

<b>Date of the CVA</b>
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16/05/2018
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## Section A. PERSONAL DATA

Name and Surname	Isabel María Pérez de Vargas Sansalvador		
DNI/NIE/Passport		Age	
Researcher's identification number	Researcher ID	L-1098-2016	
	Scopus Author ID		
	ORCID	0000-0002-3666-3231	

### A.1. Current professional situation

Institution	Universidad de Granada		
Dpt. / Centre	Química Analítica / Facultad de Ciencias		
Address	Department of Analytical Chemistry, 18071, Granada		
Phone	958240796	Email	<a href="mailto:isabelpdv@hotmail.com">isabelpdv@hotmail.com</a>
Professional category	Marie Curie Individual Fellowship	Start date	2017
UNESCO spec. code	230100 - Analytical chemistry; 330900 - Food technology		
Keywords	Analytic chemistry; Food chemistry; Gas sensors		

### A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Analytical Chemistry (Doctor Europeo- Cum Laude)	University of Granada	2011
Master in Chemistry	Universidad de Granada	2008
Certificado de Aptitud Pedagógica	Universidad de Granada	2006
Master Prevención de riesgos laborales	INEFE	2006
Degree in Chemistry	Universidad de Granada	2005

### A.3. General quality indicators of scientific production

- 389 total citations
- 18 publications in Q1
- H index = 11

## Section B. SUMMARY OF THE CURRICULUM

My scientific career began at the University of Granada (UGR) in 2006. Since then I have developed a passion for research, realising the importance of industrial engagement to make the research undertaken commercially viable.

I obtained a Master's degree in Chemistry (2008) which subsequently led me onto a PhD program at the UGR (Junta de Andalucía fellowship). I was awarded the "Excellent Cum Laude" (June 2011) which is a given to a candidate upon receiving the highest grade. During my PhD I was awarded with the "Ayuda Actividad Científica of the Junta de Andalucía", which allowed me to travel to the Dublin City University in Ireland where I started a collaboration that last to date, whilst learning new skills that I brought to my laboratory in Spain. This was a four-month visit.

After completion of my PhD, I was awarded with a postdoctoral contract at University of Granada (Spain) for 3 months. I left UGR in October 2011, when I was awarded with the prestigious Marie Curie postdoctoral position to go to Cranfield University (UK). There I continued expanding my experience in the field of chemical sensors, including a participation in the ITN Network CHEBANA (Marie Curie Actions, FP7 Program),

In 2013 I got a postdoctoral position at Dublin City University working in the Aquawarn project as postdoctoral researcher. In 2014 I got the prestigious talentia postdoc fellowship (EU- Junta de Andalucía cofunded) as principal investigator with the project entitled SmartPack.

My international experience covers different research groups in Europe (Spain, Ireland and United Kingdom) and those projects opened me the possibility to collaborate with groups in Israel, France, Germany, Italy, Finland and Austria too.

I have also gained experience in the company sector working as materials researcher in the company Inspiralia in 2013-2014.

Last year I was awarded with the important Marie Curie Individual Fellowship to develop my project Multisens, a revolutionary quality indicator platform for the food industry. I am trained in specialised fields of sensing, being an important partner at EU level. My international recognition is demonstrated by the high number of high impact publications; eighteen high impact factor journal publications, one book and one book chapter. This is a great indicator that I have rapidly increased my reputation in the scientific community and my work is widely approved by international peers (Hindex= 11). My participation in research projects with collaborators around the world has been impressive, including 6 EU projects (MultiSens, SmartPack, Aquawarn, Biomush, Adaw and Chebana)

It can be seen that there has been a clear progression in my career path by acquiring positions that have developed my personal and professional skills.

## Section C. MOST RELEVANT MERITS (ordered by typology)

### C.1. Publications

- 1 Scientific paper.** Pablo Escobedo; et al. (6/2). 2018. Non-invasive oxygen determination in intelligent packaging using a Smartphone IEEE Sensors Journal.
- 2 Scientific paper.** Isabel M. Perez de Vargas Sansalvador; et al. 2018. Towards an autonomous microfluidic sensor for dissolved carbon dioxide determination Microchemical Journal. Elsevier. 139, pp.216-221.
- 3 Scientific paper.** Isabel M. Perez de Vargas Sansalvador; et al. (/1). 2017. Water based-ionic liquid carbon dioxide sensor for applications in the food industry Sensors and Actuators B. Elsevier. 253, pp.302-309. ISSN 0003-2670.
- 4 Scientific paper.** Isabel M. Perez de Vargas Sansalvador; et al. (/1). 2016. Autonomous reagent-based microfluidic pH sensor platform Sensors and Actuators B. Elsevier. 225, pp.369-376. ISSN 0003-2670.
- 5 Scientific paper.** Pablo Escobedo; et al. (/2). 2016. Flexible passive tag based on light energy harvesting for gas threshold determination in sealed environments Sensors and Actuators B. Elsevier. 236, pp.226-232. ISSN 0003-2670.
- 6 Scientific paper.** Fernández-Ramos, María Dolores; et al. (/4). 2015. Optical humidity sensor using methylene blue immobilized on a hydrophilic polymer Sensors and Actuators B. Elsevier Science sa. 220, pp.528-533. ISSN 0925-4005.
- 7 Scientific paper.** Nuria Lopez Ruiz; et al. (/4). 2015. Wearable System for Monitoring of Oxygen Concentration in Breath Based on Optical Sensor IEEE Sensors Journal. 15-7, pp.4039-4045. ISSN 1530-437X.
- 8 Scientific paper.** Guerreiro, Antonio; et al. 2014. Influence of Surface Imprinted Nanoparticles on Trypsin Activity Advanced healthcare materials. Wiley. 3-9, pp.1426-1429. ISSN 2192-2659.
- 9 Scientific paper.** Shutov, Roman; et al. 2014. Introducing MINA, the Molecularly Imprinted Nanoparticle Assay Small. Wiley. 10-6, pp.1086-1089. ISSN 1613-6829.
- 10 Scientific paper.** Perez De Vargas-Sansalvador, Isabel Maria; et al. (/1). 2014. Perspectivas en instrumentación óptica portátil para gases Boletín GRASEQA. 8, pp.3-27. ISSN 2254-1241.
- 11 Scientific paper.** Chianella, Iva; et al. 2013. Direct Replacement of Antibodies with Molecularly Imprinted Polymer Nanoparticles in ELISA Development of a Novel Assay for Vancomycin Analytical chemistry (Washington). ACS Publications. 85, pp.8462-8468. ISSN 1520-6882.
- 12 Scientific paper.** Moczko, Ewa; et al. 2013. Surface-modified multifunctional MIP nanoparticles Nanoscale. Royal society of Chemistry. 5-6, pp.3733-3741.
- 13 Scientific paper.** López-Ruiz, Nuria; et al. (/3). 2012. Determination of O<sub>2</sub> using colour sensing from image processing with mobile devices Sensors and Actuators B. Elsevier Science sa. 172, pp.938-945. ISSN 0925-4005.
- 14 Scientific paper.** Perez De Vargas-Sansalvador, Isabel Maria; et al. (/1). 2012. LED-LED portable oxygen gas sensor Analytical and Bioanalytical Chemistry. Springer. 404, pp.2851-2858. ISSN 1618-2642.

- 15 **Scientific paper.** Martinez-Olmos, Antonio; et al. (/1). 2011. Multisensor probe for soil monitoring *Sensors and Actuators B- Chemical*. Springer. 160, pp.52-58. ISSN 0925-4005.
- 16 **Scientific paper.** Perez De Vargas-Sansalvador, Isabel Maria; et al. (/1). 2011. A new LED-LED portable CO<sub>2</sub> gas sensor based on an interchangeable membrane system for industrial applications *Analytica Chimica Acta*. Elsevier. 699, pp.216-222. ISSN 0003-2670.
- 17 **Scientific paper.** Perez De Vargas-Sansalvador, Isabel Maria; et al. (/1). 2011. Compact optical instrument for simultaneous determination of O<sub>2</sub> and CO<sub>2</sub> *Microchimica Acta*. Springer. 172, pp.455-464. ISSN 0026-3672.
- 18 **Scientific paper.** Carvajal-Rodríguez, Miguel Ángel; et al. (/2). 2010. Hand-held optical instrument for CO<sub>2</sub> in gas phase based on sensing film coating optoelectronic elements *Sensors and actuators. B, Chemical*. Elsevier. 144-1, pp.232-238. ISSN 0925-4005.
- 19 **Scientific paper.** Isabel M. Perez de Vargas Sansalvador; et al. 2010. Phosphorescent sensing of O<sub>2</sub> and CO<sub>2</sub> using a portable instrument *Luminescence*. 25, pp.282-283.
- 20 **Scientific paper.** Perez De Vargas-Sansalvador, Isabel Maria; et al. (/1). 2009. Phosphorescent sensing of carbon dioxide based on secondary inner-filter quenching *Analytica chimica acta*. Elsevier. 655-1-2, pp.66-74. ISSN 0003-2670.
- 21 **Book chapter.** Perez De Vargas-Sansalvador, Isabel Maria; Canfarotta, Francesco; Piletsky, Sergey. (/1). 2013. Synthesis of monodisperse polymeric nano- and micro-particles and their application in bioanalysis *Advances in Chemical Bioanalysis*. Springer. 2013, pp.131-154. ISBN 978-3-319-00181-4.
- 22 **Scientific book or monograph.** Perez De Vargas-Sansalvador, Isabel Maria. (/1). 2011. Diseño e integración de sensores ópticos en instrumentación portátil para análisis de gases *Diseño e integración de sensores ópticos en instrumentación portátil para análisis de gases*. University of Granada. ISBN 978-84-694-5722-1.

## C.2. Participation in R&D and Innovation projects

- 1 CTQ2016-78754-C2-1-R, Plataformas analíticas y microrreactores para seguridad agroalimentaria y sostenibilidad medioambiental Ministerio de Ciencia e Innovación. Luis Fermín Capitán Vallvey. (Universidad de Granada). 30/12/2016-29/12/2019. 121.000 €.
- 2 706303, A revolutionary quality indicator for the food industry. Multisens European Commission. European Commission Horizon 2020 - Research and Innovation Framework Programme. Isabel M Perez de Vargas Sansalvador. (Universidad de Granada). 01/02/2017-31/01/2019. 170.131,6 €. Principal investigator.
- 3 722930, Open researchers H2020-MSCA-NIGHT2016. Ana Isabel Garcia Lopez. (Universidad de Granada). 14/05/2017-15/10/2017. 174.782,82 €.
- 4 267226, Development and integration of a carbon dioxide sensor in meat packages using a Smartphone App for freshness detection. SmartPack Talentia Postdoc fellowship Junta de Andalucía co-financed by the Marie Curie Program of the European Union. Isabel M. Perez de Vargas Sansalvador. (Universidad de Granada). 01/10/2014-20/01/2017. 157.518,74 €.
- 5 722930, Open researchers H2020-MSCA-NIGHT2016. Ana Isabel Garcia Lopez. (Universidad de Granada). 14/05/2016-15/10/2016. 174.782,82 €.
- 6 605937, AQUAWARN. Deployable early warning pollution device for application in water FP7 SME European Commission. (National Centre for Sensor Research, Dublin City University). 01/12/2013-31/12/2015. 300.000 €.
- 7 314241, BIOMUSH. Early detection and bio-control of mushroom pests and diseases in an Integrated Pest Management approach to comply with the European Directive 2009/128/EU European commission. European Commission SP4-Capacities (FP7-SME-2012). (TECNOLOGIAS AVANZADAS INSPIRALIA SL). 01/11/2012-31/10/2015. 1.457.000 €.
- 8 P10-FQM-5974, Dispositivos sensores químicos y físicos para envasado inteligente Junta de Andalucía. Proyecto de Excelencia. Luis Fermín Capitán Vallvey. (Universidad de Granada). 06/07/2011-06/07/2015. 186.280 €.
- 9 314867, ADAW.Saponification pre-treatment and biosensors based control system for slaughterhouse waste anaerobic digestion improvement European Commission SP4-Capacities (FP7-SME-2012). (TECNOLOGIAS AVANZADAS INSPIRALIA SL). 01/03/2013-31/03/2015. 1.086.000 €. Others.

- 10 264772, CHEBANA. Chemical Bioanalysis Seventh Framework Programme. The people programme (FP7-PEOPLE-2010-ITN). (Cranfield University). 01/12/2010-30/11/2014. 7.757.837 €.
- 11 CTQ2009-14428-C02-01, Diseño y desarrollo de matrices de sensores no selectivos de un solo uso Ministerio de ciencia y tecnología. Luis Fermín Capitán Vallvey. (Universidad de Granada). 01/01/2010-31/12/2012. 157.300 €.
- 12 3/2009-27, Estancia Becarios. Estancia proyectos excelencia 3-2009 Junta de Andalucía. Proyectos de excelencia. Junta de Andalucía Estancias. Isabel M Perez de Vargas Sansalvador. (Universidad de Granada). 15/07/2010-15/11/2010. 4.664 €.
- 13 P06-FQM-1467, Instrumentación portátil con sensores en nanopartículas para análisis químico Junta de Andalucía. Proyectos de excelencia. Junta de Andalucía. Luis Fermín Capitán Vallvey. (Universidad de Granada). 11/04/2007-31/03/2010. 177.536,3 €.

### **C.3. Participation in R&D and Innovation contracts**

### **C.4. Patents**