

Parte A. DATOS PERSONALES		Fecha del CVA		01/12/2018
Nombre y apellidos	SANTIAGO PALANCO LOPEZ			
DNI/NIE/pasaporte	33371577A	Edad	50	
Núm. identificación del investigador	Researcher ID	E-3418-2012		
	Código Orcid	0000-0002-8246-7995		

A.1. Situación profesional actual

Organismo	Universidad de Málaga			
Dpto./Centro	Física Aplicada I			
Dirección	Málaga, Andalucía, España			
Teléfono	952131927	Correo electrónico	spalanco@uma.es	
Categoría profesional	Profesor titular de universidad	Fecha inicio	2017	
Espec. cód. UNESCO				
Palabras clave				

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Doctor. Química		2001

A.3. Indicadores generales de calidad de la producción científica (véanse instrucciones)

Indicador	Medida
Sexenios de investigación	3.0
Número de citas	1252.0
Publicaciones	42.0
Publicaciones en primer cuartil	32.0
Fecha del último sexenio	26/06/2017
Índice H	22.0

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Santiago graduated both from the University of Greenwich (UK), where he was awarded a BSc with Honour Degree in Applied Chemistry in 1992, and from the University of País Vasco (Spain, Licenciado en Ciencias Químicas) in 1996. In 2001 he obtained his PhD from the University of Málaga (Spain). His PhD research on the applications of laser induced plasma spectrometry (LIBS/LIPS) to industrial processes under the advisement of J.J. Laserna involved the development of fully-automated instruments for the monitoring of stainless steel production including both portable and stand-off LIBS instruments. In this context, he was invited to the Bremen Institute of Applied Laser Science (BIAS, Bremen, Germany) to develop a sensor for laser welding of aluminum, a work awarded by the Scientific Committee at the 1st International Conference on Laser Induced Plasma Spectroscopy and Applications (Pisa, Italy).

During his post-doc research at the University of Málaga, he worked on the development and uses of LIBS for remote sensing, increasingly requiring a deeper knowledge in optics. This work had a significant visibility worldwide and resulted in a collaboration with the Army Research Laboratory (Department of Defense, US) to study the feasibility of stand-off LIBS for the detection of energetic materials. He demonstrated stand-off detection of improvised explosive devices (IEDs) in the field for the first time in 2004. In a follow-on work, he collaborated with Ocean Optics, Inc. (US) and Applied Photonics Ltd (UK) in the design and construction of five stand-off LIBS instruments for the ARL, and two more for the University of Málaga and Indra Sistemas (Spain).

The increasing interest of the Department of Defense (US) in his work, favored In 2006, he joined efforts with Martin Richardson and moved to the University of Central Florida (US) to take a faculty position at CREOL as a Senior Scientist. He was responsible for a program on fundamental laser spectroscopy funded by the ARO (MURI) and put the foundations for the Laser Spectroscopy and Sensing Lab and the Laser Ignition Facility at the then-newborn

Townes Laser Institute. Due to the military nature of the research during this stage, most of the results remain unpublished.

In 2009 he returned to the University of Málaga where he joined José Ramos-Barrado's Group at the Department of Applied Physics I and was appointed as a Ramón y Cajal Research Scientist between 2010 and 2016. From May 2016 he is an associate professor (Profesor Titular de Universidad) and holds the I3 excellence award by the ANEP and three research periods (sexenios) accredited by the ANECA. Since his return to Spain he has widened his research interests to include the generation of nanostructures from laser-induced plasmas of precursor microdroplets, the use of plasma lenses for surface nanopatterning and the characterization of complex single and multilayered PV materials.

In summary, he is the supervisor of two theses in Spain (2006, 2013) and coauthor of 11 book chapters, 8 patents and 42 research papers in journals indexed in WoS/JCR, 32 out of these belonging to the first quartile in their respective categories. Regarding the last five years, 7 publications figure in the first quartile, including 3 in the first decile. The h-index is 21/22 (WoS/Scopus) with 1252 citations and 79 cites per year in the last five years (WoS).

Parte C. MÉRITOS MÁS RELEVANTES *(ordenados por tipología)*

C.1. Publicaciones

Publicación en Revista. Orlando, Vincenzo; Gabás-Pérez, Mercedes; Galiana, Beatriz; Espinet-gonzález, Pilar; Palanco-Lopez, Santiago; Núñez, Neftali; Vázquez, Manuel; Araki, Kenji; Algora, Carlos. 2017. Failure analysis on lattice matched GaInP/Ga(In)As/Ge commercial concentrator solar cells after temperature accelerated life tests. Progress in Photovoltaics. 95, pp. 97-112.

Publicación en Revista. Gabás-Pérez, Mercedes; Ochoa-Martinez, Efrain; Navarrete-Astorga, Elena; Landa-cánovas, A.r.; Herrero, Pilar; Agulló-rueda, Fernando; Palanco-Lopez, Santiago; Martínez-serrano, J.j.; Ramos-Barrado, Jose. 2017. Characterization of the interface between highly conductive Ga:ZnO films and the silicon substrate. Applied Surface Science. 419, pp. 595-602.

Publicación en Revista. Lopez-Escalante, Maria Cruz; Palanco-Lopez, Santiago; Ramos-Barrado, Jose. 2016. Differences between GaAs/GaInP and GaAs/AlInP interfaces grown by MOVPE revealed by depth profiling and angle-resolved X-ray photoelectron spectroscopies. Applied Surface Science. 360, pp. 477-484.

Publicación en Revista. Palanco-Lopez, Santiago; Marino-, Salvatore; Ramos-Barrado, Jose. 2015. Tailored synthesis of nanostructures by laser irradiation of a precursor microdroplet stream in open-air. Nanoscale. 7, pp. 492-499.

Publicación en Revista. Palanco-Lopez, Santiago; Ochoa-Martinez, Efrain. 2015. Determination of refractive index and extinction coefficient of standard production CVD-graphene. Nanoscale. 7, pp. 1491-1500.

Publicación en Revista. Palanco-Lopez, Santiago; Gabás-Pérez, Mercedes; Romero-Pareja, Rocío; Ramos-Barrado, Jose. 2015. Laser nano- and micro-structuring of silicon using a laser-induced plasma for beam conditioning. Nanotechnology. 26, pp. 055303-055309.

Publicación en Revista. Palanco-Lopez, Santiago; Marino-, Salvatore; Ramos-Barrado, Jose. 2014. Micro- and nanoparticle generation during nanosecond laser ablation: correlation between mass and optical emissions. Optics Express. 22, pp. 3991-3999.

Publicación en Revista. Palanco-Lopez, Santiago; Marino-, Salvatore; Ramos-Barrado, Jose. 2014. Particle formation and plasma radiative losses during laser ablation suitability of the Sedov- Taylor scaling. Optics Express. 22, pp. 16552-16557.

Publicación en Revista. Weidman-,Matthew; Palanco-Lopez, Santiago; Baudalet-,Matthieu; Richardson-, Martin C. 2009. Thermodynamic and spectroscopic properties of Nd:YAG-CO₂ double-pulse laser-induced iron plasmas. *Spectrochimica Acta Part B: Atomic Spectroscopy*. 64, pp. 961-967.

Publicación en Revista. López-Moreno, Cristina; Palanco-Lopez, Santiago; Laserna-Vazquez, Jose Javier. 2007. Stand-off analysis of moving targets using laser-induced breakdown spectroscopy. *Journal of Analytical Atomic Spectrometry*. 22, pp. 84-87.

Publicación en Revista. López-Moreno, Cristina; Palanco-Lopez, Santiago; Delucia-,F.; Miziolek-,A.W. ;Rose-,J. ;Walters-,R.A. ;Whitehouse-,A; Laserna-Vazquez, Jose Javier. 2006. Test of a stand-off laser-induced breakdown spectroscopy sensor for the detection of explosive residues on solid surfaces. *Journal of Analytical Atomic Spectrometry*. 21, pp. 55-60.

Publicación en Revista. Palanco-Lopez, Santiago; López-Moreno, Cristina; Laserna-Vazquez, Jose Javier. 2006. Design, construction and assessment of a field-deployable laser-induced breakdown spectrometer for remote elemental sensing. *Spectrochimica Acta Part B: Atomic Spectroscopy*. 64, pp. 88-95.

C.2. Proyectos

Ayudas para incentivar la incorporación estable de doctores. agencia estatal de investigación. 2017. 100000 EUR. Investigador/a.

Células solares multiunión de nitruros diluidos de concentración con eficiencias superiores al 46%. Ministerio De Economía Y Competitividad. 2015-2018. 81000 EUR. Investigador Principal Consolidado.

Caracterización estructural, espectroscópica y espectrométrica de materiales para la nueva generación de células solares multiunión que logren eficiencias del 50%. MINECO. 2015-2017. 91355 EUR. Investigador/a.

Caracterización de capas e intercaras de células solares para alta concentración con eficiencias superiores al 40%. MICINN. 2015-2017. 56870 EUR. Investigador/a.

Transferencia de estructuras de células fotovoltaicas de alta eficiencia a la producción industrial. Ramos-Barrado, Jose (Universidad de Málaga). 2011. 235000 EUR. Investigador/a.

Tailored generation of nanoparticles by laser irradiation of a micro-droplet stream. MICINN. 2010-2016. 236850 EUR. Investigador Principal Consolidado.

Equipamiento científico para un sistema de producción y caracterización de nanopartículas. Andalucía Tech, Universidad de Málaga. 2010. 154150.48 EUR. Investigador/a.

FUNCOAT: Surface functionalisation of material for high added value applications. Ministerio de Educación y Ciencia. 2009-2014. 4500000 EUR. Investigador/a.

Laser ignition facility for energetic materials (lifem). Office of Naval Research, Department of Defense, USA. 2008-2011. 2300000 USD. Investigador Principal Consolidado.

Ultrafast laser interaction processes for libs and other sensing technologies. Office of Naval Research, Department of Defense, USA. Richardson-, Martin C. 2006-2011. 4600000 USD. Investigador Principal Consolidado.

C.3. Contratos, méritos tecnológicos o de transferencia

Caracterización de nanocapas de Grafeno. Universidad Politécnica de Madrid. 2012. 17000 EUR.

LIBS Analysis of Gases - Feasibility Study. UK ATOMIC WEAPON ESTABLISHMENT. 2008-2008.

C.4. Patentes

Palanco-Lopez, Santiago. Procedimiento para la producción de nanopartículas mediante irradiación con láser de precursores líquidos de tamaño microscópico. 2013.

Palanco-Lopez, Santiago. Nano- y micro-estructuración de silicio con láser usando un plasma inducido por láser para el tratamiento del haz láser de procesado. 2014.

Palanco-Lopez, Santiago. Instrumento portátil basado en láser para la realización de análisis químico elemental. 2002.

Palanco-Lopez, Santiago. Sensor para monitorización on-line y remota de procesos automatizados de soldadura con láser. 1998.

C.5. Tesis Doctorales

Espectrometría de plasmas inducidos por láser para el análisis químico en campo y a distancia. principios, desarrollo instrumental y aplicaciones. Lopez-Moreno, Cristina.

Optimization of low-cost processes for thin crystalline silicon solar cell production. Ochoa, Efraín.