

## PERSONAL INFORMATION

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- Name: **VÍCTOR PIÑÓN HERMIDA**
- Nationality: Spanish
- Date of birth: 12/12/1976
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## EDUCATION

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**Ph. D.- January 2011**, University of A Coruña, Department of Ingeniería Industrial II, Escuela Politécnica Superior.

*"Improvements of Laser Induced Breakdown Spectroscopy technique for the analysis of solid samples"*

**Diploma in Physics- December 2001**, University of Santiago de Compostela.

## LANGUAGES

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Spanish - Native  
English - Fluent  
Greek – Basic

## WORKING EXPERIENCE

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- March 2021- Present, Experienced research assistant, IESL-FORTH, Greece.
- June 2014- Present, Senior application scientist, Applied Photonics Ltd, UK.
- Conduction of feasibility studies including literature reviews and experimental investigations on the use of LIBS in a wide range of applications.
- Mechanical assembly, optical alignment, optimisation and testing of optical analytical systems.
- Preparation of optical fibres for both nanosecond laser transmission and plasma light collection.
- Use of OpticStudio (Zemax) for modelling and optimisation of the optical design of LIBS systems.
- Experience on laser maintenance and optical alignment of laser cavities and harmonics generators.
- Interaction with mechanical and software engineers to improve system user experience and to enhance hardware/software features.
- Generation of application notes, technical notes, presentations, product datasheets and company's website upgrade.
- Installation of the company's LIBS systems and training of customers onsite.
- January 2009- June 2012, Researcher at Laboratory of Industrial Applications of Laser, University of A Coruña.
- Investigation of orthogonal double pulse LIBS configurations using nanosecond lasers for improving the lateral resolution and surface sensitivity of the technique.

- February 2007- December 2008: Marie Curie fellow, program "ATLAS" (Advanced Research Training in Laser Sciences) at Foundation for Research and Technology - Institute of Electronic Structure and Laser, FORTH-IESL, Crete, Greece.
- Continuation of the study of a collinear double pulse LIBS configuration using a femtosecond laser.
- September 2006 -January 2007 Researcher at Laboratory of Industrial Applications of Laser, University of A Coruña.
- Use of statistical methods for data processing and improving the LIBS depth profiling results.
- February 2006- August 2006: Marie Curie fellow, program "ATLAS" (Advanced Research Training in Laser Sciences) at Foundation for Research and Technology - Institute of Electronic Structure and Laser, FORTH-IESL, Crete, Greece.
- Study of a collinear double pulse LIBS configuration using a femtosecond laser, evaluation of the influence of the delay between pulses in figures of merit such as limits of detection or signal reproducibility.
- December 2002 -January 2006 Researcher at Laboratory of Industrial Applications of Laser, University of A Coruña.
- Design, implementation and testing of a LIBS setup for obtain 3D chemical maps of non-flat samples.
- Design and development of a specific software for the analysis of LIBS spectra.

## AWARDS RECEIVED

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- "LIBS Contest 2008" winner at the "5th International Conference on Laser-Induced Breakdown Spectroscopy" Berlin, Germany (22-26 September 2008)
- "Premio Extraordinario de Doctorado" from the University of A Coruña

## INFORMATIC KNOWLEDGE

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- Co-Inventor, SALIBS: Software for the Analysis of Laser Induced Breakdown spectra. Spanish patent C-137-06
- Development software: Visual Basic, Matlab, Fortran, C.
- Optical design: OpticStudio (Zemax)
- Design programs: Rhinoceros, Photoshop, CorelDRAW.
- Microsoft Office, Origin, EndNote

## COMPETENCIES AND ACHIEVEMENTS

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- 22 publications in international scientific journals, books and conference proceedings.
- 51 oral and poster presentations in international scientific conferences.

- Hands-on laboratory skills, ample experience on designing and setting experimental setups which involve the use of lasers (nanosecond or femtosecond), different optics and spectrometers. Experience on optical fibre preparation for coupling and transmission of high-power nanosecond lasers.
- Knowledge of several development software, strong set of programming and data processing skills. Capability to learn new development software.
- Laser Safety Awareness Workshop attendance (UVEX Academy), 2014.

## PUBLICATIONS

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G. Nicolás, A. Rámil, V. Piñón, J. Sanesteban, A. Yáñez, "*Data acquisition system for laser cleaning of materials*" Books of Abstracts 1st International Meeting on Applied Physics, 867-867 (2003)

M. Mateo, G. Nicolás, V. Piñón, J.C. Álvarez, A. Rámil, A. Yáñez, "*Laser cleaning of prestige tanker oil spill on coastal rocks controlled by spectrochemical analysis*" Analytica Chimica Acta 524, 27-32 (2004)

A. Rámil, E. Saavedra, A. J. López, M. P. Mateo, G. Nicolás, V. Piñón, "*Soluciones analíticas a la ecuación de conducción del calor sobre geometrías simples con límites físicos: método de las imágenes*" Anales de Ingeniería Mecánica 4, 2527-2535 (2004)

V. Piñón, A. Rámil, M.P. Mateo, J.C. Álvarez, G. Nicolás, "*Desarrollo de un software de adquisición y análisis de señales*" Anales de Ingeniería Mecánica 1, 209-214 (2004)

G. Nicolás, A. Rámil, A.J. López, J.C. Álvarez, V. Piñón, "*Integración de una Aplicación Informática en una Estación de Trabajo de Procesado de Materiales por Láser*" Anales de Ingeniería Mecánica 1, 203-207 (2004)

M.P. Mateo, G. Nicolás, V. Piñón, A. Rámil, A. Yáñez, "*Laser cleaning: an alternative method for removing oil-spill fuel residues*", Applied Surface Science 247, 333-339 (2005)

A.J. López, G. Nicolás, M.P. Mateo, V. Piñón, A. Rámil, A. Yáñez, "*Análisis de cerámicas romanas Terra Sigillata mediante Espectroscopía de Plasmas Inducidos por Láser (LIPS)*" Boletín de la Sociedad Española de Cerámica y Vidrio 44(6), 373-378 (2005)

M.P. Mateo, G. Nicolás, V. Piñón, J.C. Alvarez, A. Rámil, A. Yáñez, "*Versatile software for semiautomatic analysis and processing of laser-induced plasma spectra*" Spectrochimica Acta Part B 60 (7-8), 1202-1210 (2005)

A.J. López, G. Nicolás, M.P. Mateo, V. Piñón, M.J. Tobar, A. Rámil "*Compositional analysis of Hispanic Terra Sigillata by laser-induced breakdown spectroscopy*" Spectrochimica Acta Part B 60 (7-8), 1149-1154 (2005)

A.J. López, A. Rámil, G. Nicolás, M. P. Mateo, V. Piñón, A. Yáñez, "*Provenance characterization of archaeological ceramics by laser induced plasma spectroscopy*" Materials Science Forum 514, 1638-1642 (2006)

A.J. López, G. Nicolás, M.P. Mateo, A. Rámil, V. Piñón, A. Yáñez, "*LIPS and linear correlation analysis applied to the classification of Roman pottery Terra Sigillata*" Applied Physics A 83, 695-698 (2006)

M.P. Mateo, G. Nicolás, V. Piñón, A. Yáñez, "*Improvements in depth-profiling of thick samples by laser-induced breakdown spectroscopy using linear correlation*" Surface and Interface Analysis 38(5), 941-948 (2006)

G. Nicolás, M.P. Mateo, V. Piñón, "*3D chemical maps of non-flat surfaces by laser-induced breakdown spectroscopy*" Journal Of Analytical Atomic Spectrometry 22(10), 1244-1249 (2007)

V. Piñón, C. Fotakis, G. Nicolás, D. Anglos, "*Double pulse laser-induced breakdown spectroscopy with femtosecond laser pulses*" Spectrochimica Acta Part B 63(10), 1006-1010 (2008)

J. Goujon, A. Giakoumaki, V. Piñón, O. Musset, D. Anglos, E. Georgiou, J.P. Boquillonlos, "*A compact and portable laser-induced breakdown spectroscopy instrument for single and double pulse applications*" Spectrochimica Acta Part B 63(10), 1091-1096 (2008)

V. Piñón, D. Anglos, "*Optical emission studies of plasma induced by single and double femtosecond laser pulses*" Spectrochimica Acta Part B 64(10), 950-960 (2009)

V. Piñón, D. Anglos, G. Nicolás, "*Improvement of laser induced breakdown spectroscopy technique using double pulse schemes*" Óptica Pura y Aplicada 43(2), 113-117 (2010)

M.P. Mateo, V. Piñón, G. Nicolas, "*Vessels protective coatings characterization by laser-induced plasma spectroscopy for quality control purposes*" Surface and Coatings Technology 211, 89-92 (2012)

I. Lopez-Quintas, V. Piñón, M.P. Mateo, G. Nicolas, "*Effect of surface topography in the generation of chemical maps by laser-induced plasma spectroscopy*" Applied Surface Science 258(23), 9432-9436 (2012)

I. Lopez-Quintas, M.P. Mateo, V. Piñón, A. Yáñez, G. Nicolas, "*Mapping of mechanical specimens by laser induced breakdown spectroscopy method: Application to an engine valve*" Spectrochimica Acta Part B. 74-75, 109-114 (2012)

M.P. Mateo, V. Piñón , D. Anglos, G. Nicolas, "*Effect of ambient conditions on ultraviolet femtosecond pulse laser induced breakdown spectra*" Spectrochimica Acta Part B. 74-75, 18-23 (2012)

V. Piñón , M.P. Mateo, G. Nicolas, "*Laser-Induced Breakdown Spectroscopy for chemical mapping of materials*" Applied Spectroscopy Reviews 48(5), 357-383 (2013)

## CONFERENCES

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G. Nicolás, A. Rámil, V. Piñón, J. Sanesteban, A. Yáñez "Data acquisition system for cleaning of materials" Poster presentation at International Meeting on Applied Physics, Badajoz (Spain) 13-18/10/2003

M.P. Mateo, G. Nicolás, V. Piñón, J.C. Alvarez, A. Rámil, A. Yáñez "Laser cleaning of tools and rocks polluted by oil spill from prestige tanker" Poster presentation at VIII International Symposium on Analytical Methodology in the Environment Field / XIII Reunión de la Sociedad Española de Química Analítica, A Coruña (Spain) 21-24/10/2003

M.P. Mateo, G. Nicolás, V. Piñón, A. Rámil, A. Yáñez "Laser cleaning: an alternative method for removing oil-spill fuel residues" Poster presentation at European Materials Research Society-Spring Meeting, Strasbourg (France) 24-28/5/2004

G. Nicolás, M.P. Mateo, V. Piñón, A. Rámil, A. Yáñez "Methods of control and evaluation of laser painting removal process in naval sector" Poster presentation at European Materials Research Society-Spring Meeting, Strasbourg (France) 24-28/5/2004

M. P. Mateo, V. Piñón, G. Nicolás, A. J. López, A. Yáñez "Espectroscopía de plasmas generados en la descontaminación por láser de superficies afectadas por vertidos de fuel" Oral presentation at XIX Reunión Nacional de Espectroscopía / III Congreso Ibérico de Espectroscopía, Las Palmas de Gran Canaria (Spain) 4-9/7/2004

G. Nicolás, V. Piñón, M. P. Mateo, A. Rámil, A. Yáñez "Control del proceso de decapado por láser de pinturas utilizadas en el sector naval mediante análisis espectral de las partículas eliminadas" Poster presentation at XIX Reunión Nacional de Espectroscopía / III Congreso Ibérico de Espectroscopía, Las Palmas de Gran Canaria (Spain) 4-9/7/2004

M.P. Mateo, V. Piñón, C. Álvarez, A. Rámil, A. Yáñez, G. Nicolás "Laser-induced plasma monitoring for the control of oil-spill fuel removal by laser ablation" Poster presentation at 3rd International Conference on Laser Induced Plasma Spectroscopy and Applications, Torremolinos (Spain) 28/9/2004-1/10/ 2004

A.J. López, M.P. Mateo, V. Piñón, M.J. Tobar, A. Rámil, G. Nicolás "Compositional analysis of Hispanic terra sigillata by laser spectroscopy" Poster presentation at 3rd International Conference on Laser Induced Plasma Spectroscopy and Applications, Torremolinos (Spain) 28/9/2004-1/10/2004

G. Nicolás, V. Piñón, M. P. Mateo, J.M. Amado, A. Yáñez "Control by LIPS of laser stripping of paint layers used in naval sector" Poster presentation at 3rd International Conference on Laser Induced Plasma Spectroscopy and Applications, Torremolinos (Spain) 28/9/2004-1/10/ 2004

A. J. López, A. Rámil, M. P. Mateo, V. Piñón, G. Nicolás "Caracterización de cerámicas antiguas mediante espectroscopía de plasmas inducidos por láser: aplicación al caso de "Terra Sigillata Hispánica"" Oral presentation at XLIV Congreso Sociedad Española de Cerámica y Vidrio, Vigo (Spain) 10-13/11/2004

G. Nicolás, M. P. Mateo, A. J. López, A. Rámil, V. Piñón, A. Yáñez "Estudio comparativo de cerámicas romanas "Terra Sigillata" procedentes de distintos centros de producción" Poster presentation at XLIV Congreso Sociedad Española de Cerámica y Vidrio, Vigo (Spain) 10-13/11/2004

G. Nicolás, A. Rámil, A.J. López, J.C. Álvarez, V. Piñón "Integración de una aplicación informática en una estación de trabajo de procesamiento de materiales por láser" Poster presentation at XVI Congreso Nacional de Ingeniería Mecánica, León (Spain) 15-17/12/2004

V. Piñón, A. Rámil, M.P. Mateo, J.C. Álvarez, G. Nicolás "Desarrollo de un software de adquisición y análisis de señales" Oral presentation at XVI Congreso Nacional de Ingeniería Mecánica, León (Spain) 15-17/12/2004

A. Rámil, E. Saavedra, A. J. López, M. P. Mateo, G. Nicolás, V. Piñón "Soluciones analíticas a la ecuación de conducción del calor sobre geometrías simples con límites físicos: método de las imágenes" Oral presentation at XVI Congreso Nacional de Ingeniería Mecánica, León (Spain) 15-17/12/2004

A.J. López, A. Rámil, G. Nicolás, M.P. Mateo, V. Piñón, A. Yáñez "Analysis and characterization of archaeological ceramics by laser induced plasma spectroscopy" Oral presentation at Materials 2005: XII Portuguese Materials Society Meeting / III International Materials Symposium, Aveiro (Portugal) 20-23/3/2005

G. Nicolás, V. Piñón, M.P. Mateo, A. Yáñez "Laser ablation process controlled by emission spectroscopy: application to the paintings removal" Poster presentation at E-MRS 2005 Spring Meeting, Strasbourg (France) 20-23/3/2005

G. Nicolás, M.P. Mateo, A.J. López, A. Rámil, V. Piñón, A. Yáñez "Laser technology applied for the analysis of roman pottery Terra Sigillata" Oral presentation at E-MRS 2005 Spring Meeting, Strasbourg (France) 20-23/3/2005

G. Nicolás, M.P. Mateo, V. Piñón, J.C. Alvarez, A. Rámil, A. Yáñez "Cleaning and analysis of fuel from Prestige oil spill by laser technique" Poster presentation at Symposium. on Marine Accidental Oil Spills (VERTIMAR 2005), Vigo 13-16/7/2005

G. Nicolás, V. Piñón, M.P. Mateo, A. Yáñez "Atomic-emission spectroscopy software: identification, simulation and comparison tools" Oral presentation at CSI XXXIV: Colloquium Spectroscopicum Internationale, Antwerp (Belgium) 4-9/9/2005

G. Nicolás, A.J. López, M.P. Mateo, A. Rámil, V. Piñón, A. Yáñez "Atomic Classification of archaeological pottery by laser induced plasma spectroscopy" Poster presentation at CSI XXXIV: Colloquium Spectroscopicum Internationale, Antwerp (Belgium) 4-9/9/2005

M.P. Mateo, V. Piñón, G. Nicolás, A. Yáñez, "Improvements in depth-profiling of thick samples by laser-induced breakdown spectroscopy using linear correlation" Oral

presentation at III Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy, Aachen (Germany) 7-9/9/2005

V. Piñón, M.P. Mateo, G. Nicolás, "Chemical maps of non-flat surfaces by laser-induced breakdown spectroscopy" Poster presentation at III Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy, Aachen (Germany) 7-9/9/2005

A.J. López, G. Nicolás, M.P. Mateo, V. Piñón, A. Ramil, A. Yáñez, "Análisis de cerámicas arqueológicas mediante espectroscopía de plasmas inducidos por láser (LIPS)" Poster presentation at XXX Reunión Bienal de la Real Sociedad Española de Física, Ourense (Spain) 12-16/9/2005

M.P. Mateo, G. Nicolás, V. Piñón, A.J. López, A. Yáñez "Laser cleaning of organic formations on XII century granite walls" Oral presentation at LACONA VI: 6 TH International Congress on Lasers in the Conservation Of Artworks, Vienna (Austria) 21-25/9/2005

A.J. López, G. Nicolás, M.P. Mateo, V. Piñón, A. Ramil, "Laser induced plasma spectroscopy for the analysis of roman ceramics Terra Sigillata" Oral presentation at LACONA VI: 6 TH International Congress on Lasers in the Conservation Of Artworks, Vienna (Austria) 21-25/9/2005

M.P. Mateo, G. Nicolás, V. Piñón, A. Yáñez, "Characterization of ceramic materials by laser-induced plasma spectroscopy" Poster presentation at E-MRS 2006 Spring Meeting, Nice (France) 29/5/2006-2/6/2006

G. Nicolás, M.P. Mateo, V. Piñón, A. Yáñez "Advantages of correlation statistics for the characterization of multilayered samples using laser-induced breakdown spectroscopy" Poster presentation at 8th EUROPEAN Workshop on Laser Ablation in Elemental Analysis, Zurich (Switzerland) 19-21/6/2006

G. Nicolás, M.P. Mateo, V. Piñón, V., A. Yáñez, "Laser analysis and removal of paint layers by laser technology", Poster presentation at International Conference on Laser Induced Plasma Spectroscopy and Applications, Montreal (Canada) 5-8/9/2006

V. Piñón, "Studies on double pulse femtosecond LIBS", Oral presentation at New Frontiers in Micro and Nano Photonics, Florence (Italy) 23/4/2008-26/4/2008

V. Piñón, D. Anglos, "Studies of plume optical emission following double pulse femtosecond laser ablation" Poster presentation at E-MRS 2008 Spring Meeting, Strasbourg (France) 26-30/5/2008

V. Piñón, D. Anglos, "Double pulse femtosecond LIBS", Oral presentation at E-MRS 2008 Spring Meeting, Strasbourg (France) 26-30/5/2008

V. Piñón, D. Anglos, "Studies of double-pulse LIBS with femtosecond laser pulses" Oral presentation at 5th International Conference on Laser Induced Plasma Spectroscopy, Berlin (Germany) 22-26/9/2008

V. Piñón, D. Anglos, G. Nicolas, "Improvement of laser induced breakdown spectroscopy technique using double pulse schemes" Oral presentation at IX Reunión Nacional de óptica, Ourense (Spain) 14-17/9/2009

V. Piñón, M.P. Mateo, G. Nicolas, "Comparative study between single and double pulse LIBS mapping", Poster presentation at 5th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Rome (Italy) 28/9/2009-1/10/2009

V. Piñón, M.P. Mateo, G. Nicolas, "Laser Induced Breakdown Spectroscopy mapping using different double pulses approaches" Oral presentation at E-MRS 2010 Spring Meeting, Strasbourg (France) 7-11/6/2010

V. Piñón, M.P. Mateo, G. Nicolas, "Laser Induced Breakdown Spectroscopy mapping using different double pulses approaches" Poster presentation at XXII Reunión Nacional de Espectroscopía / VI Congreso Ibérico de Espectroscopía, Oporto (Portugal) 8-10/9/2010

M.P. Mateo, I. Lopez, V. Piñón, A. Yáñez, G. Nicolas, "Generación de mapas químicos de muestras complejas mediante espectroscopia de plasmas inducidos por laser" Poster presentation at XXII Reunión Nacional de Espectroscopía / VI Congreso Ibérico de Espectroscopía, Oporto (Portugal) 8-10/9/2010

G. Nicolas, M.P. Mateo, V. Piñón, "Effect of surface topography in the generation of chemical maps by laser-induced plasma spectroscopy" Poster presentation at E-MRS 2011 Spring Meeting, Nice (France) 10-12/5/2011

G. Nicolas, M.P. Mateo, V. Piñón, " Vessels protective coatings characterization by laser-induced plasma spectroscopy for quality control purposes" Poster presentation at E-MRS 2011 Spring Meeting, Nice (France) 10-12/5/2011

M.P. Mateo, V. Piñón, D. Anglos, G. Nicolas, "Effect of Ambient Conditions on Femtosecond Double Pulse Laser Induced Breakdown Spectra" Poster presentation at 6th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Izmir (Turkey) 11-15/9/2011

I. Lopez, V. Piñón, M. P. Mateo, A. Yáñez, G. Nicolas, "Mapping of Mechanical Specimens by Laser Induced Breakdown Spectroscopy Method: Application to an Engine Valve" Poster presentation at 6th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Izmir (Turkey) 11-15/9/2011

V. Piñón, R. Hermida, I. Lopez, M.P. Mateo, G. Nicolas, "Spatial Distribution of Nutrients in Plant Leaves by Laser Induced Breakdown Spectroscopy" Poster presentation at 6th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Izmir (Turkey) 11-15/9/2011

M.P. Mateo, V. Piñón, I. Lopez, G. Nicolas, "Combination of LIBS and Confocal Topographic Information for the Construction of 3D Chemical Maps" Poster presentation at 6th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Izmir (Turkey) 11-15/9/2011

V. Piñón, M.P. Mateo, G. Nicolas, "Application of Laser Induced Breakdown Spectroscopy to the Characterization of Marine Protective Coatings" Poster presentation at 6th Euro Mediterranean Symposium on Laser Induced Plasma Spectroscopy, Izmir (Turkey) 11-15/9/2011

I. Lopez, V. Piñón, M. P. Mateo, A. Yáñez, G. Nicolas, "Chemical Maps obtained by Laser Induced Breakdown Spectroscopy technique on non flat mechanical components" Poster



presentation at 11th International Conference On Laser Ablation (COLA 2011), Playa del Carmen (Mexico) 13-19/11/2011

V. Piñón, M. P. Mateo, G. Nicolas, "Characterization of coatings by laser-induced breakdown spectroscopy for quality control purposes" Poster presentation at 11th International Conference On Laser Ablation (COLA 2011), Playa del Carmen (Mexico) 13-19/11/2011

A.I. Whitehouse, C.P. Evans, V. Piñón, A. Giakoumaki, J.A.T. Pugh, "An overview of proven applications of Laser-Induced Breakdown Spectroscopy (LIBS) within the nuclear power and reprocessing industries", Oral presentation at Euro-Mediterranean Symposium in LIBS (EMS-LIBS), Linz (Austria) 14-18/9/ 2015

A. Giakoumaki, V. Piñón, C.P. Evans, A.I. Whitehouse, "Quantitative measurements of liquid samples by LIBS", Oral presentation at Laser-Induced Breakdown Spectroscopy LIBS 2016, Chamonix (France), 12-16/9/2016

V. Piñón, A. Giakoumaki, C.P. Evans, A.I. Whitehouse, "Comparative tests of an Echelle Multiplex Unit (EMU) spectrometer with a multi-channel spectrometer using a modular LIBS system", Poster presentation at Laser-Induced Breakdown Spectroscopy LIBS 2016, Chamonix (France), 12-16/9/2016

S. Woodbury, T. Brooks, A.I. Whitehouse, C.P. Evans, R. Robinson, V. Piñón, A. Giakoumaki, "In-cave LIBS in Windscale laboratory", Poster presentation at 54th Annual Meeting on Hot Laboratories and Remote Handling, Mito (Japan), 17-22/9/2016

## REFERENCES

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1. Dr. Andy Whitehouse, Applied Photonics Ltd, UK.

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2. Prof. Ginés Nicolás, Escuela Politécnica Superior, Universtiy of A Coruña.

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