



Diego F. Pozo Ayuso, PhD

Curriculum Vitae



DR. DIEGO FRANCISCO POZO AYUSO

Personal Details

Name: Diego Francisco
Surname: Pozo Ayuso
Gender: Male
Date of birth: 28th April, 1980
Nationality: Spanish

Professional Position

Company: MicruX Technologies
Address: Severo Ochoa Building
Floor -1 – Room 4 & 6
Julián Clavería s/n
Postal Code: 33006
City: Oviedo (Asturias)
Country: Spain

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EDUCATION

March 2010 **Ph.D. degree** by University of Oviedo entitled: “Glass microchannel manufacture: Microchip Capillary Electrophoresis and optics biosensors applications”. (Dissertation: 05/02/2010) Extraordinary Doctorate Award.

June 2006 **M.Sc. degree** entitled: “Manufacturing and characterization of optical waveguide and Microchips capillary electrophoresis in glass: Optical sensors application”. University of Oviedo.

June 2005 **Master** in Environment management. Asturias Business School.

June 2005 **Graduate thesis** entitled: “Reflectometric method to the refraction index determination using quasi-normal incidence”. University of Oviedo.

April 2004 **B.Sc. degree in Physics.** University of Oviedo.

PROFESSIONAL EXPERIENCE

January 2010 – Present Chief Executive Officer. MicruX Fluidic, S.L.

February 2008 – December 2009 Technical at Technology Transfer and Marketing Department at Prodintec Foundation. Technology center to industrial design and manufacturing.

January 2006 – December 2007 Research Physics at **Optoelectronics group** of the Physics Department at the University of Oviedo in a project “*Development to photolithographic techniques to microsystems manufacturing*”.

January 2004 – December 2005 Research Physics at **Optoelectronics group** of the Physics Department at the University of Oviedo in a project "*Manufacturing and characterization on optical waveguides*".

January 2003 – January 2004 Research Physics at **Optoelectronics group** of the Physics Department at the University of Oviedo in a project: "*Research, design and manufacturing of photonics devices*".

AWARDS AND FELLOWSHIPS

Jan 2010- Dec 2011 Best ph.D Award of Material science and metallurgy engineering depart. University of Oviedo

Dec 2010 – Dec 2013 Awarded with a Torres Quevedo grant of the Spanish Ministry of Science & Innovation (MICINN, PTQ-10-02730).

Jan 2006 – Dec 2007 Contract associated to the research project (IB05-151C2).

Jan 2004 – Dec 2005 Awarded with a collaborate fellowship of the University of Oviedo.

RESEACH PROJECTS

Feb. 2014 – June 2017 "*Optimization of low-cost Lab-on-a-Chip platforms for the development of biomedical applications - BIOLOC*" (MINECO -RETOS-COLABORACION - RTC-2014-1746-1))

Oct. 2012 – Jan. 2016 "*Smart production of Microsystems based on laminated polymer films - SMARTLAM*" (EU FP7 Grant # 314580)

June 2014 – Dic. 2015 "*New researches in integrated electronic circuits for the measurement of nano- and pico-currents*" (FICYT - IE14-003)

June 2014 – May 2015 "*Study of new multifunctional platforms for electrochemical devices*" (IDE/2014/000089)

Sept. 2013 – Sept. 2015 "*New materials for electrochemical sensors in microfluidic platforms: Application to molecular recognition - MATSENS*" (M-ERA.NET, IDEPA IDE/2013/000028)

Sept. 2013 – Dec. 2014 "*Basic modifications in electrochemical sensors based on thin-film technologies for integration in microfluidic platforms*" (FICYT - IE13-027)

Sept. 2013 – March. 2014 "*Thin-film technologies study for the manufacture of microsensors based on carbon materials*" (IDEPA IDE/2013/000119)

Nov. 2012 – Nov. 2013 "*Design and development of new analytical tools for electrochemical sensors*" (IDEPA IDE/2012/000055).

<i>Feb. 2009 – Sept. 2011</i>	<i>“Miniaturized and portables analysis systems based on microchips capillary electrophoresis” (IDI-20091097)</i>
<i>Sept. 2011 – Sept. 2013</i>	<i>“Manufacturing technologies for the development of Lab-on-a-Chip devices” (ERA-NET MANUNET, IDEPA IDE/2011/000493)</i>
<i>March 2011 – Dec 2012</i>	<i>“New universal detection systems for microfluidic devices. Application to environmental analysis” (FICYT - IE09-281).</i>
<i>March 2011 – Dec 2012</i>	<i>“Determination of cardiac biomarkers using microchips electrophoresis with electrochemical detection” (MicruX Fluidic, S.L., FICYT - PC10-30).</i>
<i>Feb 2009 - Feb 2011</i>	<i>“Miniaturized and portables analysis systems based on microchips capillary electrophoresis” (CDTI - IDI-20091097).</i>
<i>Jan 2009 – June 2010</i>	<i>“Creation of technology based companies” (FICYT- EIBT08-08).</i>
<i>Jan 2006 – Dec2008</i>	<i>“Develop and implementation of periodic microstructures capillary system and optoelectronics devices. Application to filters and optics switches, sensors, and optoelectronics modulators” (TIC2005-0554).</i>
<i>Dec 2005 – Dec 2007</i>	<i>“Manufacturing of microchips capillary electrophoresis to bioanalysis applications” (FICYT - IB05-151C1).</i>
<i>Jul 2006 – Nov 2007</i>	<i>“Nano SME” (STTIIC).</i>
<i>Jan 2003 – Jan 2004</i>	<i>“Equipment to manufacturing to mask and electrodes in optics” (EQPT02-26).</i>
<i>Dec 2002 – Dec 2006 “</i>	<i>Research, design and manufacturing of photonics devices about news optical waveguides structures and electrooptics modulators” (CICYT TIC2002-02300).</i>

PUBLICATIONS

1. J. Rodríguez, S. Fernández, M. García and D. Pozo , “**Complete analysis of the electromagnetic scattering in arbitrary dielectric waveguides: application to microwave and photonic devices design**” *Journal of Microwave and Optoelectronics*, 2005 Vol. 4 (1), pp. 12-25 (A)
2. J. Rodríguez, S. Fernández, M. García and D. F. Pozo, “**Photonic Effects Caused by Multiple Discontinuities in Optical Waveguides**” *IEE, Proceedings of Optoelectronics*, 2005, Vol. 152 (5), pp. 263-268 (A).
3. José R. García, Susana F. Fernández, Diego P. Ayuso and Miguel G. Granda, “**Electromagnetic**

Properties of Inverted Dielectric Waveguides” *Int. J. Electron. Commun (AEÜ)* **2008**, 62 349-355. (A).

4. M. Castaño-Álvarez, D.F. Pozo Ayuso, M. García Granda, M.T. Fernández-Abedul, J. Rodríguez García, A. Costa-García, **“Critical points in the fabrication of microfluidic devices on glass substrates”**. *Sensors & Actuators B: Chemical*, **2008**, 130, 436 – 448.
5. D.F. Pozo Ayuso, M. Castaño-Álvarez, A. Fernández-la-Villa, M. García Granda, M.T. Fernández-Abedul, J. Rodríguez García, A. Costa-García, **“Fabrication and evaluation of single- and dual-channel (II-design) microchip electrophoresis with electrochemical detection”**. *Journal of Chromatography A*, **2008**, 1180, 193 – 202.
6. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso, M.T. Fernández-Abedul, A. Costa-García, **“Multiple-point electrochemical detection for a dual-channel hybrid poly(dimethylsiloxane)-glass microchip electrophoresis device”**. *Electrophoresis*, **2009**, 30(19), 3372 – 3380.
7. Ana Fernández-la-Villa, Diego F. Pozo-Ayuso, Mario Castaño-Álvarez **“New analytical portable instrument for microchip electrophoresis with electrochemical detection”** *Electrophoresis*, **2010**, 31, (2641-2649).
8. A. Fernández-la-Villa, D. Sánchez-Barragán, D.F. Pozo-Ayuso, M. Castaño-Álvarez, **“Smart portable electrophoresis instrument based on multipurpose microfluidic chips with electrochemical detection”**. *Electrophoresis*, **2012**, 33, 2733 – 2742.
9. A. Fernández-la-Villa, V. Bertrand-Serrador, D.F. Pozo-Ayuso, M. Castaño-Álvarez, **“Fast and reliable urine analysis using a portable platform based on microfluidic electrophoresis chips with electrochemical detection”**. *Anal. Methods*, **2013**, 5, 1494 – 1501.
10. E.O. Barnes, A. Fernández-la-Villa, D.F. Pozo-Ayuso, M. Castaño-Alvarez, G.E.M. Lewis, S.E.C. Dale, F. Marken, R.G. Compton, **“Interdigitated ring electrodes: Theory and experiment”**. *J. Electroanal. Chem.*, **2013**, 709, 57 – 64.
11. A. Fernández la Villa, D.F. Pozo Ayuso, M. Castaño Álvarez. **“Integrated portable microfluidic electrophoresis system with electrochemical detection for fast analysis of alimentary oils”**. The 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences. *µTAS Proceedings 2014*, 2408 – 2410. October 26-30. 2014. San Antonio (TX) USA.
12. Edward O. Barnes, Ana Fernández-la-Villa, Diego F. Pozo-Ayuso, Mario Castaño-Alvarez, Richard G. Compton **“Validating the geometry of interdigitated band electrodes: A variable scan rate study”** *J. Electroanal. Chem.*, **2015**, 748, 82 – 90.

CONGRESS CONTRIBUTIONS

1. **Spanish Conference on Electrón Devices**, Tarragona 2005 "Accurate and low cost method for surface refraction index determination ", M. García, D. F. Pozo, S. Fernández and J. Rodríguez ISBN: 0-7803-8811-9 Vol: IEEE Catalog Number : 05EX965C
2. **Spanish Conference on Electrón Devices**, Tarragona 2005 " *Microwave and photonic devices design on periodical dielectric waveguides*" J. Rodríguez, S. Fernández, M. García and D. F. Pozo ISBN: 0-7803-8811-9 Vol: IEEE Catalog Number : 05EX965C
3. **European Optical Metrology Symposium- World Photonics Congress**, 2005, Munich " *High accuracy reflectometric technique and statistical measurements treatment method for refraction index determination*", D. F. Pozo Ayuso, M. García Granada, S. Fernández Fernández and J. Rodríguez **Nano and Micro-Metrology Proceedings of SPIE Vol: 5858 ISBN: 9780819458582**
4. **4º Reunión Española de Optoelectrónica- OPTOEL-2005**, Elche, " *Aplicación de una técnica de reflectometría cuasi-normal a la caracterización de guías ópticas integradas*" D. F. Pozo, M. García, S. Fernández and J. Rodríguez 2005, **Actas de la 4º Reunión Española de Optoelectrónica , ISBN: 84-609-6139-7**
5. **IV Encontro Ibérico de Electromagnetismo Computacional**, Seia, 2005 " *Comportamiento electromagnético de estructuras periódicas en guías ópticas integradas: aplicación al diseño de dispositivos fotónicos.*" J. Rodríguez, S. Fernández, M. García y D. Pozo
6. **Optics East 2006**, Boston, 2006 "Planar waveguide photonic crystals for sensing applications: a general proposal" José Rodríguez, Susana Fernández, Miguel García and Diego Pozo. **Proceedings of SPIE Vol: 6371 ISBN: 9780819464699**
7. **11th International Meeting on Chemical Sensors (IMCS)**. Brescia, Italy. July 2006. Poster presentation: " *Critical points in the fabrication of microfluidic devices on glass substrates*". M. Castaño Álvarez, D.F. Pozo Ayuso, M. García Granda, M.T. Fernández Abedul, J. Rodríguez García, A. Costa García.
8. **European Conference on Antennas and Propagation (EuCAP2006)** Niza, 2006, " *Inverted II dielectric waveguide for microwave devices design in metallic rectangular waveguides partially filled with dielectrics: theoretical and experimental confirmation*" J. Rodríguez, S. Fernández, M. García y D. Pozo **ESA_IEEE. ISBN: 92-9092-9375**
9. **EOS Annual Meeting 2006**. Paris, France. October 2006. Poster presentation: " *Photomask laser writing application for fabrication of microdevices on glass substrates*". D.F. Pozo Ayuso, M. García Granda, M. Castaño Álvarez, J. Rodríguez García, M.T. Fernández Abedul, A. Costa García.
10. **I Workshop on Analytical Nanotechnology**. Córdoba, Spain. July 2007. Poster presentation: " *Carbon nanotubes on microchips capillary electrophoresis with electrochemical detection*". A.

Fernández la Villa, M. Castaño Álvarez, M.T. Fernández Abedul, A. Costa García, D.F. Pozo Ayuso, J. Rodríguez García.

11. **5th Spanish Meeting of Optoelectronics (OPTOEL'07)**. Bilbao, Spain. July 2007. Poster presentation: *“Sensores de índice de refracción realizados sobre cristales fotónicos en guías ópticas planas”*, 11. J. Rodríguez, S. Fernández, M. García and D. F. Pozo, ISBN: : 978-84-95809-30-8
12. **5th Spanish Meeting of Optoelectronics (OPTOEL'07)**. Bilbao, Spain. July 2007. Poster presentation: *“Photolithographic techniques application for fabrication of mask and microchips capillary electrophoresis”*. D. F. Pozo Ayuso, M. García Granda, M. Castaño Álvarez, J. Rodríguez García, M.T. Fernández Abedul, A. Costa García. ISBN: : 978-84-95809-30-8
13. **IEEE-EUROCON 2007, Computer as a Tool, Varsovia, 2007** *“Optical sensing properties of planar integrated optical waveguides in cascade”*, J. Rodríguez, S. Fernández, D. F. Pozo and M. García ISBN: 1-4244-0813-X
14. **VII Scientific Meeting of the Spanish Society of Chromatography and Related Techniques (SECyTA)**. Granada, Spain. October 2007. Oral communication: *“DNA monitoring using electroactive intercalators on microchip electrophoresis with electrochemical detection”*. M. Castaño Álvarez, M. T. Fernández Abedul, A. Costa García.
15. **VII Scientific Meeting of the Spanish Society of Chromatography and Related Techniques (SECyTA)**. Granada, Spain. October 2007. Poster presentation: *“Neurotransmitter separation using an 5U-8 capillary electrophoresis microdevice with an integrated end-channel amperometric detector”*. M. Agirregabiria, J.M. Ruano López, L.J. Fernández, K. Mayora, M. Castaño Álvarez, M.T. Fernández Abedul, A. Costa García.
16. **VII Scientific Meeting of the Spanish Society of Chromatography and Related Techniques (SECyTA)**. Granada, Spain. October 2007. Poster presentation: *“Fabrication and evaluation of single- and dual-channel glass-microchip electrophoresis with electrochemical detection”*. M. Castaño Álvarez, A. Fernández la Villa, M.T. Fernández Abedul, A. Costa García, D.F. Pozo Ayuso, M. García Granda, J. Rodríguez García.
17. **12th International Conference on Electroanalysis (ESEAC 2008)**. Prague, Czech Republic. June 2008. Poster presentation: *“Integrating electrochemical detection on microchip electrophoresis”*. M. Castaño Álvarez, A. Fernández la Villa, M.T. Fernández Abedul, A. Costa García
18. **I Workshop on Analytical Miniaturization (“lab-on-a-chip”)**. Madrid, Spain. July 2008. Communication: *“Carbon microelectrodes (ink and fibers) as transducers on microchip electrophoresis”*. M. Castaño Álvarez, D.F. Pozo Ayuso, A. Fernández la Villa, M.T. Fernández Abedul, A. Costa García.
19. **I Workshop on Analytical Miniaturization (“lab-on-a-chip”)**. Madrid, Spain. July 2008. Communication: *“Comparison of different materials for microchip electrophoresis with electrochemical detection”*. A. Fernández la Villa, M. Castaño Álvarez, D.F. Pozo Ayuso, M.T. Fernández Abedul, A. Costa García.

- 20. I Workshop on Analytical Miniaturization ("lab-on-a-chip").** Madrid, Spain. July 2008. Communication: *"Mechanical micromilling for microdevices manufacturing"*. D.F. Pozo Ayuso, D. González, P. Queipo, J.A. Rodríguez Cortés, M. Castaño Álvarez, A. Fernández la Villa, M.T. Fernández Abedul, A. Costa García, J. Rodríguez García.
- 21. 59th Annual Meeting of the International Society of Electrochemistry.** Seville, Spain. September 2008. Poster presentation: *"Single- and dual-channel PDMS microchip performance with electrochemical detection"*. M. Castaño Álvarez, A. Fernández la Villa, D.F. Pozo Ayuso, M.T. Fernández Abedul, A. Costa García.
- 22. 59th Annual Meeting of the International Society of Electrochemistry.** Seville, Spain. September 2008. Poster presentation: *"CNT-modified gold wire electrode to enhance the sensitivity on microchip electrophoresis"*. A. Fernández la Villa, M. Castaño Álvarez, D.F. Pozo Ayuso, M.T. Fernández Abedul, A. Costa García.
- 23. 3rd Lab-on-a-Chip European Congress.** Stockholm, Swedish. May 2009. Poster presentation: *"New trends for versatile microfabrication of capillary electrophoresis microchips and electrochemical detection integration"*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso, D. González, P. Queipo, J. A. Cortés.
- 24. 3rd Lab-on-a-Chip European Congress.** Stockholm, Swedish. May 2009. Poster presentation: *"Polyphenolic compounds analysis on capillary electrophoresis microchips coupled with electrochemical detectors"*. A. Fernández la Villa, M. Castaño Álvarez, D.F. Pozo Ayuso, M.T. Fernández Abedul, A. Costa García.
- 25. XXXII Congreso de la Sociedad Española de Bioquímica y Biología Molecular – Foro del Emprendedor.** Oviedo, Spain. September 2009. Invited communication: *"La importancia de desarrollar un buen plan de empresa"*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso.
- 26. 15th Latin American Symposium on Biotechnology, Biomedical, Biopharmaceutical and Industrial Applications of Capillary Electrophoresis and Microchip Technology (LACE 2009).** Seville, Spain. October 2009. Poster presentation: *"Novel miniaturized instrumentation for easy handle of microchip electrophoresis"*. A. Fernández-la-Villa, D.F. Pozo-Ayuso, M. Castaño-Álvarez.
- 27. IX Scientific Meeting of the Spanish Society of Chromatography and Related Techniques** San Sebastián, Spain. October 2009. Poster presentation: *"New challenges in the development of miniaturized and portable instrumentation"*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso.
- 28. IX Scientific Meeting of the Spanish Society of Chromatography and Related Techniques** San Sebastián, Spain. October 2009. Poster presentation: *"Food analysis on microchips electrophoresis with amperometric detection"*. A. Fernández la Villa, M. Castaño Álvarez, D.F. Pozo Ayuso, M.T. Fernández Abedul, A. Costa García.

29. I Jornada Intramural de Translación de Resultados en la Investigación Biomédica. Madrid, Spain. December 2009. Invited communication: *“Creación de una spin-off desde un centro público de investigación”*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso.
30. II International Workshop on Analytical Miniaturization (*“lab-on-a-chip”*). Oviedo, June 2010, Spain, Poster/ Flash presentation: *“Compact lab-on-a-chip instrument: a first stage towards the future”*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso
31. II International Workshop on Analytical Miniaturization (*“lab-on-a-chip”*). Oviedo, June 2010, Spain. Oral and poster presentation : *“Microfluidic Platforms: From Research to the market”* M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso
32. 13th International conference on electroanalysis ESEAC. June 2010. Gijón, Spain, Spain. Oral presentation : *“Microfluidic Platforms: From Research to the market”* M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso
33. Lauching the *“Nanofutures”* European initiative. June 2010. Gijón, Spain. Oral presentation : *“Microfluidic Platforms: From Research to the market”* M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso
34. Lauching the *“Nanofutures”* European initiative, June 2010. Gijón, Spain. Poster presentation: *“Compact lab-on-a-chip instrument: a first stage towards the future”*. M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso
35. 28th International Symposium on Chromatography September 2010, Valencia, Spain, Oral presentation *“New trends on portable instrumentation for microchip capillary electrophoresis”* Pozo-Ayuso D.F., Fernández-la-Villa. A. and Castaño-Álvarez M.
36. V Workshop Nanociencia y Nanotecnología Analíticas September 2011, Toledo, Spain, Poster presentation *“Novel miniaturized high voltage power supply useful for multiple analytical applications”* Pozo-Ayuso D.F., Fernández-la-Villa. A. and Castaño-Álvarez M.
37. V Workshop Nanociencia y Nanotecnología Analíticas September 2011, Toledo, Spain, Poster presentation *“Fast and reliable urine analysis using portable platforms based on Lab-on-a-Chip technologies”* Castaño-Álvarez M., Fernández-la-Villa. A. and Pozo-Ayuso D.F.
38. 14th International conference on electroanalysis (ESEAC 2012). Portorož, Slovenia. June 2012. Oral presentation: *“Compact and portable microfluidic electrophoresis-electrochemical platform for in-situ applications”*. D.F. Pozo-Ayuso. A. Fernández-la-Villa, D. Sánchez-Barragán, M. Castaño-Álvarez.
39. III International Workshop on Analytical Miniaturization and NANotechnologies (WAM-NANO 2012). Barcelona, Spain. June 2012. Poster presentation: *“High-Performance smart small-size microfluidic electrophoresis chips with integrated electrodes”*. M. Castaño-Álvarez, A. Fernández-la-Villa, D. F. Pozo-Ayuso.
40. III International Workshop on Analytical Miniaturization and NANotechnologies (WAM-NANO 2012). Barcelona, Spain. June 2012. Poster presentation: *“Fast and reliable pharmacological*

analysis using a portable microfluidic platform". A. Fernández-la-Villa, V. Bertrand Serrador, D. F. Pozo-Ayuso, M. Castaño-Álvarez

41. III International Workshop on Analytical Miniaturization and NANOTECHNOLOGIES (WAM-NANO 2012). Barcelona, Spain. June 2012. Poster presentation: "*Hand-held automated instrument for microchip electrophoresis with amperometric detection*". D.F. Pozo-Ayuso, A. Fernández-la-Villa, D. Sánchez-Barragán, M. Castaño-Álvarez
42. 18th Meeting of the Portuguese Electrochemical Society (18 SPE). Porto, Portugal. March 2013. Oral presentation: "*Novel thin-film (micro)electrodes approaches: fabrication and performance*". A. Fernández-la-Villa, D. F. Pozo-Ayuso, M. Castaño-Álvarez
43. 10th International Interdisciplinary Meeting on Bioanalysis (CECE), Pécs, Hungary. April 2013. Oral Presentation: "*Fast and reliable urine analysis using a portable platform based on microfluidic electrophoresis chips with electrochemical detection*". A. Fernández-la-Villa, D. F. Pozo-Ayuso, M. Castaño-Álvarez
44. VI Workshop on Analytical Nanoscience and Nanotechnology (VINyNA 2013), Alcalá de Henares, Spain. July 2013. Oral/Poster Presentation: "*Smart thin-film (micro)electrode approaches as suitable electroanalytical tool*". M. Castaño-Álvarez, A. Fernández-la-Villa, D. F. Pozo-Ayuso.
45. Advances in Microfluidics and Nanofluidics 2014 (AMN2014). Taipei, Taiwan. May 2014. Poster presentation: "*Next generation of microfluidic platforms based on microchips electrophoresis with integrated electrochemical sensors*". M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso.
46. 15th International conference on electroanalysis (ESEAC 2014). Malmö, Sweden. June 2014. Oral presentation: "*Interdigitated ring electrodes: Theory and Experiment*". E.O. Barnes, A. Fernández-la-Villa, D.F. Pozo-Ayuso, M. Castaño-Álvarez, G.E. M. Lewis, S.E. C. Dale, F. Markenc and R.G. Compton.
47. IV International Workshop on Analytical Miniaturization and NANOTECHNOLOGIES (WAM-NANO 2012). Copenhagen, Denmark. June 2014. Poster presentation: "*Alimentary oil fast analysis on portable system based on microfluidic electrophoresis chips with electrochemical detection*". A. Fernández-la-Villa, D. F. Pozo-Ayuso, M. Castaño-Álvarez.
48. XXXV Meeting of the Electrochemistry Group of the Spanish Royal Society of Chemistry. Burgos, Spain. July 2014. Oral presentation: "*Innovative Electrochemical Platforms for Using a New Generation of Low-Cost Thin -Film (micro)Electrodes*". A. Fernández-la-Villa, D.F. Pozo-Ayuso, M. Castaño-Álvarez.
49. 65th Annual Meeting of the International Society of Electrochemistry (ISE 2014). Lausanne, Switzerland. August-September 2014. Poster presentation: "*Development of Innovative Platforms for improving the use of a New Generation of Low-cost Thin-film Electrochemical Sensors*". A. Fernández la Villa, D.F. Pozo Ayuso, M. Castaño Álvarez.

50. The 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2014). San Antonio, USA. October 2014. Poster presentation: *“Integrated portable microfluidic electrophoresis system with electrochemical detection for fast analysis of alimentary oils”*. A. Fernández la Villa, D.F. Pozo Ayuso, M. Castaño Álvarez.
51. The 18th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2014). San Antonio, USA. October 2014. Commercial Poster: *“Hand-held automated instrument for microchip electrophoresis with amperometric detection”*. A. Fernández la Villa, D.F. Pozo Ayuso, M. Castaño Álvarez.
52. Lab-on-a-chip & Microfluidics 2015. Berlin Germany. April 2015. Poster *“Hand-held automated instrument for microchip electrophoresis with amperometric detection”*. D.F. Pozo Ayuso A. Fernández la Villa, M. Castaño Álvarez.
53. I Advances in microfluidics & Lab-on-a-chip technologies (AML 2015). On-line event. June 2015. Poster: *smart Downsize microfluidic chips with integrated electrochemical sensing approach*. M. Castaño Álvarez, A. Fernández la Villa, D.F. Pozo Ayuso.
54. VII Workshop on Analytical Nanoscience and Nanotechnology (VII NyNA 2015), Salamanca, Spain. July 2015. Poster Presentation: *“Development of novel electroanalytical methods based on smart thin-film (micro)electrode in static and dynamic conditions”*. O. Amor Gutiérrez, M. Cuellas Díaz, M. T. Fernández Abedul, A. Fernández-la-Villa, D.F. Pozo- Ayuso, M. Castaño-Álvarez.

PATENTS

- A. Costa-García, M.T. Fernández-Abedul, M. Castaño-Álvarez, A. Fernández-la-Villa, D.F. Pozo-Ayuso. **“Microchips capillary electrophoresis of resin EPON SU-8 with integrated electrochemical detection”**, application number: P200802006, publication number: ES 2 320 619 [A1], priority data: 30/06/08, applicant: University of Oviedo.

LANGUAGES SKILLS

Spanish: Mother tongue.
 English: Intermediate level

COMPUTER SKILLS

MS-DOS, Windows 95/98/XP/Vista, MS Office (Word, Excel, PowerPoint, Access), Internet (IE Explorer, Outlook Express), Scientific software (Hysys, Fullprof, Fluent,...)

Initiation in program languages (Matlab, Labview, C++ and Fortran)

COURSES

Post-graduate courses 2005. Material Science and Metallurgy Engineering Department.
(University of Oviedo)

- Characterization of solids materials: Structural characterization techniques by neutron beam and X-Ray spectroscopy.
- Magnetics Materials. Material Science and Metallurgy Engineering Department.
- Metallic glass and nanocrystalline materials.
- Polymers and composite materials: Properties and processing.
- Sincotron and neutron diffraction in materials science.

Other courses:

December 2010 Course of effective negotiation techniques FADE

December 2010 Course of R&D Taxation FADE

December 2010 Financial Management FADE

November – December 2010 Financial Management enterprise workshop Programa de consolidación y excelencia empresarial CEEI

July 2010 English business. Grupo FIDA (36h)

May 2009 Proposals to 7PM Federación Asturiana de Empresarios (20h)

February – July 2008 IV Bioances. Fundación Genoma España y ANCES.

September – October 2007 I CLINIC Joven Emprend@. Grupo FIDA and Asociación Asturias Emprend@.
(130 h.)

February – March 2006 Basic Course in Enterprise Formation. Centro Municipal de Empresas de Gijón (CME). (72 h.)

December 2005 Course in Generation of Business Ideas. Centro Europeo de Empresa e Innovación del Principado de Asturias (CEEI). (12 h.)

2004 – 2005 Curso de Adaptación Pedagógica. University of Oviedo. (300 h.)

April 2005 – May 2005 Technician in Quality Management Systems. ISO 9001 norm. Asturias Business School. (30 h.)

2005 Environment law updates. Asturias Business School.

2005 Integral residues managing. Asturias Business School

June 2004 **Microoptics and Application optics: Communications optics and biosensors Applications.** University of Barcelona, Optoelectronic Committee SEED.(30 h)

June 2004 **Guide electromagnetic propagation: Dielectric guides to microwaves and optics frequency.** University of Oviedo.

July 2003 **Simulations and advanced optimization in chemistry and process industry: HYSYS.** University of Oviedo.

2003 **Characterization materials techniques.** University of Oviedo.

September 1996- June 1997 **Managing companies.** New technology learning center

OTHERS

Co-founder of the *spin-off* "**MicruX Fluidic, S.L.**" (Awarded with BioAnces Prize 2008, XV SODECO Prize, 9th CEEI Prize, ANCES National Prize Accesit VIII San Alberto Magno Prize, Bancaja Prize 2011), created on December 2008 (www.micruxfluidic.com).

Member of Sociedad Española de Cromatografía y Técnicas Afines (SECYTA).

Environment inspector practice in ECA, Entidad Colaboradora de la Administración, S.A.

Five years' experience in managing R&D projects and organizing R&D activities, seminars and science diffusion.

Five years' experience applying international projects.

Teaching experience in technical courses in the University of Oviedo and technology centers.

Teaching experience in postgraduate courses in the University of Oviedo (How create a technology company? and Ophthalmology microfluidics applications)