



Pablo Merino Mateo

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

I completed my doctoral thesis at "Centro de Astrobiologia", a highly interdisciplinary center of excellence associated with the NASA Astrobiology Institute, in close collaboration with the Institute of Materials Science of Madrid (ICMM-CSIC) under the supervision of Prof. J.A. Martin Gago. During this period I participated in scientific projects involving multiple collaborations with renowned groups, both at national (Prof. Dr. J. Cernicharo, Dr. G. Ellis, Prof. Dr. R. Perez) and at international level (Dr. P. Jelinek, Dr. YJ Dappe, Prof. Dr. P. Soukiassian) in the field of epitaxial graphene characterization. I acquired skills in a number of advanced surface characterization techniques such as scanning tunneling microscope (STM), atomic force microscope (AFM), or X-ray (XPS) and ultraviolet (UPS) spectroscopies. During this period I obtained beamtimes by open call competitions in some of the major European centers of synchrotron radiation, such as ESRF (Grenoble), ELETTRA (Trieste) or ALBA (Barcelona), to perform experiments of advanced characterization of surfaces such as SXRD or PEEM / LEEM. The works performed during this period have been published in numerous articles in high impact journals such as ACS Nano (IF 13.3), Nature Communications (IF 11.3) or Physical Review Letters (IF 7.6). Among these articles there are two cited more than 100 times and eight with more than 25 citations. The result of this work led me to be awarded the Extraordinary Prize for best doctoral thesis in Physics of the UAM 2013-2014.

I later joined the group of Prof. Dr. K. Kern at the Max Planck Institute für Festkörperforschung through a grant from the Max Planck Foundation for foreign researchers. The institute is one of the best centers in condensed matter physics of the world and has important researchers such as Prof. Dr. K. V Klitzing (NP 1985). Prof. Dr. K. Kern is one of the most prominent scientists worldwide in the field of nanoscience and has won awards such as the prestigious Price Liebnitz. My work has been done in the laboratory of Nanooptics located in the recently inaugurated precision laboratory (world record installation of vibrational damping). During my stay I have developed a new experimental technique that combines the capabilities of quantum optics and molecular nanoscience called HBT-STM that allows to study the dynamics of emission of photons with temporal and spatial of ps and pm. In Germany I have been able to attract my own funding by means of the prestigious Alexander von Humboldt Foundation. The last two years I funded my salary as well as expendables by the sponsor of the foundation. Together with the two PhD students which I co-mentored, we have published 8 publications in top-tier nanoscience (including 3 Nano Letters, 1 ACS Nano and one prestigious Chemical Review) and multidisciplinary (1 Nat. Commun. and 1 Sci. Adv., both as sole corresponding author) journals.

Since 2017 I am Scientific responsible of the Stardust machine in the frame of the ERC Synergy project Nanocsomos. I study the formation of carbonaceous dust grain analogues and their interaction with molecules present in the interstellar and circumstellar media.











General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

In the 9 years since I started my scientific career I have published 26 articles (8 as first author and 6 as corresponding) with about 650 citation. The average number of citations in the last 5 years is around 100 citations per year. Eight of these papers have more than 25 citations (two of them with more than 120 citations). I have an Hirsch index H=13 (google scholar) and an average IF/publication above 10.4.

Most of my articles have been published in high impact journals of the first quarter Q1 in their field, and 15 of them belonging to the top 10% of their field. I have one article in Chemical Reviews, three in Nano Letters, four in ACS Nano, two in Nature Communications, one in Physical review Letters and one Science Advances. I have actively participated in 3 research projects supported by the Spanish Ministry of Economy and one ERC synergy project. I have been awarded Fellow of the Alexander von Humbodt Foundation which sponsored my research in Germany. In order to join ERC Nanocosmos I had to decline two prestigious grants which I was awarded: "Intertalentum Marie Curie postdoctoral Fellowship" and "Atracción del Talento Investigador de la Comunidad de Madrid".

During my research career I have collaborated with national and international groups and I have co-led with research projects with theoretical collaborators that resulted in a publication in Nano Letters and Nanoscale. I have also obtained synchrotron beamtimes in competitive calls and performed a number of research stays in international synchrotron light sources such as ESRF, ELETTRA, or ALBA.

In my Postdoctoral stay in Germany I have led a project developing a new experimental technique combining quantum optics correlation spectroscopy and nanoscale science near field microscopy which permits to address the luminescence dynamics of molecular systems with temporal and spatial resolutions of few ps and pm. These results where published in Nature Communications and Science Advances where I am both, corresponding and first author. In 2018 I was finalist in the ERC Starting Grant for my project: Single Molecule Photochemistry and Astrochemistry on Surfaces (SiMPAS).









Pablo Merino Mateo

Surname(s): Name: ORCID: ResearcherID: Google Scholar: Merino Mateo Pablo 0000-0002-0267-4020 K-1392-2016 Pablo Merino

Current professional situation

Employing entity: Consejo Superior de Type of entity: State agency Investigaciones Científicas Department: ESISNA, Instituto de Ciencia de Materiales de Madrid Professional category: ERC Synergy postdoc Educational Management (Yes/No): No Phone: (0034) 179 - 6437300 Email: pablo.merino@csic.es Start date: 01/02/2017 Type of contract: Grant-assisted student (pre or Dedication regime: Full time post-doctoral, others) Primary (UNESCO code): 221100 - Solid state physics Secondary (UNESCO code): 220900 - Optics Tertiary (UNESCO code): 221000 - Physical chemistry Performed tasks: Scientific responsible of the Stardust machine Identify key words: Interaction light-matter

Previous positions and activities

	Employing entity	Professional category	Start date
1	Max Planck Foundation	Alexander von Humboldt Fellow	02/2015
2	Max Planck Foundation	Max-Planck Grant to Foreign Postdocs	01/2014
3	Instituto Nacional de Técnica Aerospacial	Predoctoral Fellowship Rafael Calvo Rodes	06/2010
4	Instituto Nacional de Técnica Aerospacial	Predoctoral Fellowship	01/2009

 1
 Employing entity: Max Planck Foundation
 Type of entity: Foundation

 Department: Nanoscale science, Max Planck Institute for Solid State Research

 Professional category: Alexander von Humboldt
 Educational Management (Yes/No): No

 Fellow
 Start-End date: 02/2015 - 02/2017
 Duration: 2 years

 Type of contract: Grant-assisted student (pre or post-doctoral, others)
 Dedication regime: Full time

 Primary (UNESCO code): 221100 - Solid state physics
 Secondary (UNESCO code): 220900 - Optics

Tertiary (UNESCO code): 221000 - Physical chemistry

Field of management activity: Public Research Body













Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Master
 Name of qualification: M. Sc. in Solid State Physics and Nanotechnology
 City degree awarding entity: Madrid, Community of Madrid, Spain
 Degree awarding entity: Universidad Autónoma de Type of entity: University
 Madrid
 Date of qualification: 06/2010
 Average mark: Excellent
 Prize: Special Price to M. Sc. Thesis
 Standardised degree: No

2 University degree: Higher degree
 Name of qualification: B. Sc. in Physics
 City degree awarding entity: Madrid, Community of Madrid, Spain
 Degree awarding entity: Universidad Autónoma de Type of entity: University Madrid
 Date of qualification: 09/2008
 Average mark: Good
 Standardised degree: No

Doctorates

Doctorate programme: Ph. D. in Solid State Physics and NanotechnologyDegree awarding entity: Universidad Autónoma deType of entity: UniversityMadridCity degree awarding entity: Madrid, Community of Madrid, SpainDate of degree: 11/2013European doctorate: YesThesis title: Structural characterization of epitaxial grapheneThesis director: Jose Angel Martin GagoObtained qualification: Sobresaliente Cum Laude International MentionRecognition of quality: YesSpecial doctorate award: YesDate of award: 09/2014







Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Chinese	A1	A1	A1	A1	A1
German	A2	A2	A2	A2	A2
French	B2	B2	B2	B2	B2
English	C2	C2	C2	C2	C2

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project: Fun-LDS: Functional low-dimensional materials for electrochemical (bio)sensing Entity where project took place: Instituto de Ciencia Type of entity: State agency de Materiales de Madrid City of entity: Madrid, Community of Madrid, Spain N° of researchers: 1 Start-End date: 01/02/2018 - 01/02/2021 Total amount: 182.000 €
- 2 Name of the project: NEOS: Nano-Excitonics on Surfaces (DECLINED) Entity where project took place: FUNDACIÓN IMDEA NANOCIENCIA City of entity: Madrid, Community of Madrid, Spain Nº of researchers: 1 Name of the programme: Marie Curie Intertalentum Start-End date: 01/02/2018 - 01/02/2021 Total amount: 145.800 €
- 3 Name of the project: Comunidad de Madrid Young Excellent Investigator (DECLINED) Entity where project took place: FUNDACIÓN IMDEA NANOCIENCIA City of entity: Madrid, Community of Madrid, Spain Nº of researchers: 1 Start-End date: 01/02/2017 - 01/02/2021 Total amount: 80.000 €
- Name of the project: ERC Synergy NANOCOMOS
 Entity where project took place: Instituto de Ciencia Type of entity: State agency de Materiales de Madrid
 City of entity: Madrid, Community of Madrid, Spain
 Nº of researchers: 1
 Start-End date: 01/09/2014 01/09/2020
 Total amount: 14.983.261 €







- 5 Name of the project: Monitoring light absorption dynamics of organic pigments at surfaces
 Entity where project took place: Alexander von Humboldt Foundation
 City of entity: Stuttgart, Germany
 N° of researchers: 1
 Start-End date: 01/02/2015 - 01/02/2017
- 6 Name of the project: Energy Conversion Ddynamics Studied at the Nanoscale Entity where project took place: Max Planck Fellowship to International Post-docs City of entity: Stuttgart, Germany N° of researchers: 1 Start-End date: 15/01/2015 - 01/02/2015 Total amount: 25.350 €
- 7 Name of the project: Quiralidad y Autoorganización de Aminoácidos en Superficies
 Entity where project took place: Centro de Astrobiología
 Nº of researchers: 4
 Start-End date: 01/2011 01/2014
 Total amount: 60.000 €
- 8 Name of the project: NANOSELECT CONSOLIDER-INGENIO-2007 CSD2007-041
 Entity where project took place: Centro de Astrobiología
 Start-End date: 12/2007 12/2012
 Total amount: 5.000.000 €

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

Pablo Merino; Anna Roslawska; Christopher C. Leon; Abhishek Grewal; Christoph Grosse; Cesar Gonzalez; Klaus Kuhnke; Klaus Kern. A single hydrogen molecule as an intensity chopper in an electrically-driven plasmonic nanocavity. Nano Letters. 19, pp. 235 - 241. 2019.

Type of production: Scientific paper Position of signature: 1

Corresponding author: Yes Impact source: ISI

Impact index in year of publication: 12.08 Position of publication: 4 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY Journal in the top 25%: Yes No. of journals in the cat.: 86

Pablo Merino; Anna Roslawska; Christoph Grosse; Christopher C. Leon; Klaus Kuhnke; Klaus Kern. Bimodal exciton-plasmon light sources controlled by local charge carrier injection. Science Advances. eaap8349, 2018.
 Type of production: Scientific paper







CURRÍCULUM VÍTAE NORMALIZADO

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Position of signature: 1

Corresponding author: Yes Impact source: ISI Impact index in year of publication: 11.51 Position of publication: 4

Source of citations: SCOPUS

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Multidisciplinary Journal in the top 25%: Yes No. of journals in the cat.: 121

Citations: 3

Anna Roslawska; Pablo Merino; Christoph Grosse; Chistopher C. Leon; Olle Gunnarson; Markus Etzkorn; Klaus Kuhnke; Klaus Kern. Single charge and exciton dynamics probed by molecular-scale-induced electroluminescence. Nano Letters. 18, pp. 4001 - 4007. 2018.
 Type of production: Scientific paper

Position of signature: 1	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes	
Impact source: ISI	Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY
Impact index in year of publication: 12.08	Journal in the top 25%: Yes
Position of publication: 4	No. of journals in the cat.: 86
Source of citations: SCOPUS	Citations: 2

4 Klaus Kuhnke; Christoph Grosse; Pablo Merino; Klaus Kern. Atomic-Scale Imaging and Spectroscopy of Electroluminescence at Molecular Interfaces. Chemical Reviews. 117 - 7, pp. 5174 - 5222. American Chemical Society, 2017.

Type of production: Scientific paper **Position of signature:** 2

Corresponding author: Yes Impact source: ISI Impact index in year of publication: 47.92 Position of publication: 4

Source of citations: SCOPUS

Format: Journal **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

Category: MULTIDISCIPLINARY SCIENCES Journal in the top 25%: Yes No. of journals in the cat.: 12.090

Citations: 14

5 Pablo Merino; Hernan Santos; Anna Lisa Pinardi; Leonor Chico. Atomically-resolved edge states on surface-nanotemplated graphene explored at room temperature. Nanoscale. 9 - 11, pp. 3905 - 3911. RSC, 2017.
 Type of production: Scientific paper Format: Journal Position of signature: 1

Corresponding author: Yes Impact source: ISI Impact index in year of publication: 7.37 Position of publication: 13

Source of citations: SCOPUS

Category: Nanoscience and nanotechnology Journal in the top 25%: Yes No. of journals in the cat.: 86

Citations: 0

6 Christoph Grosse; Pablo Merino; Anna Roslawska; Olle Gunnarsson; Klaus Kuhnke; Klaus Kern. Submolecular Electroluminescence Mapping of Organic Semiconductors. ACS Nano. 11 - 2, pp. 1230 - 1237. American Chemical Society, 2017.

Type of production: Scientific paper **Position of signature:** 2

Format: Journal







Impact index in year of publication: 13.94

Corresponding author: No

Position of publication: 4

Source of citations: SCOPUS

Impact source: ISI

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Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY Journal in the top 25%: Yes No. of journals in the cat.: 86

Citations: 7

 Christoph Grosse; Olle Gunnarsson; Pablo Merino; Klaus Kuhnke; Klaus Kern. Nanoscale Imaging of Charge Carrier and Exciton Trapping at Structural Defects in Organic Semiconductors. Nano Letters. 16 - 3, pp. 2084 -2089. American Chemical Society, 2016.

Type of production: Scientific paperFormat: JournalPosition of signature: 3Degree of contribution: Author or co-author of article in
journal with external admissions assessment committeeCorresponding author: NoImpact source: ISIImpact index in year of publication: 13.78Category: Science Edition - NANOSCIENCE &
NANOTECHNOLOGYImpact index in year of publication: 13.78Journal in the top 25%: Yes
No. of journals in the cat.: 83Source of citations: SCOPUSCitations: 9

8 Jose I Marinez; Pablo Merino; Anna L Pinardi; Gonzalo Otero-Irureta; Maria F Lopez; Javier Mendez; Jose A Martin-Gago. Role of the Pinning Points in epitaxial Graphene Moiré Superstructures on the Pt (111) Surface. Scientific Reports. 6, Nature Publishing Group, 2016.

Type of production: Scientific paper Position of signature: 2

Corresponding author: No Impact source: ISI

Impact index in year of publication: 5.23 Position of publication: 7

Source of citations: SCOPUS

Format: Journal **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - MULTIDISCIPLINARY SCIENCES Journal in the top 25%: Yes No. of journals in the cat.: 63

Citations: 8

9 Mikola Telychko; Pingo Mutongo; Pablo Merino; Prokop Hapala; Martin Ondráček; François C Bocquet; Jessica Sforzini; Oleksandr Stetsovych; Martin Vondráček; Pavel Jelinek; Martin Švec. Electronic and Chemical Properties of Donor, Acceptor Centers in Graphene. ACS Nano. 9 - 9, pp. 9180 - 9187. American Chemical Society, 2015.

Type of production: Scientific paperFormat: JournalPosition of signature: 3Degree of contribution: Author or co-author of article in
journal with external admissions assessment committeeCorresponding author: NoImpact source: ISIImpact index in year of publication: 13.33Category: Science Edition - NANOSCIENCE &
NANOTECHNOLOGYImpact index in year of publication: 13.33Journal in the top 25%: Yes
No. of journals in the cat.: 83

Source of citations: SCOPUS

Citations: 12









10 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern. Exciton dynamics of C60-based Single-Photon Emitters explored by Hanbury Brown-Twiss Scanning Tunneling Microscopy. Nature Communications. 6, Nature Publishing Group, 2015. Type of production: Scientific paper Format: Journal

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Position of signature: 1	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes	
Impact source: ISI	Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 11.33	Journal in the top 25%: Yes
Position of publication: 3	No. of journals in the cat.: 63
Source of citations: SCOPUS	Citations: 15

11 Pablo Merino; Martin Švec; Jose I Martinez; Pingo Mutongo; Cesar Gonzalez; Jose A Martin-Gago; Pedro de Andres; Pavel Jelinek. Ortho and para hydrogen dimers on G/SiC (0001): combined STM and DFT study. Langmuir. 31 - 1, pp. 233 - 239. American Chemical Society, 2015.

Type of production: Scientific paper **Position of signature:** 1

Corresponding author: Yes Impact source: ISI Impact index in year of publication: 3.99 Position of publication: 36

Source of citations: SCOPUS

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - CHEMISTRY, PHYSICAL Journal in the top 25%: Yes No. of journals in the cat.: 144

- Citations: 7
- **12** Pablo Merino; Martin Švec; Jose I Martinez; Pavel Jelinek; Paolo Lacovig; Matteo Dalmiglio; Silvano Lizzit; Patrick Soukiassian; Jose Cernicharo; Jose A Martin-Gago. Graphene etching on SiC grains as a path to interstellar polycyclic aromatic hydrocarbons formation. Nature Communications. 5, Nature Publishing Group, 2014. Type of production: Scientific paper

Type of production: Scientific paper	Format: Journal
Position of signature: 1	Degree of contribution: Author or co-author of article in
	journal with external admissions assessment committee
Corresponding author: No	
Impact source: ISI	Category: Science Edition - MULTIDISCIPLINARY

Impact index in year of publication: 11.47 **Position of publication:** 3

Source of citations: SCOPUS

rnal admissions assessment committee Category: Science Edition - MULTIDISCIPLINARY SCIENCES Journal in the top 25%: Yes

No. of journals in the cat.: 57

Citations: 25

13 Elena Casero; Concepción Alonso; M. Dolores Petit-Domínguez; Luis Vázquez; Ana M Parra-Alfambra; Pablo Merino; Susana Álvarez-García; Alicia de Andrés; Edna Suárez; Felix Pariente; Encarnación Lorenzo. Lactate biosensor based on a bionanocomposite composed of titanium oxide nanoparticles, photocatalytically reduced graphene, and lactate oxidase. Microchimica Acta. 181 - 1-2, pp. 79 - 87. Springer Vienna, 2014.

Type of production: Scientific paper Position of signature: 6

Corresponding author: No Impact source: ISI Impact index in year of publication: 3.74 **Position of publication: 9**



Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - CHEMISTRY, ANALYTICAL Journal in the top 25%: Yes No. of journals in the cat.: 74





Source of citations: SCOPUS

Citations: 21

14 Martin Švec; Prokop Hapala; Martin Ondráček; Pablo Merino; Maria Blanco-Rey; Pingo Mutongo; Martin Vondráček; Martin Polyak; Vladimir Chab; Jose A Martin-Gago; Pavel Jelinek. Silicene Versus Two-Dimensional Ordered Silicide: Atomic and Electronic Structure of Si-(19x19)R23.4°/ Pt(111). Physical Review B: Rapid Comm.89, pp. 201412. American Physical Society, 2014.

Type of production: Scientific paperFormat: JournalPosition of signature: 4Degree of contribution: Author or co-author of article in
journal with external admissions assessment committeeCorresponding author: NoImpact source: ISIImpact source: ISICategory: Science Edition - PHYSICS, CONDENSED
MATTERImpact index in year of publication: 3.74Journal in the top 25%: YesPosition of publication: 14No. of journals in the cat.: 67Source of citations: SCOPUSCitations: 33

Pablo Merino; Lucia Rodrigo; Anna Lisa Pinardi; Javier Méndez; M. Francisca López; Pablo Pou; Rubén Pérez; Jose A Martin-Gago. Sublattice localized electronic states in atomically resolved graphene-Pt (111) edge-boundaries. ACS Nano. 8 - 4, pp. 3590 - 3596. American Chemical Society, 2014.
 Type of production: Scientific paper

Type of production. Scientific paper	Format. Journal
Position of signature: 1	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No	
Impact source: ISI	Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY
Impact index in year of publication: 12.88	Journal in the top 25%: Yes
Position of publication: 5	No. of journals in the cat.: 80
Source of citations: SCOPUS	Citations: 13

16 Elena Casero; Concepcion Alonso; Luis Vázquez; M. Dolores Petit-Dominguez; Ana M Parra-Alfambra; M. de la Fuente; Pablo Merino; S. S Álvarez-García; Alicia De Andrés; Felix Pariente; M. Encarnacion Lorenzo. Comparative response of biosensing platforms based on synthesized graphene oxide and electrochemically reduced graphene. Electroanalysis. 25 - 1, pp. 154 - 165. WILEY-VCH Verlag, 2013.

Type of production: Scientific paper	Format: Journal
Position of signature: 7	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No	
Impact source: ISI	Category: Science Edition - CHEMISTRY, ANALYTICAL
Impact index in year of publication: 2.50	Journal in the top 25%: No
Position of publication: 29	No. of journals in the cat.: 76
Source of citations: SCOPUS	Citations: 31

17 Marta Castelaín; Gerardo Martínez; Pablo Merino; José Á Martín-Gago; José L Segura; Gary Ellis; Horacio J Salavagione. Graphene functionalisation with a conjugated poly (fluorene) by click coupling: Striking electronic properties in solution. Chemistry–A European Journal. 18 - 16, pp. 4965 - 4973. WILEY-VCH Verlag, 2012.

Type of production: Scientific paper Position of signature: 3 Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No









Impact source: ISI

Impact index in year of publication: 5.83 Position of publication: 21

Source of citations: SCOPUS

Category: Science Edition - CHEMISTRY, MULTIDISCIPLINARY Journal in the top 25%: Yes No. of journals in the cat.: 152

Citations: 55

18 Ranjit Hawaldar; Pablo Merino; Marta R. Correia; Igor Bdikin; José Grácio; Javier Méndez; José Á Martín-Gago; Manoj Kumar Singh. Large-area high-throughput synthesis of monolayer graphene sheet by Hot Filament Thermal Chemical Vapor Deposition. Scientific Reports. 2, Nature Publishing Group, 2012.

Type of production: Scientific paper	Format: Journal
Position of signature: 2	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No	
Impact source: ISI	Category: Science Edition - MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 2.92	Journal in the top 25%: Yes
Position of publication: 8	No. of journals in the cat.: 56
Source of citations: SCOPUS	Citations: 85

19 Martin Švec; Pablo Merino; Yannick J. Dappe; Cesar González; Enrique Abad; Pavel Jelinek; José A. Martín-Gago. van der Waals interactions mediating the cohesion of fullerenes on graphene. Physical Review B: Rapid Comm.86 - 12, pp. 121407. American Physical Society, 2012.

Type of production: Scientific paper Position of signature: 2

Corresponding author: No Impact source: ISI

Impact index in year of publication: 3.77 Position of publication: 15

Source of citations: SCOPUS

Format: Journal Degree of contr

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - PHYSICS, CONDENSED MATTER Journal in the top 25%: Yes No. of journals in the cat.: 68

Citations: 34

20 Pablo Merino; Martin Svec; Anna Lisa Pinardi; Gonzalo Otero; José A Martín-Gago. Strain-driven moiré superstructures of epitaxial graphene on transition metal surfaces. ACS Nano. 5 - 7, pp. 5627 - 5634. American Chemical Society, 2011.

Type of production: Scientific paper **Position of signature:** 1

Corresponding author: No Impact source: ISI

Impact index in year of publication: 11.42 Position of publication: 4

Source of citations: SCOPUS

Format: Journal **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY Journal in the top 25%: Yes No. of journals in the cat.: 64

Citations: 98







Corresponding author: No

Corresponding author: Yes

21 Gonzalo Otero; Cesar Gonzalez; Anna Lisa Pinardi; Pablo Merino; Sandra Gardonio; Silvano Lizzit; Maria Blanco-Rey; Kevin Van de Ruit; Kees C.F.J Flipse; Javier Méndez; Pedro L. de Andrés; Jose A. Martín-Gago. Ordered vacancy network induced by the growth of epitaxial graphene on Pt (111). Physical Review Letters. 105 - 21, pp. 216102. American Physical Society, 2010.

Type of production: Scientific paper	Format: Journal
Position of signature: 4	Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No	
Impact source: ISI	Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.62	Journal in the top 25%: Yes
Position of publication: 5	No. of journals in the cat.: 80
Source of citations: SCOPUS	Citations: 48

Jose Ignacio Marínez; Pablo Merino; José Angel Martín-Gago. Cuando el grafeno toca metales. Revista Española de Fisica. 30 - 2, pp. 26 - 27. 2016.
 Type of production: Popular science article
 Degree of contribution: Author or co-author of scientific or technical document for the general public

- Klaus Kuhnke; Christoph Grosse; Pablo Merino; Anna Roslawska. Exzitonen unter dem Mikroskop. Physik in unserer Zeit. 47 1, pp. 6 7. WILEY-VCH Verlag, 2016.
 Type of production: Popular science article Format: Journal Corresponding author: No
- Pablo Merino; José Angel Martín-Gago; José Cernicharo. A solid state physics approach to the interaction between organic molecules and interstellar dust grains: C60 on SiC. Proceedings of the International Astronomical Union 280. 2011.
 Type of production: Scientific edition Format: Book
 Degree of contribution: Author or co-author of published critical note or commentary
- Pablo Merino; Martin Švec; Jose I Martinez; Pavel Jelinek; Paolo Lacovig; Matteo Dalmiglio; Silvano Lizzit; Patrick Soukiassian; Jose Cernicharo; Jose A Martin-Gago. Graphene etching on SiC grains as a path to interstellar polycyclic aromatic hydrocarbons formation. Elettra Highlights. 2013-2014, pp. 28 29. 2014.
 Type of production: Scientific-technical report Format: Scientific and technical document or report Corresponding author: No
- **26** Gonzalo Otero; Cesar Gonzalez; Anna Lisa Pinardi; Pablo Merino; Sandra Gardonio; Silvano Lizzit; Maria Blanco-Rey; Kevin Van de Ruit; Kees C.F.J Flipse; Javier Méndez; Pedro L. de Andrés; Jose A. Martín-Gago. Ordered vacancy network induced by the growth of epitaxial graphene on Pt (111). Elettra Highlights. 2010-2011, pp. 76 77. 2010.

Type of production: Scientific-technical report Corresponding author: No Format: Scientific and technical document or report







Works submitted to national or international conferences

1 Title of the work: A single hydrogen molecule as an intensity chopper in an electrically-driven plasmonic nanocavity Name of the conference: IFIMAC Seminars

Type of event: Seminar Type of participation: Participatory - invited/keynote talk Date of event: 2019 Pablo Merino.

- 2 Title of the work: Time-resolved scanning tunneling induced luminescence Name of the conference: Exploring the limits of nanoscience with scanning probe methods Type of event: Seminar Type of participation: Participatory - invited/keynote talk City of event: Bad Honnef, Germany Date of event: 2019 Pablo Merino.
- **3** Title of the work: A light on the origin of light in C60 films Name of the conference: GEFES Type of event: Conference Type of participation: Participatory - invited/keynote talk Corresponding author: Yes City of event: Valencia, Valencian Community, Spain Date of event: 2018 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 4 Title of the work: Atomically-resolved edge states on surface-nanotemplated graphene explored at room temperature Name of the conference: EWEG/2D Type of event: Conference Type of participation: Participatory - oral communication Corresponding author: Yes City of event: Salamanca, Castile and León, Spain Date of event: 2018 Pablo Merino; Hernan Santos; Anna L. Pinardi; Leonor Chico; José Angel Martín-Gago.
- 5 Title of the work: Atomically-resolved edge states on surface-nanotemplated graphene explored at room temperature Name of the conference: X Congreso Español de Fuerzas y Túnel Type of event: Conference Type of participation: Participatory - oral communication Corresponding author: Yes City of event: Jaca, Aragon, Spain Date of event: 2018 Pablo Merino; Hernan Santos; Anna L. Pinardi; Leonor Chico; José Angel Martín-Gago.







- 6 Title of the work: STM induced plasmonic and excitonic luminescence on C60 films Name of the conference: ICN+T
 Type of event: Conference
 Type of participation: Participatory - oral communication
 Corresponding author: Yes
 City of event: Brno, Czech Republic
 Date of event: 2018
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 7 Title of the work: Atomic-scale imaging excitons and plasmons at thin C60 films Name of the conference: Seminaire Matiere Quantique, LPS-CNRS Type of event: Seminar Type of participation: Participatory - invited/keynote talk Corresponding author: Yes City of event: Paris, Île de France, France Date of event: 2018 Pablo Merino.
- 8 Title of the work: Nanoscale mapping of exciton traps in solid C60
 Name of the conference: Conference on Molecular Nanostructures
 Type of event: Conference
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: Ascona, Switzerland
 Date of event: 2017
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 9 Title of the work: Atomic-scale imaging exciton and charge carrier dynamics at thin molecular films.
 Name of the conference: N2D: Nanophotonics in 2D materials
 Type of event: Conference
 Type of participation: Participatory invited/keynote talk
 Corresponding author: Yes
 City of event: San Sebastian, Spain
 Date of event: 2017
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- Title of the work: Light emission from C60 molecules explored at the atomic scale
 Name of the conference: Nanoselect meeting
 Type of event: Conference
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: Sant Feliu de Guíxols, Catalonia, Spain
 Date of event: 2017
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 11 Title of the work: Real-Space Atomic-Scale Imaging Circumstellar Carbon Cluster Analogues Name of the conference: EPOLM Type of event: Conference Type of participation: 'Participatory - poster Corresponding author: Yes City of event: Toulouse, France







Date of event: 2017 Pablo Merino.

- 12 Title of the work: Real-Space Atomic-Scale Imaging Circumstellar Carbon Cluster Analogues
 Name of the conference: RIVA X
 Type of event: Conference
 Type of participation: 'Participatory poster
 Corresponding author: Yes
 City of event: Bilbao, Basque Country, Spain
 Date of event: 2017
 Pablo Merino.
- Title of the work: Exciton dynamics at atomic length scales
 Name of the conference: CIC Nanogune
 Type of event: Seminar
 Type of participation: Participatory invited/keynote talk
 Corresponding author: Yes
 City of event: San Sebastian, Spain
 Date of event: 2016
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 14 Title of the work: Single Photon Emission in STM-induced luminescence from Fullerene Excitons
 Name of the conference: Institute of Physics of the Academy of Sciences of the Czech Republic
 Type of event: Seminar
 Type of participation: Participatory invited/keynote talk
 Corresponding author: Yes
 City of event: Praga, Czech Republic
 Date of event: 2015
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 15 Title of the work: Single Photon Emission in STM-induced luminescence from Fullerene Excitons
 Name of the conference: Instituto de Ciencia de Materiales CSIC
 Type of event: Seminar
 Type of participation: Participatory invited/keynote talk
 Corresponding author: Yes
 City of event: Madrid, Spain
 Date of event: 2015
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 16 Title of the work: Exciton Dynamics of C60-based Single Photon emitters explored by Hanbury Brown-Twiss Scanning Tunneling Microscopy
 Name of the conference: 62 nd AVS International Symposium
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: San Jose, United States of America
 Date of event: 2015
 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.
- 17 Title of the work: Single Photon Emission in STM-induced luminescence from Fullerene Excitons Name of the conference: 79 th Annual Meeting of the DPG Condensed Matter Section Type of participation: Participatory - oral communication







Corresponding author: Yes City of event: Berlin, Germany Date of event: 2015 Pablo Merino; Christoph Grosse; Anna Roslawska; Klaus Kuhnke; Klaus Kern.

- 18 Title of the work: Graphene Etching on SiC Grains as a Path to Interstellar Polycyclic Aromatic Hydrocarbons Formation
 Name of the conference: IX Congreso Español de Fuerzas y Tunel
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: San Sebastian, Spain
 Date of event: 2014
 Pablo Merino; Martin Švec; Jose I Martinez; Pavel Jelinek; Paolo Lacovig; Matteo Dalmiglio; Silvano Lizzit; Patrick Soukiassian; Jose Cernicharo.
- 19 Title of the work: Monitoring Dynamics of Single Molecules at Surfaces
 Name of the conference: Workshop on Nanoscience for Clean Energy
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: Ringberg Castle, Germany
 Date of event: 2014
 Pablo Merino; Christoph Grosse; Klaus Kuhnke; Klaus Kern.
- Title of the work: Sublattice localized electronic states in atomically resolved Graphene-Pt(111) edge-boundaries
 Name of the conference: Conference on molecular nanostrucutres
 Type of participation: 'Participatory poster
 Corresponding author: Yes
 City of event: Ascona, Switzerland
 Date of event: 2014
 Pablo Merino; Lucia Rodrigo; Anna L Pinardi; Javier Mendez; Maria F Lopez; Pablo Pou; Ruben Perez; Jose A Martin-Gago.
- 21 Title of the work: Sublattice localized electronic states in atomically resolved Graphene-Pt(111) edge-boundaries Name of the conference: Graphene Week 2013 Type of participation: 'Participatory - poster Corresponding author: Yes City of event: Chemintz, Germany Date of event: 2013
 - Pablo Merino; Martin Svec; Anna L Pinardi; Gonzalo Otero; Jose A Martin-Gago.
- Title of the work: Round table on Astrobiology
 Name of the conference: 3rd early stage astrobiology researchers workshop at CAB INTA-CSIC
 Corresponding author: Yes
 City of event: Torrejón de Ardoz, Spain
 Date of event: 2012
 Pablo Merino.







- Title of the work: Strain-driven moiré superstructures of epitaxial graphene on transition metal surfaces
 Name of the conference: Graphene Week 2012
 Type of participation: 'Participatory poster
 Corresponding author: Yes
 City of event: Delft, Holland
 Date of event: 2012
 Pablo Merino; Martin Svec; Anna L Pinardi; Gonzalo Otero; Jose A Martin-Gago.
- Title of the work: van der Waals Interactions Mediating the Cohesion of Fullerenes on Graphene
 Name of the conference: 2nd Early Stage Researchers Workshop at IMDEA Nanociencia
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: Madrid, Spain
 Date of event: 2012
 Pablo Merino; Martin Švec; Yannick J Dappe; Cesar Gonzalez; Enrique Abad; Pavel Jelinek.
- 25 Title of the work: van der Waals Interactions Mediating the Cohesion of Fullerenes on Graphene
 Name of the conference: VIII Congreso Español de Fuerzas y Tunel
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: El Escorial, Spain
 Date of event: 2012
 Pablo Merino; Martin Švec; Yannick J Dappe; Cesar Gonzalez; Enrique Abad; Pavel Jelinek.
- Title of the work: A Model for Predicting Moiré Superstructures on Single Crystal Transition Metal Surfaces
 Name of the conference: Nanoscale Pattern Formation at Surfaces
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: El Escorial, Spain
 Date of event: 2011
 Pablo Merino; Martin Svec; Anna L Pinardi; Gonzalo Otero; Jose A Martin-Gago.
- Title of the work: A Model for Predicting Moiré Superstructures on Single Crystal Transition Metal Surfaces
 Name of the conference: XVIII International Summer School Nicolás Cabrera
 Type of participation: 'Participatory poster
 Corresponding author: Yes
 City of event: Miraflores, Spain
 Date of event: 2011
 Pablo Merino; Martin Svec; Anna L Pinardi; Gonzalo Otero; Jose A Martin-Gago.
- Title of the work: A Solid State Physics Approach to the Interaction between Organic Molecules and Interstellar Dust Grains: C60 on SiC
 Name of the conference: The Molecular Universe, IAU Symposium 280
 Type of participation: 'Participatory - poster
 Corresponding author: Yes
 City of event: Toledo, Spain
 Date of event: 2011
 Pablo Merino; Jose A Martin-Gago; Jose Cernicharo.







- 29 Title of the work: A model for predicting Moiré superstructures on single crystal transition metal surfaces Name of the conference: 2nd early stage astrobiology researchers workshop at CAB INTA-CSIC Corresponding author: Yes City of event: Torrejón de Ardoz, Spain Date of event: 2011 Pablo Merino; Anna Pinardi; Martin Svec; Gonzalo Otero; José Angel Martín-Gago.
- Title of the work: Ordered Vacancy Network Induced by the Growth of Epitaxial Graphene on Pt(111)
 Name of the conference: International Conference on the Formation of Semiconductor Interfaces
 Type of participation: Participatory oral communication
 Corresponding author: Yes
 City of event: Praga, Czech Republic
 Date of event: 2011
 Pablo Merino; Anna L Pinardi; Gonzalo Otero; Cesar Gonzalez; Sandra Gardonio; Silvano Lizzit; Maria Blanco-Rey; Kevin van de Ruit; Kees C.F.J Flipse; Javier Mendez; Pedro L de Andres.
- Title of the work: New Structures of Graphene Epitaxially Grown on Pt(111) by Using Fullerene Precursors
 Name of the conference: VII Congreso Español de Fuerzas y Tunel, Tarragona
 Type of participation: 'Participatory poster
 Corresponding author: Yes
 City of event: Tarragona, Spain
 Date of event: 2010
 Pablo Merino; Martin Svec; Anna L Pinardi; Gonzalo Otero; Jose A Martin-Gago.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1 Committee title: Member of ASEVA (Asociación española para el vacío y sus aplicaciones) Start date: 2017
- 2 Committee title: Member of GEFES (Grupo especializado en físca del estado solido) section of the RSEF Start date: 2014
- 3 Committee title: Member of the RSEF (Real Sociedad Española de Física) Start date: 2014
- 4 Committee title: Referee of ACS Omega
- 5 Committee title: Referee of Applied Surface Science
- 6 Committee title: Referee of Beilstein Journal of nanotechnology







- 7 Committee title: Referee of Nanoscale
- 8 Committee title: Referee of Surface Science

R&D management

- Name of the activity: "IV Festival Astro Jeunes" organizer within the "XIX Festival d'Astronomie"
 Type of management: Outreach
 Performed tasks: Organizer of the Festival
- 2 Name of the activity: Comunidad de Madrid Semana de la Ciencia Performed tasks: Outreach talk Entity: ICMM-CSIC
- 3 Name of the activity: Oral presentation for "Siglo XXI" association of science students from UAM Type of management: Outreach Performed tasks: Outreach talk Entity: Universidad Autonoma de Madrid

Other achievements

Stays in public or private R&D centres

- Entity: Max Planck Institute for Solid State Research Type of entity: R&D Centre Faculty, institute or centre: Nanoscience department City of entity: Stuttgart, Germany Start-End date: 19/11/2018 - 01/12/2018 Goals of the stay: Guest Provable tasks: STML measurements
- Entity: Max Planck Institute for Solid State Research Type of entity: R&D Centre Faculty, institute or centre: Nanoscience department
 City of entity: Stuttgart, Germany
 Start-End date: 12/03/2018 19/03/2018
 Goals of the stay: Guest
 Provable tasks: STML measurements
- Entity: Instituto de Nanociencia de Aragon
 Type of entity: R&D Centre
 Faculty, institute or centre: Laboratorio de Microscopias Avanzadas
 City of entity: Zaragoza, Spain
 Start-End date: 26/02/2018 09/03/2018
 Goals of the stay: Guest
 Provable tasks: nc-AFM measurements





- V n currículum vítae normalizado **4 Entity:** Instituto de Nanociencia de Aragon Type of entity: R&D Centre
 - Faculty, institute or centre: Laboratorio de Microscopias Avanzadas City of entity: Zaragoza, Spain Start-End date: 15/10/2017 - 03/11/2017 Goals of the stay: Guest Provable tasks: nc-AFM measurements
 - 5 Entity: Max Planck Institute for Solid State Research Type of entity: R&D Centre Faculty, institute or centre: Nanoscience department City of entity: Stuttgart, Germany Start-End date: 11/07/2017 - 28/07/2017 Goals of the stay: Guest Provable tasks: STML measurements
 - 6 Entity: IMDEA Nanoscience Type of entity: R&D Centre Faculty, institute or centre: Nanoarchitectonics group City of entity: Madrid, Spain Start-End date: 26/04/2017 - 03/05/2017 Goals of the stay: Guest Provable tasks: STM measurements
 - 7 Entity: ALBA- CELLS Synchrotron facility Type of entity: R&D Centre Faculty, institute or centre: CIRCE beamline City of entity: Cerdanyola del Vallés, Catalonia, Spain Start-End date: 27/02/2013 - 06/03/2013 Goals of the stay: Guest Provable tasks: Synchrotron measurements
 - 8 Entity: Academy of Sciences of the Czech Republic Type of entity: R&D Centre Faculty, institute or centre: Institute of Physics City of entity: Praga, Czech Republic Start-End date: 07/01/2013 - 20/01/2013 Goals of the stay: Guest Provable tasks: STM measurements
 - **9 Entity:** European Synchrotron Radiation Facility Type of entity: R&D Centre (ESRF) Faculty, institute or centre: ID03 beamline City of entity: Grenoble, France Start-End date: 28/11/2012 - 05/12/2012 Goals of the stay: Guest Provable tasks: Synchrotron measurements
 - **10 Entity:** Elettra Synchrotron facility Type of entity: R&D Centre Faculty, institute or centre: SuperESCA beamline City of entity: Trieste, Italy Start-End date: 19/04/2012 - 28/04/2012 Goals of the stay: Guest Provable tasks: Synchrotron measurements







11 Entity: ALBA- CELLS Synchrotron facility Type of entity: R&D Centre Faculty, institute or centre: CIRCE beamline City of entity: Cerdanyola del Vallés, Catalonia, Spain Start-End date: 26/03/2012 - 01/04/2012 Goals of the stay: Guest Provable tasks: Synchrotron measurements **12** Entity: ALBA- CELLS Synchrotron facility Type of entity: R&D Centre Faculty, institute or centre: CIRCE beamline City of entity: Cerdanyola del Vallés, Catalonia, Spain Start-End date: 27/02/2012 - 06/03/2012 Goals of the stay: Guest Provable tasks: Synchrotron measurements **13 Entity:** European Synchrotron Radiation Facility Type of entity: R&D Centre (ESRF) Faculty, institute or centre: SpLine beamline City of entity: Grenoble, France Start-End date: 16/11/2011 - 22/11/2011 Goals of the stay: Guest Provable tasks: Synchrotron measurements 14 Entity: Academy of Sciences of the Czech Republic Type of entity: R&D Centre Faculty, institute or centre: Institute of Physics City of entity: Praga, Czech Republic Start-End date: 08/06/2011 - 05/07/2011 Goals of the stay: Guest Provable tasks: STM measurements **15 Entity:** European Synchrotron Radiation Facility Type of entity: R&D Centre (ESRF) Faculty, institute or centre: SpLine beamline City of entity: Grenoble, France Start-End date: 22/11/2010 - 01/12/2010 Goals of the stay: Guest

Provable tasks: Synchrotron measurements



