CURRICULUM VITAE (maximum 4 pages)

CV date	05/05/2018

Part A. PERSONAL INFORMATION

First and Family name	Leire Kortazar Oliver		
Social Security, Passport, ID number	78937930K	Age	30
Researcher numbers	Researcher ID	C-8242-2017	
	Orcid code	0000-0002-2922-429X	

A.1. Current position

Name of University/Institution	University of the Basque Country (UPV/EHU)			
Department	Analytical Chemistry			
Address and Country	Barrio Sarriena s/n 48940 Leioa (Bizkaia)			
Phone number	+34 946015551	E-mail	leire.kortazar@ehu.eus	
Current position	Post-Doctoral researcher	From	01/05/2018	
Espec. cód. UNESCO	230101			
Palabras clave	Estuary Acidification, Chemometrics, Potentiometry, UV-Vis Spectrophotometry, Solution Equilibria, Raman			

A.2. Education

PhD	University	Year
PhD. Doctorate program in Environmental Contamination and Toxicology	UPV/EHU	2018
Master degree in Environmental Contamination and Toxicology	UPV/EHU	2012
Degree in Chemistry	UPV/EHU	2011

A.3. JCR articles, h Index, thesis supervised…

Total citations: 15 (Scopus)
Articles: 6
Books: 1
h-index: 3 (Scopus)
Master thesis supervised: 3
Bachelor's thesis supervised: 4

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

I joined the IBeA research group of the Analytical Chemistry Department (UPV/EHU) in 2010 after being awarded a collaboration grant offered by the Basque Government. I worked then improving the laboratory practices of the course in *Experimentation in Analytical Chemistry*. Meanwhile, I collaborated with a PhD student helping her with the determination of heavy metals in polluted soil samples. In 2012, after finishing the degree in chemistry I enrolled in the master's degree in Environmental Contamination and Toxicology at the UPV/EHU. After the master, I made a short stay in the *University of Las Palmas de Gran Canaria* to learn how to use the VINDTA 3C system for the determination of the total alkalinity and dissolved inorganic carbon that the research group I joined bought soon after. The 1st of January of 2014 I started my doctoral thesis work with the help of a grant awarded by the Basque Government. In October 2014, I spent 4 weeks in the National Oceanographic Centre de Southampton (United Kingdom) to improve the knowledge on the VINDTA 3C system and the data treatment. In October 2015, I stayed for 5 weeks in the University of Messina (Italy) to learn about the calculation of stability constants (pk_a) at different ionic strengths for its application in the calculation of the alkalinity in estuarine waters. In May 2016, I stayed for 3 months in the *GEOMAR Helmholtz Centre for Ocean Research* in Kiel (Germany) where I

tried to study the mobility of heavy metals from polluted sediments to the water column and from there to the mussel shells under different acidification conditions. The mussel shells were studied using LA-ICP-MS. Although not totally conclusive results were obtained, this stay was helpful to learn how to grow mussels and study their shells, which has led to its continuation until now. In 2016 I started working in an international project about high mountain lakes in the Pyrenees in which I studied the carbonate system in the lakes at different altitudes. During 2017, I started working on the removal of boron from seawater by liquid-liquid extraction using ionic liquids, where the effects of pH and the quantity of the organic solvent in which the ionic liquid was dissolved were studied. The 9th of March of 2018, I presented and defended my PhD entitled "Development and Implementation of New Analytical Methodologies for the Study of Acidification in Estuaries". The thesis obtained a mark of *Excellent* with *Cum Laude* and *International PhD* mentions. The main objective of the thesis was to study and implement adequate ways to treat the potentiometric data for the exact determination of alkalinity in estuarine samples with variable salinities. For that purpose, an appropriate set of stability constants for the CO_2 system was stablished. For the determination of the alkalinity different approaches were studied for the potentiometric data treatment. In this work, an equation for the ionic strength dependence of the pk_a of the phenol red indictor dye phenol red was also developed for the spectrophotometric determination of pH in estuarine waters due to its lower pk_a. Finally, the variation of nutrients, physico-chemical parameters and the parameters of the CO_2 system was studied.

Part C. RELEVANT MERITS

C.1. Publications (including books)

(1) Leire Kortazar; Demetrio Milea; Olivia Gómez-Laserna; Luis Angel Fernández. Accurate determination of total alkalinity in estuarine waters for acidification studies, TrAC - Trends in Analytical Chemistry, 2019, 114,69-80.
(2) Leire Mijangos; Haizea Ziarrusta; Oihana Ros; Leire Kortazar; Luis Angel Fernández; Maitane Olivares; Olatz Zuloaga; Ailette Prieto; Nestor Etxebarria. Occurrence of emerging pollutants in estuaries of the Basque Country: Analysis of sources and distribution, and assessment of the environmental risk, Water Research, 2018, 147, 152-163 (Article).
(3) Olivia Gómez-Laserna, Paola Cardiano, Marta Diez-Garcia, Nagore Prieto-Taboada, Leire Kortazar, María Ángeles Olazabal, Juan Manuel Madariaga, Multi-analytical methodology to diagnose the environmental impact suffered by building materials in coastal areas, Environmental Science and Pollution Research, 2018, 25 (5), 4371-4386 (Article).
(4) Leire Kortazar, Sara Alberdi, Eithne Tynan, Luis Angel Fernández, An adapted flow injection analysis method of phosphate for estuarine samples avoiding matrix effects, Microchemical Journal, 2016, 124, 416-421 (Article).
(5) Leire Kortazar, Janire Sáez, Josu Agirre, Jon Kepa Izaguirre, Luis Angel Fernández, Application of multivariate analysis to the turbidimetric determination of sulphate in seawater, *Analytical Methods*, 2014, 6 (10), 3510 - 3514 (Article).
(6) Leire Kortazar, Janire Sáez, Luis A. Fernández, Chemometric Applications of the H+ Affinity Spectra for Seawater Studies: Classification and Multivariate Calibration to Understand Sea and Estuary Water Chemistry, LAP Lambert Academic Publishing, Germany, 2013 (Book).
(7) Leire Kortazar, Janire Saez, Elisa Astigarraga, Naiara Goienaga, Luis Angel Fernandez, Chemometrics for the Classification and Calibration of Seawater using the H^+ Affinity Spectrum, Talanta, 2013, 116, 108-114 (Article).

C.2. Research projects and grants

(1) Project title: Grupo Consolidado, Tipo A ("IBeA en Medio Ambiente Físico, Urbano Construido, Recursos Naturales y Salud")
Financing entity: Basque Government
Start date: 2013 End date: 2018

Responsible researcher: Juan Manuel Madariaga Mota
Amount of the subsidy: 601.798,00 Euro
(2) Project title: Fortalecimiento de las capacidades de diagnóstico medioambiental del profesorado y alumnado de la escuela de ingeniería en gestión ambiental de la Pontificia Universidad Católica del Ecuador Sede Esmeraldas (PUCESE), orientados a la mejora de los proyectos de investigación y vinculación con las comunidades de la zona norte de Esmeraldas
Financing entity: UPV/EHU
Start date: 2014 End date: 2015
Responsible researcher: Daniel Zuazagoitia
Amount of the subsidy: 15.000 Euro
(3) Project title: Puesta en Valor del Edificio Histórico Galerías de Punta Begoña (Getxo): Aspectos Químicos de los Materiales, su Evolución en el entorno Histórico-Temporal del Inmueble y su posible tratamiento de conservación.
Financing entity: Getxo City Council
Start date: 10/03/2014 End date: 10/03/2016
Responsible researcher: Juan Manuel Madariaga Mota
Amount of the subsidy: 937.119,95 Euro for our group
(4) Project title: Puesta en Valor del Edificio Histórico Galerías de Punta Begoña (Getxo): Aspectos Químicos de los Materiales, su Evolución en el entorno Histórico-Temporal del Inmueble y su posible tratamiento de conservación.
Financing entity: Getxo City Council
Start date: 01/01/2016 End date: 31/12/2018
Responsible researcher: Juan Manuel Madariaga Mota
Amount of the subsidy: 717.094,14 Euro for our group
(5) Project title: Soluciones basadas en líquidos iónicos para diversificar las oportunidades de la industria vasca (LISOL).
Financing entity: Basque Government
Start date: 01/03/2016 End date: 30/04/2017
Responsible researcher: Luis Ángel Fernández Cuadrado
Amount of the subsidy: 57.065,3 Euro for our group from 664.809,92 Euro in total
(6) Project title: Red de observatorios de ecosistemas sensibles (lagos, turberas) al cambio climático en el Pirineo (REPLIM)
Financing entity: European Comunity, Interreg Program V A Spain-France-Andorra (POCTEFA) 2014-2020 (Ref: EFA056/15)
Start date: 01/07/2016 End date: 30/06/2019
Responsible researcher: Alberto de Diego (in UPV/EHU-QA); Dr. Blas Valero (General Coordinator)
Amount of the subsidy: 756.036 Euro for our group from 2.384.218 Euro in total
(7) Project title: Síntesis, caracterización y validación de productos híbridos sostenibles nano reforzados de carácter multifuncional para la recuperación y protección de superficies pétreas (PHETRUM, ref. CTQ2017-82761-P).
Financing entity: MINECO
Start date: 01/01/2018 End date: 31/12/2020
Responsible researcher: María Angeles Olazabal Dueñas
Amount of the subsidy: 132.000 euros Euro

C.3. Contracts

(1) Trainee Researcher (personal investigador en formación). From 01/01/2014 to 31/12/2017. UPV/EHU (Grant given by the Basque Government).
(2) Post-Doctoral researcher (Personal Investigador Doctor). From 01/05/2018 to 30/04/2019. UPV/EHU.
(3) Post-Doctoral researcher (Personal Investigador Doctor). From 01/06/2019 to 31/05/2021. UPV/EHU.

C.4. Participation in training and workshops

(1) MARIANDA Workshop 2016. The topic of the workshop was the analytical determination of the parameters of the oceanic carbon system DIC (dissolved inorganic carbon), and AT (total alkalinity). The analytical methods of coulometric and infra-red quantification of CO_2 (for DIC) and potentiometric titration (for AT) were covered. In particular, operation and trouble-shooting of the analytical instruments SOMMA, VINDTA, and AIRICA were part of the practical training. 25th-29th of April 2016, Kiel, Germany, 40h.
(2) Training on Hazardous Waste Management in the UPV/EHU: procedure, classification and minimisation. 22nd of June 2015, UPV/EHU, 2h.
(3) Training on "Introduction to Refworks: program for the management of bibliographic references. 17th of February 2015, UPV/EHU, 2h.
(4) Training on Fundamentals and Applications of Raman Spectroscopy. 14th-18th of October 2013, UPV/EHU, 20h.
(5) 4th training on Introduction to the REACH regulation. 14th-16th of May 2012, UPV/EHU, 20h.

C.5. International and national research mobilities (pre-doctoral)

(1) Helmholtz Centre for Ocean Research in Kiel (Germany). From 02/02/2016 to 29/07/2016.
(2) Department of Chemical, Biological, Pharmaceutical and Environmental Science at the University of Messina in Messina (Italy). From 01/10/2015 to 06/11/2015
(3) National Oceanographic Centre of Southampton in Southampton (United Kingdom). From 7/10/2014 to 8/11/2014
(4) Faculty of Oceanographic Science at the University of Las Palmas de Gran Canaria in Las Palmas de Gran Canaria (Spain). 12th-25th of November 2013.

C.6. Supervised Master and Bachelor Theses

(1) Master thesis of Maialen Esnaola in the Master's Degree in Environmental Contamination and Toxicology, entitled "Determination of the relation of the stability constants of the indicator dye phenol red with the ionic strength", 2016/2017, UPV/EHU. Grade: B.
(2) Master thesis of Álvaro Morales in the Master's Degree in Environmental Contamination and Toxicology, entitled "Optimization of the Azomethine-H method for Boron determination in estuarine waters by UV-VIS spectrophotometry (Batch and FIA methods)", 2016/2017, UPV/EHU. Grade: C.
(3) Master thesis of Andrea Ramos in the Master's Degree in Environmental Contamination and Toxicology, entitled "**Effects of acidification on metal mobility in estuarine sediments**", 2016/2017, UPV/EHU. Grade: B.
(4) Bachelor thesis of Maialen Esnaola in the Degree of Chemistry, entitled "A new point of view to determine alkalinity in estuarine waters", 2015/2016, UPV/EHU. Grade: B.
(5) Bachelor thesis of Sara Alberdi in the Degree of Chemistry, entitled "Validation of analytical methods for the determination of ammonium, nitrate and organic carbon in estuarine waters", 2014/2015, UPV/EHU. Grade: A.

C.7. OTHERS

- Teacher at the UPV/EHU in the subject *Analytical Chemistry I* in the Degree of Chemistry, 3.2 credits. Scholar year 2016/2017.
- Language title in Basque language EGA (equivalent to C1)
- 13 Scientific Communications in International Symposiums such as ISMEC, EMEC, GeoRaman, etc: 10 poster communications and 3 oral communications.
- Organisation of the TECHNART 2017 International conference held in Bilbao, 2-6 of May 2017.
- Participation within the scientific diffusion activities: Science Week of the UPV/EHU in 2012 and in 2016.
- Participation in the 6th Research Conference of the Faculty of Science and Technology, 14-15 of March 2018, (UPV/EHU).

- Assistance to the XXIII International Symposium on Metal Complexes ISMEC 2012. 18-22 of June 2012, Lisbon, Portugal.