Date of the CVA	18/12/2018

Section A. PERSONAL DATA

Name and Surname	Miguel Moreno Ugeda		
DNI/NIE/Passport		Age	
Researcher's identification number	Researcher ID	N-3006-2016	
	Scopus Author ID		
	ORCID	0000-0001-7913-1617	

A.1. Current professional situation

Institution	Donostia International Physics Center		
Dpt. / Centre			
Address			
Phone		Email	mmugeda@dipc.org
Professional category	Ikerbasque research associate	Start date	2018
UNESCO spec. code			
Keywords			

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

Bachelor/Master/PhD	University	Year
Doctor en Ciencias Físicas	Universidad Autónoma de Madrid	2011
Diploma de estudios avanzados (DEA)	Universidad Autónoma de Madrid	2006
Licenciado en Ciencias (Físicas)	Universidad Autónoma de Madrid	2004

A.3. General quality indicators of scientific production

Section B. SUMMARY OF THE CURRICULUM

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

1 **Scientific paper**. Ming-Wei Chen; et al. 2018. Electronic Properties of Transferable Atomically Thin MoSe2/h-BN Heterostructures Grown on Rh(111) ACS NANO. 12-11, pp.11161-11168.

2 **Scientific paper**. ; et al. 2018. Observation of topologically protected states at crystalline phase boundaries in single-layer WSe2 NATURE COMMUNICATIONS. 9-3401.

3 **Scientific paper**. Carmen Rubio Verdú; et al. 2018. Orbital-selective spin excitation of a magnetic porphyrin COMMUNICATION PHYSICS. 1-15.

4 **Scientific paper**. Deung-Jang Choi; et al. 2018. Influence of Magnetic Ordering between Cr Adatoms on the Yu-Shiba-Rusinov States of the beta-Bi2Pd Superconductor PHYSICAL REVIEW LETTERS. 120-167001.

5 **Scientific paper**. Shujie Tang; et al. 2017. Quantum spin Hall state in monolayer 1T '-WTe2 NATURE PHYSICS. 13-7, pp.683-687.

6 **Scientific paper**. Deung-Jang Choi; et al. 2017. Mapping the orbital structure of impurity bound states in a superconductor NATURE COMMUNICATIONS. 8, pp.15175.

7 **Scientific paper**. Miguel Moreno Ugeda; et al. 2016. Covalent Functionalization of GaP(110) Surfaces via a Staudinger-Type Reaction with Perfluorophenyl Azide JOURNAL OF PHYSICAL CHEMISTRY C. 120-46, pp.26448-26452.

8 **Scientific paper**. Alexander Riss; et al. 2016. Imaging single-molecule reaction intermediates stabilized by surface dissipation and entropy NATURE CHEMISTRY. 8-7, pp.678-683.

9 **Scientific paper**. Seita Onishi; et al. 2016. Selenium capped monolayer NbSe2 for two-dimensional superconductivity studies PHYSICA STATUS SOLIDI B. DOI: 10.1002/pssb.20.

10 **Scientific paper**. Héctor Gonzalez-Herrero; et al. 2016. Graphene Tunable Transparency to Tunneling Electrons: A Direct Tool To Measure the Local Coupling ACS NANO.
11 **Scientific paper**. Héctor Gonzalez-Herrero; et al. (/7). 2016. Atomic-scale control of graphene magnetism by using hydrogen atoms SCIENCE. 352-6284, pp.437-441.
12 **Scientific paper**. Sara Barja; et al. 2016. Charge density wave order in 1D mirror twin boundaries of single-layer MoSe2 NATURE PHYSICS. 12, pp.751-756.
13 **Scientific paper**. Yi Zhang; et al. (/2). 2016. Electronic Structure, Surface Doping, and Optical Response in Epitaxial WSe2 Thin Films NANO LETTERS. 16-4, pp.2485-2491.
14 **Scientific paper**. Miguel M. Ugeda; et al. (/1). 2016. Characterization of collective ground states in single-layer NbSe2 NATURE PHYSICS. 12, pp.92-97.
15 **Scientific paper**. A. J. Bradley; et al. (/1). 2015. Probing the Role of Interlayer Coupling and Coulomb Interactions on Electronic Structure in Few-Layer MoSe2 Nanostructures NANO LETTERS. 15, pp.2594-2599.
16 **Scientific paper**. Miguel M. Ugeda; et al. (/1). 2014. Giant bandgap renormalization and excitonic effects in a monolayer transition metal dichalcogenide semiconductor NATURE MATERIALS. 13, pp.1091-1095.
17 **Scientific paper**. A. Riss; et al. (/8). 2014. Imaging and Tuning Molecular Levels at the Surface of a Gated Graphene Device ACS NANO. 8, pp.5395-5401.
18 **Scientific paper**. A. Riss; et al. (/9). 2014. Local Electronic and Chemical Structure of Oligo-acetylene Derivatives Formed Through Radical Cyclizations at a Surface NANO LETTERS. 14, pp.2251-2255.
19 **Scientific paper**. Miguel M. Ugeda; et al. (/1). 2013. Adsorption and Stability of pi-Bonded Ethylene on GaP(110) JOURNAL OF PHYSICAL CHEMISTRY C. 117, pp.26091-26096.
20 **Scientific paper**. I. Brihuega; et al. (/5). 2012. Unraveling the Intrinsic and Robust Nature of van Hove Singularities in Twisted Bilayer Graphene by Scanning Tunneling Microscopy and Theoretical Analysis PHYSICAL REVIEW LETTERS. 109, pp.196802.
21 **Scientific paper**. P. Mallet; et al. (/4). 2012. Role of pseudospin in quasiparticle interferences in epitaxial graphene probed by high-resolution scanning tunneling microscopy PHYSICAL REVIEW B. 86, pp.045444.
22 **Scientific paper**. A. J. Martínez-Galera; et al. (/3). 2012. Adsorption and Growth of 1,3,5-Triazine on Cu(111) at Low Temperature under Ultrahigh Vacuum Conditions JOURNAL OF PHYSICAL CHEMISTRY C. 116, pp.9568-9574.
23 **Scientific paper**. Miguel M. Ugeda,; et al. (/1). 2012. Electronic and structural characterization of divacancies in irradiated graphene PHYSICAL REVIEW B (RAPID). 85, pp.121402.
24 **Scientific paper**. I. Brihuega; et al. (/4). 2011. Experimental observation of thermal fluctuations in single superconducting Pb nanoparticles through tunneling measurements PHYSICAL REVIEW B. 84, pp.104525.
25 **Scientific paper**. Miguel M. Ugeda; et al. (/1). 2011. Point Defects on Graphene on Metals PHYSICAL REVIEW LETTERS. 107, pp.116803.
26 **Scientific paper**. S. Bose; et al. (/3). 2010. Observation of shell effects in superconducting nanoparticles of Sn NATURE MATERIALS. 9, pp.550-554.
27 **Scientific paper**. Miguel. M. Ugeda; et al. (/1). 2010. Missing Atom as a Source of Carbon Magnetism PHYSICAL REVIEW LETTERS. 104, pp.096804.
28 **Scientific paper**. J. W. Wells; et al. (/7). 2009. Nondegenerate Metallic States on Bi(114): A One-Dimensional Topological Metal PHYSICAL REVIEW LETTERS. 102, pp.096802.
29 **Scientific paper**. I. Brihuega; Miguel M. Ugeda; J. M. Gómez-Rodríguez,. (/2). 2007. Surface diffusion of Pb single adatoms on the Si(111)-(root 3x root 3)R30 degrees-Pb system PHYSICAL REVIEW B. 76, pp.035422.
30 **Scientific paper**. I. Brihuega; et al. (/3). 2007. Adatom-adatom interaction mediated by an underlying surface phase transition PHYSICAL REVIEW LETTERS. 98, pp.156102.
31 **Scientific paper**. I. Brihuega; et al. (/3). 2007. Defects in the (R3x R3) to (3x3) phase transition in the Pb/Si(111) system PHYSICAL REVIEW B. 75, pp.155411.
32 **Scientific paper**. I. Brihuega; et al. (/3). 2005. Direct observation of a (3 x 3) phase in alpha-Pb/Ge(111) at 10 K PHYSICAL REVIEW LETTERS. 95, pp.206102.

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

1 Linking atomic-scale properties of 2D correlated materials with their mesoscopic transport and mechanical response European Reseach Council. Miguel Moreno Ugeda. (Donostia International Physics Center). 01/10/2018-30/09/2023. 1.734.625 €.
2 Transistores de spin basados en heteroestructuras de van der Waals Ministerio de Ciencia e Innovación. Reyes Calvo Urbina. (CENTRO DE FISICA DE MATERIALES). 01/01/2018-31/12/2021. 108.900 €.
3 Understanding and controlling the electronic and optoelectronic behavior of hierarchical layered heterostructures Fundación Ikerbasque. Miguel Moreno Ugeda. (ASOCIACION CIC NANOGUNE). 15/06/2015-14/06/2020. 4.000 €.
4 Correlación entre las propiedades a la escala atómica y el transporte electrónico mesoscópico en materiales bidimensionales altamente correlacionados Ministerio de Ciencia e Innovación. Miguel Moreno Ugeda. (Donostia International Physics Center). 01/01/2018-31/12/2018. 68.181 €.
5 Dispositivos fotovoltaicos y luminiscentes de alta eficiencia basados en heteroestructuras híbridas Ministerio de Economia y Competitividad. Miguel Moreno Ugeda. (ASOCIACION CIC NANOGUNE). 01/01/2015-31/12/2017. 84.700 €.
6 Superconductividad a escala nanométrica Diputación de Guipuzcoa. Miguel Moreno Ugeda. (ASOCIACION CIC NANOGUNE). 01/07/2015-30/09/2016. 70.410 €.
7 Microscopy of Hierarchical 2-D Interface Structures National Science Foundation (NSF). (University of California at Berkeley). 01/01/2012-30/06/2016. 117.000 €.
8 Advanced force technology for future nanoelectronics and nanomedicine CONSOLIDER - Ministerio de Ciencia e Innovación.. (Universidad Autónoma de Madrid). 01/01/2011-31/12/2015. 3.000.000 €.
9 Correlating Local Defect Structure with Dynamical Response in Graphene National Science Foundation (NSF). (University of California at Berkeley). 01/10/2012-30/09/2015. 80.000 €.
10 Novel SP2-Bonded Materials and Related Nanostructures Department of Energy (DOE). (University of California at Berkeley). 02/11/2009-30/06/2015. 800.000 €.
11 Functionalized Nanoscale Graphene: A Platform for Integrated Nanodevices Office of Naval Research (MURI). (University of California at Berkeley). 01/06/2009-31/12/2014. 743.000 €.
12 Atom Scale Characterization of Graphene Surfaces and Related Bidimensional Systems by means of SPM Techniques in Ultra-High Vacuum and Low Temperatures Ministerio de Ciencia e Innovación. Investigación.. (Universidad Autónoma de Madrid). 01/01/2011-31/12/2013. 249.260 €.
13 Investigation of the local electronic properties of nanostructures at the atomic scale by means of low temperature scanning tunneling microscopy/spectroscopy in ultrahigh vacuum conditions European Union (EU). (Universidad Autónoma de Madrid). 01/11/2009-31/10/2012. 45.000 €.
14 Investigation of the local electronic properties of graphene grown on SIC by STM/STS at low temperature European Union (EU). (Universidad Autónoma de Madrid). 01/01/2010-31/12/2011. 12.000 €.
15 Surface architectonics and structural and electronic characterization at the atomic scale by means of variable temperature scanning tunneling microscopy. Ministerio de Educación y Ciencia.. (Universidad Autónoma de Madrid). 01/10/2007-30/08/2010. 148.830 €.
16 Strategic action in Atomic Force Microscopy for Nanotechnology and Nanoscience Ministerio de Educación y Ciencia.. (Universidad Autónoma de Madrid). 01/12/2005-01/12/2008. 417.000 €.
17 Development of a 4K Scanning Tunneling Microscope in UHV conditions for the electronic characterization of nanostructures at the atomic scale Ministerio de Educación y Ciencia.. (Universidad Autónoma de Madrid). 13/12/2004-13/12/2007. 192.100 €.

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

1 Molecular and Nanoscale Interfaces Department of Energy (DOE). Heinz Frei. 01/01/2012-01/06/2013.
2 Development and implementation of control software for scanning probe microscopy (SPM) Fundación General de la Universidad Autónoma de Madrid. Arturo Baró. 01/02/2004-P8M.

C.4. Patents