biogeochemistry in coastal environments and wetlands. For three consecutive years (2018 to 2021) I was award with the "Excellence in Teaching" by Instituto Superior Técnico as a result of students teaching evaluation (QUCs).

I have published 85 papers in international journals with referees, and two book chapters. Among this 85 already published or accepted, 18 were published as first author (*ca.* 21%) and 33 as second or senior (last) author (*ca.* 39%). Note that in publications prior to 2013 the senior author was listed second, while publications completed after the move from IPIMAR to CQE follow the convention that the senior/corresponding author is listed last. Since my Ph.D., published papers have an accumulated impact factor of 418.876 (JCR 2021), which is considered excellent compared to the average impact factors for environmental or environmental chemistry journals. Also, *ca.* 69% of the publications belong to the first quartile (Scimago 2021).

I have been cited more than 2240 times (3160 in Google Scholar) and my *h-index* varies from 25 (ISI Web of Knowledge – Thompson Reuters) to and 31 (Google Scholar). In 2010, the journal *Marine Pollution Bulletin* recognized me with a "Highly Cited Author Award" for 2005-2009. It should be notice that more than 58% of my citations were in the last 5 years.

In 2011 I was nominated as the Portuguese representative in the Global Mercury Partnership of the United Nations Environment Programme (UNEP) and since 2013, I have been an executive member of the coordination committee of Portuguese Polar Program (PROPOLAR).

Also, in 2013 I was invited by PROPOLAR and the Polar Office of Fundação para a Ciência e Tecnologia to prepare the admission of Portugal to the International Arctic Science Committee (IASC) having the national observer status at this International scientific organization. In 2014 I was responsible to the preparation of the document "*Portuguese Strategy for Arctic Research*". This document was approved by the Secretary of State for Science and was submitted to IASC in January 2015. In April 2015 in Toyama, Japan, Portugal was accepted as the 23rd IASC member country. After acceptance, I was nominated by the Ministry of Science and Education, National Delegate at the IASC Council and at the Terrestrial Working Group (TWG) and in April 2017 I was nominated chair of the Pan-Arctic Program T-MOSAiC (*www.t-mosaic.com*). In 2018 in the IASC Davos meeting (ASSW2018) I was appointed chairman of the Arctic Science Summit Week to be held in Lisbon in 2021 (ASSW2021). During the ASSW2021 I was elected vice-chair of the TWG.

Due to my expertise in contaminant cycle in the Arctic, I was appointed their representative at the Arctic Monitoring and Assessment Program (AMAP, Arctic council) and as a member of the advisor panel of the Sustainable Arctic Observing Networks (SAON) Roadmap for Arctic Observing and Data Systems" (ROADS). In January 2022 I was appointed by SAON as co-chair of the Committee of Observation Networks (CON).

Since September 2014 I have been an external researcher at the Centre D'études Nordiques at University Laval, Canada and in since January 2017 I was appointed as Adjunct Graduate Faculty Member at Trent University, also in Canada. In September 2022 I was also appointed as Adjunct Professor (Professeur Associé) of the Department of Chemistry, Université Laval, Canada.

# 1. ACADEMIC

## 1.1. Academic Degrees

**September 2017**

Habilitation in Chemistry

Instituto Superior Técnico - University of Lisbon - Portugal

**October 2004**

PhD in Environmental Sciences (Environmental Chemistry)

New University of Lisbon - Portugal

**June 2000**

MSc in Marine Sciences (Marine Chemistry)

Faculty of Sciences and Technology - New University of Lisbon - Portugal

**July 1998**

Post-Graduation in Educational Sciences

Faculty of Sciences and Technology - New University of Lisbon - Portugal

**December 1994**

Degree in Technological Chemistry (Analytical)

Faculty of Sciences – University of Lisbon - Portugal

## 1.2. Professional Activities

***2021-Present***

Member of the Scientific Committee of the Environmental Engineering Bachelor's degree at Instituto Superior Técnico – University of Lisbon

***2020- Present***

*Invited Associate Professor*

Department of Chemical Engineering – Instituto Superior Técnico – University of Lisbon

***2019- Present***

*Coordinator Researcher*

Centro de Química Estrutural - Instituto Superior Técnico – University of Lisbon (CEEC 2017)

***2015 - 2020***

*Invited Assistant Professor*

Department of Chemical Engineering – Instituto Superior Técnico – University of Lisbon

***2014- 2019***

*Principal Researcher*

Centro de Química Estrutural - Instituto Superior Técnico –University of Lisbon (IF 2013)

***2008 - 2013***

*Junior Researcher*

Department of Aquatic Environment and Biodiversity of the National Institute for Fisheries and Sea Research. (Ciência 2007)

***2006 - 2008***

*Post-Doctoral Research Scientist*

Environment Canada, St. Lawrence Centre in Montréal (Supervision of Dr. Laurier Poissant) and at the National Institute for Fisheries and Sea Research in Lisbon, Portugal (Co-supervision of Dr. Carlos Vale)

***2004 - 2006***

*Post-Doctoral Research Scientist*

Portuguese Institute for Fisheries and Sea Research (Supervision of Dr. Carlos Vale)

***2000 - 2004***

*PhD student*

Portuguese Institute for Fisheries and Sea Research (Supervision of Dr. Carlos Vale) and Faculty of Sciences and Technology - New University of Lisbon (co-supervision Prof. João Gomes Ferreira)

***1998 - 2000***

MSc student

Portuguese Institute for Fisheries and Sea Research (Supervision of Dr. Carlos Vale) and Faculty of Sciences and Technology - New University of Lisbon (co-supervision Prof. João Gomes Ferreira).

***1995 - 1999***

Chemistry and Environmental Sciences teacher in a Portuguese high school.

## 1.3. Other Professional Activities

***2022 – Present***

- Vice-President (Elected) of the International Arctic Science Committee (IASC)
- Co-Chair of the Committee of Observation Networks (CON) of the Sustainable Arctic Observing Networks (SAON)

***2021 – Present***

- International Arctic Science Committee representative at the SAON "Roadmap for Arctic Observing and Data Systems" (ROADS) Advisory Panel.
- Elected member of The Oceanography Society (TOS) Honors Selection Committee
- Adjunct Professor (*Professeur Associé*) of the Department of Chemistry, Université Laval, Canada
- Vice-chair of Terrestrial Working Group of the International Arctic Science Committee (IASC)

***2019 – Present***

International Arctic Science Committee (IASC) delegate at the Arctic Monitoring and Assessment Program (AMAP) - Arctic Council.

***2017 – Present***

Adjunct Graduate Faculty Member at University of Trent, Peterborough, Canada

***2015 - Present***

- Portuguese Delegate at the International Arctic Science Committee (IASC) - Council Member – Delegation from the Ministry of Science, Technology and Higher Education (through FCT).
- Portuguese Delegate at the Terrestrial Working Group of the International Arctic Science Committee (IASC) - Delegation from the Ministry of Science, Technology and Higher Education (through FCT).

***2014 - Present***

External Research Collaborator at Centre for Northern Studies, University Laval, Québec, Canadá.

***2013 - 2017***

National Delegate for the Forum of Arctic Research Operators (FARO) - Delegation from the Ministry of Science, Technology and Higher Education (through FCT)

***2013 - Present***

Member of the Executive Committee of the Portuguese Polar Program (PROPOLAR) – Arctic Expert

***2013 - 2014***

Portuguese Delegate (Observer) at the International Arctic Science Committee (IASC) - Delegation from the Ministry of Science, Technology and Higher Education (through FCT)

***2012 - 2013***

Researcher collaborator at “Centro de Química Estrutural” at the Technical University of Lisbon.

**2011 - 2013**

Portuguese representative in the Global Mercury Partnership of the United Nations Environmental Program

***2010 - Present***

Invited Lecturer in the Faculty of Pharmacy, University of Lisbon – Master Program in Food Quality

***2009 - 2015***

Invited Lecturer in the University of Lisbon – Instituto Superior Técnico – Integrated Master’s in Environmental Engineering

***2007***

Visiting Professor – Department of Earth and Environmental Sciences - University of Acadia – Wolfville - Nova Scotia – Canada.

***2006 - 2008***

Vice-president of the Scientific Council of the National Institute for Fisheries and Sea Research – Lisbon - Portugal.

# 2. RESEARCH

## 2.1. Scientific Interests

My main research interests are on the field of environmental chemistry mainly in the fate and biogeochemistry of key pollutants in the environment.

During my Master and Ph.D., I was focus on understanding the processes involved in mercury partitioning, transport, and speciation in wetlands but since my Post-Doc in Canada I´ve started to work in Polar Regions.

Presently I'm focusing my research work on biogeochemical cycle of contaminants in Antarctica and in understanding the changes in contaminant, carbon, and sulphur cycles in the Arctic thawing permafrost as a consequence of global warming.

Research interests by topics (alphabetic order) include:

Analytical Chemistry: In the development and implementation of analytical methodologies to quantify contaminants in environmental matrices, particularly in the development of *in situ* strategies for sampling and routine analyses. More recently I'm particularly interested in the use of stable isotopes to access biogeochemical processes.

Environmental Chemistry: To understand the biogeochemical processes involved in trace element speciation, partitioning and fate and their relationship with other physico-chemical variables. I'm particularly interested in early diagenesis mechanisms and how they influence other trace elements chemistry in sediments.

Permafrost: The chemistry of thawing permafrost in a changing Arctic is one of my main interests. I'm particularly focus on the formation, chemistry, and fate of permafrost thaw lakes. These environments, extremely enriched in natural organic matter, have a particular chemistry that strongly influence not only the chemistry of other trace elements but also have local and global impacts due to the release of greenhouse gases (mainly methane). I've been more involved in this research since 2014 as a part of a multidisciplinary international team.

Polar Sciences: In general, I'm involved in several projects concerning contaminant cycle in the Arctic and Antarctica. However, and besides permafrost research, the study of the impacts of the human presence in Antarctica particularly the effects of the scientific stations on the Antarctic ecosystems have been an area of research I've been particularly involved.

Contaminant Cycling in wetlands (saltmarshes): Despite this topic being related with the other below, I'm particularly interested in salt marshes ecosystems. This type of wetlands experiences constantly changing conditions and are influenced by a variety of chemical and physical variables that may affect trace elements biogeochemical processes. Moreover, the effect of salt-marsh plants in the sediment chemistry is particularly interesting.

Environmental Pollution and Ecotoxicology: To better understand the effect of pollution in living organisms particularly the physiological and ecotoxicological effects (behaviour, oxidative stress, etc). This work has been a result of a strong cooperation with the Universities of Aveiro and Minho.

## 2.2. Scientific Publications

### 2.2.1. Thesis/Evaluation Documents

Canário, J., 2017. Overview of the Major Mercury Chemical Processes in the Ocean. Lesson submitted for the Habilitation degree in Chemistry, Instituto Superior Técnico, University of Lisbon, 45 pp.

Canário, J., 2004. Mercury and monomethylmercury fate and biogeochemistry in the North Channel of the Tagus Estuary. PhD Thesis. New University of Lisbon, 221 pp. (In Portuguese – Abstract in English and French)

Canário, J., 2000. Mercury in contaminated sediments and pore waters at a contaminated site in the Tagus Estuary. MSc Thesis. New University of Lisbon, 98 pp. (In Portuguese – Abstract in English)

Canário, J., 1994. Selenium determination in human tissues by Neutron Activation Analysis. BSc Thesis. Faculty of Sciences, University of Lisbon, 116 pp. (In Portuguese)

### 2.2.2. Book Chapters

1. Vale, C., Canário, J., Caetano, L., Poissant, L., Ferreira, A.M., 2011. Contaminant Cycle under Climate Change: Evidence and Scenarios. In: Oceans and the Atmospheric Carbon Content, P. Duarte and J. M. Santana-Casiano (Eds.), Springer Science Books, NY, pp. 133-156.

2. Bhattacharya, A. Satpathy, K.K., Prasad, M.V.R., Canário, J., Chatterjee, M., Sarkar, S., Branco, V., Bhattacharya, B., Bandyopadhyay, A.K., Alam, Md. A., 2008. Geochemistry of major and trace elements in core sediments of Sunderban Delta, India: An assessment of metal pollution using Atomic Absorption Spectrometer and Inductively Plasma Mass Spectrometry. In: Causes and Effects of Heavy Metal Pollution, Mikel L. Sanchez (Ed.), Nova Science Publishers, Inc., NY, pp. 305-340.

### 2.2.3. Peer-Reviewed Journals

1. Jusek, M., Hintelmann, H., Pilote, M., Vincent, W.F., Canário, J. Biogeochemical factors influencing Hg methylation and MMHg demethylation in subarctic permafrost thaw lakes. *Chemosphere*. (*Submitted*)
2. Coelho, L.F., Couceiro, J.F., Keller-Costa, T., Valente, S.M., Ramalho, T.R., Carneiro, J., Comte, J., Blais, M-A., Vincent, W.F., Martins, Z., Canário, J., Costa, R., 2022. Structural shifts in sea ice prokaryotic communities across a salinity gradient in the subarctic. *Science of the Total Environment*, 827, Art. 154286.

   (DOI: *https://doi.org/10.1016/j.scitotenv.2022.154286* - IF: 7.963 - Q1)

3. Freitas, P., Vieira, G., Mora, C., Canário, J., Vincent, W.F. valuation of Cast Shadow Impacts on Remotely Sensed Water Surface Reflectance from Thermokarst Lakes in the Boreal Forest-Tundra Zone. *Science of the Total Environment*. (*Submitted*)
4. Coelho, L.F., Madden, J., Kaltenegger, L., Zinder, S., Philpot, W., Esquível, M.G., Canário, J., Costa, R., Vincent, W., Martins, Z., 2022. Color catalog of life in ice: Surface biosignatures on icy worlds. *Astrobiology*.

   (DOI: *https://doi.org/10.1089/ast.2021.0008* - IF: 4.335 - Q1)

5. Martins, B.M., O'Driscoll, N.J., Mallory, M., Canário, J., 2021. A review of freshwater invertebrates as biomonitors of methylmercury: the importance of more complete physical and chemical reporting. *Bulletin of Environmental Contamination and Toxicology*, 107, 801-808.

   (DOI: *https://doi.org/10.1007/s00128-021-03274-9* - IF: 1.657 - Q2)

6. Nozais, C., Vincent, W.F., Belzile, C., Gosselin, M., Blais, M-A., Canário, J., Archambault, P., 2021 The Great Whale River ecosystem: ecology of a subarctic river and its receiving waters in coastal Hudson Bay, Canada. *Ecoscience*, 28(3-4), 327-346.

(DOI: https://doi.org/10.1080/11956860.2021.1926137- IF: 1.950 - Q2)

7. Cesário, R., O'Driscoll, N.J., Justino, S., Wilson, C.E., Monteiro, C.E., Zilhão, H., Canário, J., 2021. Air concentrations of mercury and vegetation-air fluxes within saltmarshes of the Tagus Estuary, Portugal. *Atmosphere*, 12, 228.

(DOI: https://doi.org/10.1016/atmos12020228- IF: 2.686 - Q2)

8. Bento, B., Hintelmann, H., Santos, M.C., Cesário, R., Canário, J., 2021. Mercury methylation rates in Deception Island (Maritime Antarctica) waters and pyroclastic gravel impacted by volcanic mercury. *Marine Pollution Bulletin*, 164, Art. 112013.

(DOI: https://doi.org/10.1016/j.marpolbul.2021.112023 - IF: 5.553 - Q1)

*9.* Folhas, D., Duarte, A.C., Pilote, M., Vincent, W.F., Freitas, P., Vieira, G., Silva, A.M.S., Duarte, R.M.B.O., Canário, J., 2020. Structural Characterization of Dissolved Organic Matter in Permafrost Peatland Lakes. *Water*, 12, Art. 3059.

(DOI: https://doi.org/10.3390/w12113059 - IF: 3.103 - Q1)

*10.* Rego, A. Sousa, A.A.G.G., Santos, J.P., Pascoal, F., Canário, J., Leão, P.N., Magalhães, C., 2020. Diversity of bacterial biosynthetic genes in maritime Antarctica. *Microorganisms*, 8(2), 279.

(DOI: https://doi.org/10.3390/microorganisms8020279 - IF: 4.128 - Q2)

11. Freitas, P., Vieira, G., Canário, J., Folhas, D., Vincent, W., 2019. Identification of a threshold minimum area for reflectance retrieval from thermokarst lakes and ponds using full-pixel data from Sentinel-2. Remote Sensing, 11, 657.

(DOI: https://doi.org/10.3390/rs11060657 - IF: 4.848 - Q1)

*12.* Pereira, P., Korbas, M., Pereira, V., Cappello, T., Maisano, M., Canário, J., Almeida, A., Pacheco, M., 2019 Contribution to build a multidimensional concept for mercury neurosensory toxicity in fish - from toxicokinetics and biochemistry to morphometry and behavior. *Biochimica et Biophysica Acta - General Subjects*, 1863, Art. nº 129298.

(DOI: https://doi.org/10.1016/j.bbagen.2019.01.020 - IF: 3.770 - Q1)

13. Cabrita, M.T., Duarte, B., Cesário, R., Mendes, R., Hintelmann, H., Eckey, K., Dimock, B., Caçador, I., Canário, J., 2019. Mercury mobility and effects in the salt-marsh plant *Halimione portulacoides*: uptake, transport, and toxicity and tolerance mechanisms. *Science of the Total Environment*, 650, 111-120.

(DOI: https://doi.org/10.1016/j.scitotenv.2018.08.335 - IF: 7.963 - Q1)

14. Figueiredo, N., Serralheiro, M.L., Canário, J., Duarte, A., Hintelmann, H., Carvalho, C., 2018. Evidence of mercury methylation and demethylation by the estuarine microbial communities obtained in stable Hg isotope studies. *International Journal of Environmental Research and Public Health*, 15, 2141.

(DOI: https://doi.org/10.3390/ijerph15102141 - IF: 3.390 – Q2)

15. Duarte, B., Cabrita, M.T., Vidal, T., Pereira, J.L., Pacheco, M., Pereira, P., Canário, J., Gonçalves, F.J.M., Matos, A.R., Rosa, R., Marques, J.C., Caçador, M.I., Gameiro, C., 2018. Phytoplankton community-level bio-optical assessment in a naturally mercury contaminated Antarctic ecosystem (Deception Island). *Marine Environmental Research*, 140, 412-421.

(DOI: https://doi.org/10.1016/j.marenvres.2018.07.014 - IF: 3.130 - Q1)

*16.* Pereira, R., Leite, E., Raimundo, J., Guilherme, S., Puga, S., Canário, J., Almeida, A., Pacheco, M., Pereira, P., 2018. Metals(loids) targeting fisheyes and brain in a contaminated estuary - uncovering neurosensory (un)susceptibility through toxicokinetics, antioxidant and morphometric profiles. *Marine Environmental Research*, 140, 403-411.

(DOI: https://doi.org/10.1016/j.marenvres.2018.07.001 - IF: 3.130 - Q1)

17. Brito, P, Malvar, M., Galinha, C., Caçador, I., Caetano, Canário, J., Araújo, F., Raimundo, J., 2018. Yttrium and rare earth elements fractionation in salt marsh halophyte plants. *Science of the Total Environment*, 643, 1117-1126.

(DOI: https://doi.org/10.1016/j.scitotenv.2018.06.291 - IF: 7.963 - Q1)

18. Cesário, R., Mota, A.M., Caetano, M., Nogueira, M., Canário, J., 2018. Mercury and methylmercury transport and fate in the water column of Tagus Estuary (Portugal). *Marine Pollution Bulletin*, 127, 235-250.

(DOI: https://doi.org/10.1016/j.marpolbul.2017.11.066 - IF: 5.553- Q1)

19. Figueiredo, N., Canário, J., Serralheiro, M.L., Carvalho, C., 2017. Optimization of Microbial Detoxification for an Aquatic Mercury-contaminated Environment. *Journal of Toxicology and Environmental Health* - Part A, 80(13-15), 788-796.

(DOI: http://dx.doi.org/10.1080/15287394.2017.1357311 - IF: 2.300 - Q2)

20. Cesário, R. Hintelmann, H., O'Driscoll, N.J., Monteiro, C.E., Caetano, M., Nogueira, M., Mota, A.M., Canário, J., 2017. Mercury and methylmercury dynamics in two high contaminated areas of Tagus estuary (Portugal). *Water Air and Soil Pollution*, 228, 257-275.

(DOI: *http://dx.doi.org/10.1007/s11270-017-3442-1* - IF: 2.520 – Q2)

*21.* Cesário, R., Poissant, L., Pilote, M., O'Driscoll, N.J., Mota, A.M., Canário, J., 2017. Dissolved Gaseous Mercury Formation and Mercury Volatilization in Intertidal Sediments. *Science of the Total Environment,* 603-604, 279-289.

(DOI: *https://dx.doi.org/10.1016/j.scitotenv.2017.06.093* - IF: 7.963 - Q1)

22. Cardoso, O., Puga, S., Brandão, F., Canário, J., O'Driscoll, N., Santos, M.A., Pacheco, M., Pereira, P., 2017. Oxidative stress profiles in brain point out a higher susceptibility of fish to waterborne divalent mercury compared to dietary organic mercury. *Marine Pollution Bulletin,* 122(1-2), 110-121.

(DOI: *https://doi.org/10.1016/j.marpolbul.2017.06.029* – IF: 5.553 - Q1)

23. Cabrita, M.T., Padeiro, A., Amaro, E., Santos, M.C., Leppe, M., Verkulich, S., Hughes, K., Peter, H-U., Canário, J., 2017. Evaluating trace metal bioavailability and transfer into marine food chains using immobilised diatom model species *Phaeodactylum tricornutum*, on King George Island, Antarctica. *Marine Pollution Bulletin*, 121, 192-200.

(DOI: *https://doi.org/10.1016/j.marpolbul.2017.05.059* – IF: 5.553 - Q1)

*24.* Pellegrini, E., Petranich, E., Acquavita, A., Canário, J., Emili, A., Covelli, S., 2107. Mercury uptake by halophytes in response to a long-term contamination in coastal wetland salt marshes (Northern Adriatic Sea). *Environmental Geochemistry and Health*, 39, 1273-1289.

(DOI: *http://dx.doi.org/10.1007/s10653-017-9981-y* – IF: 4.609 - Q1)

25. Cesário, R., Hintelmann, H., Mendes, R., Eckey, K., Dimock, B., Araújo, B., Mota A.M., Canário, J., 2017. Evaluation of mercury methylation and methylmercury demethylation rates in vegetated and non-vegetated saltmarsh sediments from two Portuguese estuaries. *Environmental Pollution*, 226, 297-307.

(DOI: *http://dx.doi.org/10.1016/j.envpol.2017.03.075* – IF: 8.071 - Q1)

26. Canário, J., Santos-Echeandia, J., Padeiro, A., Amaro, E., Strass, V., Klaas, C., Ossebaar, S., Koch, B., Laglera, L.M., 2017. Mercury and methylmercury in the Atlantic sector of the Southern Ocean. *Deep-Sea Research II*, 138, 52-62.

(DOI: http://dx.doi.org/10.1016/j.dsr2.2016.07.012 – IF: 2.732 - Q1)

27. Canário, J., Poissant, L., Pilote, M., Caetano, M., Hintelmann, H., O'Driscoll, N. J., 2017. Salt-marsh plants as potential sources of $Hg^0$ into the atmosphere. *Atmospheric Environment*, 152, 458-464.

(DOI: http://dx.doi.org/10.1016/j.atmosenv.2017.01.011 – IF: 4.798 - Q1)

28. Pereira, J.L., Pereira, P., Padeiro, A., Gonçalves, F., Amaro, E., Leppe, M., Verkulich, S., Hughes, K.A., Peter, H-U., Canário, J., 2017. Environmental Hazard Assessment of contaminated soils in Antarctica: using a structured tier 1 approach to inform decision-making. *Science of the Total Environment*, 574, 443-454.

(DOI: http://dx.doi.org/10.1016/j.scitotenv.2016.09.091 – IF: 7.963 - Q1)

29. Cesário, R., Monteiro, C.E., Nogueira, M., O'Driscoll, N.J., Caetano, M., Hintelmann, H., Mota, A.M., Canário, J., 2016. Mercury and methylmercury dynamics in sediments on a protected area of Tagus estuary (Portugal). *Water Air and Soil Pollution*, 227(12), Artº 475.

(DOI: http://dx.doi.org/10.1007/s11270-016-3179-2 – IF: 2.520 – Q2)

30. Puga, S., Pereira, P., Pinto-Ribeiro, F., O'Driscoll, N.J., Mann, E., Barata, M., Pousão-Ferreira, P., Canário, J., Almeida, A., Pacheco, M., 2016. Unveiling the neurotoxicity of methylmercury in fish (*Diplodus sargus*) through a regional morphometric analysis of brain and swimming behavior assessment. *Aquatic Toxicology*, 180, 320-333.

(DOI: http://dx.doi.org/0.1016/j.aquatox.2016.10.014 – IF: 4.964 - Q1)

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### 2.2.4. Oral Communications in Congresses

1. Canário, J., Hintelmann, H., Bento, B., Santos, M.M., Figueiredo, D., Oliveira, H., Cabrite, T., 2022. Methylmercury Biogeochemistry and Fate in Deception Island, (Maritime Antarctica)

and their potential impact in the surrounding Southern Ocean. *Ocean Sciences Meeting 2022*, February/March, Honolulu, Hawaii, USA. *(Online Conference*)

2. Pinheiro, D., Vieira, G., Whalen, D., Pina, P., Canário, J., Freitas, P., Stuckey, S., 2021. Evaluating Hydrodynamic and Bathtub Water-Level Models to Assess Storm Surge Flooding in Tuktoyaktuk. *ArcticNet Annual Scientific Meeting*, Canada *(Online Conference*)

3. Freitas, P., Vieira, G., Mora, C., Canário, J., folhas, D., Vincent, Q.F., 2021. Ultra-high-resolution assessment of potential impacts of vegetation shadows on satellite-derived spectral signals from small thermokarst lakes in the boreal forest-tundra transition zone (subarctic Canada). *European Geoscience Union General Assembly Meeting 2021,* April 19–30, Vienna, Austria. *(Online Conference).*

4. Cesário, R., O'Driscoll, N.J., Justino, S., Wilson, C.E., Monteiro, C., Zilhão, H., Canário, J., 2021. The influence of mercury contamination and vegetation type on atmospheric Hg(0) concentrations and vegetation-air fluxes in the Tagus estuary salt marshes. *ECSA 58 & EMECS 13 – Estuaries and Coastal Seas in the Anthropocene, Structure, functions, services and management*, September 6-9, Hull, United Kingdom. *(Online Conference).*

5. Zilhão, H., Cesário, R., Hintelmann, H., Canário, J., 2021. Mercury methylation and methylmercury demethylation rates in salt marsh sediments from Tagus estuary: the role of plants and seasonal effect. *ECSA 58 & EMECS 13 – Estuaries and Coastal Seas in the Anthropocene, Structure, functions, services and management*, September 6-9, Hull, United Kingdom. *(Online Conference).*

6. Jusek, M., Hintelmann, H., Pilote, M., Comte, J., Canário, J., 2021. Who is methylating mercury in permafrost thaw lakes? *Arctic Science Summit Week 2021*, March 19-26, Lisbon, Portugal. *(Online Conference)*

7. Pilote, M., Canário, J., Turcotte, P., Gagnon, C., Houle, D., 2021. Influence of thawing permafrost on the fate of Hg and trace metals in thermokarst ponds, eastern Canadian subarctic region (Nunavik). *Arctic Science Summit Week 2021*, March 19-26, Lisbon, Portugal. *(Online Conference)*

8. Folhas, A., Duarte, A., Pilote, M., Vincent, W., Freitas, P., vieira, G., Silva, A.M.S., Duarte, R.M.B.O., Canário, J., 2021. Importance of dissolved organic matter (DOM) characterization from permafrost thermokarst lakes. *Arctic Science Summit Week 2021*, March 19-26, Lisbon, Portugal. *(Online Conference)*

9. Freitas, P., Vieira, G., Mora, C., Canário, J., Folhas D., Vincent, W., 2021. Monitoring the optical properties of small thermokarst lakes through synergistic Unmanned Aerial Vehicle and satellite data analysis. *Arctic Science Summit Week 2021*, March 19-26, Lisbon, Portugal. *(Online Conference)*

10. Pinheiro, D., Vieira, G., Whalen, D., Pina, P., Canário, J., Freitas, P., Stuckey, S., 2021. Sea level rise floodmapping and bathtub water-level models over UAV and LIDAR DSMs in Tuktoyaktuk, Northwest Territories, Canada. *Arctic Science Summit Week 2021*, March 19-26, Lisbon, Portugal. *(Online Conference)*

11. Canário, J., Jusek M, Hintelmann H, Pilote M, Hugelius G, Wagner J, Vieira G, Martin V, Ritcher A, Lodi R., Lantuit H., 2020. Mercury methylation in permafrost thaw ecosystems. *GoldSchmidt 2020*, June 21-26, Honolulu, Hawaii, USA. *(Online Conference)*

12. Canário, J., Hintelmann, H., Bento, B., Santos, M.C., Mateus., 2019. Methylmercury Biogeochemistry and Fate in Deception Island, (Antarctica). *14th International Conference on Mercury as a Global Pollutant*, September 8-13, Krakow, Poland.

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15. Ferreira, D., Duarte, A., Duarte, R., Canário, J., Vincent, W.F., 2018. Structural characterization of natural organic matter in thermokarst lakes in the Eastern Canadian Subarctic. ArcticNet Annual Scientific Meeting, December 10-14, Ottawa, Canada.

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17. Pereira, P., Cardoso, O., Puga, S., Brandão, F., O'Driscoll, N., Canário, J., Pacheco, M., 2018. New findings on mercury neurotoxicity in fish unveiled by oxidative stress profiles in the brain and neurotransmission status upon exposure to inorganic and organic forms. *The 24$^{th}$ International Sustainable Development Research Society Conference*, June 13-15, Messina, Italy.

*18.* Freitas, P., Vieira, G., Girst, S., Mora, C., Canário, J., Vincent, W.F., 2018. UAV multispectral remote sensing of Sub-Arctic ponds (Nunavik, Canada). *Polar 2018*, June 15-26, Davos, Switzerland.

*19.* Canário, J., Pilote, M., Santos, M. C., Araújo, F., Duarte, T., Vieira, G., Vincent, W.F., 2017. Arsenic, cadmium and lead cycling in permafrost thaw lakes. *Arctic Change 2017*, December 11-15, Quebec City, Canada.

*20.* Pilote, M., Canário, J., Gagnon, C., 2017. Impact of thawing permafrost in subarctic region on the Hg cycling in thermokarst ponds. *Arctic Change 2017*, December 11-15, Quebec City, Canada.

*21.* Vieira, G., Freitas, P., Girst, S., Mora, C., Canário., J., Vincent, W., 2017. Multiscale remote sensing of Sub-Arctic thaw ponds in Eastern Hudson Bay. *Arctic Change 2017*, December 11-15, Quebec City, Canada.

22. Cesário, J., Nogueira, M., Caetano, M., Mota, A.M., Canário, J., 2017. Transport and fate of mercury and methylmercury in the water column of a contaminated estuarine system (Tagus estuary, Portugal). *International Conference on the Biogeochemistry of Trace Elements,* July 16-20, Zurich, Switzerland.

23. Pilote, M., Canário, J., Gagnon, C., 2017. Impact of permafrost melting in subarctic region on the Hg cycling in thermokarst ponds. *13$^{th}$ International Conference on Mercury as a Global Pollutant*, July 16-21, Providence, Rhode Island, USA.

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25. Canário, J., Santos, M.C., Vieira, G., Vincent, W., 2017. Tracking permafrost soils degradation through sulphur biogeochemical tracers. *European Geoscience Union General Assembly Meeting,* April 23–28, Vienna, Austria.

26. Canário, J., Hintelmann, H., Bento, B., Oliveira, H., Padeiro, A., Cabrita, M.T., Santos, M.C., Mateus, M., 2016. Origin and availability of mercury in Deception Island, Antarctica. *2016 SCAR Open Science Conference*, August 22-26, Kuala Lumpur, Malaysia.

27. Canário, J., Padeiro, A., Castanheira, L., Santos, M.C., Nunes, T.G., Vieira, G., Vincent, W.F., 2016. Sulphur biogeochemistry in permafrost thaw lakes. *XI International Conference on Permafrost (ICOP2016)*, June 20-24, Potsdam, Germany.

28. Canário, J., Cabrita, M.T., Figueiredo, D., Hintelmann, Mão de Ferro, A., Mateus, M., Mota, A.M., Oliveira, H., Padeiro, A., Santos, A., Santos, M.C., 2015. Mercury biogeochemistry in an ecosystem impacted by volcanic-Hg, Deception Island, Antarctica. *VIII Latin-American Congress on Antarctic Science*, October 7-8, Montevideo, Uruguay.

29. Cesário, R., Hintelmann, H., Mendes, R., Eckey, K., Dimock, B., Mota, A.M., Canário, J., 2015. Estimation of mercury methylation rates in sediments from two Portuguese Estuaries using mercury stable isotopes. *XXIV National Meeting of the Portuguese Chemical Society*, July 1-3, Coimbra, Portugal.

30. Castanheira, L., Duarte, T., Oliveira, M.C., Ascenso, J., Santos, M.C., Nunes, T., Araújo, M.F., Gomes, S., Ferreira, M.J., André, V., Vieira, G., Vincent, W.F., Canário, J., 2015. Biogeochemistry of Canadian sub-arctic thermokarst lakes. *XXIV National Meeting of the Portuguese Chemical Society*, July 1-3, Coimbra, Portugal.

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32. Cesário, R., Mendes, R., Eckey, K., Dimock, B., Hintelmann, H., Mota, A.M., Canário, J., 2015. Mercury methylation rates in colonized and non-colonized saltmarsh sediments of two Portuguese estuaries with different Hg origin. *12$^{th}$ International Conference on Mercury as a Global Pollutant*, June 14-19, Jeju, South Korea.

33. Canário, J., Castanheira, L., Duarte, T., Oliveira, M.C., Ascenso, J., Araújo, M.F., Vieira, G., Vincent, W., 2015. Trace Element Biogeochemistry in Thaw Lakes: Influence of Organic Matter. *Third International Conference on Arctic Research Planning*, April 26-30, Toyama, Japan.

34. Canário, J., Mão de Ferro, A., Amaro, E., Padeiro, A., Mota, A.M., 2014. Mercury in Maritime Antarctica - The case studies of Deception and King George Islands. *SETAC North America 35th Annual Meeting*, November 9-13, Vancouver, Canada.

35. Cesário, R., Nogueira, M., Mota, A.M., Canário., 2014. Methylmercury transport in contaminated waters of the Tagus Estuary, Portugal. *SETAC North America 35th Annual Meeting*, November 9-13, Vancouver, Canada.

36. Mateus, M., Canário, J., 2014. Modeling the pathway of mercury in contaminated waters (Tagus Estuary, Portugal). *SETAC North America 35th Annual Meeting*, November 9-13, Vancouver, Canada.

37. Padeiro, A., Amaro, E., Santos, M.C., Araújo, M.F., Cabrita, M.T., Gomes, S., Leppe, M., Hughes, K., Ulrich, H-P., Canário, J., 2014. Assessing contaminant levels and distribution in Fildes Bay (King George Island, Antarctica). *6th Portuguese Meeting of Polar Sciences*, October 31, University of Porto, Porto, Portugal.

38. Canário, J., Padeiro, A., Amaro, E., Huges, K., Peter, H-U., Leppe, M., Verkulich, S., 2014. Trace element concentrations in environmental samples from Fildes Peninsula (King George Island, Antarctica): A potential problem? *2014 SCAR Open Science Conference*, August 24-28, Auckland, New Zealand.

39. Mão de Ferro, A., Mota, A., Canário, J., 2014. Sources, speciation and transport of Hg, As, Pb, Cd and Cu in Deception Island, Antarctica. 2014 *SCAR Open Science Conference*, August 24-28, Auckland, New Zealand.

40. Canário, J., Poissant, L., Pilote, M., Nogueira, M., 2014. Thermokarst lakes as potential sources of contaminants to sub-Arctic aquatic ecosystems. *Thermokarst Aquatic Systems Workshop, Thaw 2014*, March 12-15, Quebec City, Canada.

41. Raimundo, J., Caetano, M., Vale, C., Pereira, P., Canário, J., Brito, P., Mil-Homens, M., 2013. The influence of lithology and human pressure on sediment elemental composition: the case of nine estuaries in Portugal. *8th International SedNet Conference,* November 6–9, Lisbon, Portugal.

42. Amaro, E., Mão de Ferro, A., Mota, A., Canário, J., 2014. Arsenic, Cu, Cd, Hg, Zn and Pb contamination in the water, sediments and soils of Fildes Peninsula (King George Island, Antarctica). *5th Portuguese Conference of Polar Sciences*, November 1, University of Algarve, Faro, Portugal.

43. Figueiredo, N., Canário, J., Duarte, A., Carvalho, C., 2013. Relationship between Bacteria Susceptibility to Mercury and Mercury Contamination on Tagus Estuary (Portugal). *2nd International Conference on Occupational and Environmental Toxicology (ICOETox)*, September 17-16, Porto, Portugal.

44. Canário, J., Mão de Ferro, A., Mota, A., Mateus, M., 2013. Mercury in Deception Island, Antarctica: An integrated study. *VII Latino American Congress on Antarctic Science*, September 4-6, La Serena, Chile.

45. Ferreira, J., Carvalho, B., Branco, V., Canário, J., Amorim, A., 2013. Assessment mercury levels in Blue Sharks from the southeastern Brazilian coast. July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

46. Mão de Ferro, A., Mota, A., Canário, J., 2013. Sources, transport and speciation of Hg in environmental compartments of Deception Island (Antarctica). July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

47. Emili, A., Petranich, E., Acquavita, A., Covelli, S., Canário, J., 2013. Evaluating mercury contamination in the context of sustainable sediment management of a costal lagoon: evidence from the Marano and Grado Lagoon saltmarshes. July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

48. Branco, V., Santos, A.G., Rodrigues, J., Canário, J., Gonçalves, J., Lu, J., Holmgren, A., Carvalho, C., 2013. Effecf of co-exposure to mercury compounds and selenium on the activity and expression of the Thioredoxin system, in HepG2 cells. July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

49. Canário, J., Caetano, M., Poissant, L., Vale, C., O'Driscoll, N., 2012. Tidal induce transport of mercury in salt-marsh sediments. November 11-15, *SETAC North America 33rd Annual Meeting*, Long Beach, CA, USA.

50. Canário, J., Vale, C., 2012. Mercury in wetlands – A contribution to the definition of a global mercury policy. November 11-15, *SETAC North America 33rd Annual Meeting*, Long Beach, CA, USA.

51. Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2012. Mercury reactivity during AMDE's in Canadian Sub-Arctic region (Kuujjuarapik, Qc). *4th Portuguese Meeting of Polar Sciences*, October 19, Instituto Superior Técnico, Lisboa, Portugal.

52. Mão de Ferro, A., Canário, J., Mota, A., 2012. Sources, transport and speciation of trace metals in environmental compartments of Deception Island (Antarctica). *4th Portuguese Meeting of Polar Sciences*, October 19, Instituto Superior Técnico, Lisboa, Portugal.

53. Nogueira, M., Poissant, l., Canário, J., Pilote, M., 2012. Chemical properties of snow in the Arctic Nunavik region (Canada). *4th Portuguese Meeting of Polar Sciences*, October 19, Instituto Superior Técnico, Lisboa, Portugal.

54. Ferreira, P., Mil Homens, M., Mão de Ferro, A., Calvo, R., Canário, J., Mota, A., 2012. Preliminary major element data for the volcanic rocks collected in the scope of the CONTANTARC Project for Deception Island, Antarctica. *4th Portuguese Meeting of Polar Sciences*, October 19, Instituto Superior Técnico, Lisboa, Portugal

55. Canário, J., Caetano, M., Poissant, L., Vale, C., O'Driscoll, N., 2011. The effect of tidal flushing on mercury fate and biogeochemistry in intertidal sediments. *SETAC North America 32nd Annual Meeting*, November 13-17, Boston, MA, USA.

56. Sizmur, T., Edmonds, S., Godfrey, A., Canário, J., Redden, A., Mallory, M., Gibson, G., O'Driscoll, N., 2011. Mercury demethylation in intertidal mudflats by the polychaete worm *Nereis diversicolor*. *SETAC North America 32nd Annual Meeting*, 13-17, Boston, Boston, USA.

57. Cesário, R., Canário, J., Mota, A., Caetano, M., Monteiro, C., O'Driscoll, N., Nogueira, M., Vale, C., 2011. Seasonal variation of Hg, mercury methylation and their fluxes in the sediment/water interface in the Tagus Estuary (Portugal). *EuroLag 2011 - European Coastal Lagoons Symposium*, July 25-30, Aveiro, Portugal.

58. Canário, J., Cesário, R., O'Driscoll, N., Caetano, M., Vale, C., Monteiro, C., Nogueira, M., 2011. Effect of tidal flooding on export of methylmercury and mercury from salt marsh sediments (Tagus Estuary, Portugal). *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

59. Branco, V., Canário, J., Holmgren, A., Carvalho, C., 2011. *In vivo* interaction between mercury compounds and selenium: effects on thioredoxin reductase and glutathione peroxidase. *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

60. Mil-Homens, M., Blum, J.D., Canário, J., Caetano, M., Costa, A., Lebreiro, S., Branco, V., Johnson, M.W., Trancoso, M.A., Stigter, H., 2011. Temporal variations in the stable isotopic composition of Hg in sediments of the Central Portuguese Margin. *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

61. Canário. J., Poissant, L., Nogueira, M., Martin, P., 2011. Transport mechanism of contaminants in the Arctic: Effect and consequences of the seasonal ice melt. *3rd Portuguese Meeting of Polar Sciences*, April, 13, University of Coimbra, Coimbra, Portugal.

62. Nogueira, M., Poissant, L., Canário. J., Martin, P., 2011. Carbon and nutrients temporal variation in aquatic systems of the Canadian Arctic. *3rd Portuguese Meeting of Polar Sciences*, April, 13, University of Coimbra, Coimbra, Portugal.

63. Canário, J., Vale, C., Branco, V., 2010. Profound changes on mercury partitioning and speciation during heavy rainy season. *47th Estuarine Coastal and Sciences Association Meeting*, September 14-19, Figueira da Foz, Portugal.

64. Guerra, M., Gaudêncio, M., Vale, C., Canário, J., Ferreira, A.M., Micaelo, C., 2010. *47th Estuarine Coastal and Sciences Association Meeting*, September 14-19, Figueira da Foz, Portugal.

65. Canário, J., Vale, C., Micaelo, C., Nogueira, M., Cesário, R., 2010. Impact of dredging operations in marine environment: Case study. 1st. *Symposium of hydrographical Engineering*. Hydrographical Institute, June 21-22, Lisbon, Portugal.

66. Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2010. Trace element partitioning in arctic ecosystems: potential for springtime efflux. *International Polar Year Oslo Science Conference*, June 8-12, Oslo, Norway.

67. Nogueira, M., Poissant, L., Pilote, M., Canário, J., 2010. Carbon biogeochemistry in thermokarst pounds during winter season. *International Polar Year Oslo Science Conference*, June 8-12, Oslo, Norway.

*68.* Canário, J., Vale, C., Poissant, L., Nogueira, M., 2010. Mercury fate and Biogeochemistry in Portuguese Salt-Marshes. *SETAC Europe 20th Annual Meeting*, May 23-27, Seville, Spain.

*69.* Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2010. Thermokarst lakes as potential sources of contaminants to the Arctic aquatic systems. *Second Portuguese Meeting of Polar Sciences*, April 26, Portuguese Geographic Society, Lisbon, Portugal.

*70.* Nogueira, M., Poissant, L., Canário, J., Pilote, M., 2010. Organic carbon and nutrients dynamics in Canadian Arctic aquatic systems. *Second Portuguese Meeting of Polar Sciences*, April 26, Portuguese Geographic Society, Lisbon, Portugal.

*71.* Canário, J., Vale, C., Poissant, L., 2010. Mercury in Coastal Ecosystems: The case of Tagus Estuary, Portugal. *XV Iberian Seminar of Marine Chemistry*, February 22-24, University of Vigo, Vigo, Spain.

*72.* O'Driscoll, N.J., Canário, J., Dalziel, J., Tordon, R., Risk, D.. Kellman, L., 2009. Mercury fate and biogeochemistry in coastal wetlands on the minas Basin, Bay of Fundy. *SETAC North America 30th Annual Meeting*, 1November 9-23, New Orleans, Louisiana, USA.

*73.* Canário, J., Poissant, L., Vale, C., Nogueira, M., Pilote, M., Branco, V., 2009. Tidal effect on dissolved gaseous mercury formation and mercury volatilization. *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*74.* Canário, J., Poissant, M., Nogueira, M., Pilote, M., Branco, V., Vale, C., 2009. Mercury in Sediments and Vegetation of an Uncontaminated Salt-Marsh (Tagus Estuary, Portugal). *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*75.* Canário, J., Poissant, L., O'Driscoll, N., Vale, C., Pilote, M., Lean, D., 2009. Sediment processes and mercury transport in a frozen freshwater fluvial lake. *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*76.* Branco, V., Carvalho, C., Canário, J., 2009. Changes in Anti-Oxidant enzyme levels in liver, kidney and brain of zebra-seabreams (*Diplodus cervinus*) exposed to waterborne Methylmercury. *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*77.* O'Driscoll, N., Canário, J., Datziel, J., Tordon, R., Risk, D., Kellman, L., 2009. Mercury fate and biogeochemistry in coastal wetlands on the Minas Basin, Bay of Fundy. *8th Bay of Fundy Science Workshop*, May 26-29, Acadia University, Wolfville, NS, Canada.

*78.* Poissant, L., Constant, P., Pilote, M., Canário, J., Nogueira, M., Carpenter, L., 2008. Ozone and mercury depletion events at Kuujjuarapik (Qc. Canada) in connection with COBRA and CICAT IPY Projects in 2008. *Arctic Change 2008,* December 9-12, Québec City, Canada.

*79.* O'Driscoll, N., Canário, J. 2008. Mercury in Coastal Wetlands of the Minas Basin, Nova Scotia. *SETAC North America 29th Annual Meeting*, November 16-20, Tampa, FL, U.S.A.

*80.* Vale, C., Canário, J., Ferreira, A., Caetano. M. 2008. Possible effects of climatic changes on volatile pollutants cycle. SeaSink 2008 Congress, June 26-28, Porto, Portugal.

*81.* Canário, J., Poissant, L., O'Driscoll, N., Pilote, M., Vale, C., 2008. Mercury availability in ecosystems: How it is impacted by climate change. 43rd Estuarine & Coastal Sciences Association International Symposium, February 7-9, Lisbon, Portugal.

*82.* O'Driscoll, N., Poissant, L., Canário, J., Lean, D., 2007. Dissolved gaseous mercury concentrations and mercury volatilization in a frozen freshwater fluvial lake. *SETAC North America 28th Annual Meeting*, November 11-15, Milwaukee, U.S.A.

83. Canário, J., Caetano, M., Vale, C., 2007. Development, validation and application of an analytical methodology for methylmercury determination in salt-marsh plants. *6th National Analytical Chemistry Meeting*, March 29-30, I.S.T., Technical University of Lisbon, Lisbon, Portugal.

84. Canário, J., Cossa, D., Vale, C., Averty, B., Nogueira, M., 2006. Effect of solar radiation in mercury biogeochemistry in inter-tidal sediments. *SETAC North America 27th Annual Meeting*, November 5-9, Montréal, Canada.

85. O'Driscoll, N., Poissant, L., Canário, J., Ridal, J., Lean, D., 2006. Continuous analysis of dissolved gaseous mercury and mercury volatilization in the St. Lawrence River. *SETAC North America 27th Annual Meeting*, November 5-9, Montréal, Canada.

86. Canário, J., Poissant, L., O'Driscoll, N., Ridal, J., Delongchamp, T., Pilote, M., Constant, P., Blais, J., Lean, D., 2006. Importance of the sulphur chemistry in the mercury biogeochemistry of surface of the upper St. Lawrence River Cornwall – Ontario - Canada. *SMART Meeting*, October 18, University of Ottawa, Ottawa, Canada.

87. Canário, J., 2006. Development of analytical methodologies for monomethylmercury determination in environmental samples. *XIII Iberian Seminar of Marine Chemistry*, September 27-29, National Institute for Agronomy and Fisheries Research, Lisbon, Portugal.

88. Canário, J., Prego, R., Vale, C., Branco, V., 2006. Monomethylmercury and mercury distribution in surface sediments of Ria Vigo (Northwester of Iberian Peninsula). *8th International Conference on Mercury as a Global Pollutan*t, August 6-11, Madison, Wisconsin, USA.

89. Poissant, L., O' Driscoll, N., Canário, J., Ridal, J., Delongchamp, T., Pilote, M., Constant, P., Blais, J., Lean, D., 2005. An integrated study of mercury dynamics in sediment-water-air interfaces in the upper St. Lawrence River. *SETAC North America 26th Annual Meeting*, November 13-17, Baltimore, Maryland, USA.

90. Pinho, J., Canário, J., Cesário, R., Vale, C., 2005. Simple method for selenium determination in sediments by acid digestion and ICP-MS detection. *5th National Analytical Chemistry Meeting*, October 27-28, Hotel D. Luis, Coimbra, Portugal.

91. Alves, A., Canário, J., Pereira, P., Fonseca, I., 2005. Upgrade of the analytical method for determination of dissolved mercury species in natural waters by BrCl oxidation and detection with CV-AFS. *5th National Analytical Chemistry Meeting*, October 27-28, Hotel D. Luis, Coimbra, Portugal.

92. Canário, J., Vale, C., 2004. Monomethylmercury high resolution profiles in contaminated sediments. *XII Iberian Seminar of Marine Chemistry*, October 26-28, University of Coruña, La Coruña, Spain.

93. Canário, J., Vale, C, 2004. Effect of sunlight on mercury mobility in inter-tidal sediments. *7th International Conference on Mercury as a Global Pollutant*, June 27 to July 2, Ljubljana, Slovenia.

94. Canário, J., Vale, C., 2003. Simple method for organic mercury determinations in aquatic organisms. *4th National Analytical Chemistry Meeting*, November 18-19, Escola Superior de Biotecnologia da Catholic University of Oporto, Oporto, Portugal.

95. Caetano, M., Fonseca, N., Raimundo, J., Canário, J., Vale, C., 2002. Particulate trace metal distributions in the Guadiana River Estuary. *XI Iberian Seminar of Marine Chemistry*, April 2-4, University of Algarve, Faro, Portugal.

96. Canário, J., Vale, C., Caetano, M., 2002. Early diagenesis of mercury in sulphate enriched sediments of the Tagus Estuary. *XI Iberian Seminar of Marine Chemistry*, April 2-4, University of Algarve, Faro, Portugal.

97. Canário, J., Vale, C., Caetano, M., Madureira, M-J, 2001. Mercury in contaminated sediments and pore waters enriched in sulphate (Tagus Estuary, Portugal). *6th International Conference on Mercury as a Global Pollutant*. October 15-19, Minamata, Japan.

98. Caetano, M., Vale, C., Canário, J., Cabeçadas, G., 2001. Mediterranean water in Southern Portugal: Changes on dissolved and particulate trace-element concentrations. *Oceans III Millennium, 1st International Congress of Marine Science and Technology*. April 24-27 2001, Pontevedra, Spain.

99. Canário, J., Vale, C., Caetano, M., 2000. Mercury in contaminated sediments and pore waters in the Tagus Estuary. *X Iberian Seminar of Marine Chemistry*, June 1-3, Cadiz – Spain.

100. Reis, M.F., Machado, A.C., Abdulla, M., Canário, J., Silva, J.C., 1993. Validation of the cumulative or replicate NAA method for the determination of trace elements in biological samples In Nuclear and Analytical Methods in Life Sciences. *International Conference on Nuclear Analytical Methods in Life Sciences*, Prague, Czech Republic.

### 2.2.5. Poster Communications in Congresses

1. Marques, A., Pereira, J.L., Pereira, P., Frankenbach, S. Gonçalves, F.J.M., Serôdio, J., Menezes, R., Cesário, R., Canário, J., Pacheco, M. , 2022. Long-term Effects of Inorganic Mercury and Methylmercury in Naïve and Historically Exposed Saltmarsh Plants. *SETAC Europe 32nd Annual Meeting*, May 15-19, Copenhagen, Denmark. *(Submitted).*

2. Marques, A., Pereira, P., Pereira, J.L., Frankenbach, S. Gonçalves, F.J.M., Serôdio, J., Menezes, R., Cesário, R., Canário, J., Pacheco, M., 2022. Disclosing short time scale toxicokinetics and toxicodynamics of inorganic mercury in the saltmarsh plant *Halimione portulacoides. SETAC Europe 32nd Annual Meeting*, May 15-19, Copenhagen, Denmark. *(Submitted).*

3. Menezes, R., Cesário, R., Ribeiro, B.C., Pereira, J., Pacheco, M., Zilhão, H., Monteiro, C., Canário, J., 2022. Export of mercury from saltmarsh vegetated sediments during flooding period. *SETAC Europe 32nd Annual Meeting*, May 15-19, Copenhagen, Denmark. *(Submitted).*

4. Freitas, P., Vieira, G., Mora, C., Canário, J., Folhas, D., Vincent, W., 2021. Evaluation of the impacts of vegetation shadows and scattering on remotely sensed detected optical properties of small thermokarst lakes. *ArcticNet Annual Scientific Meeting*, December 6-10, Canada *(Online Conference*)

5. Coelho, L.F., Couceiro, J.F., Keller-Costa, T., Valente, S., Ramalho, T., Carneiro, J., Comte, J., Vincent, W., Martins, Z., Canário, J., Costa, R., 2021. Structural Shifts Revealed for Water and Ice Microbiomes Across a Salinity Gradient in the Subarctic. *World Microbe Forum*. June 20-24, Online Event.

6. Vieira, G., Whalen, D., Pina, P., Mora, C., Freitas, P., Pinheiro, D., Canário, J., 2020. UAV Mapping and Monitoring Exposure of Beaufort Sea Coastal Communities to Flooding and Coastal Erosion. *2020 European Polar Science Week*. Online Event organized by the European Commission and the European Space Agency.

7. Vieira, G., Pina, P., Whalen, D., Canário, J., Freitas, P., Pinheiro, D., Irrgang, A., Bartsch, A., Lantuit, H., 2020. Monitoring Recent Changes in the Beaufort Sea Coast Using Very High-Resolution Remote Sensing. *2020 European Polar Science Week*. Online Event organized by the European Commission and the European Space Agency.

8. Klapstein, S. J., Hill, N.M., Canário, J., O'Driscoll, N.J., 2020. Assessing the mobilization potential of mercury during bog restauration: a review. *SETAC Europe 30th Annual Meeting*, 3-7 May, Dublin, Ireland.

9. Klapstein, S. J., Hill, N.M., Canário, J., O'Driscoll, N.J., 2019. Assessing the mobilization potential of mercury during bog restauration. *SETAC North America 40th Annual Meeting*, 3-7 November, Toronto, Canada.

10. Canário, J., Santos, M.C., Pilote, M., Vieira, G., Vincent, W.F., 2018. Sulphur Dynamics in permafrost thaw lakes. *Polar 2018*, June 15-26, Davos, Switzerland.

11. Pilote, M., Canário, J., Turcotte, P., Cagnon, C., 2018. Impact of thawing permafrost on the Hg Cycling in Thermokarst Ponds. *Polar 2018*, June 15-26, Davos, Switzerland.

12. Santos, J.P., Ribeiro, H., Sousa, A., Padeiro, A., Canário, J., Magalhães, C., 2018. Anthropogenic impact on soil prokaryotic communities of Fildes Peninsula. Sulphur Dynamics in permafrost thaw lakes. *Polar 2018*, June 15-26, Davos, Switzerland.

13. Klapstein, S., Carvalho, I., Cameron, R., Walker, A., Murimboh, J., Saunders, C., Canário, J., Keenan, R., O'Driscoll, N., 2018. Spatial distribution of mercury and trace metals adsorbed to epiphytic lichens in Nova Scotia. *SETAC Europe 28th Annual Meeting*, 13-17 May, Rome, Italy.

14. Lavin, P., Canário, J., 2017. Effect of trace-element contamination over bacterial populations from Fildes Peninsula (King George Island), Antarctica. *SCAR Biology Symposium,* July 10-14, Leuven, Belgium

15. Canário, J., Santos-Echeandia, J., Padeiro, A., Amaro, E., Strass, V., Klaas, C., Ossebaar, S., Koch, B., Laglera, L.M., 2016. Mercury and methylmercury in the Atlantic sector of the Southern Ocean: Results from Eddy Pump - ANTXXVIII/3 cruise. *2016 SCAR Open Science Conference*, August 22-26, Kuala Lumpur, Malaysia

*16.* Canário, J., Padeiro, A., Castanheira, L., Santos, M.C., Araújo, M.F., Duarte, T., Oliveira, M.C., Ascenso, J., Nunes, T.G., Gomes, S.S., Ferreira, M.J., Vieira, G., Vincent, W.F., 2016. Trace element cycles in permafrost thaw lakes. *XI International Conference on Permafrost (ICOP2016)*, June 20-24, Potsdam, Germany

*17.* Vieira, G., Girst, S., Paulo, V., Canário, J., Padeiro, A., Vincent, W., 2016. UAV surveying of thaw lake areas for the characterization of geomorphology, vegetation and water colour (Whapmagoostui-Kuujjuarapik and Umiujaq, Quebec, Canada). *XI International Conference on Permafrost (ICOP2016)*, June 20-24, Potsdam, Germany

*18.* Cesário, R., Nogueira, M., Monteiro, C.E., Mota, A.M., Canário, J., 2015. Methylmercury transport across the north channel of the Tagus Estuary (Portugal). *SETAC North America 36th Annual Meeting*, November 1-5, Salt-Lake City, USA

*19.* Cesário, R., Mendes, R., Mota, A.M., Canário, J., 2015. The role of sulphur biogeochemistry in methylmercury formation in salt-marshes (Portugal). *SETAC North America 36th Annual Meeting*, November 1-5, Salt-Lake City, USA

20. Santos, J., Magalhães, C., Ribeiro, H., Padeiro, A., Canário, J., 2015. Shifts on bacterial community structure in Antarctica Fildes Peninsula soils with different levels of metal concentrations. *VI International Conference on Environmental, Industrial and Applied Microbiology*, October 28-30, Barcelona, Spain

*21.* Padeiro, A., Amaro, E., Santos, M.C., Araújo, M.F., Cabrita, M.T., Gomes, S., Leppe, M., Hughes, K., Ulrich, H-P., Canário, J., 2015. Trace element distribution in soils from Fildes Peninsula (King George Island, Antarctic). *XXIV National Meeting of the Portuguese Chemical Society*, July 1-3, Coimbra, Portugal

*22.* Raimundo, J., Pacheco, M., Araújo, O., Canário, J., Caetano, M., Pereira, P., 2015. New findings towards the understanding of mercury (Hg) toxicokinetics in fish following exposures to organic and inorganic forms and depuration. *12$^{th}$ International Conference on Mercury as a Global Pollutant*, June 14-19, Jeju, South Korea

*23.* Duarte, B., Cabrita, T., Mendes, R., Hintelmann, H., Caçador, M.I., Canário, J., 2014. Biophysical probing of halophyte Photosystem II changes induced by Hg and MeHg exposure. November 9-13, *SETAC North America 35$^{th}$ Annual Meeting*, Vancouver, Canada

*24.* O'Driscoll, N.J., Justino, S., McArthur, G., Canário, J., Risk., D., Tordon, R., 2014. Mercury Volatilization from Coastal Wetland Sites in Canada and Portugal. *SETAC North America 35$^{th}$ Annual Meeting*, November 9-13, Vancouver, Canada

25. Pereira, J.L., Pereira, P., Padeiro, A., Gonçalves, F., Leppe, M., Amaro, E., Canário, J., 2014. Toxicity potential of Antarctica soils related with trace elements. *6$^{th}$ Portuguese Meeting of Polar Sciences*, October 31, University of Porto, Porto, Portugal

26. Amaro E., Padeiro, A., Mota, A.M., Santos, M.C., Leppe, M., Canário, J., 2014. Dissolved trace elements in Fildes Peninsula, King George Island, Antarctica. *6$^{th}$ Portuguese Meeting of Polar Sciences*, October 31, University of Porto, Porto, Portugal

27. David, A., Vieira, G., Xavier, J., Canário, A., Canário, J., 2014. Supporting Polar research: the contribution of the Portuguese Polar Program (PROPOLAR). *6$^{th}$ Portuguese Meeting of Polar Sciences*, October 31, University of Porto, Porto, Portugal

28. Lourenço, S., Seco, J., Azinhaga, P., Guerreiro, P.M., Magalhães, C., Canário, J., Catry, P., Canário, A., Xavier, J.C., 2014. How can you take Polar Marine Science to the world? *1$^{st}$ International Marine Science Communication Conference*, September 9-10, Porto, Portugal

*29.* Monteiro, C., Cesário, R., Nogueira, M., Canário, J., O'Driscoll, N., Válega, M., 2014. Methylmercury seasonal and spatial variations in sediment from the Tagus Estuary (Portugal). May 12-16, *ECSA54*, Sesimbra, Portugal

*30.* Cesário, R., Nogueira, M., Monteiro, C., Canário, J., Mota, A., 2014. Mercury hotspots in the Tagus estuary: Spatial distribution in intertidal sediments. May 12-16, *ECSA54*, Sesimbra, Portugal

*31.* Monteiro, C., Nogueira, M., Cesário, R., Canário, J., 2014. Factor analyses on sediment mercury from Tagus Estuary (Portugal). May 12-16, *ECSA54*, Sesimbra, Portugal

32. O'Driscoll, N., McArthur, G., Justino, S., Canário, J., Risk, D., Tordon, R., 2014. Factors affecting mercury volatilization from coastal wetlands. May 11-15, *SETAC Europe 24th Annual Meeting*, Basel, Switzerland

33. Pereira, P., Raimundo J., Leite, E., Guilherme, S., Santos, M.A., Canário, J., Almeida, A., Pacheco, M., 2014. The fish eyes as new target organ for trace elements accumulation - a new insight on environmental risk assessment. May 11-15, *SETAC Europe 24th Annual Meeting*, Basel, Switzerland

34. Raimundo, J., Pereira, P., Vale, C., Canário, J., Gaspar, M., 2014. Relations between total mercury, methyl-mercury and selenium in five tissues of Sepia officinalis captured in the South Portuguese Coast. May 11-15, *SETAC Europe 24th Annual Meeting*, Basel, Switzerland

35. Mão de Ferro, A., Mota, A., Canário, J., 2013. Sources and transport of As, Cu, Cd and Pb in the environmental compartments of Deception Island, Antarctica. *5th Portuguese Meeting of Polar Sciences*, November 1, University of Algarve, Faro, Portugal.

36. Ferreira, P., Santos, R., Mão de Ferro, Canário, J., Ana Mota, 2013. Trace element characterization of Deception Island Tephras: Implication for the origin of magmas associated to recent volcanism. *5th Portuguese Meeting of Polar Sciences*, November 1, University of Algarve, Faro, Portugal.

37. Figueiredo, N., Areias, A., Canário, J., Duarte, A., Carvalho, C., 2013. Isolation and Characterization of Mercury-resistant Bacteria from Salt Marsh of Tagus Estuary. *2nd International Conference on Occupational and Environmental Toxicology (ICOETox)*, 17-16 September, Porto, Portugal.

38. Figueiredo, N., Canário, J., Duarte, A., Carvalho., 2013. Mercury-Resistant Bacteria from Tagus Estuary Characterization and Mercury Reduction Potential. *49th Congress of the European Societies of Toxicology (Eurotox)*, 1-4 September, Interlaken, Switzerland.

39. Canário, J., Mendes, R., Caetano, M., 2013. Seasonal variation of methylmercury in salt marshes: The role of sulfur chemistry. July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

40. Figueiredo, N., Duarte, A., Canário, J., Carvalho, C., 2013. Mercury-resistant citrobacter Freundil Strain 1.1Sva isolated from Tagus Estuary. Characterization and mercury detoxification potential. July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

41. Cesário, R., Canário, J., Nogueira, M., Mota, A., Monteiro, C., 2013. Mercury distribution associated with organic carbon in surface layer of intertidal sediments in Tagus Estuary (Portugal). July 28 - August 2, *11th International Conference on Mercury as a Global Pollutant*, Edinburgh, UK.

42. Pereira, P., Raimundo, J., Leite, E., Guilherme, S., Santos, M.A., Canário, J. Armando, A., Pacheco, M., 2012. Metals accumulation and oxidative stress in fish neurosensory structures reflecting environmental contamination: application to risk assessment in the Tagus estuary (Portugal). May 5 -8, *Pollutant Responses in Marine Organisms*, Faro, Portugal.

43. Canário, J., Mão de Ferro, A., Mota, A., 2012. Mercury in Mecon River and Foster Bay (Deception Island, Antarctica). November 11-15, *SETAC North America 33rd Annual Meeting*, Long Beach, CA, USA.

44. Cesário, R., Canário, J., Mota, A., Caetano, M., Monteiro, C., Nogueira, M., Vale, C., 2012. Seasonal variation of mercury diffusive fluxes in the sediment/water interface in the Tagus Estuary (Portugal). November 11-15, *SETAC North America 33rd Annual Meeting*, Long Beach, CA, USA.

45. Figueiredo, N., Canário, J., Duarte, A., Carvalho., C., 2012. Mercury and antibiotic resistance in bactéria isolated from Tagus Estuary. November 2-4. *Congresso Nacional dos Farmacèuticos*, Lisbon, Portugal.

46. Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2012. Thermokarst lakes as potential sources of contaminants to the surrounding Low-Arctic Aquatic Ecosystems. *IPY Conference 2012*, April 22-27, Montréal, Canada.

47. Nogueira, M., Poissant, L., Canário, J., Pilote, M., 2012. Carbon and nutrients in Arctic aquatic ecosystems during winter. *IPY Conference 2012*, April 22-27, Montréal, Canada.

48. Nogueira, M., Poissant, L., Canário, J., Pilote, M., 2012. Temporal variation of carbon and nutrients in Arctic aquatic ecosystems. *IPY Conference 2012*, April 22-27, Montréal, Canada.

49. Cesário, R., Caetano, M., Canário, J., Monteiro, C., Nogueira, M., Vale, C., 2011. Seasonal variation of methylmercury sediment/water fluxes in a meso-tidal estuary (Tagus-SW Europe). *SETAC North America 32nd Annual Meeting*, November 13-17, Boston, USA.

*50.* Nogueira, M., Cesário, R., Canário, J., 2011. Carbon and nutrients dynamics in intertidal sediments of Tagus estuary (Portugal). *EuroLag 2011 - European Coastal Lagoons Symposium*, July 25-30, Aveiro, Portugal.

*51.* Canário, J., Poissant, L., Vale, C., Pilote, M., 2011. Mercury concentrations and vegetation-atmosphere fluxes in salt-marsh plants (Tagus Estuary, Portugal). *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

*52.* Monteiro, C., Cesário, R., Canário, J., Caetano, M., Hintelmann, H., Nogueira, M., Válega, M., Vale, C., 2011. Methylmercury in sediment cores from the Tagus Estuary (Portugal): partition, methylation and fluxes. *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

*53.* Canário, J., Branco, V., Vale, C., 2011. Changes in mercury partitioning and speciation in three adjacent coastal systems due to a heavy rain season (Portugal). *10th International Conference on Mercury as a Global Pollutant*, July 24-29, Halifax, Canada.

54. Campos, I., Abrantes, N., Pereira, P., Raimundo, J., Canário, J., Vieira, D., Vale, C., Ferreira, A., Keizer, J., 2011. Metals in ashes and burnt forest soils in north-central Portugal. *EGU (European Geosciences Union), General Assembly 2011*, April 3-8, Vienna, Austria.

*55.* Canário. J. Vale, C., Caetano, M., Lavrado, J., Brito, P., 2010. Estimation of anthropogenic quantities of elements in surface sediments of the Tagus estuary (Portugal). *SETAC Europe 20th Annual Meeting*, May 23-27, Seville, Spain.

*56.* Sarkar, S., Canário, J., 2010. Biogeochemistry of mercury and methylmercury in sediment cores from intertidal mudflats of Suderban mangrove wetland, India – a UNESCO world heritage site. *SETAC Europe 20th Annual Meeting*, May 23-27, Seville, Spain.

*57.* Caetano, M., Canário, J., Prego, R., Garcia-Blanco, A., Branco, V., Vale, C., 2010. Spatial and temporal changes of mercury and methylmercury in the Pontevedra Ria, Spain. *SETAC Europe 20th Annual Meeting*, May 23-27, Seville, Spain.

*58.* Nogueira, M., Canário, J., Poissant, L., Pilote, M., Branco, V., 2010. Organic carbon dynamics during tidal flooding of interatidal sediments. *XV Iberian Seminanar of Marine Chemistry*, February 22-24, University of Vigo, Vigo, Spain.

*59.* O'Driscoll, N.J., Poissant, L., Canário, J., Lean, D., 2009. Where does mercury come from in ice covered lakes? *SETAC North America 30th Annual Meeting*, November 19-23, New Orleans, Louisiana, USA.

*60.* Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2009. Mercury distribution along Great Whale River and Hudson Bay. *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*61.* Canário, J., Prego, R., Branco, V., Vale, C., 2009. Methylmercury and mercury distribution in Pontevedra Ria (Northwester of Iberian Peninsula). *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*62.* Mil-Homens, M., Canário, J., Costa, A., Lebreiro, S., Branco, V., Trancoso, A., Zenaida, M., de Stigter, H., Richter, T., 2009. Mercury contamination in sediment cores off the Portuguese Margin. *9th International Conference on Mercury as a Global Pollutant*, June 9-12, Guiyang, China.

*63.* Canário, J., Poissant, L., Nogueira, M., Pilote, M., 2008. Particulate trace element and carbon distribution along Great Whale River and Hudson Bay. *Arctic Change 2008,* December 9-12, Québec City, Canada.

*64.* Nogueira, M., Poissant, L., Canário, J., Pilote, M., 2008. Organic matter characterization of a thermokarst pond in winter season. *Arctic Change 2008,* December 9-12, Québec City, Canada.

*65.* Canário, J., Poissant, L., Pilote, M., Nogueira, M., Constant, P., Noirbusson, A., 2008. Seasonal Variation of Methylmercury Concentrations in sediment cores in a Freshwater Lake (Lake St. Louis, Québec, Canada). 14th Conference of Heavy Metals in the Environment, November 16-23, Taipei. Taiwan.

*66.* Canário, J., Poissant, L., Pilote, M., Nogueira, M., Branco, V., 2008. Mercury Speciation in Sediments and Vegetation of an Uncontaminated Salt-Marsh (Tagus Estuary,

Portugal). 14th Conference of Heavy Metals in the Environment, November 16-23, Taipei. Taiwan.

*67.* Canário, J., Poissant, L., Nogueira, M., Pilote, M., Branco, V., Vale, C., 2008. Mercury as an indicator of biogeochemical exchanges between ecosystems. 1st Metech Workshop: "From deep-sea to coastal zones: Methods and Techniques for studying paleoenvironments", 25- February 29, Faro, Portugal.

*68.* Canário, J., Poissant, L., O'Driscoll, N., Ridal, J., Pilote, M., Constant, P., Blais, J., Lean, D., 2007. Mercury partitioning in surface sediments of the upper St. Lawrence River (Canada): Evidence of the importance of the organic sulphur chemistry. *SETAC Europe 17th Annual Meeting*, May 20-24, Porto, Portugal.

69. Canário, J., Poissant, L., Vale., C., Branco, V., Pilote, M., Caetano, M., 2007. Heavy metal contamination in St. Louis Lake (Québec, Canada). *SETAC Europe 17th Annual Meeting*, May 20-24, Porto, Portugal.

70. Canário, J., Branco, V., Vale, C., 2006. Seasonal variation of monomethylmercury concentrations in surface sediments of the Tagus Estuary (Portugal). *SETAC North America 27th Annual Meeting*, November 5-9, Montréal, Canada.

71. Canário, J., Poissant, L., O'Driscoll, N., Ridal, J., Delongchamp, T., Pilote, M., Constant, P., Blais, J., Lean, D., 2006. Mercury dynamics in surface sediments of the upper St. Lawrence River (Canada). *8th International Conference on Mercury as a Global Pollutant*, August 6-11, Madison, Wisconsin, USA.

72. Canário, J., Vale, C., Caetano, M., Cesário, R., 2006. Evidence of high monomethylmercury production in salt marshes. *8th International Conference on Mercury as a Global Pollutant*, August 6-11, Madison, Wisconsin, USA.

73. Branco, V., Canário, J., Vale, C., Santos, M.N., 2006. Mercury and selenium in muscle and liver of blue shark (*Prionace glauca*) and swordfish (*Xiphias gladius*) from the Atlantic. *8th International Conference on Mercury as a Global Pollutant*, August 6-11, Madison, Wisconsin, USA.

74. Canário, J., Cossa, D., Vale, C., Averty, B., Nogueira, M., 2006. Total mercury and monomethylmercury in UV exposed inter-tidal sediments. *8th International Conference on Mercury as a Global Pollutant*, August 6-11, Madison, Wisconsin, USA.

75. Canário, J., Caetano, M., Vale, C., Cesário, R., 2006. Evidence of high monomethylmercury production in salt marsh sediments. *8th International Conference on Mercury as a Global Pollutant*, August 6-11, Madison, Wisconsin, USA.

76. Canário, J., Caetano, M., Vale, C., 2006. Simple methodology for monomethylmercury determination in aquatic plant tissues. *34th International Symposium on Environmental Analytical Chemistry*, June 4-8, Hamburg, Germany.

77. Hampel, M., Canário, J., Vale, C., Blasco, J., 2005. Environmental levels of linear alkylbenzene sulphonates (LAS) in sediments from the Tagus Estuary, Portugal. *6th Iberian and 3rd Iberoamerican Congress on Environmental Contamination and Toxicology*, September 25-28, Cadiz, Spain.

78. Canário, J., Antunes, P., Lavrado, J., Vale, C., 2005. A simple method for monomethylmercury determination in estuarine sediments – Application to the Tagus Estuary. *10th Workshop on Analytical Methodologies in Trace Metal Speciation*, April 6-9, Luxemburg.

79. Pinho, J., Canário, J., Cesário, R., Vale, C., 2005. A rapid method for total selenium determination in estuarine sediments. *10th Workshop on Analytical Methodologies in Trace Metal Speciation*, April 6-9, Luxemburg.

80. Canário, J., Vale, C., Nogueira, M., 2004. The pathway of mercury in contaminated waters determined by association with organic carbon. *Fourth SETAC World Congress*, November 14-18, Portland, Oregon, USA.

81. Cecilio, P., Raimundo, Canário, J., Fosenca, I., 2004. Total and organic mercury in dolphin tissues from the Portuguese coast. *XII Iberian Seminar of Marine Chemistry*, October 26-28, University of Coruña, La Coruña, Spain.

82. Santos, C., Canário, J., Gouveia, N., Sena-Carvalho, D., Vale, C., Bebbiano, M.J., 2004. Relationship between mercury and metallothionein-like protein concentrations in the swordfish *Aphanopus carbo. XII Iberian Seminar of Marine Chemistry*, October 26-28, University of Coruña, Coruña, Spain.

83. Canário, J., Caetano, M., Vale, C., Lavrado, J., 2004. Mercury partition in contaminated sediments from the Tagus Estuary. *7th International Conference on Mercury as a Global Pollutant*, June 27 to July 2, Ljubljana, Slovenia.

84. Canário, J., Branco, V., Vale, C., Reis, C., 2004. Total and organic mercury in muscle tissues of the Blue Shark (*Prionace glauca* L.1758) from Northeast Atlantic. *7th*

*International Conference on Mercury as a Global Pollutant*, June 27 to July 2, Ljubljana, Slovenia.

85. Raimundo, J., Canário, J., Micaelo, C., Vale, C., 2003. Cadmium, Pb and Hg in fisheries products. 6$^{th}$ *National Food Products Meeting*, June 22-25, IPIMAR, Lisbon, Portugal.

86. Canário, J., Vale, C., 2003. Escape of mercury from contaminated sediments exposed to sunlight. *SedNet Contaminant Behaviour and Fate 2$^{nd}$ Workshop: Impact, bioavailability and assessment of pollutants in sediments and dredged materials under extreme hydrological conditions*. April 3-5, Berlin, Germany.

87. Vale, C., Caetano, M., Fonseca, N., Canário, J., Raimundo, J., 2002. Particulate metal distribution in a meso-tidal estuary punctuated by runoff episodes (Guadiana River Estuary). *7$^{th}$ International Estuarine Biogeochemistry Symposium.* May 28-30, Grimstad, Germany.

## 2.3. Impact of the Scientific Publications

### 2.3.1. Citations

In **08/02/2022** the number of citations in the Researcher ID website was 2240 with an *h-index* of 25. On SCOPUS database, the number of citations was 2330 with an *h-index* of 26 and in Google Scholar, the number of citations were 3160 with an h-index of 31. It should be noticed that in the three platforms, more 58% of the citations were in the last five years.

Actualized citations can be access through the following links:

Research ID: *http://www.researcherid.com/rid/B-1193-2008*

Scopus: *https://www.scopus.com/authid/detail.uri?authorId=6602689212*

Google Scholar: *https://scholar.google.com/citations?user=NNKFs30AAAAJ&hl=pt-PT&oi=ao*

### 2.3.2. Impact Factor

The following figures illustrate the distribution of my publications by Impact Factor (JCR2020, Published in 2021) and Quartile (*Scimago 2021*)

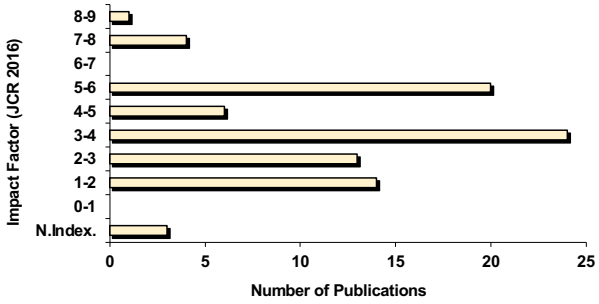


Figure 1 – Number of publications by Impact Factor (JCR 2021)

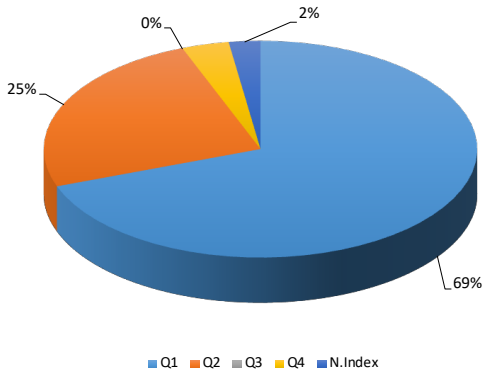


Figure 2 - Number of publications by Quartile (*Scimago* 2021)

## 2.4. Some Relevant Publications

1. Bento, B., Hintelmann, H., Santos, M.C., Cesário, R., Canário, J., 2021. Mercury methylation rates in Deception Island (Maritime Antarctica) waters and pyroclastic gravel impacted by volcanic mercury. *Marine Pollution Bulletin*, 164, Art. 112013.

   *This paper was a result of my former master student and reports for the first time Hg methylation rates in an Antarctic Ecosystem (Deception Island). In this system where active volcanism is present, relative higher levels of methylmercury were detected in water samples and a favorable mechanism for Hg methylation was hypothesized. The results published in the article confirm the above hypothesis and quantifies the rates in terms of the amount of Hg that is transformed in MeHg on a daily basis.*

2. Folhas, D., Duarte, A.C., Pilote, M., Vincent, W.F., Freitas, P., Vieira, G., Silva, A.M.S., Duarte, R.M.B.O., Canário, J., 2020. Structural Characterization of Dissolved Organic Matter in Permafrost Peatland Lakes. *Water*, 12, Art. 3059

   *This paper was published by my former master student and aims to identify the organic composition of natural organic matter in permafrost thaw lake waters and their relation the organic matter lability. The use of complementary structural analytical techniques was applied for the first time in this type of samples and results may be used for organic matter degradation models.*

3. Cesário, R., Hintelmann, H., Mendes, R., Eckey, K., Dimock, B., Araújo, B., Mota A.M., Canário, J., 2017. Evaluation of mercury methylation and methylmercury demethylation rates in vegetated and non-vegetated saltmarsh sediments from two Portuguese estuaries. *Environmental Pollution*, 226, 297-307.

   *This paper published by my former PhD student report for the first-time mercury methylation and methylmercury demethylation rates in salt-marsh sediments. Results confirmed that rhizosphere in these coastal ecosystems create unique biogeochemical conditions for the methylation process and promoted the discussion on the role of saltmarshes as Hg phytoremediation sites.*

4. Canário, J., Poissant, L., Pilote, M., Caetano, M., Hintelmann, H., O'Driscoll, N. J., 2017. Salt-marsh plants as potential sources of $Hg^0$ into the atmosphere. *Atmospheric Environment*, 152, 458-464.

   *This work published in an environmental atmospheric journal reports for the first time that salt-marsh plants are a source of elemental mercury to the atmosphere. In comparison to other plants Hg deposition was never observed in this study raison the important of saltmarshes as sources of Hg and not only sinks as it was initially supposed.*

5. Padeiro, A., Amaro, E., Santos, M.M.C., Araújo, M.F., Gomes, S.S, Leppe, M., Verkulich, S., Hughes, K.A., Peter, H-U., Canário, J., 2016. Trace element contamination and availability in Fildes Peninsula, King George Island, Antarctica. *Environmental Sciences Sources and Impacts*, 18, 648-657.

   *This paper reported for the first time the impact of scientific stations in an Antarctic ecosystem. The work was developed by a master student and was published after minor revisions. The paper had a strong political impact and resulted on a working paper presented by the Portuguese Delegate at the Antarctic Treaty System annual meeting in May 2016 in Santiago, Chile. Both scientific and working papers were acknowledged by*

*researchers and diplomats from Chile, UK, Russia, and Germany. This paper was also the cover of the journal issue.*

6. Vonk, J.E., Tank, S.E., Bowden, W.B., Laurion, I., Vincent, W.F., Alekseychik, P., Amyot, M., Billet, M.F., Canário, J., Cory, R.M., Deshpande, B.N., Helbig, M., Jammet, M., Karlsson, J., Larouche, J., MacMillan, G., Rautio, M., Walter-Anthony, K.M., Wickland, K.P., 2015. Effects of permafrost thaw on arctic aquatic ecosystems. *Biogeosciences,*12, 7129-7167.

   *In February 2014 in Quebec City Canada, several researchers worldwide were invited for a Symposium (THAW 2014) to discuss all scientific aspects of permafrost thaw in the Arctic. One of the main themes was to update of the current knowledge about biogeochemistry of thaw lakes and to publish the first review about this issue. This paper is the result of the discussions of the group I was involved. In the article, I was responsible for the contaminants section.*

7. Mão de Ferro, A., Mota, A., Canário, J., 2014. Pathways and speciation of Hg in the environmental compartments of Deception Island, Antarctica. *Chemosphere*, 95, 227-233.

   *The paper resulted from my first Antarctic campaign with a master student and reported, for the first time, the first integrated Hg study in an Antarctic ecosystem. This work established a direct connection between the Hg volcanic emissions and the optimum environmental conditions for Hg methylation in the island with direct implications on the wildlife.*

*8.* Poissant, J., Zhang, H.H., Canário, J., Constant, P., 2008. Critical review of mercury fate and contamination in the Arctic Tundra ecosystem. *Science of the Total Environment*, 400(1-3), 173-211.

   *This paper was leaded my former Post-Doc supervisor and presented the first complete review of Hg in the Arctic. I was responsible for the sections on Hg in arctic freshwater and marine sediments, and complete revisions. This paper is cited in most Hg studies in the north.*

9. Canário, J., Vale, C., Nogueira, M., 2008. The pathway of mercury in contaminated waters determined by association with organic carbon. *Applied Geochemistry,* 23(3), 519-528.

   *This paper showed that in estuarine systems, Hg transport in the water column is governed by organic carbon transport. It was considered the best paper in the Applied Geochemistry special issue by the guest editor (Dr. Allan Kolker, USGS).*

10. Canário, J., Caetano, M., Vale, C., Cesário, R., 2007. Evidence for elevated production of methylmercury in salt marshes. *Environmental Science and Technology*, 41(21), 7376-7382.

    *This paper showed that vegetated saltmarshes are important sites for Hg methylation. It instigated a critical debate concerning the effectiveness of salt-marsh phytoremediation in Hg-contaminated sites and was the base of a presentation and debate in a SETAC (Society of Environmental Contamination and Toxicology) session Concerning the United Nations Partnership for Mercury (UNEP) in Long Beach, CA, USA in 2012.*

11. Canário, J., Branco, V., Vale, C. 2007. Seasonal variation of monomethylmercury concentrations in surface sediments of the Tagus Estuary (Portugal). *Environmental Pollution*, 148(1), 380-383.

    *This paper showed a substantial increase in toxic monomethylmercury (MMHg) in the Tagus Estuary due to seasonal variation (37% higher in July than December). This was the first time this was reported for an entire aquatic system. The paper also addresses the consequences in terms of impact assessment.*

12. Pinho, J., Canário, J., Cesário, R., Vale, C., 2005. A rapid acid digestion method with ICP-MS detection for the determination of selenium in dry sediments. *Analytica Chimica Acta*, 551(1-2), 207-212.

    *In this work, we developed a simple routine method for determination of selenium in dry sediments based on a digestion with aqua-regia and an HCl acid attack and on ICP-MS technique using the less abundant isotope $^{82}Se$. The improvement of the proposed methodology over the existing methods was the direct used of the ICP-MS without any introduction system and the minimization of some spectral interferences by a simple and adequate digestion procedure.*

13. Canário, J., Vale, C., Caetano, M., 2005. Distribution of monomethylmercury and mercury in surface sediments of the Tagus Estuary (Portugal). *Marine Pollution Bulletin*, 50(10), 1142-1145.

    *This was the first Hg and monomethylmercury (MMHg) survey for the entire Tagus Estuary. The paper addressed the environmental risks of Hg contamination in the Tagus and received a lot of media attention. It is one of my most cited articles. It was recognized the most cited Marine Pollution Bulletin Paper between 2005 and 2009*

14. Canário, J., Vale, C., 2004. Rapid release of mercury from intertidal sediments exposed to solar radiation: a field experiment. *Environmental Science and Technol*ogy, 38(14), 3901-3907.

    *This paper reported for the first time the direct evasion of elemental mercury from intertidal sediments to the atmosphere when they are exposed to solar radiation. Field and laboratory measurements pointed to the importance of the oxidation of reduced sulphur compounds and to the direct Hg photoreduction.*

15. Canário, J., Antunes, P., Lavrado, J., Vale, C., 2004. Simple method for monomethylmercury determination in estuarine sediments. *Trends in Analytical Chemistry*, 23(10-11), 798-805.

    *The analytical quantification of monomethylmercury (MMHg) in environmental matrices is a complicated process due to the low concentrations of this mercury specie, its toxicity and the need of specific sampling preparation and MMHg quantification. In this paper a simple and routine method was described including its validation. This analytical method was published in this high impacted journal.*

16. Canário, J., Vale, C., Caetano, M., Madureira, M.J., 2003. Mercury in contaminated sediments and pore waters enriched in sulphate (Tagus Estuary, Portugal). *Environmental Pollution,* 126(3), 425-433.

    *The diagenetic reactions in sediments are important processes with direct consequences in trace-element (and in particularly mercury) speciation, partitioning and fate. This paper reported for the time the association of Hg with sediment Fe-oxi(hydroxid)es in a sedimentary environment enriched in sulphate. The paper received particular attention in the International Conference on Mercury as a Global Pollutant in Japan in October 2001.*

## 2.5. Research Projects

### 2.5.1. International Projects

***2018 - 2024***

**NFRFE-2018-01102 – Access to safe drinking water in a changing Arctic –** Funded EC – Call New Frontiers in Research Fund – Exploration, Canada. (Funding for PT: 25 kCAD – 16k€) – *Co-Applicant*

**Coordinator:** Dr. Jérome Comte, INRS, Canada.

***2017-2022***

- **NUNATARYUK – BG-11-2017 – Permafrost Thaw and changing Arctic coast, science for socio-economic adaptation –** Funded EC – Call H2020-BG-2016-2017. (Funding for PT: 318k€) – *Participant*

  **Coordinator:** Dr. Hugues Lantuit, AWI, Germany.
- **T-MOSAiC - Terrestrial Multidisciplinary distributed Observatories for the Study of Arctic Connections** – ***Project Co-chair***. – International Arctic Science Committee (IASC) flagship project involving more than 150 researchers from 23 countries, including the 8 Arctic countries. Co-chired by Prof. Warwick Vincent from Laval City (Canada). *http://www.t-mosaic.com*

***2017 - 2021***

**MONITOOL – InterReg Atlantic Area (EAPA_565/2016) – New tools for water quality monitoring –** Funded by European Region Development Fund (EC). (Funding for IST: 130k€) - *Participant*

**Coordinator:** Dr. Blánaid White, Dublin City University, Ireland.

***2012 - 2016***

**ADAPT – Arctic Development and Adaptation to Permafrost in Transition –** Funded by NSERC, Canada. (Funding of 25k€ not transferred to PT) - *Participant*

**Coordinator:** Dr. Vincent Warwick, Centre D'études Nordiques, University Laval, Canada.

***2007 - 2009***

**COBRA – Impact of combined iodine and bromine release on the Artic Atmosphere (IPY Project).** Partners: Environment Canada (Canada), University of York (UK), University of Manchester (UK), University of Cambridge (UK), British Antarctic Survey (UK). (Funding of 15k€ not transferred to PT) - *Participant*

***Coordinator:*** *Professor Lucy Carpenter – University of York, UK*

**2007 - 2009**

**CiCAT – Climate change impact on Canadian Arctic Tundra (IPY Project).** Partners: University of British Columbia (Canada), Natural Resources Canada, Environment Canada, University of

Northen British Columbia (Canada), University of Queens (Canada), Universisty of Saskatchewan (Canada), Université du Québec à Montréal (Canada), University of Alberta (Canada), among others. (Funding of 20k€ not transferred to PT) - *Participant*

***Coordinator:*** *Professor Greg Henry – University of British Columbia, Canada*

***2006 - 2008***

**Heavy metal concentrations in sediment profiles of Sunderban mangrove environment, West Bengal, Northeast India.** Funded by the Indian Science Foundation. Partners: University of Calcutta (India). (Funding of 5k€ not transferred to PT) - *Participant*

***Coordinator:*** *Dr. Santosh Sarkar – University of Calcutta (India).*

***2005 - 2006***

**SMART Project** – **Sources of Mercury Accumulating in River and Tributaries**. Funded by NSERC. Partners: University of Ottawa (Canada), Queens University (Canada), Environment Canada, St. Lawrence River Institute (Canada) and IPIMAR (Portugal). Funding of 4k€ not transferred to PT) - *Participant*

***Coordinator:*** *Dr. David Lean (PhD) – University of Ottawa - Canada.*

### 2.5.2. National Projects Funded by Official Agencies

***2021-2024***

**PERMAMERC - Mercury Biogeochemistry, Fate and Impact in Permafrost Thaw Ecosystems** – ***Project Coordinator***. – (*Project PTDC/CTA-AMB/4744/2020*). Funded by the Portuguese Foundation for Science and Technology. Partners: Centre of Geographical Studies (IGOT/ULisboa), Interdisciplinary Centre of Marine and Environmental Research (UPorto) and University of Trent (Canada) (Funding: 250 k€)

***2021-2022***

**BIOMOON - Spectroscopic detection of bio-signatures in natural ice samples as a proxy of icy moons** (Exploratory Project) – ***Project Coordinator***. – (*Project MIT-EXPL/SOE/0058/2019*). Funded by the Portuguese Foundation for Science and Technology. Partners: Massachusetts Institute of Technology, MIT (U.S.A.) (Funding: 50 k€)

***2017-2022***

**PLANTA II - Role of salt-marsh plants in the mercury cycle under climate change scenarios: tracking the fate in light of toxicokinetic-toxicodynamic data** – ***Project Coordinator***. – (*Project C&DT – AAC nº 02/SAICT/2017 nº 31208*). Funded by the Portuguese Foundation for Science and Technology. Partners: University of Aveiro (Portugal) and Trent University

***2013-2016***

**NEUTOXMER - Neurotoxicity of mercury in fish and association with morphofunctional brain alterations and behavior shifts** – (*Project FCT-PTDC/MAR/114114/2009*). Funded by the Portuguese Foundation for Science and Technology. Partners: IPMA, Lisboa (Portugal) and University of Aveiro (Portugal) (Funding: 168 k€)
**Coordinator:** *Professor Mário Pacheco, University of Aveiro*.

***2011 - 2014***

**PLANTA – Effect of salt-marsh plants on mercury methylation, transport and volatilization to the atmosphere – *Project Coordinator***. - (*Project FCT- PTDC/AAC-AMB/115798/2009*). Funded by the Portuguese Foundation for Science and Technology. Partners: Acadia University (Canada), Trent University (Canada). (Funding: 67k€)

***2010 - 2013***

**PROFLUX – Process and Fluxes of mercury and methylmercury in a contaminated coastal ecosystem (Tagus Estuary, Portugal) – *Project Coordinator***. - (*Project FCT-PTDC/MAR/102748/2008*). Funded by the Portuguese Foundation for Science and Technology. Partners: Faculty of Pharmacy University of Lisbon (Portugal), University of Acadia (Canada), Trent University (Canada). (Funding: 120 k€)

***2005 - 2009***

**Rizosphere Biogeochemistry** (*Project FCT-POCTI/CTA/48386/2002*). Funded by the Portuguese Foundation for Science and Technology (Funding: 120 k€)
**Coordinator:** *Professor Teresa Vasconcelos, University of Porto*.

***2004 - 2007***

**Tagus Estuary Monitoring Program**. Funded by IPIMAR and SIMTEJO. ***Coordinators:*** *Dr. João Canário (PhD) and Dr. Carlos Vale (PhD) – INIAP/IPIMAR – Portugal.* (Funding: 60 k€)

***2001 - 2005***

**MACAC** - Contamination of the coastal environment: Biogeochemical Processes and Interactions with the Biota – (*FCT-PLE-14, 2001-2005*). Funded by the Portuguese Foundation for Science and Technology. ***Coordinator:*** *Dr. Carlos Vale (PhD) – INIAP/IPIMAR – Portugal.* (Funding: 500 k€)

***Coordinator:*** *Dr. Carlos Vale (PhD) – INIAP/IPIMAR – Portugal*

***2000 - 2002***

**Contaminants in Portuguese Coast** – Funded by IPIMAR and Environmental Institute of the Ministry of Environment. (Funding: 200k€)

***Coordinator:*** *Dr. Carlos Vale (PhD) – INIAP/IPIMAR – Portugal.*

### 2.5.3. National Projects Funded by the Portuguese Polar Program

***2020-2021***

**PermChem IV – Chemical Structural Characterization of Natural Organic Matter in Permafrost Thaw Lakes in Summer Season - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR). Partners: Universities of Lisbon, Laval (Canada), INRS (Canada) and Environment and Climate Change Canada (Funding: 16 k€)

***2019-2020***

**PermArsenic – Arsenic Speciation and Biogeochemistry in Permafrost Thaw Lakes - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR). Partners: Universities of Lisbon, Laval (Canada), INRS (Canada) and Environment and Climate Change Canada (Funding: 16 k€)

***2018-2019***

**PermaMerc – Mercury methylation and MMHg demethylation in Permafrost Thaw Lakes - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR). Partners: Universities of Lisbon, Laval (Canada), INRS (Canada) and Environment and Climate Change Canada (Funding: 16 k€)

***2017-2018***

**Permachem III – Chemical Structural Characterization of Natural Organic Matter in Permafrost Thaw Lakes - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR).

Partners: Universities of Lisbon, Aveiro, Laval (Canada), INRS (Canada), Helsinki (Finland) and Environment and Climate Change Canada (Funding: 16 k€)

***2016-2017***

**Permachem II – Biogeochemistry of carbon, sulphur and contaminants in thermokarst lakes under winter conditions - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR). Partners: Universities of Lisbon, Laval (Canada), INRS (Canada), Helsinki (Finland) and Environment Canada (Funding: 10 k€)

***2015-2016***

**Permachem I – Biogeochemistry of carbon, sulphur and contaminants in thermokarst lakes under winter conditions - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR). Partners: Universities of Lisbon, Laval (Canada), INRS (Canada), Helsinki (Finland) and Environment Canada (Funding: 15 k€)

**MERCANTAR – Mercury methylation and demethylation rates in Deception Island waters impacted by volcanic-mercury - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR) and the Spanish Polar Programs. Partners: Universities of Trent and Acadia, Canada (Funding: 55 k€)

***2014-2015***

- **ADAPT-PT2 – Arctic Development and Adaptation for Permafrost in Transition, Portuguese Branch - *Project Coordinator***. – Funded by the Portuguese Polar Program (PROPOLAR) and ADAPT (CEN/ULaval – Canada) (Funding: 6 k€)

- **CONTANTARCT 4 – Speciation and (bio)availability of mercury and methylmercury in a natural contaminated ecosystem (Deception Island, Antarctica) - *Project Coordinator***. – Funded by the Portuguese (PROPOLAR) and the Spanish Polar Programs. Partners: Universities of Trent and Acadia, Canada (Funding: 23 k€)

***2013-2014***

- **ADAPT-PT1 – Arctic Development and Adaptation for Permafrost in Transition, Portuguese Branch - *Project Coordinator***. – Funded by the Portuguese Polar Program (PROPOLAR) and ADAPT (CEN/ULaval – Canada) (Funding: 7 k€)

- **CONTANTARCT 3 – Speciation and (bio)availability of key contaminants in contaminated soils at Fildes Peninsula - *Project Coordinator***. – Funded by the Portuguese Polar Program (PROPOLAR). Partner: INACH Chile. (Funding: 35 k€)

***2012-2013***

**CONTANTARCT 2 - Trace Element Fate, Transport and Speciation in Environmental Compartments in King George Island (Antarctica) - *Project Coordinator***. – Funded by the Portuguese Polar Program (PROPOLAR). Partners: IST- Technical University of Lisbon and INACH Chile. (Funding: 13 k€)

***2011 - 2012***

**CONTANTARCT 1 - Trace Element Fate, Transport and Speciation in Environmental Compartments in Deception Island (Antarctica) - *Project Coordinator***. – Funded by the Portuguese Science Foundation. Partners: IST- Technical University of Lisbon and the Spanish Polar Board. (Funding: 11 k€).

## 2.6. Other Scientific Activity

### 2.6.1. Coordination of Scientific Teams

Since 2013 I'm coordinator of the research team of Polar Sciences (Environmental Polar Chemistry) at the Environment Biogeochemistry Group of CQE. This group involve several researchers and students not only from other groups of CQE but also from other institutes inside and outside the University of Lisbon.

Since 2013 I'm coordinator of the Arctic Research Program for the Portuguese Polar Program and National Delegate for the Scientific Committee for Arctic Research. This delegation from the Minister of Science and Higher Education started in April 2015.

In 2017 I was nominated by the Terrestrial Working Group of the International Arctic Science Committee as Chair of the Pan-Arctic program T-MOSAiC (*http://www.t-mosaic.com*).

### 2.6.2. Supervision of Invited Scientists

**Dr. Emma Kritzberg** (University of Lund, Sweden): From September 1st to December 21st 2017, Dr. Kritzberg visit Instituto Superior Técnico to perform chemical analysis in Swedish soils and to discuss further scientific collaboration.

**Dr. Claudio Lamilla** (University of Bío Bío, Chile): From April 1st to May 31st 2015, Dr. Lamilla visit Instituto Superior Técnico to perform chemical and microbiological analysis in Antarctic soils.

**Professor Stefano Covelli** (University of Trieste, Italy): In June 2015, professor Covelli stayed at Instituto Superior Técnico for collaborative research in mercury geochemistry in salt marshes.

**Professor Nelson O'Driscoll** (University of Acadia, Canada): From September 2014 to June 2105 professor O'Driscoll stayed at Instituto Superior Técnico (CQE) for collaborative research on mercury biogeochemistry in salt marshes.

### 2.6.3. Supervision of Post-Doc Researchers

1. Rute Isabel Talhadas Cesário - (Joint supervision Dr. Holger Hintelmann, Trent University Canada) **– Supervisor**
2. Patricia Oliveira Pereira Kowalski, *Concluded in 2016* - (Joint supervision Dr. Mário Pacheco, University of Aveiro and Dr. Armando Almeida, University of Minho) **– Co-Supervisor**
3. Tom Sizmur, *Concluded in 2012* – (Joint supervision Dr. Nelson O'Driscoll – Acadia University – Canada) ) **– Co-Supervisor**

### 2.6.4. Supervision of Students with Research Grants

1. Diogo Tavares Antão Folhas Ferreira. Research Grant level 1 (Bachelor) in 2018 and level 2 (Master) in 2019 for the Project T-MOSAiC – From 2017 to 2018. IST – University of Lisbon / Lisbon) **– Supervisor**
2. Rute Isabel Talhadas Cesário. Research Grant level 2 (Master) for the Project PROFLUX – From 2010 to 2013. IPIMAR / Lisbon) **– Supervisor**
3. Ricardo Manuel Pires Mendes. Research Grant level 2 (Master) for the Project PLANTA – From 2011 to 2014. IPIMAR / Lisbon) **– Supervisor**
4. Vasco Rui Veloso Neves Branco. Research Grant level 2 (Master) for the Project MACAC – From 2003 to 2005. IPIMAR / Lisbon) **– Supervisor**

# 3. TEACHING

## 3.1. Summary of Teaching Philosophy

I believe that the goal of teaching is to give students the tools they need to work independently and within multidisciplinary groups. While certain fundamental scientific concepts are the core of my teaching, the students are given freedom to pursue their own interests and form independent ideas. To this end, I think it is critical to incorporate a certain amount of self-directed education into any course. However, it is also important to set educational goals that are appropriate for the student, the subject of study, and the expectations of the university and of society in general. Goals should be reasonable, and students' progress toward them should be measurable. A combination of structured lectures and independent oral and written presentations for lower-level courses and increasingly independent projects and group work for upper-level courses will be the basis of my teaching. For environmental chemistry I believe that fieldwork and laboratoy work are important components of the program. My teaching philosophy is aimed at producing active learners who can think critically about science and apply relevant skills to current topics.

My teaching philosophy is based on three principles:

i. *Creating a Focused Learning Environment*: This will be achieved using practical hands-on experience, class participation, and a combination of independent and group work. I hope to create a learning environment that encourages open communication of ideas and discussion between students. I feel the teacher should be viewed as a guide, helping students to reach their highest potential, and encouraging them to expand their views.

ii. *Creating Independent Learners*: I will strive to create a learning environment that encourages students to become self-sufficient. Providing them with the skills to adapt to a changing work environment and continue to learn independently throughout their lives is a critical part of my teaching philosophy.

iii. *Providing Interesting and Relevant Content*: The content of courses will be explained through practical examples and problem-based learning, and students will be encouraged to provide input to help shape the direction of study. Application of theory to current global issues will enhance the learning experience. In addition, fieldwork will be a key learning experience for students in environmental science. Technology and computer-

based learning will be incorporated into the educational environment in a way that will introduce valuable skills to the students.

## 3.2. Teaching Activities

### *Undergraduate*

1. Instrumental Methods of Analysis (2nd Year of Chemical and Biological Engineering - IST) – Started in 2018/2019.
   (Laboratory classes)
2. Sampling and Environmental Methods of Analysis (3rd Year of Environmental Engineering - IST) – Since 2009/2010 (Invited lectures) and since 2016/2017 - ***Senior lecture***.
   (Lectures and Laboratory Classes)
3. Chemical Analysis (3rd Year of Chemical and Biological Engineering - IST) – From 2014/2015 to 2017/2018.
   (Laboratory classes)

### *Master*

1. Sampling Techniques and Methodologies in Extreme Environments (Minor in Extreme Environments) - Instituto Superior Técnico – University of Lisbon – Starting in 2021/2022. - ***Senior lecture***

2. Environmental Analytical Chemistry (Master in Chemistry) – Faculty of Sciences – University of Lisbon – Starting in 2019/2020.
   (Lecture by Invitation)
3. Validation, Quality Control and Accreditation (Master in Chemistry – Instituto Superior Técnico – University of Lisbon – Started in 2018/2019. - ***Senior lecture***
4. Pollutant biogeochemical cycles and their role in the food quality (Master in Food Quality – Faculty of Pharmacy – University of Lisbon – Since 2009/2010 until 2013/2014.
   (Lectures)

## 3.3. Publication and availability of lessons or other didactic material

1. Canário, J., Mota, A.M., 2018. Environmental Chemical Analysis. Printed version by IST Folhas.
2. Lessons in PowerPoint of the block "Environmental Chemical Analysis" of the UCs of "Sampling and Methods for Environmental Analysis" - (3rd Year of Environmental Engineering - IST).
3. Lessons in PowerPoint of the block "Biogeochemical Cycles and the Transformations of Food Contaminants" of the Master Program in Food Quality – Faculty of Pharmacy – University of Lisbon).
4. Protocols for laboratory works of the block "Environmental Chemical Analysis" of the UCs of "Sampling and Methods for Environmental Analysis" in co-authorship with Prof. Ana Maria Mota - (3rd Year of Environmental Engineering)

## 3.4. Teaching Innovation

1. Preparation of the *Minor* in "Extreme Environments" (***coordination***). This *Minor* started in 2021/2022 and aims to prepare future students and professionals to develop work or research in extreme environments: from the bottom of the ocean to the solar system, including the Polar Regions and highest mountains. The Minor has a curriculum of three courses: "Sampling methodologies and techniques in extreme environments", "Extreme environments in Earth and Space" and "Remote Sensing" with 18 ECTS in total. In this Minor, besides being its coordinator, I'm the senior lecture of the course "Sampling methodologies and techniques in extreme environments".
2. Preparation of contents, objectives, teaching methods and bibliography of the curricular unit (UC) "Ecotoxicology and Environmental Risk Assessment". This UC was accepted by the Department of Chemical Engineering of Instituto Superior Técnico for the inclusion as an optional discipline in the Master of Environmental, Biological and Chemical Engineering Curricula. ***Senior lecture***.
3. Preparation of contents, objectives, teaching methods and bibliography of the curricular unit (UC) "Validation, Quality Control and Accreditation". This UC was accepted by the Department of Chemical Engineering of Instituto Superior Técnico for the inclusion as

an optional discipline in the Master in Chemical Engineering and Master in Chemistry Curricula. ***Senior lecture***

4. Preparation of contents, objectives, teaching methods and bibliography of the curricular unit (UC) "Environmental Chemistry". This UC was submitted to the Department of Chemical Engineering of Instituto Superior Técnico for the inclusion as an optional or mandatory discipline in the Environmental, Chemical or Biological Engineering Curricula. Still not in progress.

5. Member of the team responsible for the reformulation of the Master Course in Chemistry at IST. In this process I was responsible for the preparation of a minor in Quality, Validation and Accreditation of Analytical Methods.

## 3.5. Student Supervision

### 3.5.1. PhD thesis

1. Henrique José Albino Zilhão. "Contaminants in the Antarctic Peninsula and the impacts of permafrost thaw" *In progress* - (Joint supervision Professor Gonçalo Vieira, IGOT, ULisboa and Dr. Rute Cesário, Instituto Superior Técnico) – **Supervisor**

2. Beatriz Malcata Martins. "Mercury Biogeochemistry, Fate and Impact in Permafrost Thaw Ecosystems" *In progress* - (Joint supervision Professor Holger Hintelmann, Trent University, Canada and Dr. Martin Pilote, Environment and Climate Change Canada) – **Supervisor**

3. Diogo Tavares Antão Folhas Ferreira. "*Natural organic matter dynamics in permafrost thermokarst lakes*" – *In progress* - (Joint supervision Professor Raoul-Marie Couture, Laval University, Canada) – **Supervisor**

4. Pedro Freitas. "*Thermokarst lake dynamics and spatial variability from the Arctic and Sub-Arctic and their biogeochemical significate" – In progress* – (Joint supervision Professor Gonçalo Vieira, IGOT – University of Lisbon and Professor Warwick F. Vincent, Laval University, Canada) – **Co-Supervisor**

5. Ligia Fonseca Coelho. "*Astrobiology analyses of icy biomes as a proxy for extra-terrestrial life in icy moons" – In progress* – Program MIT Portugal – (Joint supervision Professors Zita Martins and Rodrigo Costa – IST – University of Lisbon) – **Co-Supervisor**

6. Rute Isabel Talhadas Cesário. *"Process and fluxes of mercury and methylmercury in a contaminated ecosystem: Tagus Estuary (Portugal) – Concluded in 2017* – (Joint supervision Professor Ana Maria Mota – IST – University of Lisbon) - **Supervisor**

7. Neusa Lindorosa Figueiredo Loureiro. "*Microbial community composition and mercury cycling in sediments of the Tagus Estuary" - Concluded in 2016* - (Joint supervision Professor Cristina Carvalho, Faculty of Pharmacy and Professor Maria Luisa Serralheiro, Faculty of Sciences both from the University of Lisbon) – **Co-Supervisor**

8. Vasco Rui Veloso Neves Branco. *"In vivo mercury interaction with the thioredoxin system" - Concluded in 2012* - (Joint supervision Professor Cristina Carvalho – Faculty of Pharmacy, University of Lisbon) - **Supervisor**

### 3.5.2. Master thesis

1. Cristiana Dias Antunes. "Variation of the optical properties of water column and porewater in permafrost thaw lakes and their relation to organic matter composition" *In progress* (Joint supervision Prof. Raoul-Marie Couture – Laval University Canada) - *Master in Environmental Engineering* – **Supervisor**

2. Matilde Pereira. "Effect of a land slide on the sediment chemistry at the Great Whale River, Nunavik, Canada" *In progress* (Joint supervision Prof. Raoul-Marie Couture – Laval University Canada) - *Master in Environmental Engineering* – **Supervisor**

3. Bárbara Costa Ribeiro. "Distribution of heavy metal contamination in Ria de Aveiro, Portugal" *In progress* (Joint supervision Dr. Rute Cesário – IST – University of Lisbon) - *Master in Environmental Engineering* – **Supervisor**

4. Maria Rita Menezes. "Fluxes of Mercury in salt-marshes". *In progress* (Joint supervision Dr. Rute Cesário – IST – University of Lisbon) - *Master in Environmental Engineering* – **Co-Supervisor**

5. Henrique José Zilhão. "Mercury methylation in salt-marshes with different degree of Hg contamination" – *concluded in 2021* (Joint supervision Professor Holger Hintelmann –

University Trent – Canada and Rute Cesário, CQE-IST) - *Master in Chemical Engineering* – **Supervisor**

6. Beatriz Malcata Martins. "Variation in methylmercury biomagnification in wetland invertebrates: a critical examination of the effects of nutrient inputs and flooding" – *Concluded in 2020* (Joint supervision Professors Nelson O'Driscoll and Marc Mallory – University of Acadia – Canada) - *Master in Environmental Engineering* – **Co-Supervisor**
7. Daniel António Gaudêncio Pinheiro. "Exposure of lowland permafrost coastal areas to flooding and coastal erosion: the case of Tuktoyaktuk (Northwest Territories, Canada)" – *Concluded in 2021* (Joint supervisions Professor Gonçalo Vieira – IGOT, University of Lisbon and Dr. Dustin Whalen – Geological Survey of Canada) - *Master in Environmental Engineering* – **Co-Supervisor**
8. Sancha Reynolds. "Assessing mercury and methylmercury demethylation in sediments and water from Subarctic ponds in Kuujjjuarapik" – *Concluded in 2019* (Joint supervision Professor Holger Hintelmann – University Trent – Canada) - *Master in Environmental Sciences* – **Co-Supervisor**
9. Martin Jusek. "Mercury methylation and MMHg demethylation in Permafrost Thaw Lakes" – *Concluded in 2019* (Joint supervision Professor Holger Hintelmann – University Trent – Canada) - *Master in Chemical Engineering* – **Supervisor**
10. Diogo Folhas Ferreira. *"Chemical Structural Characterization of Natural Organic Matter in Permafrost Thaw Lakes" Concluded in 2018* (Joint supervision Professor Armando Duarte – University of Aveiro – Portugal) - *Master in Chemistry* – **Co-Supervisor**
11. Cláudia Ferreira da Silva Tunes. "*Do colonial birds enhance concentrations of toxic trace-elements in coastal soils?*" – *Concluded in 2018* (Joint supervision Professor Mark Mallory – University of Acadia – NS - Canada) - *Master in Environmental Engineering* – **Supervisor**
12. Filomena Margarida Malvar Cruces Rodrigo dos Santos. "*Distribution and fractioning of rare earth elements in salt-marshes*" – *Concluded in 2018* (Joint supervision Dr. Joana Raimundo – IPMA - Portugal) - *Master in Environmental Engineering* – **Supervisor**
13. Daniela Alexandra Rufino dos Santos. "Biogeochemistry *of permafrost thaw lakes under winter conditions in the Canadian Subarctic" – Concluded in 2017*. (Joint supervision Dr. Marin Pilote – Environment and Climate Change Canada – QC - Canada) - *Master in Environmental Engineering* - **Supervisor**

14. Inês Horta Correia Rio de Carvalho. *"Mercury stability on Usnea lichens. Radiation and temperature controlled experiments" – Concluded in 2017.* (Joint supervision Professor Nelson O'Driscoll – University of Acadia – NS - Canada) - *Master in Environmental Engineering* – **Co-Supervisor**

15. Beatriz Paiva Bento. "*Mercury methylation rates in Deception Island (Antarctica) waters and pyroclastic gravel impacted by volcanic-mercury*" - *Concluded in 2016*. (Joint supervision Professor Holger Hintelmann – Trent University – ON - Canada and Professor Margarida dos Santos Romão – IST – University of Lisbon) - *Master in Chemical Engineering* - **Supervisor**

16. Inês Marçal Margarido Almeira, "Evaluation of the contamination, distribution, and availability of POP in Contaminated Antarctic Soils, King George Island" – *Concluded in 2016*. (Joint supervision and Professor Margarida dos Santos Romão – IST – University of Lisbon and Dr. Miguel Caetano - IPMA) - *Master in Chemical Engineering* – **Co-Supervisor**

17. Carolina Raquel de Sá Luz*, "Chemical elements as tracers of climate change and long-range transport in Antarctica lakes" – Concluded in 2016*. (Joint supervision Dr. Marc Oliva – University of Barcelona) - *Master in Environmental Engineering* - **Supervisor**

18. Hélia Carla Sousa Oliveira. "*Stress evaluation in phytoplankton contaminated by natural sources (Deception Island, Antarctica) using laser induced fluorescence (LIF)" – Concluded in 2015* - (Joint supervision and Professor Margarida dos Santos Romão – IST – University of Lisbon and Dr. Maria Teresa Cabrita - PROPOLAR) - *Master in Environmental Engineering* - **Supervisor**

19. Leandro Alexandre Mendes Castanheira. "*Biogeochemistry of permafrost thermokarst lakes in Canadian Subarctic" – Concluded in 2015* - (Joint supervision Professor Warwick Vincent – University of Laval – QC - Canada) - *Master in Chemical Engineering* - **Supervisor**

20. Sara Pereira da Silva e Sousa Justino. "*Atmospheric mercury vegetation/air fluxes and concentrations in two sites on the Tagus Estuary*" - *Concluded in 2014* - (Joint supervision Professor Nelson O'Driscoll – University of Acadia – NS - Canada) - *Master in Environmental Engineering* – **Supervisor**

21. Ana Carina Gomes Padeiro, "*Soil Contamination in Fildes Bay (King George Island, Antarctica): (Bio)availability and possible remediation strategies" – Concluded in 2014* - (Joint supervision Professor Margarida dos Santos Romão – IST – University of Lisbon) - *Master in Environmental Engineering* – **Supervisor**

22. Eduardo Lanceiro Amaro. "*Trace element anthropogenic input in Fildes Peninsula, a pristine site (King George Island, Antarctica)* " – Concluded in 2014 - (Joint supervision Professor Ana Maria Mota – IST – University of Lisbon) - *Master in Environmental Engineering* - **Supervisor**

23. André Diogo Tavares Mão de Ferro. *"Sources, transport and speciation of trace elements in environmental compartments of Deception Island, Antarctica" - Concluded in 2012* - (Joint supervision Professor Ana Maria Mota – IST – University of Lisbon) - *Master in Environmental Engineering* - **Supervisor**

24. Ricardo Manuel Pires Mendes. *"Influence of salt-marsh plants in mercury and methylmercury biogeochemistry in Tagus and Guadiana marshes" - Concluded in 2012* - (Joint supervision Professor Manuel Luis Lopes – University of Lisbon) - *Master in Chemistry* - **Supervisor**

25. Carlos Eduardo S. S. Monteiro. *"Mercury and methylmercury in sediment cores from the Tagus Estuary" - Concluded in 2010* - (Joint supervision Dr. Mónica Válega - University of Aveiro) - *Master in Marine Sciences* - **Supervisor**

### 3.5.3. Undergraduate thesis/projects

1. Rodrigo Dias. "Spectroscopic detection of biosignatures in artificial ice samples as analogues of icy moons" *In progress* – (Join supervision Professor Zita Martins – IST - University of Lisbon) – **Supervisor**

2. Francisco Calapez. "*Analysis and Distribution of Trace Metals in Meteorites*" – Concluded in 2020 – (Join supervision Professor Zita Martins – IST - University of Lisbon) – **Co-Supervisor**

3. Ana Sofia Ferraz Alves. *"Implementation and validation of an analytical method for reactive and total mercury determinations in natural waters by CV-AFS" - Concluded in 2005* - (Joint supervision Professor Inês Fonseca – University of Lisbon) - **Supervisor**

4. Patrícia Cecílio Leite Ribeiro dos Santos. *"Total mercury and methylmercury in dolphin tissues from the Portuguese coast" - Concluded in 2004* - (Joint supervision Professor Inês Fonseca – University of Lisbon and Dr. Joana Raimundo - IPIMAR) - **Supervisor**

5. Joana Cardoso Tavares Sampaio Pinho. *"Implementation and validation of an analytical method for total selenium determination in sediments by ICP-MS" - Concluded in 2004 -* (Joint supervision Professor Maria Cristina Santos – University of Lisbon) – **Supervisor**
6. João Paulo Martins Ferreira Lavrado. *"Mercury distribution and reactivity in sediments from the Tagus Estuary" - Concluded in 2003* - (Joint supervision Professor Ana Paula Paiva – University of Lisbon) - **Supervisor**

# 4. SCIENTIFIC INTERNATIONALIZATION AND RECOGNITION

## 4.1. Relevant International collaborations

**Dr. Adelina Geyer** – CSIC Barcelona – SPAIN – Collaboration on trace-element biogeochemistry in Deception Island, Antarctica.

**Dr. Antonio Álvarez-Valero** – University of Salamanca – SPAIN – Collaboration on trace-element biogeochemistry in Deception Island, Antarctica.

**Prof. David Amouroux** – Pau University, Pau – FRANCE – *Collaboration in mercury biogeochemical studies in coastal areas.*

**Dr. Kevin Hughes** – British Antarctic Survey, Cambridge – UK - *Collaboration in impact assessment of contamination in Antarctica and communication with policy makers.*

**Prof. Hans-Ulrich Peter** – Jena University, Jena – GERMANY - *Collaboration in impact assessment of contamination in Antarctica and communication with policy makers.*

**Prof. Holger Hintelmann** – Department of Chemistry, Trent University, Peterborough, ON – CANADA - *Collaboration in mercury biogeochemical studies in coastal areas and wetlands particularly in the use if Hg stable isotopes.*

**Prof. Isabelle Laurion** – INRS – Centre Eau Terre Environnement, Quebec City, QC – CANADA – *Collaboration on biogeochemical studies of permafrost thaw lakes and permafrost impacted soils.*

**Prof. Jeróme Cómte** – INRS - Centre Eau Terre Environnement, Quebec City, QC – CANADA – *Collaboration on the microbiology role in trace-element processes in permafrost thaw lakes.*

**Dr. Juan Echeandia** – Spanish Institute of Oceanography, Murcia – SPAIN – *Collaboration on trace element studies in the Southern Ocean.*

**Dr. Martin Pilote** – Environment and Climate Change Canada, Montreal, QC – CANADA - *Collaboration on biogeochemical studies of permafrost thaw lakes and permafrost impacted soils*

**Dr. Marcelo Leppe** – Chilean Antarctic Institute, Punta Arenas – CHILE - *Collaboration in impact assessment of contamination in Antarctica and communication with policy makers.*

**Prof. Marcello Veiga** – Department of Mining – University of British Columbia, Vancouver, BC - CANADA - *Collaboration in mercury biogeochemical studies in Hg contaminated sites, particularly related with artisanal gold mines.*

**Prof. Nelson O'Driscoll** – Department of Earth and Atmospheric Sciences – Acadia University, Wolfville, NS – CANADA - *Collaboration in mercury biogeochemical studies in coastal areas and wetlands*

**Prof. Raoul-Marie Couture** – Department of Chemistry – Laval University, Quebec City, QC, - CANADA - *Collaboration on biogeochemical studies of permafrost thaw lakes and permafrost impacted soils*

**Dr. Rocio Millan** – CIEMAT, Madrid – SPAIN - - *Collaboration in mercury biogeochemical studies in Hg contaminated sites, particularly related with artisanal gold mines.*

**Dr. Sergi Diaz** - Department of Environmental Chemistry, IDAEA-CSIC, Barcelona, SPAIN - - *Collaboration in mercury biogeochemical studies in coastal areas.*

**Prof. Stefano Covelli** – Department of Mathematics and Earth Sciences – Trieste University, Trieste – ITALY - - *Collaboration in mercury biogeochemical studies in coastal areas and wetlands particularly in the development of benthic flux chambers.*

**Prof. Warwick F. Vincent** – Department of Biology – Laval University, Quebec City, QC, - CANADA - *Collaboration on biogeochemical studies of permafrost thaw lakes and permafrost impacted soils*

## 4.2. Recognition by the Scientific Community

### 4.2.1. International Awards

**Elsevier:** Marine Pollution Bulletin *Highly Cited Author Award* 2005-2009

### 4.2.2. National Grants and Awards

1. May 2021 – **Excellence in Teaching Award** by Instituto Superior Técnico – Related to the teaching of the curricular unit "Sampling and Environmental Methods of Analysis" and "Methods of Instrumental Analysis" in 2019/2020.

2. May 2020– **Excellence in Teaching Award** by Instituto Superior Técnico – Related to the teaching of the curricular unit "Sampling and Environmental Methods of Analysis" in 2018/2019.

3. May 2019 – **Excellence in Teaching Award** by Instituto Superior Técnico – Related to the teaching of the curricular unit "Sampling and Environmental Methods of Analysis" in 2017/2018.

4. May 2013 - December 2013 - **Post-Doc Grant** (SFRH/BPD/86904/2012) – Fundação para a Ciência e Tecnologia – "Climate Change in Polar Regions and its Impact on Contaminant Pathways"

5. May 2013 - December 2013 - **Post-Doc Grant** (SFRH/BPD/26324/2006) – Fundação para a Ciência e Tecnologia – "Mercury Cycle on Regional Scale: Processes and Fluxes"

6. June 2006 – August 2006 – **Short Term Grant** – Fundação Calouste Gulbenkian – "Mercury cycle on a freshwater lake: Lac Saint Louis, Qc, Canada"

### 4.2.3. Editorial Activity in Peer-Reviewed Journals

***2020-2022***

Guest Editor of the "*Environmental Pollution*" journal special issue "*Arctic Terrestrial Pollution*".

***2020-Present***

Editor of the "*Frontiers in Environmental Chemistry*" journal.

***2018-Present***

Academic Editor of the "*PLOS One*" journal.

***2017-2018***

Guest Editor of the "*Science of the Total Environment*" journal special issue "*Wetlands in a changing world*".

**2011 - *2018***

Member of Editorial Board of the *Scientific World Journal* (Environmental Chemistry)

### 4.2.4. Reviewer Activity in Peer-Reviewed Journals (By Areas)

***a. Analytical Chemistry***

Analytica Chimica Acta, Analyst, Analytical Chemistry, Analytical and Bioanalytical Chemistry, Journal of Analytical Chemistry, Journal of Chromatography A, Spectrochimica Acta B, Talanta, Trac - Trends in Analytical Chemistry

***b. Atmospheric Sciences***

Atmospheric Environment, Journal of Geophysical Research: Atmosphere, Atmosphere (MDPI)

***c. Ecotoxicology***

Ecotoxicology, Ecotoxicology and Environmental Safety, Metallomics, Neurotoxicology

***d. Environmental Chemistry***

Chemosphere, Environmental Chemistry, Environmental Science and Technology, Frontiers in Environmental Chemistry, Geochimica Cosmochimica Acta, International Journal of Environmental Analytical Chemistry

***e. Environmental Sciences (General)***

Ambio, Biogeosciences, Fuel, Catena, Critical Reviews in Environmental Science and Technology, Environmental Geochemistry and Health, Environmental Monitoring and Assessment, Environmental Pollution, Environmental Research, Fuel, Nature Communications, Nature Geosciences, Journal of Geophysical Research: Biogeosciences, Journal of Environmental Monitoring and Assessment, Microorganisms, PLOS One, Polish Journal of Environmental Studies, Scientific Reports, The Science of the Total Environment, Water Air and Soil Pollution

***f. Marine and Freshwater Chemistry***

Aquatic Geochemistry, Estuarine Coastal and Shelf Sciences, Marine Chemistry, Water (MDPI)

***g. Marine Sciences (General)***

Ciencias Marinas, Estuarine Coastal and Shelf Science, Journal of Aquatic Research, Journal of Geophysical Research: Oceans, Limnology and Oceanography, Marine Pollution Bulletin

***h. Polar Sciences***

Antarctic Science, Arctic Science, Polar Research, Polar Record, Polar Science

### 4.2.5. Organization of Conferences / Scientific Sessions in Conferences

***2021***

1. Chairman of the "2021 Arctic Science Summit Week" conference helded in Lisbon (Portugal) between March 19 and 26, 2021, under the theme: The Arctic: Regional Changes, Global Impacts.

2. Co-Chairman of the "*Arctic Ecosystem Changes, Pollutant issues and their Impact on wildlife and Northern Communities*" Scientific Session at the Arctic Science Summit Week 2021. (Charing with Dr. Martin Pilote from Environment and Climate Change Canada and Dr. Martin Jusek from the University of Lisbon)

***2018***

1. Chairman of the "*Biogeochemical processes in permafrost thaw lakes*" Scientific Session at the Arctic Change - ArcticNet Annual Scientific Meeting to be held in Ottawa (Canada). (Charing with Professor Warwick F. Vincent from University Laval, Canada and Dr. Diogo Folhas Ferreira from the University of Lisbon)

2. Co-chairman of the "*Mercury Biogeosciences – Fate, Effects and Policy*" Scientific Session at the SETAC Europe 28$^{th}$ Annual Meeting to be held between May 13–17 in Rome (Italy). (Co-Charing with Dr. Michael S. Bank from Institute of Marine Research - Norway, Dr.

Séverine Le Faucheur from Genève University and Dr. Nelson O'Driscoll from the Acadia University)

### *2017*

1. Co-chairman of the "*Permafrost-affected soils*" Scientific Session at the European Geoscience General Assembly Meeting to be held between May 23–28 in Vienna (Austria). (Co-Charing with Dr. Alevtina Evgrafova from Bern University, Dr. Marc Oliva from Barcelona University and Dr. Sebastian Zubrzycki from the Munich University)

### *2016*

1. Member of the Local and Scientific Committee of the 8th Portuguese Meeting of Polar Sciences – October 26-28, Lisbon, Portugal

### *2015*

1. Member of the Scientific Committee of the 7th Portuguese Meeting of Polar Sciences - October 28-29, Évora, Portugal

### *2014*

1. Member of the Scientific Committee of the 6th Portuguese Meeting of Polar Sciences - October 30-31, Porto, Portugal
2. Co-Chairman of the "*Mercury Fate and Biogeochemistry*" Scientific Session at the SETAC North America 35th Annual Meeting – November 2014, Vancouver, Canada (Co-Charing with Dr. Nelson O'Driscoll from Acadia University and Dr. Marcelo Veiga from the University of British Columbia).
3. Co-Chairman of the "*Biogeochemistry of the permafrost in transition*" Scientific Session at the 4th European Conference on Permafrost – June 2014, Évora, Portugal (Co-Charing with Prof. Warwick Vincent, University of Laval, Canadá).

4. Member of the Local Organizing Committee of the 4th European Conference on Permafrost - June 18-21, Évora, Portugal

### *2013*

1. Member of the Scientific Committee of the 5th Portuguese Meeting of Polar Sciences – November 1, Faro, Portugal
2. Co-Chairman of the Scientific Session "*Why do ecosystems retain mercury? The role of redox transformations in controlling Hg mobility in terrestrial and aquatic environments*" at the 11th International Conference on Mercury as a Global Pollutant – July/August 2013, Edinburgh, UK (Co-Charing with Dr. Nelson O'Driscoll from Acadia University and Dr. Alain Poulain from the University of Ottawa).

### *2012*

1. Chair and member of the Organizing and Scientific Committee of the 4th Portuguese Meeting of Polar Sciences
2. Co-Chairman of the "*Mercury Fate and Biogeochemistry*" Scientific Session at SETAC North America 33 Annual Meeting – November 2012, Long Beach CA, USA (Co-Charing with Dr. Nelson O'Driscoll from Acadia University and Dr. Alain Poulain from the University of Ottawa).

### *2011*

1. Member of the Scientific Committee of the 3rd Portuguese Meeting of Polar Sciences – April 11, Coimbra, Portugal

### *2010*

1. Co-Chairman of the EC02 Scientific Session, "*Fate and Biogeochemistry of Metals*" in the 20th SETAC Europe Annual Meeting in Seville, Spain

2. Chairman of the 3rd Session of the 2nd Portuguese Meeting of Polar Sciences

### 4.2.6. Invited Lectures

1. Canário, J., 2021. Environmental chemistry as a vital tool to better understand ecosystem changes in Polar Regions. Department of Chemistry, Laval University, November 1st, Quebec City, Canada,
2. Canário, J., 2021. Portugal and the Arctic: an overview in the context of European policy. Online webinar organized by the Portuguese Embassy in Helsinki, October 26th. (*Online event*)
3. Canário, J., 2021. Impact of Climate Change in Polar Regions. Toxeco 2021 - Lectures in Toxicology and Ecotoxicology: 2021 Edition, May 26th, University of Aveiro, Portugal. (*Online Event*)
4. Canário, J. 2020. T-MOSAiC: A Pan-Arctic Terrestrial Program. 1st Beijing Normal University Arctic Workshop, November 19th, Beijing, China. (*Online Event*)
5. Canário, J. 2020. Permafrost in a Changing Arctic. *IX Environmental Forum*, University of Porto, November 12th, Porto, Portugal. (*Online Event*)
6. Canário, J., 2019. Permafrost degradation: When we thought that things could not go worst. *Ciência 2019 - Portuguese National Science Summit 2019*, July 9th, Lisbon, Portugal.
7. Canário, J., 2017. Tracking permafrost degradation through chemistry. *European Geosciences Union General Assembly*, April 24th, Vienna, Austria.
8. Canário, J., 2017. The chemistry of permafrost thaw lakes in a changing Arctic. University of Aveiro, February 10th, Aveiro, Portugal.
9. Canário, J., 2016. Permafrost in a changing Arctic. Centre for Nuclear Sciences and Technologies (C2TN), December 15th, Bobadela, Portugal
10. Canário, J., 2016. Assessing mercury methylation and demethylation rates in waters from Deception Islands. Gabriel de Castilla Antarctic Station, February 16th, Deception Island, Antarctica.
11. Canário, J., Santos, M.C., Castanheira, L., Duarte, T., Oliveira, M.C., Ascenso, J., Nunes, T.G., Ferreira, M.J., André, V., Vieira, G., Vincent, W.F., 2015. *2nd EuCheMS Congress on Green and Sustainable Chemistry*, October 4-7, Lisboa, Portugal.

12. Canário, J., 2014. Contaminant fate and biogeochemistry in Polar Regions: The case studies of Arctic permafrost and Deception island in Antarctica. ChemForum, CQE-IST, June 4th, Lisboa, Portugal.

13. Canário, J., 2014. Biogeochemical Processes in Polar Regions. New Challenges for Environmental Analytical Chemistry. *Symposium of the Analytical Division of the Portuguese Chemical Society*, April 14th, Coimbra, Portugal.

14. Canário, J., 2014. Mercury in Deception Island, Antárctica: Processes and fate in a volcanic ecosystem. Chilean Institute on Antarctic Research, Julio Escudero Antarctic Station, February 18th, King George Island, Antarctica.

15. Canário, J., 2013. Mercury contamination in Polar Regions: Fate and biogeochemistry. INACH – Chilean Institute on Antarctic Research, Julio Escudero Antarctic Station, January 23rd, King George Island, Antarctica.

16. Caetano, M., Canário, J., Vale, C., 2012. Biogeochemical cycle of metals. The contrast between mercury and lead. Environmental and air quality risks. Calouste Gulbenkian Foundation, November 8th, Lisbon, Portugal.

17. Canário, J., 2012. Mercury in extreme environments: Transport and processes in polar systems. Workshop on Arsenic and Mercury in the Environment, *9th International Symposium on Environmental Geochemistry*, July 15th, University of Aveiro, Portugal.

18. Canário, J., Nogueira, M., 2009. Climate change in arctic ecosystems. Effects and consequences in the carbon and contaminant biogeochemical cycles. October 21st, INRB IP/IPIMAR.

*19.* Vale, C., Caetano, M., Canário, J., Pereira, O., 2009. Complex interactions and fluxes of trace elements in saltmarshes. *3rd Wetland Pollutant Dynamics and Control Symposium WETPOL 2009*, 20-24 September, Barcelona, Spain.

*20.* Canário, J., Poissant, L., Vale, C., Branco, V., 2009. Mercury biogeochemistry in the Environment – Case studies. National Institute of Geology and Energy, January 7th, Lisbon, Portugal.

*21.* Canário, J. 2007. Mercury biogeochemical processes in a coastal estuarine system – Tagus Estuary, Portugal. University of Acadia, September 14th, Wolfville, Nova Scotia, Canada.

22. Canário, J., Vale, C., 2005. Sediment contamination and its implications on water quality. *Seminar on Management Optimization for the Sewage Water Treatment – Monitoring and Modeling*, National Laboratory of Civil Engineer, May 19th, Lisbon, Portugal.

23. Canário, J., Vale, C., 2004. Rapid release of mercury from intertidal sediments exposed to solar radiation: a field experiment. *Environment Canada – Québec Region* – November 19th, Montréal, Canada.

24. Canário, J., Vale, C., 2003. Escape of mercury from contaminated sediments exposed to sunlight: Effects on dredging operations. *Wastewater and wastewater treatment symposium*, November 26-28, Katholieke Hogeschool Saint-Lieven, Gent, Belgium.

### 4.2.7. Member of Scientific Societies

- American Chemical Society (ACS)
- Association of Polar Early Career Scientists (APECS) – Mentor
- European Geosciences Union (EGU)
- Geochemical Society (GS)
- International Permafrost Association (IPA)
- Polar Educators International (PEI)
- Portuguese Chemical Society (SPQ)
- Society of Environmental Toxicology and Chemistry (SETAC)
- The Oceanography Society (TOS)

# 5. MANAGEMENT ACTIVITIES

## 5.1. Management Activities at the Portuguese Polar Program

Since 2013 I'm the Arctic Research Expert in the Portuguese Polar Program (PROPOLAR). Presently I'm in charge of the evaluation of the logistics concerning Arctic projects submitted in the annual call and related to this issue. Between 2014 and 2017 I was the National Delegate at the Forum of Arctic Research Operators (FARO), designated by Fundação para a Ciência e Tecnologia.

In 2013 I was nominated by Fundação para a Ciência e Tecnologia and PROPOLAR as Portuguese observer at the International Arctic Science Committee (IASC) and I had the responsibility to prepare the "National Strategy for Arctic Research" document to be submitted to IASC for the admission of Portugal as a member state. In April 2015 Portugal was accepted as the 23rd member state and since then I'm the National Representative at the IASC council and at the Terrestrial Working Group, both by designation of the Ministry of Science and Higher Education.

In 2015 I was responsible, with the Polar Office of Fundação para a Ciência e Tecnologia, for preparing the guidelines for submission, peer-review and international evaluation of the scientific projects submitted to PROPOLAR in the annual call.

## 5.2. Participation in Juries

### 5.2.1. PhD thesis

1. Elena Pavoni, 2020. Trace elements in estuarine environments: mixing, partitioning and feta in the main Italian and Slovenian River Mouths (Gulf of Trieste, Northern Adriatic Sea) – University of Trieste – Italy **(*Examiner*)**
2. Fatima Usana, 2018. Application of the Double Spike Method for High-Precision and Ultra-Trace Level Isotope Ratio Measurement of Total Mercury (THg) and Monomethyl Mercury (MMHg) – University of Trent – Canada **(*Member of the Ph.D. Conversion Exam*)**

3. Clara Almécija Pereda, 2015. *Geochemical behaviour and sources of platinum group elements in anthropogenically-impacted sediments* – University of Vigo - Spain **(*Examiner*)**

4. Cristal Fernández Gómez, 2014. *New insights on the biogeochemical cycle of mercury in freshwater environments. Development and application of the DGT technique for bioavailability assessment and studies of methylmercury photodegradation* – University of Barcelona – Spain **(*Examiner*)**

5. Raquel Larios Ardila, 2012. *Assessment of arsenic occurrence in different mining environments by the development and application of suitable analytical methodologies* – Universid Autónoma de Madrid – Spain **(*Raporteur*)**

6. Vasco Rui Veloso Neves Branco, 2012. *In vivo mercury interaction with the thioredoxin system* – Faculty of Pharmacy, University of Lisbon – Portugal **(*Supervisor*)**

7. Marta Cristina Silva Nunes Nogueira, 2007. *Carbon biogeochemical cycle in coastal zones* – Faculty of Sciences, University of Lisbon - Portugal **(*Examiner*)**

### 5.2.2. Master thesis

1. Catarina Lino de Sousa Costa Miranda, 2021. *Global assessment of the composition of Phobos through spectroscopic analyses of Phobos analogues*. Master in Chemistry. University of Lisbon, Instituto Superior Técnico. ***(Examiner)***

2. Silvia Alexandra dos Santos Cardoso, 2019. *Colorimetric methods for quantification of total nitrogen and total phosphorous from sewage from Caima plant – Validation and quality control*". Master in Technological Chemistry. University of Lisbon, Faculty of Sciences. ***(Examiner)***

3. Miguel Velez Rodrigues da Silva, 2018. "*Implementation and validation of an analytical method for the quantification of organic compounds in water using passive samplers*". Master in Technological Chemistry. University of Lisbon, Faculty of Sciences. ***(Examiner)***

4. Pedro António Faria Freitas, 2018. "*Evaluation of new platforms of remote sensing for permafrost thermokarst lakes monitoring (Canadian subarctic).* Master in Geographic information Systems. University of Lisbon, Institute of Geography and Territorial Planning. ***(Examiner)***

5. Chiara Amicucci, 2017. "*Innovative solution for the treatment of tannery waste*" – Master in Chemistry. University of Lisbon, Instituto Superior Técnico. ***(Examiner)***

6. Vanessa Moreira Morgado, 2017. *"Comparison of different approaches for the evaluation of the uncertainty in metal quantification in sediments"* – Master in Chemistry. University of Lisbon, Faculty of Sciences. **(*Examiner*)**

7. Sara Margarida Monteiro Anacleto, 2017. "*Implementation and validation of an analytical method for the determination of cyanotoxins in waters by HPLC-DAD and UPLC-MS/MS*" – Master in Technological Chemistry. University of Lisbon, Faculty of Sciences. **(*Examiner*)**

8. Daniela Alexandra Rufino dos Santos, 2017. "*Biogeochemistry of permafrost thaw lakes under winter conditions in the Canadian Subarctic*". Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

9. Inês Horta Correia Rio de Carvalho, 2017. "*Mercury stability on Usnea lichens. Radiation and temperature-controlled experiments*" - Concluded in 2017. (Joint supervision Professor Nelson O'Driscoll - University of Acadia - NS - Canada) - Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**10.** Beatriz Paiva Bento., 2016. "*Mercury methylation rates in Deception Island (Antarctica) waters and pyroclastic gravel impacted by volcanic-mercury*" – Master in Chemical Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

***11.*** *Carolina Raquel de Sá Luz, 2016. "Chemical elements as tracers of climate change and long-range transport in Antarctica lakes"* – Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**12.** Hélia Carla Sousa Oliveira., 2015. *Stress evaluation in phytoplankton contaminated by natural sources (Deception Island, Antarctica) using laser induced fluorescence (LIF)* - Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**13.** Leandro Alexandre Mendes Castanheira., 2015. *Biogeochemistry of permafrost thermokarst lakes in Canadian Subarctic"* - Master in Chemical Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**14.** Sara Pereira da Silva e Sousa Justino., 2014. *Atmospheric mercury vegetation/air fluxes and concentrations in two sites on the Tagus Estuary*" - Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**15.** Ana Carina Gomes Padeiro, 2014. *Soil Contamination in Fildes Bay (King George Island, Antarctica): (Bio)availability and possible remediation strategies"* - Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**16.** Eduardo Lanceiro Amaro, 2014. *Trace element anthropogenic input in Fildes Peninsula, a pristine site (King George Island, Antarctica)* - Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

**17.** Andreia Cristina Laranjeiras Areias, 2013. *Characterization of bacteria found in sediments of the Tagus Estuary* – Master in Toxicology. University of Lisbon, Faculty of Pharmacy. (***Examiner*)**

18. André Diogo Tavares Mão de Ferro, 2012. *Sources, transport and speciation of trace elements in environmental compartments of Deception Island, Antarctica* – Master in Environmental Engineering. University of Lisbon, Instituto Superior Técnico. **(*Supervisor*)**

19. Ricardo Manuel Pires Mendes, 2012. *Influence of salt-marsh plants in mercury and methylmercury biogeochemistry in Tagus and Guadiana marshes* – Master in Technological Chemistry. University of Lisbon, Faculty of Sciences. **(Supervisor)**

20. Carlos Eduardo S. S. Monteiro, 2010. *Mercury and methylmercury in sediment cores from the Tagus Estuary* - Master in Marine Sciences. University of Aveiro. **(*Supervisor*)**

### 5.2.3. Jury in International Prizes

**2020**

Chair of the International Committee responsible for the evaluation of nominees to the Annual IASC Medal. IASC Medals are awarded in recognition of exceptional and sustained contributions to the understanding of the Arctic. A maximum of one award is made each year, assuming that there is a nominee of appropriate quality.

**2019**

Member of the International Committee responsible for the evaluation of nominees to the Annual IASC Medal. IASC Medals are awarded in recognition of exceptional and sustained

contributions to the understanding of the Arctic. A maximum of one award is made each year, assuming that there is a nominee of appropriate quality.

## 5.3. Participation in Panels for Project Evaluations

***2021***

1. External Project Evaluator for the **Israel Science Foundation**. Joint National Natural Science Foundation of China-Israel Science Foundation, **Israel**.
2. External Project Evaluator for the **National Science Centre** (NCN) of the Polish Ministry of Science and Higher Education, Programs PRELUDDIUM-20 and OPUS-20 (LAP), **Poland.**
3. External Project Evaluator for Dipartimento per la formazione superiore e per la Ricerca. **Direzione Generale per il Coordinamento, la promozione e la valorizzazione della Ricerca** – Ministero del´ Istruzione del' Università e della Ricerca, PRIN 2020, **Italy**.
4. External Project Evaluator for the **Science Fund**, Republic of Serbia, Program Ideas, **Serbia**

***2020***

1. External Project Evaluator for XXVI Regular call for proposals on Antarctic Science and Technology Research projects from the Chilean Antarctic Institute, **INACH**, **Chile**.
2. External Project Evaluator for the Multidisciplinary Review Panel for the New Frontiers in Research Fund (NFRF) – Exploration 2020 Competition. **NRCC**, **Canada**.
3. External Project Evaluator for the **National Science Centre** (NCN) of the Polish Ministry of Science and Higher Education, Program OPUS-20, **Poland**.

***2019***

1. External Project Evaluator for the **European Commission**, **Horizon 2020** – Call: H2020-LC-CLA-2018-2019-2020 – 2$^{st}$ Stage.

2. External Project Evaluator for the Multidisciplinary Review Panel for the New Frontiers in Research Fund (NFRF) – Exploration 2019 Competition. **NRCC**, **Canada**.

3. External Project Evaluator for the **National Science Centre** (NCN) of the Polish Ministry of Science and Higher Education, Program OPUS-18, **Poland**.

4. External Project Evaluator for the **European Commission**, **Horizon 2020** – Call: H2020-LC-CLA-2018-2019-2020 – 1st Stage.

5. External Project Evaluator for the **Italian Antarctic Committee** – Commissione Scientifica Nazionale per l'Antartide, Programma Nazionale di Ricerca in Antartide, CSNA-PNRA, **Ital**y.

***2018***

1. External Project Evaluator for Dipartimento per la formazione superiore e per la Ricerca. **Direzione Generale per il Coordinamento**, **la promozione e la valorizzazione della Ricerca** – Ministero del´ Istruzione del' Università e della Ricerca, PRIN 2017, **Italy**.

2. External Project Evaluator for the **Italian Antarctic Committee** – Commissione Scientifica Nazionale per l'Antartide, Programma Nazionale di Ricerca in Antartide, CSNA-PNRA, **Italy**.

3. External Project Evaluator for XXIII Regular call for proposals on Antarctic Science and Technology Research projects from the Chilean Antarctic Institute, **INACH**, **Chile**

***2015***

1. External Project Evaluator for XX Regular call for proposals on Antarctic Science and Technology Research projects from the Chilean Antarctic Institute, **INACH**, **Chile**.

***2014***

1. External Project Evaluator for **ArcticNet Projects Phase 4**. ArcticNet is a Network of Centres of Excellence of Canada, **Canada**.

2. External Project Evaluator of the **Fundação para a Ciência e Tecnologia** - Joint R&D Project grants, **Portugal**.

**Since 2011**

1. Research Grant Expert Evaluator of the Grants for the Young Polar Research Scientists - Portuguese Polar Program.

***2011***

1. Research Programs Expert Evaluator of the **National Council for Scientific Research of Romanian** Government, **Romania**.

# 6. EDUCATION AND OUTREACH

1. Participation in the RTP2 Program “Biosfera” on the theme “The Cryosphere”. February 2022.
2. Participation in several “Noite Europeia dos Investigadores” organized by the Pavilion of Knowledge, Lisbon, Portugal.
3. Participation in Polar Education outreach activities in Basic and Secondary Schools during the International Polar Weeks. Lectures with activities for students, namely:
    - *The Polar Regions: lectures and activities for 7º, 8º and 9º grades*
    - *Permafrost in a changing Arctic for 10º, 11º and 12º grades*
4. Participation with Lectures in Seminars for high school teachers
5. Participation with Lectures in Science Outreach Activities at the “Pavilhão do Conhecimento – Ciência Viva”.
6. Participation in “*Laboratórios Abertos*” with a lecture for high school students organized by Department of Chemical Engineering of Instituto Superior Técnico (2017, 2018 and 2021)

Lisbon, on February 10, 2022