

Part A. PERSONAL INFORMATION		CVA date		02-10-2019
Name and surname	Manuela López Tenés			
DNI/NIE/Passport		Age	55	
Researcher's identification number	Researcher ID	R-6940-2018		
	Orcid	0000-0002-9572-708X		

A.1. Current professional situation

Organism	Universidad de Murcia			
Dpto./Center	Dpto. de Química Física / Facultad de Química			
Address and Country	Campus de Espinardo, 30100 Espinardo Murcia (Spain)			
Land line phone	868887428	Email	manuela@um.es	
Professional category	Associate Professor	Start date	1997	
UNESCO code	221005-3			
Keywords	Electrochemistry, Physical Chemistry			

A.2. University Education

BSc/Degree/MSc/Doctorate	University	Year
BSc in Chemistry	University of Murcia	1987
Doctorate in Chemistry	University of Murcia	1990

A.3. General indicators of the quality of scientific production (see instructions)

Number of six-year research periods: **4** (the last one in 2016)

Number of doctoral thesis directed (last 10 years):

Total citations (Web of Science-Scopus, October 2019): **400**

Average number of citations/year 2014-2018 (Scopus, October 2019): **21**

Total publications in the first quartile (Web of Science-Scopus, October 2019): **30**

h-index (Scopus, October 2019): **11**

Part B. FREE SUMMARY OF CV (maximum 3500 characters, including blank spaces)

Research lines

- 1.- Analytical and numerical resolution of differential diffusive and kinetic-diffusive equations for electrodes of different geometries, sizes and different boundary conditions.
- 2.- Study of charge transfer processes with different electrochemical techniques and design of new techniques.
- 3.- Homogeneous kinetics coupled to charge transfer. Multistep reactions.
- 4.- Electrocatalysis of molecules and biomolecules confined in a surface. Sensors.
- 5.- Study of homogeneous catalytic processes and other reaction mechanisms in macroelectrodes, microelectrodes and nanoelectrodes.
- 6.- Study of the electrochemical behavior of ITIES. Facilitated ion transfer. MicroITIES.

Global merits

- **48** publications, with a large number corresponding to journals within the first quartile of the areas of Physical Chemistry, Analytical Chemistry, Electrochemistry and Materials Science of the JCR.
- Participation in **23** competitive research projects.
- 40 Communications to congresses.
- 3 Bachelor's Thesis.
- Collaboration fellowship of MEC, Training of the research staff and improvement of professors in foreign research centers.
- Extraordinary Doctorate Award (Murcia, 1990).
- Prize to Novel Researchers of the Specialized Group of Electrochemistry of the R.S.E.Q., 1992.
- Three-month stay at the Department of Physical Chemistry and Applied Thermodynamics of the University of Córdoba, carrying out experimental studies on mixed monolayers (1993). Supervisor: Luis Camacho.

- One-year postdoctoral stay at the Electrochemistry Laboratory of the Pierre and Marie Curie University of Paris (1995-96). Supervisors: Nicolas Fatouros and Denise Krulic. Subject: "Study of the adsorption in the electrode-solution interface with potentiostatic techniques".
- Reviewer of "Journal of Electroanalytical Chemistry" (ISSN: 1572-6657), "Electroanalysis" (ISSN: 1040-0397), "Electrochimica Acta" (ISSN: 0013-4686)..
- Concession of all the research periods requested (4).
- Positive evaluation of 5 teaching periods.
- Participation in the organization of R + D + i activities.

Part C. MOST RELEVANT MERITS (classified by type)

C.1. Publications (10 of the most representative of the last 10 years)

1. Authors: M. LÓPEZ-TENÉS, E. LABORDA, A. MOLINA, R.G. COMPTON

Title: Guidelines for the voltammetric study of electrode reactions with coupled chemical kinetics at an arbitrary electrode geometry.

Reference: Journal: Analytical Chemistry

JCR Ranking: Chemistry, Analytical.

Impact Index (JCR 2018): 6.350

Position 2018: 7/84 (Q1)

Type: Article

Nº of citations: 1

Volume: 91

Initial, final pages: 6072-6079

Date: 2019

Place of publication: USA

2. Authors: A. MOLINA, M. LÓPEZ-TENÉS, E. LABORDA

Title: Unified theoretical treatment of the E_{irrev} , CE, EC and CEC mechanisms under voltammetric conditions.

Reference: Journal: Electrochemistry Communications

JCR Ranking: Electrochemistry

Impact Index (JCR 2018): 4.197

Position 2018: 7/26 (Q2)

Type: Article

Nº of citations: 3

Volume: 92

Initial, final pages: 48-55

Date: 2018

Place of publication: USA

3. Authors: E. TORRALBA, M. LÓPEZ-TENÉS, E. LABORDA, A. MOLINA

Title: Double pulse voltammetric study of the IT- C_{eq} C mechanism underlying the oxygen reduction and hydrogen evolution reactions at liquid/liquid interfaces.

Reference: Journal: Electrochimica Acta

JCR Ranking: Electrochemistry

Impact Index (JCR 2018): 5.383

Position 2018: 5/26 (Q1)

Type: Article

Nº of citations: 1

Volume: 265

Initial, final pages: 638-650

Date: 2018

Place of publication: GREAT BRITAIN

4. Authors: J. GONZÁLEZ, A. MOLINA, F. MARTÍNEZ-ORTIZ, M. LÓPEZ-TENÉS, R.G. COMPTON

Title: Analytical approach to the transient and steady-state Cyclic Voltammetry of non-reversible electrode processes. Defining the transition from macro to microelectrodes.

Reference: Journal: Electrochimica Acta

JCR Ranking: Electrochemistry

Impact Index (JCR 2016): 4.798

Position 2016: 4/29 (Q1)

Type: Article

Nº of citations: 3

Volume: 213

Initial, final pages: 911-926

Date: 2016

Place of publication: GREAT BRITAIN

5. Authors: M. LÓPEZ-TENÉS, J. GONZÁLEZ, A. MOLINA

Title: Two-electron transfer reactions in Electrochemistry for solution soluble and surface-confined molecules: a common approach.

Reference: Journal: Journal of Physical Chemistry C

JCR Ranking: Chemistry, Physical

Impact Index (JCR 2014): 4.772

Position 2014: 29/139 (Q1)

Type: Article

Nº of citations: 9

Volume: 118

Initial, final pages: 12312-12324

Date: 2014

Place of publication: USA

6. Authors: J. GONZÁLEZ, A. MOLINA, M. LÓPEZ-TENÉS, F. KARIMIAN

Title: Reversible surface two-electron transfer reactions in Square Wave Voltcoulometry. Application to the study of the reduction of Polioxometalate $[PMo_{12}O_{40}]^{3-}$ immobilized at a Boron Doped Diamond electrode

Reference: Journal: Analytical Chemistry



- JCR Ranking: Chemistry, Analytical. Impact Index (JCR 2013): 5.825
Position 2013: 4/76 (Q1) Type: Article N° of citations: 8
Volume: 85 Initial, final pages: 8764-8772 Date: 2013
Place of publication: USA
- 7. Authors: J. GONZÁLEZ, M. LÓPEZ-TENÉS, A. MOLINA**
Title: Non-nernstian two-electron transfer reactions for immobilized molecules. A theoretical study in Cyclic Voltammetry.
Reference: Journal: Journal of Physical Chemistry C
JCR Ranking: Chemistry, Physical. Impact Index (JCR 2013): 4.835
Position 2013: 29/136 (Q1) Type: Article N° of citations: 6
Volume: 117 Initial, final pages: 5208-5220 Date: 2013
Place of publication: USA
- 8. Authors: A. MOLINA, J. GONZÁLEZ, C. M. SOTO, M. LÓPEZ-TENÉS**
Title: Transient and steady state behaviour of electrochemical reactions preceded by a chemical step at spherical electrodes and microelectrodes. A chronopotentiometric study.
Reference: Journal: Journal of Electroanalytical Chemistry
JCR Ranking: Chemistry, Analytical Impact Index (JCR 2010): 2.733
Position 2010: 20/73 (Q2) Type: Article N° of citations: 0
Volume: 645 Initial, final pages: 74-80 Date: 2010
Place of publication: SWITZERLAND
- 9. Authors: A. MOLINA, J. GONZÁLEZ, M. LÓPEZ-TENÉS, C. M. SOTO**
Title: Theoretical and experimental study of homogeneous catalytic oxidation of nicotinamide adenine dinucleotide (NADH) at spherical gold electrodes using linear sweep voltammetry and chronopotentiometry.
Reference: Journal: Electroanalysis
JCR Ranking: Chemistry, Analytical Impact Index (JCR 2009): 2.630
Position 2009: 18/70 (Q2) Type: Article N° of citations: 2
Volume: 21 Initial, final pages: 740-748 Date: 2009
Place of publication: GERMANY
- 10. Authors: A. MOLINA, M. LÓPEZ-TENÉS, C. M. SOTO**
Title: Application of a power time current to the study of a catalytic mechanism in chronopotentiometry and reciprocal derivative chronopotentiometry. Advantages of a cyclic stationary response.
Reference: Journal: Electroanalysis
JCR Ranking: Chemistry, Analytical Impact Index (JCR 2008): 2.901
Position 2008: 15/70 (Q1) Type: Article N° of citations: 9
Volume: 20 Initial, final pages: 1175-1185 Date: 2008
Place of publication: GERMANY

C.2. Projects

1. Title of the project: Electrocatálisis molecular en diferentes interfases: análisis de la respuesta electroquímica (CTQ2015-65243-P). Funding entity: Ministerio de Economía y Competitividad. Duration: 2016-2018. Total amount: 46.000 Euros. Principal investigator: Joaquín González Sánchez. Number of researchers: 8
2. Title of the project: Advances in the study of charge transfer processes at static and dynamic micro- and nano-interfaces (19887/ Grupos de Excelencia de la Región de Murcia /15). Funding entity: Fundación SENECA (Comunidad Autónoma de la Región de Murcia). Duration: 2016-2019. Total amount: 250.000 Euros. Principal investigator: Ángela Molina Gómez. Number of researchers: 9
3. Title of the project: Estudio de procesos de transferencia de carga y procesos electrocatalíticos en macro, micro y nano interfases (19456/PI/14). Funding entity: Fundación SENECA (Comunidad Autónoma de la Región de Murcia). Duration: 2016-2018. Total amount: 85.600 Euros. Principal investigator: Ángela Molina Gómez. Number of researchers:

4



4. Title of the project: Electroquímica dinámica en interfases convencionales, micrométricas y nanométricas (CTQ2012-36700). Funding entity: Ministerio de Economía y Competitividad. Duration: 2013-2015. Total amount: 90.090 Euros. Principal investigator: Ángela Molina Gómez. Number of researchers: 7

5. Title of the project: Estudio de procesos de transferencia electrónica e iónica en diferentes superficies activas (CTQ2009-13023). Funding entity: Dirección General de Investigación (Ministerio de Ciencia e Innovación). Duration: 2010-2012. Total amount: 106.480,00 euros. Principal investigator: Ángela Molina Gómez. Number of researchers: 7

6. Title of the project: Avances en el desarrollo y diseño de técnicas electroquímicas (08813/PI/08). Funding entity: Fundación SENECA (Comunidad Autónoma de la Región de Murcia). Duration: 2009-2011. Total amount: 58.600,00 euros. Principal investigator: Ángela Molina Gómez. Number of researchers: 8

7. Title of the project: Estudio de la evolución de la respuesta transitoria hacia estacionaria de procesos interfaciales complejos. (CTQ2006-12552/BQU). Funding entity: Dirección General de Investigación (Ministerio de Ciencia y Tecnología). Duration: 2006-2009. Total amount: 122.210,00 euros. Principal investigator: Ángela Molina Gómez. Number of researchers: 5

C.5 Other achievements

- Member of the Spanish Royal Society of Chemistry (R.S.E.Q.), the Iberoamerican Society of Electrochemistry (S.I.B.A.E.) and the International Society of Electrochemistry (I.S.E.).
- Secretary of the Department of Physical Chemistry of the University of Murcia (1998).
- Treasurer of the Electrochemical Group of R.S.E.Q. (2002-2004).
- Academic Director of the University School of Tourism of Murcia (2008-2010).
- Director of the "Universidad Internacional del Mar". Summer courses at the University of Murcia (2009-2012).
- Teaching in the inter-university doctorate program "Electroquímica. Ciencia y Tecnología", with a Mention of Quality, during the 2006-2009 courses (Barcelona 2007, Alicante, 2008, Sevilla, 2009) and in the PhD program "Química" of the University of Murcia, with a Quality Award (www.um.es/electroquimica).
- Supervisor of End-of-degree works in Chemistry, Biochemistry and Chemical Engineering.
- Co-author of the text-guide of the subject: "Experimentación en Química Física". Publishing service of the University of Murcia, 2002.
- Book chapter: "Turismo y gestión de espacios protegidos". ISBN 978-84-9876-692-9. Tirant lo Blanch, 2010.
- Book chapter: "Renovación de destinos turísticos consolidados". ISBN 978-84-9004-101-7. Tirant Lo Blanch, 2011.
- Attendance to the scientific congress "Power our Future: The 1st International Forum on Progress and Trends in Battery and Capacitor Technologies". CIC energigune, Vitoria (Spain), March 20-21, 2012.
- Attendance to the scientific congress "ElecNano6. Electrochemistry at the nanoscale from basic aspect to applications". Université Paris Diderot, Paris (France), 26-28 May 2014.
- Member of international doctoral thesis tribunal. PhD student: Dongya Liu. Université Pierre et Marie Curie. Paris, November 2014.
- Attendance and oral communication at the 4th Congress of the Engineering of Energy Campus Mare Nostrum: "Almacenamiento y conversión de energía por vía electroquímica. Aplicación al vehículo eléctrico". Murcia, 2018.