CURRICULUM VITAE (maximum 4 pages)

CV date	20/08/2018

Part A. PERSONAL INFORMATION

First and Family name	FLORENCIO FERNÁNDEZ MARZO		
Social Security, Passport, ID number	15957346s	Age	55 (27/11/1962)
Researcher numbers	Researcher ID	I-1636-2015	
	Orcid code	0000-0002-0525-3256	

A.1. Current position

Name of University/Institution	UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)			
Department	Chemical Engineering and Environmental Department Faculty of Engineering, Gipuzkoa			
Address and Country	PLAZA EUROPA Nº1, 20018 DONOSTIA-SAN SEBASTIÁN, GIPUZKOA			
Phone number	943017184	E-mail	florencio.fernandez@ehu.eus	
Current position	Tenured Professor	From	1/3/2011	
Espec. cód. UNESCO	3308 ; 3303 ; 23104			
Palabras clave	Corrosion, Fuel cells, analytical electrochemical techniques			

A.2. Education

PhD	University	Year
Chemical Science	UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU)	2002

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

- Six-year research periods: 2 (last period evaluated: 2003-2008, granted: 38/06/2009)
- Doctoral theses supervised in the last 10 years: 2

Data from: http://www.researcherid.com/rid/I-1636-2015

- Total cites: 261
- Average cites/year: 9,67 cites/year
- h index: 7

Data from: https://www.scimagojr.com/

- Total papers published in the first quartile (Q1): 13

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

Dr. Florencio Fernandez Marzo obtained his degree in Chemistry, with specialty in petrochemistry, and his phD in chemical Science at the University of the Basque Country. He is currently Tenured Professor in the Chemical Engineering and Environment department of the Polytechnic University School of Donostia-San Sebastián. Regarding his teaching career, he has taught in the degrees of Chemical Engineering, Mechanical Engineering, Electrical and Civil Engineering. Some of the subjects taught are Chemical Reaction Engineering, Environmental Engineering, Industrial Chemistry and Environmental Technologies.

His doctoral thesis focused on the preparation, characterization and optimization of new amorphous metal materials (obtained by rapid quenching) and nanocrystals, the latter obtained by thermal treatment of the amorphous precursors. In this line, he has developed works related to the study of the influence of thermal treatments and manufacturing parameters on the electrochemical behaviour of these nanocrytalline electrodes. The electrochemical techniques used in the experimental studies cover both, direct current (potentiodynamic polarization, voltammetry) and alternating (Electrochemical Impedance Spectroscopy). In addition, he ha participated in projects related to the determination of metals, trace in aqueus solutions through the use of stripping voltammetry and mercury drop electrode. At present, his research activity is focused on the use of new metallic materials (Aluminum, stainless steels) coated with Ni and NiCr for used as bipolar plates in high temperature polymer electrolite fuel cell (PEM), as efficient substitutes for graphite bipolar plates. In this sense, the fundamental objetive is to improve the useful life of the device, thus

increasing the performance of the PEM fuel cells. To do this, I combine corrosion studies, direct and alternating current electrochemical techniques, surface contact resistance measurements, contact angle, surface roughness and microscopy studies.
Dr. Florencio Fernandez Marzo has participated in various national and regional research projects. Also, has attended several nationals and internationals conferences. The results obtained have been publicated in different international scientific journals. As a result of his research he has been recognized 2 six-years as researcher. Finally, he has shared patent in the field of bipolar plates for PEM fuel cells (ES2395300 (A2) — 2013-02-11).

Part C. RELEVANT MERITS

C.1. Publications (including books): Energy and materials research line

1. MIKEL ALBERRO ASTARBE; FLORENCIO FERNANDEZ MARZO; ANGEL PEREZ MANSO; VICTORIANO DOMINGUEZ; JOSE BARRANCO; XABIER GARIKANO. 2015. Electronic modeling of a PEMFC with logarithmic amplifiers. International Journal of Hydrogen Energy. 40 - 9, pp.3708-3718.
2. ANGEL PEREZ MANSO; FLORENCIO FERNANDEZ MARZO; JOSE BARRANCO RIVEROS; XABIER GARIKANO OSINAGA; MIKEL GARMENDIA MUJIKA. 2012. Influence of geometric parameters of the flow fields on the performance of a PEM fuel cell. A review. International Journal of Hydrogen Energy. 37 - 20, pp.15256-15287.
3. ANGEL PEREZ MANSO; FLORENCIO FERNANDEZ MARZO; MIKEL GARMENDIA MUJIKA;JOSE ENRIQUE BARRANCO RIVEROS;AGUSTIN LORENZO; 2011. Numerical analysis of the influence of the channel cross-section aspect ratio on the performance of a PEM fuel cell with serpentine flow field design. International Journal of Hydrogen Energy. 36 - 11, pp.6795-6808.
4. ANGEL PEREZ MANSO; FLORENCIO FERNANDEZ MARZO; ANGEL RODRIGUEZ PIERNA; JOSE ENRIQUE BARRANCO RIVEROS; AGUSTIN LORENZO; JAVIER BARROSO. 2009. Design optimization of a polymer electrolyte membrane fuel cell, PEMFC. Journal of New Materials for Electrochemical Systems. 12 - 2-3, pp.133-137.
5. FLORENCIO FERNANDEZ MARZO; ANGEL RODRIGUEZ PIERNA; J. BARRANCO RIVEROS; AGUSTIN LORENZO MARTIN; JAVIER BARROSO; J. A. GARCIA; ANGEL PEREZ MANSO. 2008. Determination of trace metal release during corrosion characterization of FeCo-based amorphous metallic materials by stripping voltammetry. New materials for GMI biosensors. Journal of Non-Crystalline Solids. 354 - 47-51, pp.5169-5171.
6. FLORENCIO FERNANDEZ MARZO; ANGEL AGUSTIN RODRIGUEZ PIERNA; J. BARRANCO; G. VARA; ANGEL PEREZ MANSO; T. GOMEZ ACEBO. 2007. Optimization of the microstructure and corrosion resistance of Finemet type alloys in KOH solutions. Journal of Non-Crystalline Solids. 353 - 8-10, pp.875-878.
7. ANGEL PEREZ MANSO; FLORENCIO FERNANDEZ MARZO; JOSE BARRANCO RIVEROS; MIKEL GARMENDIA MUJIKA. 2011. Application of the techniques of computational fluid dynamics in the design of bipolar plates for PEM fuel cells. Book: Computational fluid dynamics modeling in development of renewable energy applications, pp. 377-402. Ed. International energy and Environment foundation, ISBN: 978-1466231313.

C.2. Research projects and grants

YEAR: 2006
TITLE: LABORATORIO DE QUÍMICA INDSUTRIAL E INGENIERÍA ELECTROQUÍMICA (GRUPO DE VIDRIOS METÁLICOS Y NANOTECNOLOGÍAS)
FUNDED BY: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
DURATION: 18/12/2006 - 30/03/2010
PR: ANGEL AGUSTIN RODRIGUEZ PIERNA
AMOUNT: 121.275,00 €

YEAR: 2005
TITLE: NUEVOS BIOMATERIALES DE ALTA SENSIBILIDAD GMI BASADOS EN ALEACIONES METÁLICAS AMORFAS Y NANOESTRUCTURADAS FECOSIBCR
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA

DURATION: 01/01/2005 - 30/06/2007
PR: FLORECIO FERNANDEZ MARZO
AMOUNT: 51.786,44 €

YEAR: 2006
TITLE: LABORATORIO DE QUÍMICA INDSUTRIAL E INGENIERÍA ELECTROQUÍMICA (GRUPO DE VIDRIOS METÁLICOS Y NANOTECNOLOGÍAS)
FUNDED BY: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
DURATION: 18/12/2006 - 30/03/2010
PR: ANGEL AGUSTIN RODRIGUEZ PIERNA
AMOUNT: 121.275,00€

YEAR: 2006
TITLE: ESTUDIO DE LA RESISTENCIA A LA CORROSIÓN DE ALEACIONES METÁLICAS AMORFAS DE TIPO FECOSIBCR, MEDIANTE EIS, COMO PROTOTIPOS PARA BIOSENSORES DE EFECTO GMI
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA
DURATION: 01/01/2006 - 30/06/2008
PR: FLORENCIO FERNANDEZ MARZO
AMOUNT: 27.490,00€

YEAR: 2007
TITLE: BIOMEIS: ESPECTROSCOPÍA DE IMPEDANCIA ELECTROQUÍMICA EN LA CARACTERIZACIÓN DE BIOMATERIALES BASADOS EN EFECTO GMI
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA
DURATION: 01/10/2007 - 30/09/2008
PR: FLORENCIO FERNANDEZ MARZO
AMOUNT: 39.000,00€

YEAR: 2007
TITLE: ESPECTROFOTÓMETRO DE MASAS ACOPLADO A CROMATÓGRAFO DE GASES GCMS-QP2010S
FUNDED BY: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
DURATION: 12/07/2007 - 31/12/2007
PR: ANGEL AGUSTIN RODRIGUEZ PIERNA
AMOUNT: 48.000,00€

YEAR: 2009
TITLE: ESPECTROSCOPÍA DE MASAS ELECTROQUÍMICAS DIFERENCIAL (DEMS)
FUNDED BY: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
DURATION: 01/01/2010 - 31/12/2012
PR: ANGEL AGUSTIN RODRIGUEZ PIERNA
AMOUNT: 39.576,34€

YEAR: 2010
TITLE: MATERIALES METÁLICOS AMORFOS Y NANOESTRUCTURADOS
FUNDED BY: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA
DURATION: 01/01/2009 - 31/12/2009
PR: ANGEL AGUSTIN RODRIGUEZ PIERNA
AMOUNT: 141.000 €

YEAR: 2013
TITLE: DISEÑO Y FABRICACIÓN DE UN SISTEMA DE PILA DE COMBUSTIBLE DE TIPO PEM DE 250 VATIOS PARA APLICACIÓN EN VEHÍCULO DE TRANSPORTE DE ÚLTIMA MILLA.
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA
DURATION: 01/01/2013 - 30/06/2014
PR: FLORENCIO FERNANDEZ MARZO
AMOUNT: 5.581,67€

YEAR: 2016
TITLE: MICA-PEM: ADVANCED MANUFACTURING, INTEGRATION AND CONTROL METHODS FOR A HEAT AND POWER UNIT BASED ON A HIGH TEMPERATURE PEM FUEL CELLS AND ITS APPLICATION.
REFERENCE: DPI2015-69286-C3-1-R.
FUNDED BY: MINISTRY OF ECONOMY
DURATION: 2016 - 2018
PR: FÉLIX BARRERAS TOLEDO
AMOUNT: 167,706,00€

YEAR: 2017
TITLE: ACCIÓN PARA LA INVESTIGACIÓN DE LAS POSIBILIDADES DE VALORIZACIÓN DEL POLIETILENO TEREFTALATO (PET) RECOGIDO COMO RESIDUO MARINO.
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA
DURATION: 09/06/2017 - 31/12/2017
PR: CRISTINA PEÑA RODRÍGUEZ
AMOUNT: 60.000,00€

YEAR: 2018
TITLE: INVESTIGACIÓN SOBRE LAS POSIBILIDADES DE BIODEGRADACIÓN Y VALORIZACIÓN DEL POLIETILENO, Y DE RECICLADO DE COMPLEJOS LAMINADOS DE POLIETILENO/POLI (ETILEN TEREFTALATO) (PE/PET), PARTIENDO DE POLIETILENO VÍRGEN, POST-INDUSTRIAL Y MARINO.
FUNDED BY: DIPUTACIÓN FORAL DE GIPUZKOA
DURATION: 17/05/2018 - 31/12/2018
PR: CRISTINA PEÑA RODRÍGUEZ
AMOUNT: 60.000,00€

C.3. Contracts

TÍTULO DEL CONTRATO: OPTIMIZACIÓN Y DISEÑO DE UNA PLANTA PILOTO PARA LA OBTENCIÓN DE TCCA (ACIDO TRICLOROISOCIANÚRICO).
EMPRESA/ADMINISTRACIÓN FINANCIADORA: ELECTROQUÍMICA DE HERNANI S.A. (EHER).
DURACIÓN: 2001-2003
TIPO DE PARTICIPACIÓN: INVESTIGADOR
INVESTIGADOR RESPONSABLE: Ángel Rodriguez Pierna

C.4. Patents

Authors: ANGEL PEREZ MANSO; FLORENCIO FERNANDEZ MARZO; MIKEL GARMENDIA MUJIKA; AINHOA EZEIZA RAMOS
Publication number: ES 2 395 300 A2
Title: PLACA PARA PILAS DE COMBUSTIBLE CON CAMARA DE DISTRIBUCION DE REACTIVO
Countries: ESPAÑA
Date: 11/01/2011
Entity holder: UNIVERSIDAD DEL PAÍS VASCO/EUSKAL HERRIKO UNIBERTSITATEA

C.5, C.6, C.7… (e. g., Institutional responsibilities, memberships of scientific societies…)

- International Society of Electrochemistry (ISE) member
- Asociación Española Pilas Combustible (APPICE) member
- Real Sociedad Española de Química (RSEQ) member
- Asociación Española de Evaluación de Impacto Ambiental (AEEIA) member