



Nicolás Lorente Palacios

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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.

Thesis (UAM 1995) and postdoc (Orsay 1996-1998) in calculations of ion-surface collisions, charge transfer, electronic, plasmonic and vibrational excitations. Postdoc (Chalmers 1998-2000) calculations of inelastic effects in tunneling electrons. First tenured position: Maître de Conférences (Université Paul Sabatier, Toulouse, 2000-2006), 31 published articles of which: 7 in Phys. Rev. Lett., 1 Nature, 1 review in J. Phys.: Condens. Matter. Promoted to Professeur des Universités in 2006 and awarded with membership of the Institut Universitaire de France. In 2007 a second tenured position in Spain (on leave from U. Paul Sabatier) as Investigador Científico (CSIC). From 2007 to 2017, 95 articles co-authored of which: 9 in Phys. Rev. Lett., 10 in Nano Lett., 5 in J. Am. Chem. Soc., 2 Nat. Comm., 1 Nat. Chem., 1 Nat. Mat. and 1 review article in Prog. Surf. Sci. New research field initiated in the study of magnetic impurities and magnetic objects on surfaces via electronic currents.



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.

H index: 35 (July, 2018) Sexenios: 4 (June 17, 2015)
Supervised Thesis: 3 (2008, 2009 and 2011)



Nicolás Lorente Palacios

Surname(s): **Lorente Palacios**
 Name: **Nicolás**
 ResearcherID: **M-6125-2013**

Current professional situation

Employing entity: CENTRO DE FISICA DE MATERIALES **Type of entity:** State agency

Professional category: Investigador Científico (CSIC)

Start date: 25/05/2007

Type of contract: Civil servant

Dedication regime: Full time

Primary (UNESCO code): 221110 - Electron states; 221111 - Electron transport properties; 221117 - Magnetic properties; 221128 - Surfaces

Identify key words: Surface spectroscopy; Solid state; Kondo models; Magnetism

Previous positions and activities

	Employing entity	Professional category	Start date
1	Université Paul Sabatier, Toulouse III, Francia	Professeur des Universités	01/09/2006
2	Université Paul Sabatier, Toulouse III, Francia	Maître de Conférences	01/09/2000
3	Chalmers Tekniska Högskola, Göteborg, Suecia	Investigador Postdoctoral	01/10/1998
4	Université Paris Sud	Investigador postdoctoral	01/10/1996
5	Universidad Autónoma de Madrid	Profesor ayudante	01/10/1994
6	Universidad Autónoma de Madrid	Profesor Asociado	01/04/1994
7	Universidad Autónoma de Madrid	Becario FPI	01/09/1991

1 **Employing entity:** Université Paul Sabatier, Toulouse III, Francia **Type of entity:** University
Professional category: Professeur des Universités
Start-End date: 01/09/2006 - 24/05/2007 **Duration:** 8 months - 24 days

2 **Employing entity:** Université Paul Sabatier, Toulouse III, Francia
Professional category: Maître de Conférences
Start-End date: 01/09/2000 - 21/08/2006 **Duration:** 6 years

3 **Employing entity:** Chalmers Tekniska Högskola, Göteborg, Suecia **Type of entity:** University
Professional category: Investigador Postdoctoral
Start-End date: 01/10/1998 - 31/08/2000 **Duration:** 1 year - 11 months



- 4** **Employing entity:** Université Paris Sud
Professional category: Investigador postdoctoral
Start-End date: 01/10/1996 - 30/09/1998 **Duration:** 2 years
- 5** **Employing entity:** Universidad Autónoma de Madrid
Professional category: Profesor ayudante
Start-End date: 01/10/1994 - 30/09/1996 **Duration:** 2 years
Type of entity: University
- 6** **Employing entity:** Universidad Autónoma de Madrid
Professional category: Profesor Asociado
Start-End date: 01/04/1994 - 30/09/1994 **Duration:** 6 months
Type of entity: University
- 7** **Employing entity:** Universidad Autónoma de Madrid
Professional category: Becario FPI
Start-End date: 01/09/1991 - 31/03/1994 **Duration:** 2 years - 7 months
Type of entity: University



Education

University education

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

- 1 **Name of qualification:** Habilitation à diriger des recherches
Degree awarding entity: Université Paul Sabatier, Toulouse III, France
Date of qualification: 06/12/2002
- 2 **Name of qualification:** Grado de Licenciado
Degree awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
Date of qualification: 20/03/1991
- 3 **Name of qualification:** Licenciatura en Ciencias Físicas
Degree awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
Date of qualification: 01/07/1990

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Ciencias Físicas
Degree awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
Date of degree: 12/07/1995

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French		C1	C1	C1	C1
English		C1	C1	C1	C1

Teaching experience



Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Molecular Kondo problem: first-principles approach for scanning tunneling microscope studies
Type of project: Doctoral thesis
Entity: Universitat Autònoma de Barcelona **Type of entity:** University
Student: Richard Korytár
Date of reading: 31/05/2011
- 2** **Project title:** Study of the geometry and electronic structure of self-assembled monolayers on the Au (111) surface
Type of project: Doctoral thesis
Co-director of thesis: Andrés Arnau Pino
Entity: Universidad del País Vasco **Type of entity:** University
Student: Nora González Lakunza
Date of reading: 23/01/2009
European doctorate: Yes
- 3** **Project title:** Transport électronique en présence de vibrations atomiques : une étude résolue en temps
Type of project: Doctoral thesis
Entity: Université Paul Sabatier, Toulouse III, France **Type of entity:** University
Student: Serge Monturet
Date of reading: 09/07/2008
- 4** **Project title:** Dynamique quantique de l'adsorption d'atomes d'hydrogène sur une surface SiC
Co-director of thesis: Didier Lemoine
Entity: Université Paul Sabatier, Toulouse III, France
Student: Adrien Poissier
Date of reading: 23/06/2006
- 5** **Project title:** Calcul en liaisons fortes d'effets inélastiques induits par un courant électronique
Co-director of thesis: Christophe Meier
Entity: Université Paul Sabatier, Toulouse III, France
Student: Serge Monturet
Date of reading: 24/06/2005
- 6** **Project title:** Calcul de nanofils de silicium en DFT
Co-director of thesis: Riccardo Rurali
Entity: Université Paul Sabatier, Toulouse III, France
Student: Adrien Poissier
Date of reading: 21/06/2005
- 7** **Project title:** Etude d'un système moléculaire chimisorbé : trans-2-butène sur surface de palladium [110]
Entity: Université Paul Sabatier, Toulouse III, France
Student: Serge Monturet
Date of reading: 21/06/2004
- 8** **Project title:** Couplage de l'excitation de vibration au mouvement de rotation d'une molécule unique chimisorbée
Co-director of thesis: Christophe Meier
Entity: Université Paul Sabatier, Toulouse III, France
Student: Rémy Vincent



Date of reading: 03/07/2003

9 Project title: Etude des effets inélastiques dans un courant tunnel
Entity: Université Paul Sabatier, Toulouse III, France
Student: Candide Jarczak
Date of reading: 15/06/2002

10 Project title: Etude de la diffusion H / Ag (110)
Co-director of thesis: Pierre Cafarelli
Entity: Université Paul Sabatier, Toulouse III, France
Student: Olivier Pujol
Date of reading: 15/06/2001

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:** Mechanics with molecules
Entity where project took place: CENTRO DE FISICA DE MATERIALES **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Nicolas Lorente
N° of researchers: 40
Funding entity or bodies: European Commission
Start-End date: 01/11/2017 - 31/10/2021
Total amount: 398.000 €
- 2 Name of the project:** Magnetismo en la nanoescala: explorando nuevas rutas (física de dispositivos de espín)
Entity where project took place: CENTRO DE FISICA DE MATERIALES **Type of entity:** State agency
N° of researchers: 4
Funding entity or bodies: Ministerio de economía y competitividad
Start-End date: 01/01/2016 - 31/12/2018
Total amount: 50.000 €
- 3 Name of the project:** Dispositivos moleculares
Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA **Type of entity:** State agency
Name principal investigator (PI, Co-PI....): Marco Evangelisti; Daniel Ruiz Molina
N° of researchers: 20
Name of the programme: PLAN NACIONAL
Code according to the funding entity: MAT2012-38318-C03-02



Start-End date: 2013 - 2015

Total amount: 163.000 €

4 Name of the project: Atomic scale and single molecule logic gate technologies

Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA

Type of entity: State agency

Name principal investigator (PI, Co-PI....): Christian Joachim; Nicolás Lorente Palacios

Nº of researchers: 60

Funding entity or bodies:

Comunidad Europea

Start-End date: 01/01/2011 - 31/12/2014

Total amount: 567.000 €

5 Name of the project: Desarrollo y aplicación de métodos de simulación mecano-cuánticos en nanociencia FIS2009-12721-C04-01

Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA

Type of entity: State agency

Name principal investigator (PI, Co-PI....): Pablo Ordejón Rontomé

Nº of researchers: 20

Start-End date: 2010 - 2012

Total amount: 160.930 €

6 Name of the project: National Institute of Information and Communications Technology

Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA

Type of entity: State agency

Name principal investigator (PI, Co-PI....): Nicolás Lorente Palacios; Tadahiro Komeda

Nº of researchers: 12

Funding entity or bodies:

National Institute of Information and Communication Technologies

Type of entity: State agency

City funding entity: Tokyo, Japan

Start-End date: 18/06/2010 - 31/03/2011

Total amount: 50.000 €

7 Name of the project: Simulaciones mecanocuánticas y microscopías de proximidad en problemas actuales de superficies, materiales complejos, biomoléculas y nanoestructuras FIS2006-12117-C04-01

Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA

Type of entity: State agency

Nº of researchers: 20

Start-End date: 2007 - 2009

Total amount: 312.000 €

8 Name of the project: Inelastic spectroscopy simulations of wetting structures on metals, Agence Nationale de la Recherche JCJC06_148337

Entity where project took place: Université Paul Sabatier, Toulouse III, France

Name principal investigator (PI, Co-PI....): Marie-Laure Bocquet

Nº of researchers: 10



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CURRÍCULUM VITAE NORMALIZADO

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Start-End date: 2006 - 2009**Total amount:** 140.000 €

- 9 Name of the project:** Métodos de primeros principios para la simulación de corrientes electrónicas y efectos inelásticos en sistemas nanoscópicos

Entity where project took place: CENTRO DE INVESTIGACION EN NANOCIENCIA Y NANOTECNOLOGIA

Type of entity: State agency

Name principal investigator (PI, Co-PI....): Nicolás Lorente Palacios

Nº of researchers: 6

Start-End date: 2007 - 2008

Total amount: 40.000 €

- 10 Name of the project:** Effets inélastiques en nano-objets individuels, ACI Blanche

Entity where project took place: Université Paul Sabatier, Toulouse III, France

Name principal investigator (PI, Co-PI....): Nicolás Lorente Palacios

Nº of researchers: 3

Start-End date: 2001 - 2004

Total amount: 66.000 €

- 11 Name of the project:** Projet CNRS Nano-objet individuel

Entity where project took place: Université Paul Sabatier, Toulouse III, France

Name principal investigator (PI, Co-PI....): Nicolás Lorente Palacios

Start-End date: 2001 - 2002

Total amount: 10.000 €

Scientific and technological activities

Scientific production

H index: 35

Date of application: 03/07/2018

Publications, scientific and technical documents

- 1** Marie-Laure Bocquet; Nicolas Lorente; Richard Berndt; Manuel Gruber. Spin in a {Closed}-{Shell} {Organic} {Molecule} on a {Metal} {Substrate} {Generated} by a {Sigmatropic} {Reaction}. *Angewandte Chemie International Edition*. 58 - 3, pp. 821 - 824. 2019. Available on-line at: <<https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.201812121>>. ISSN 1521-3773

Type of production: Scientific paper

Format: Journal

- 2** Luciano Colazzo; Mohammed S. G. Mohammed; Ruth Dorel; Pawel Nita; Carlos Garcia Fernandez; Paula Abufager; Nicolas Lorente; Antonio M. Echavarren; Dimas G. de Oteyza. On-surface synthesis of heptacene on Ag(001) from brominated and non-brominated tetrahydroheptacene precursors. *CHEMICAL COMMUNICATIONS*. 54 - 73, pp. 10260 - 10263. 09/2018. ISSN 1359-7345

Type of production: Scientific paper

Format: Journal



- 3** Deung-Jang Choi; Carlos Garcia Fernandez; Edwin Herrera; Carmen Rubio-Verdu; Miguel M. Ugeda; Isabel Guillamon; Hermann Suderow; Jose Ignacio Pascual; Nicolas Lorente. Influence of Magnetic Ordering between Cr Adatoms on the Yu-Shiba-Rusinov States of the beta-Bi₂Pd Superconductor. PHYSICAL REVIEW LETTERS. 120 - 16, 04/2018. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal
- 4** Sujoy Karan; Carlos Garcia; Michael Karolak; David Jacob; Nicolas Lorente; Richard Berndt. Spin Control Induced by Molecular Charging in a Transport Junction. NANO LETTERS. 18 - 1, pp. 88 - 93. 01/2018. ISSN 1530-6984
Type of production: Scientific paper **Format:** Journal
- 5** M. Ormaza; P. Abufager; B. Verlhac; N. Bachelier; M-L. Bocquet; N. Lorente; L. Limot. Controlled spin switching in a metallocene molecular junction. NATURE COMMUNICATIONS. 8, 12/2017. ISSN 2041-1723
Type of production: Scientific paper **Format:** Journal
- 6** Katharina Scheil; Nicolas Lorente; Marie-Laure Bocquet; Pascal Christian Hess; Marcel Mayor; Richard Berndt. Adatom Coadsorption with Three-Dimensional Cyclophanes on Ag(111). JOURNAL OF PHYSICAL CHEMISTRY C. 121 - 45, pp. 25303 - 25308. 11/2017. ISSN 1932-7447
Type of production: Scientific paper **Format:** Journal
- 7** Carlos Garcia Fernandez; Paula Abufager; Nicolás Lorente Palacios. Transport Properties of Co in Cu(100) from Density Functional Theory Calculations. JOURNAL OF PHYSICAL CHEMISTRY C. 121 - 42, pp. 23736 - 23743. ACS, 26/10/2017.
Type of production: Scientific paper **Format:** Journal
- 8** Deung-Jang Choi; Roberto Robles; Shichao Yan; Jacob J A Burgess; Steffen Rolf-Pissarczyk; Jean-Pierre Gauyacq; Nicolás Lorente; Markus Ternes; Sebastian Loth. Building Complex Kondo Impurities by Manipulating Entangled Spin Chains. Nano Letters. 17 - 10, pp. 6203 - 6209. ACS, 11/10/2017.
Type of production: Scientific paper **Format:** Journal
- 9** Deung-Jang Choi; Carmen Rubio-Verdú; Joeri de Bruijkere; Miguel Ugeda; Nicolas Lorente; Jose Ignacio Pascual. Mapping the orbital structure of impurity bound states in a superconductor. Nature Communications. 8, pp. 15175. McMillan, 08/05/2017.
Type of production: Scientific paper **Format:** Journal
- 10** Nick Papior; Nicolas Lorente; Thomas Frederiksen; Alberto Garcia; Mads Brandbyge. Improvements on non-equilibrium and transport Green function techniques: The next-generation TRANSIESTA. COMPUTER PHYSICS COMMUNICATIONS. 212, pp. 8 - 24. Elsevier, 23/03/2017.
Type of production: Scientific paper **Format:** Journal
- 11** Maider Ormaza; Nicolas Bachelier; Marisa Faraggi; Benjamin Verlhac; Paula Abufager; Philippe Ohresser; Loic Joly; Michelangelo Romero; Fabrice Scheurer; Marie-Laure Bocquet; Nicolas Lorente; Laurent Limot. Efficient Spin-Flip Excitation of a Nickelocene Molecule. Nano Letters. 17 - 3, pp. 1877 - 1882. ACS, 16/03/2017.
Type of production: Scientific paper **Format:** Journal
- 12** Deung-Jang Choi; Paula Abufager; Laurent Limot; Nicolas Lorente. From tunneling to contact in a magnetic atom: The non-equilibrium Kondo effect. JOURNAL OF CHEMICAL PHYSICS. 146 - 9, pp. 092309. APS, 07/03/2017.
Type of production: Scientific paper **Format:** Journal
- 13** Florian Chaumeton; Roberto Robles; Miguel Pruneda; Nicolas Lorente; Benoit Eydoux; Xavier Bouju; Sebastien Gauthier; David Martrou. Noncontact atomic force microscopy and density functional theory studies of the (2 x 2) reconstructions of the polar AlN(0001) surface. PHYSICAL REVIEW B. 94 - 16, pp. 165305. APS, 17/10/2016.
Type of production: Scientific paper **Format:** Journal



- 14** Deung-Jang Choi; Roberto Robles; Jean-Pierre Gauyacq; Markus Ternes; Sebastian Loth; Nicolas Lorente. Structural and magnetic properties of FeM_x chains (x=1-6) supported on Cu₂N/Cu (100). PHYSICAL REVIEW B. 94 - 8, pp. 085406. APS, 05/08/2016.
Type of production: Scientific paper **Format:** Journal
- 15** Jean-Pierre Gauyacq; Nicolas Lorente. Extremely long-lived magnetic excitations in supported Fe chains. PHYSICAL REVIEW B. 94 - 4, pp. 045420. APS, 12/07/2016.
Type of production: Scientific paper **Format:** Journal
- 16** Thomas Knaak; Thiruvancheril Gopakumar; Bettina Schwager; Felix Tuczek; Roberto Robles; Nicolas Lorente; Richard Berndt. Surface cis Effect: Influence of an Axial Ligand on Molecular Self Assembly. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY. 138 - 24, pp. 7544 - 7550. ACS, 22/06/2016.
Type of production: Scientific paper **Format:** Journal
- 17** Deung-Jang Choi; Roberto Robles; Jean-Pierre Gauyacq; Carmen Rubio-Verdu; Nicolas Lorente; Jose Ignacio Pascual. Spin-polarised edge states in atomic Mn chains supported on Cu₂N/Cu (100). JOURNAL OF PHYSICS-CONDENSED MATTER. 28 - 23, pp. 23LT01. IOP, 15/06/2016.
Type of production: Scientific paper **Format:** Journal
- 18** Nadine Hauptmann; Roberto Robles; Paula Abufager; Nicolas Lorente; Richard Berndt. AFM Imaging of Mercaptobenzoic Acid on Au(110): Submolecular Contrast with Metal Tips. JOURNAL OF PHYSICAL CHEMISTRY LETTERS. 7 - 11, pp. 1984 - 1990. ACS, 02/06/2016.
Type of production: Scientific paper **Format:** Journal
- 19** Maider Ormaza; Roberto Robles; Nicolas Bachelier; Paula Abufager; Nicolás Lorente; Laurent Limot. On-Surface Engineering of a Magnetic Organometallic Nanowire. Nano Letters. 16 - 1, pp. 588 - 593. ACS, 01/01/2016.
Type of production: Scientific paper **Format:** Journal
- 20** B Wortmann; D van Wörden; P Graf; R Robles; P Abufager; N Lorente; C A Bobisch; R Möller. Reversible 2D Phase Transition Driven By an Electric Field: Visualization and Control on the Atomic Scale. Nano Letters. 16 - 1, pp. 528 - 533. ACS, 01/01/2016.
Type of production: Scientific paper **Format:** Journal
- 21** Jean-Pierre Gauyacq; Nicolás Lorente. Decoherence-governed magnetic-moment dynamics of supported atomic objects. Journal of Physics: Condensed Matter. 27 - 45, pp. 455301 - 455301. IOP, 18/11/2015.
Type of production: Scientific paper **Format:** Journal
- 22** P. N. Abufager; R. Robles; N. Lorente. FeCoCp₃ Molecular Magnets as Spin Filters. JOURNAL OF PHYSICAL CHEMISTRY C. 119 - 22, pp. 12119 - 12129. AMER CHEMICAL SOC, 06/2015. ISSN 1932-7447
Type of production: Scientific paper **Format:** Journal
- 23** Maider Ormaza; Paula Abufager; Nicolas Bachellier; Roberto Robles; Martin Verot; Tangui Le Bahers; Marie-Laure Bocquet; Nicolas Lorente; Laurent Limot. Assembly of Ferrocene Molecules on Metal Surfaces Revisited. JOURNAL OF PHYSICAL CHEMISTRY LETTERS. 6 - 3, pp. 395 - 400. 02/2015. ISSN 1948-7185
Type of production: Scientific paper **Format:** Journal
- 24** J. P. Gauyacq; N. Lorente. Classical limit of a quantal nano-magnet in an anisotropic environment. SURFACE SCIENCE. 630, pp. 325 - 330. 12/2014. ISSN 0039-6028
Type of production: Scientific paper **Format:** Journal
- 25** J-P Gauyacq; N. Lorente. Excitation of bond-alternating spin-1/2 Heisenberg chains by tunnelling electrons. JOURNAL OF PHYSICS-CONDENSED MATTER. 26 - 39, 10/2014. ISSN 0953-8984
Type of production: Scientific paper **Format:** Journal



- 26** Alexandre Zanchet; Octavio Roncero; Anaís Dorta-Urra; Alfredo Aguado; José Ignacio Martínez; Fernando Flores; Nicolás Lorente. Electron transport signature of H₂ dissociation on atomic gold wires. *Phys. Rev. B.* 90, pp. 041404(R) - 041404(R). American Physical Society, 07/2014. Available on-line at: <<http://link.aps.org/doi/10.1103/PhysRevB.90.041404>>.
Type of production: Scientific paper **Format:** Journal
- 27** Mikaël Kepenekian; Jean-Pierre Gauyacq; Nicolás Lorente. Difficulties in the ab initio description of electron transport through spin filters. *Journal of Physics: Condensed Matter.* 26 - 10, pp. 104203 - 104203. 2014. Available on-line at: <<http://stacks.iop.org/0953-8984/26/i=10/a=104203>>.
Type of production: Scientific paper **Format:** Journal
- 28** Mikaël Kepenekian; Roberto Robles; Riccardo Rurali; Nicolás Lorente. Spin transport in dangling-bond wires on doped H-passivated Si(100). *Nanotechnology.* 25 - 46, pp. 465703 - 465703. 2014. Available on-line at: <<http://stacks.iop.org/0957-4484/25/i=46/a=465703>>.
Type of production: Scientific paper **Format:** Journal
- 29** D. Wegner; R. Yamachika; X. W. Zhang; Y. Y. Wang; M. F. Crommie; N. Lorente. Adsorption Site Determination of a Molecular Monolayer via Inelastic Tunneling. *Nano Letters.* 13 - 6, pp. 2346 - 2350. 2013. Available on-line at: <<Go to ISI>://WOS:000320485100005>. ISSN 1530-6984
Type of production: Scientific paper **Format:** Journal
- 30** J. P. Gauyacq; S. M. Yaro; X. Cartoixa; N. Lorente. Correlation-Mediated Processes for Electron-Induced Switching between Neel States of Fe Antiferromagnetic Chains (vol 110, 087201, 2013). *Physical Review Letters.* 110 - 12, 2013. Available on-line at: <<Go to ISI>://WOS:000316682600011>. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal
- 31** M. Kepenekian; F. D. Novaes; R. Robles; S. Monturet; H. Kawai; C. Joachim; N. Lorente. Electron transport through dangling-bond silicon wires on H-passivated Si(100). *Journal of Physics-Condensed Matter.* 25 - 2, 2013. Available on-line at: <<Go to ISI>://WOS:000312106700012>. ISSN 0953-8984
Type of production: Scientific paper **Format:** Journal
- 32** J. Schaffert; M. C. Cottin; A. Sonntag; H. Karacuban; C. A. Bobisch; N. Lorente; J. P. Gauyacq; R. Moeller. Imaging the dynamics of individually adsorbed molecules. *Nature Materials.* 12 - 3, pp. 223 - 227. 2013. Available on-line at: <<Go to ISI>://WOS:000315707200020>. ISSN 1476-1122
Type of production: Scientific paper **Format:** Journal
- 33** M. Kepenekian; R. Robles; C. Joachim; N. Lorente. Leakage current in atomic-size surface interconnects. *Applied Physics Letters.* 103 - 16, 2013. Available on-line at: <<Go to ISI>://WOS:000326148700022>. ISSN 0003-6951
Type of production: Scientific paper **Format:** Journal
- 34** J. P. Gauyacq; N. Lorente. Magnetic reversal of a quantum nanoferrromagnet. *Physical Review B.* 87 - 19, 2013. Available on-line at: <<Go to ISI>://WOS:000318518000002>. ISSN 1098-0121
Type of production: Scientific paper **Format:** Journal
- 35** M. Kepenekian; R. Robles; C. Joachim; N. Lorente. Surface-State Engineering for Interconnects on H-Passivated Si(100). *Nano Letters.* 13 - 3, pp. 1192 - 1195. 2013. Available on-line at: <<Go to ISI>://WOS:000316243800051>. ISSN 1530-6984
Type of production: Scientific paper **Format:** Journal
- 36** J. Schaffert; M. C. Cottin; A. Sonntag; C. A. Bobisch; R. Moller; J. P. Gauyacq; N. Lorente. Tunneling electron induced rotation of a copper phthalocyanine molecule on Cu(111). *Physical Review B.* 88 - 7, 2013. Available on-line at: <<Go to ISI>://WOS:000322910600005>. ISSN 1098-0121



Type of production: Scientific paper **Format:** Journal

- 37 S. Monturet; M. Kepenekian; R. Robles; N. Lorente; C. Joachim. Vibrational transition rule during a through-bond electron transfer process. *Chemical Physics Letters*. 567, pp. 1 - 5. 2013. Available on-line at: <<Go to ISI>://WOS:000317349600001>. ISSN 0009-2614

Type of production: Scientific paper **Format:** Journal

- 38 S. R. Burema; N. Lorente; M. L. Bocquet. A theoretical rationalization of a total inelastic electron tunneling spectrum: The comparative cases of formate and benzoate on Cu(111). *Journal of Chemical Physics*. 136 - 24, 2012. Available on-line at: <<Go to ISI>://WOS:000305881100031>. ISSN 0021-9606

Type of production: Scientific paper **Format:** Journal

- 39 A. Mugarza; R. Robles; C. Krull; R. Korytar; N. Lorente; P. Gambardella. Electronic and magnetic properties of molecule-metal interfaces: Transition-metal phthalocyanines adsorbed on Ag(100). *Physical Review B*. 85 - 15, 2012. Available on-line at: <<Go to ISI>://WOS:000302993300006>. ISSN 1098-0121

Type of production: Scientific paper **Format:** Journal

- 40 R. Robles; M. Kepenekian; S. Monturet; C. Joachim; N. Lorente. Energetics and stability of dangling-bond silicon wires on H passivated Si(100). *Journal of Physics-Condensed Matter*. 24 - 44, 2012. Available on-line at: <<Go to ISI>://WOS:000310571100006>. ISSN 0953-8984

Type of production: Scientific paper **Format:** Journal

- 41 J. P. Gauyacq; N. Lorente; F. D. Novaes. Excitation of local magnetic moments by tunneling electrons. *Progress in Surface Science*. 87 - 5-8, pp. 63 - 107. 2012. Available on-line at: <<Go to ISI>://WOS:000308279300002>. ISSN 0079-6816

Type of production: Scientific paper **Format:** Journal

- 42 J. P. Gauyacq; N. Lorente. Lifetime of magnetic excitations in supported ferromagnetic and antiferromagnetic spin-1/2 Heisenberg chains. *Physical Review B*. 85 - 11, 2012. Available on-line at: <<Go to ISI>://WOS:000301572200004>. ISSN 1098-0121

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- 116** J. Merino; N. Lorente; W. More; F. Flores; M. Y. Gusev. Charge transfer of slow light ions interacting with surfaces. Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms. 125 - 1-4, pp. 250 - 255. 1997. Available on-line at: <<Go to ISI>://WOS:A1997WX88000044>. ISSN 0168-583X
Type of production: Scientific paper **Format:** Journal
- 117** N. Lorente; J. Merino; F. Flores; M. Y. Gusev. Negative ion formation on Al, Si and LiF. Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms. 125 - 1-4, pp. 277 - 282. 1997. Available on-line at: <<Go to ISI>://WOS:A1997WX88000049>. ISSN 0168-583X
Type of production: Scientific paper **Format:** Journal
- 118** J. Merino; N. Lorente; F. Flores; M. Y. Gusev. Quantum approach to charge transfer between low energy H+ ions and Al surfaces. Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms. 125 - 1-4, pp. 288 - 292. 1997. Available on-line at: <<Go to ISI>://WOS:A1997WX88000051>. ISSN 0168-583X
Type of production: Scientific paper **Format:** Journal
- 119** N. Lorente; R. Monreal; M. Alducin; P. Apell. Radiative neutralization of small clusters impinging on solid surfaces. Zeitschrift Fur Physik D-Atoms Molecules and Clusters. 41 - 2, pp. 143 - 150. 1997. Available on-line at: <<Go to ISI>://WOS:A1997XN96700011>. ISSN 0178-7683
Type of production: Scientific paper **Format:** Journal



- 120** N. Lorente; R. Monreal. Self-consistent LDA calculation in ion neutralization at metal surfaces. Surface Science. 370 - 2-3, pp. 324 - 338. 1997. Available on-line at: <<Go to ISI>://WOS:A1997WD88600024>. ISSN 0039-6028
Type of production: Scientific paper **Format:** Journal
- 121** J. Merino; N. Lorente; P. Pou; F. Flores. Charge transfer for slow H atoms interacting with Al: Atomic levels and linewidths. Physical Review B. 54 - 15, pp. 10959 - 10969. 1996. Available on-line at: <<Go to ISI>://WOS:A1996VT67400103>. ISSN 0163-1829
Type of production: Scientific paper **Format:** Journal
- 122** N. Lorente; R. Monreal. Multielectron neutralization channels in ion-surface scattering. Physical Review B. 53 - 15, pp. 9622 - 9625. 1996. Available on-line at: <<Go to ISI>://WOS:A1996UJ29600034>. ISSN 1098-0121
Type of production: Scientific paper **Format:** Journal
- 123** R. Monreal; N. Lorente. DYNAMICAL SCREENING IN AUGER PROCESSES NEAR METAL-SURFACES. Physical Review B. 52 - 7, pp. 4760 - 4763. 1995. Available on-line at: <<Go to ISI>://WOS:A1995RR50200034>. ISSN 0163-1829
Type of production: Scientific paper **Format:** Journal
- 124** N. Lorente; R. Monreal; M. Maravall. ELECTRON-EMISSION IN THE NEUTRALIZATION OF MULTIPLY-CHARGED IONS AT LOW VELOCITIES ON METAL-SURFACES - THE EFFECT OF SECONDARY-ELECTRON CASCADES. Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms. 100 - 2-3, pp. 290 - 295. 1995. Available on-line at: <<Go to ISI>://WOS:A1995RF42300017>. ISSN 0168-583X
Type of production: Scientific paper **Format:** Journal
- 125** N. Lorente; R. Monreal; M. Alducin. LOCAL THEORY OF AUGER NEUTRALIZATION FOR SLOW AND COMPACT IONS INTERACTING WITH METAL-SURFACES. Physical Review A. 49 - 6, pp. 4716 - 4725. 1994. Available on-line at: <<Go to ISI>://WOS:A1994NT90800059>. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
- 126** N. Lorente; R. Monreal. NEUTRALIZATION OF SLOW HE₂⁺ ON METAL-SURFACES - THEORY FOR AUGER AND CASCADE ELECTRON-EMISSION. Surface Science. 303 - 1-2, pp. 253 - 265. 1994. Available on-line at: <<Go to ISI>://WOS:A1994MW78400028>. ISSN 0039-6028
Type of production: Scientific paper **Format:** Journal
- 127** N. Lorente; R. Monreal. A THEORY FOR AUGER NEUTRALIZATION OF HE⁺ IONS SCATTERED OFF SIMPLE METAL-SURFACES. Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms. 78 - 1-4, pp. 44 - 48. 1993. Available on-line at: <<Go to ISI>://WOS:A1993LE96900007>. ISSN 0168-583X
Type of production: Scientific paper **Format:** Journal
- 128** F. L. Tabares; B. Garciacastaner; M. Liniers; N. Lorente; J. Hackman. GLOBAL PARTICLE BALANCE IN THE TJ-I TOKAMAK. Vacuum. 41 - 4-6, pp. 1519 - 1522. 1990. Available on-line at: <<Go to ISI>://WOS:A1990EE54700213>. ISSN 0042-207X
Type of production: Scientific paper **Format:** Journal
- 129** Roberto Robles; Mikael Kepenekian; Nicolas Lorente. Evaluation of Leakage Current in 1-D Silicon Dangling-Bond Wire Due to Dopants. Nanopackaging: From Nanomaterials to the Atomic Scale. pp. 33 - 40. Springer, 07/08/2015.
Type of production: Book chapter **Format:** Book



- 130** Mikael Kepenekian; Roberto Robles Rodríguez; Nicolás Lorente Palacios. First-principles simulations of electronic transport in dangling-bond wires. Architecture and design of molecule logic gates and atom circuits. pp. 137 - 147. Springer, 2012.
Type of production: Book chapter **Format:** Book
- 131** Marie-Laure Bocquet; Hervé Lesnard; Serge Monturet; Nicolás Lorente Palacios. Theory of Elastic and Inelastic Electron Tunneling. Computational Methods in Catalysis and Materials Science. pp. 201 - 220. Wiley-VCH, 2009.
Type of production: Book chapter
- 132** Nicolás Lorente Palacios. Theory of Tunneling Currents and Induced Dynamics at Surfaces. Handbook of Surface Science. 3, pp. 575 - 620. North-Holland, 2008.
Type of production: Book chapter **Format:** Book
- 133** José Ignacio Pascual Chico; Nicolás Lorente Palacios. Inelastic electron tunneling microscopy and spectroscopy. Scanning Probe Microscopies beyond Imaging. pp. 77 - 97. Wiley-VCH, 2006.
Type of production: Book chapter **Format:** Book
- 134** José Ignacio Pascual Chico; Nicolás Lorente Palacios. Single-Molecule Vibrational Spectroscopy and Chemistry. Properties of Single-Molecules on Crystal Surfaces. Imperial College Press, Londres, 2006.
Type of production: Book chapter **Format:** Book
- 135** Nicolás Lorente Palacios; Mads Brandbyge. Theory of Elastic and Inelastic Transport from Tunneling to Contact. Scanning Probe Microscopies Beyond Imaging. pp. 471 - 507. Wiley-VCH, 2006.
Type of production: Book chapter **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** Probing magnetic interactions between transition metal atoms via YSR state
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft **Type of entity:** Public Research Body
Javier Zaldívar.
- 2** **Title of the work:** Transport-based single-atom STM electron-spin resonance: a cotunneling description
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft **Type of entity:** Public Research Body
Jose Reina.



- 3** **Title of the work:** Composite Kondo impurities created by assembly of entangled spin chains
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft
Sebastian Loth. **Type of entity:** Public Research Body
- 4** **Title of the work:** Controlled spin switch with a nickelocene molecular junction
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft
Benjamin Verlhac. **Type of entity:** Public Research Body
- 5** **Title of the work:** Probing magnetic interactions between Cr adatoms on the β -Bi₂Pd superconductor
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft
Deung-Jang Choi. **Type of entity:** Public Research Body
- 6** **Title of the work:** Probing surface magnetism with a nickelocene tip
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018
Organising entity: Deutschen Physikalischen Gesellschaft
Benjamin Verlhac. **Type of entity:** Public Research Body
- 7** **Title of the work:** Quasi-ballistic transport through surface states of Ge(001)-c(4x2) demonstrated by two-probe STM measurements and multi-terminal first-principles simulations
Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS
Corresponding author: Yes
City of event: Berlin, Germany
Date of event: 11/03/2018
End date: 16/03/2018



Organising entity: Deutschen Physikalischen Gesellschaft
Pedro Brandimarte.

Type of entity: Public Research Body

8 Title of the work: Reversible 2D phase transition driven by an electric field: visualization and control on the atomic scale

Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS

Corresponding author: Yes

City of event: Berlin, Germany

Date of event: 11/03/2018

End date: 16/03/2018

Organising entity: Deutschen Physikalischen Gesellschaft
Paul Graf.

Type of entity: Public Research Body

9 Title of the work: Spin control induced by molecular charging in a transport junction

Name of the conference: DPG Spring Meeting of the Condensed Matter Section (SKM) together with the EPS

Corresponding author: Yes

City of event: Berlin, Germany

Date of event: 11/03/2018

End date: 16/03/2018

Organising entity: Deutschen Physikalischen Gesellschaft
Carlos García.

Type of entity: Public Research Body

10 Title of the work: Magnetic impurities on superconducting surfaces: Shiba nad Majorana states studied with the STM

Name of the conference: The 5th Ito International research conference, RIKEN Centennial Anniversary, ISSP International Workshop & Surface and Interface Spectroscopy 2017

City of event: Tokyo, Japan

Date of event: 20/11/2017

End date: 23/11/2017

Organising entity: Riken

City organizing entity: Tokyo, Japan

Nicolas Lorente Palacios.

Type of entity: Public Research Body

11 Title of the work: Magnetic spectra of atomic and molecular adsorbates

Name of the conference: 13th Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures ACSIN 2016

City of event: Roma, Italy

Date of event: 09/10/2016

End date: 15/10/2016

Organising entity: Frascati National Laboratories

City organizing entity: Frascati, Italy

Nicolas Lorente; Jean-Pierre Gauyacq.

12 Title of the work: Spin dynamics in transition metal chains on Cu₂N/Cu (100)

Name of the conference: 20th International Vacuum Congress (IVC-20)

City of event: Busan, Republic of Korea

Date of event: 21/08/2016



End date: 26/08/2016

Organising entity: IVC

Type of entity: Foundation

City organizing entity: Busan, Republic of Korea
Nicolas Lorente; Jean-Pierre Gauyacq.

13 Title of the work: Long-range collective motion of CO molecules on Cu (111) induced by a scanning probe electric field

Name of the conference: Molecular Switches and Functional Interfaces

City of event: Montzener, Germany

Date of event: 11/04/2016

End date: 13/04/2016

Organising entity: SFB 658

City organizing entity: Berlin, Germany

B Wortmann; D van Vorden; P Graf; Roberto Robles; Paula Abufager; Nicolas Lorente; Chris A. Bobisch; Rolf Moeller.

14 Title of the work: Magnetic molecules as building blocks for quantum magnetism

Name of the conference: Magnetic adatoms as building blocks for quantum magnetism

City of event: Mainz, Rheinhessen-Pfalz, Germany

Date of event: 17/08/2015

End date: 20/08/2015

Organising entity: SPICE

Type of entity: Foundation

City organizing entity: Mainz, Rheinhessen-Pfalz, Germany

Nicolas Lorente.

15 Title of the work: Imaging molecular motions with scanning tunnelling microscopy

Name of the conference: Vibrations at surfaces 15

Corresponding author: Yes

City of event: San Sebastian, Basque Country, Spain

Date of event: 22/06/2015

End date: 26/06/2015

Organising entity: Donostia International Physics Center

Type of entity: Foundation

Johannes Schaffert; Maren Cottin; Andreas Sonntag; Hatice Karacuban; Christian Bobisch; Nicolas Lorente; Jean-Pierre Gauyacq; Rolf Moeller.

16 Title of the work: Propiedades magnéticas reveladas por microscopía túnel de adsorbatos atómicos y moléculares

Name of the conference: XV encuentro: superficies y materiales nanoestructurados NANO 2015

City of event: Rosario, Argentina

Date of event: 13/05/2015

End date: 15/05/2015

Organising entity: Consejo Nacional de Investigaciones Científicas y Técnicas

Type of entity: Nacional

Nicolas Lorente.

17 Title of the work: Kondo physics seen as electron-molecule collisions

Name of the conference: Symposium in honor of Jean-Pierre Gauyacq

City of event: Orsay, Île de France, France

Date of event: 17/11/2014

End date: 18/11/2014



Organising entity: ISMO

Type of entity: Public Research Body

City organizing entity: Orsay, Île de France, France

18 Title of the work: Magnetic dynamics of adsorbed atomic objects.

Name of the conference: Electron Dynamics on Surfaces and Nanostructures

City of event: Zaragoza, Aragon, Spain

Date of event: 05/11/2014

End date: 07/11/2014

Organising entity: ZCAM

Type of entity: Foundation

City organizing entity: Zaragoza, Aragon, Spain

Roberto Robles Rodríguez; Richard Korytár; Jean-Pierre Gauyacq; Nicolás Lorente Palacios.

19 Title of the work: STM studies of adsorbed magnetic atomic and molecular systems

Name of the conference: Spinmol2014

City of event: Ascona, Switzerland

Date of event: 26/10/2014

End date: 30/10/2014

Organising entity: Universität Bern

Type of entity: University

City organizing entity: Bern, Switzerland

Roberto Robles Rodríguez; Richard Korytár; Jean-Pierre Gauyacq; Nicolás Lorente Palacios.

20 Title of the work: Spontaneous magnetic switching due to decoherence

Name of the conference: DIPC Workshop: A tribute to Heinrich Rohrer

City of event: San Sebastián, Basque Country, Spain

Date of event: 11/09/2014

End date: 12/09/2014

Organising entity: Donostia International Physics Center

Type of entity: 1

City organizing entity: San Sebastián, Basque Country, Spain

Nicolás Lorente Palacios.

21 Title of the work: Spin correlations as revealed by the STM

Name of the conference: Physics Boat Workshop

City of event: Helsinki, Finland

Date of event: 03/06/2014

End date: 05/06/2014

Organising entity: Aalto University

Type of entity: University

City organizing entity: Helsinki, Finland

Roberto Robles Rodríguez; Richard Korytár; Jean-Pierre Gauyacq; Nicolás Lorente Palacios.

22 Title of the work: Spin Correlations of supported nano-objects

Name of the conference: MANA International Symposium 2014

City of event: Tsukuba, Japan

Date of event: 05/03/2014

End date: 07/03/2014

Organising entity: NIMS

Type of entity: Public Research Body

City organizing entity: Tsukuba, Japan

Roberto Robles Rodríguez; Richard Korytár; Jean-Pierre Gauyacq; Nicolás Lorente Palacios.



- 23** **Title of the work:** Current-induced switching between Néel states of Fe anti-ferromagnetic chains
Name of the conference: Electron transport through atoms, molecules and nanowires: advances in experiment and theory
City of event: Bad Honnef, Germany
Date of event: 27/10/2013
End date: 31/10/2013
Organising entity: Wilhelm und Else Heraeus Seminar
Type of entity: Foundation
City organizing entity: Bad Honnef, Jean-Pierre Gauyacq; Simeón Moisés Yaro Medina; Xavier Cartoixa Soler; Nicolás Lorente Palacios.
- 24** **Title of the work:** Electronic structure simulations of magnetic molecules displaying the Kondo effect
Name of the conference: Chinanano 2013
City of event: Beijing, China
Date of event: 05/09/2013
End date: 07/09/2013
Organising entity: National Center for Nanoscience and Technology, China
Nicolás Lorente Palacios; Richard Korytár; Jean-Pierre Gauyacq.
- 25** **Title of the work:** Magnetic properties of absorbed complex molecules
Name of the conference: Scanning Probe Microscopy & Quantum Materials Workshop
City of event: Vancouver, Canada
Date of event: 28/06/2013
End date: 30/06/2013
Organising entity: University of British Columbia
City organizing entity: Canadá, Canada
Nicolás Lorente.
- 26** **Title of the work:** Theory of spin-polarized STM
Name of the conference: Scanning Probe Microscopy & Quantum Materials Workshop
City of event: Vancouver, Canada
Date of event: 28/06/2013
End date: 30/06/2013
Organising entity: University of British Columbia
City organizing entity: Vancouver, Canada
Nicolas Lorente Palacios.
- 27** **Title of the work:** Excitation of magnetic adsorbates by tunneling electrons: atoms and chains
Name of the conference: Controlled Atomic Dynamics on Solid Surfaces: Atom and Molecular Manipulation
City of event: San Sebastián, Spain
Date of event: 13/05/2013
End date: 16/05/2013
Organising entity: Donostia International Physics Center
Type of entity: Fundación
City organizing entity: San Sebastián, Jean-Pierre Gauyacq; Simeón Moisés Yaro Medina; Xavier Cartoixa Soler; Frederico Dutilh Novaes; Nicolás Lorente Palacios.
- 28** **Title of the work:** Manipulation of spin in double decker phthalocyanine molecules
Name of the conference: Controlled Atomic Dynamics on Solid Surfaces: Atom and Molecular Manipulation
City of event: San Sebastián, Spain



Date of event: 13/05/2013

End date: 16/05/2013

Organising entity: Donostia International Physics Center **Type of entity:** Fundación

City organizing entity: San Sebastián,

T. Komeda; H. Isshiki; J. Liu; K. Katoh; M. Yamashita; Roberto Robles Rodríguez; Nicolás Lorente Palacios.

- 29** **Title of the work:** Magnetic properties of phthalocyanine derivatives on metal surfaces: from magnetic IETS to the Kondo effect
Name of the conference: Functional molecules on surfaces: new building blocks for nano-spintronics
City of event: Bonn, Germany
Date of event: 02/10/2012
Organising entity: CECAM
- 30** **Title of the work:** Molecular Kondo effect
Name of the conference: CHEMOCH
City of event: Lyon, France
Date of event: 25/09/2012
Organising entity: Ecole Normale Supérieure de Lyon
- 31** **Title of the work:** Magnetic excitations induced and studied with the Scanning Tunneling Microscope
Name of the conference: Non-contact AFM 2012
Date of event: 01/07/2012
- 32** **Title of the work:** Kondo effects in inelastic spin transitions
Name of the conference: Quantum transport in molecular nanostructures
City of event: Dublin, Ireland
Date of event: 22/05/2012
Organising entity: CECAM
- 33** **Title of the work:** The STM as a vibrational and magnetic spectroscopy on the single molecule level
Name of the conference: Electron Driven Processes at the Molecular Level
City of event: Prague, Czech Republic
Date of event: 19/10/2011
- 34** **Title of the work:** Many-body effects in vibrational and magnetic IETS
Name of the conference: Quantum Transport in Nanoscale Molecular Systems.
City of event: Colorado, United States of America
Date of event: 01/08/2011
Organising entity: TSRC
- 35** **Title of the work:** Mixed-valency signature in vibrational inelastic electron tunneling spectroscopy
Name of the conference: DIPC Conference-Passion for Knowledge
Date of event: 27/09/2010
- 36** **Title of the work:** Strong coupling theory of spin excitation and de-excitation by a passing electron current,
Name of the conference: PsiK 2010
City of event: Berlin, Germany
Date of event: 12/09/2010



- 37** **Title of the work:** Simulations of tunneling conductance in M-phthalocyanines displaying Kondo effect
Name of the conference: CECAM workshop
Date of event: 22/06/2010
- 38** **Title of the work:** Spin excitations with the STM.
Name of the conference: Mini-Workshop on Electron and Spin Transport in Nanostructures. KTH
City of event: Stockholm, Sweden
Date of event: 09/06/2010
- 39** **Title of the work:** Strong coupling theory of spin excitation and de-excitation by a passing electron current.
Name of the conference: NordsForsk spintronics workshop, DTU
City of event: Lyngby, Denmark
Date of event: 29/10/2009
Organising entity: Kalmar University and DTU
- 40** **Title of the work:** Vibrational excitation by tunneling electrons and post-excitation molecular dynamics
Name of the conference: Energy dissipation at Surfaces
City of event: Essen, Germany
Date of event: 26/09/2009
Organising entity: Universitat Duisburg-Essen
- 41** **Title of the work:** Vibrational excitation by tunneling electrons and post-excitation molecular dynamics
Name of the conference: Energy dissipation at Surfaces
City of event: Essen, Germany
Date of event: 26/09/2009
Organising entity: Universitat Duisburg-Essen
- 42** **Title of the work:** Molecule-substrate decoupling in quantum transport in molecular systems: from NDR to inelastic effects
Name of the conference: CECAM workshop: Quantum Transport on the Molecular Scale
City of event: Bremen,
Date of event: 14/09/2009
- 43** **Title of the work:** The excitation of local vibrations by an electron current: from atomic manipulation to local heating
Name of the conference: 3rd international workshop, SFB 616, Energy dissipation at surfaces.
City of event: Bad Honnef, Germany
Date of event: 25/08/2008
- 44** **Title of the work:** Inelastic effects in electron currents: from vibrational spectra to atomic manipulation
Name of the conference: ICN+T 2008
City of event: Colorado, United States of America
Date of event: 20/07/2008
- 45** **Title of the work:** Jahn-Teller effect in C60 molecules studied with the scanning tunneling microscope
Name of the conference: COST-ECCL 2008 meeting
City of event: Lisbon, Portugal
Date of event: 12/03/2008



- 46** **Title of the work:** Vibrational excitation by tunnelling electrons: reactivity and spectroscopy.
Name of the conference: Workshop on Elementary Reactive Processes at Surfaces.
City of event: San Sebastián, Spain
Date of event: 30/09/2007
Organising entity: Unidad de Física de Materiales
- 47** **Title of the work:** Theory of inelastic phenomena of single molecules.
Name of the conference: Workshop MEXT and CREST
City of event: Tokyo, Japan
Date of event: 18/08/2007
Organising entity: University of Tokyo
- 48** **Title of the work:** Vibrational excitation by tunnelling electrons: reactivity and spectroscopy
Name of the conference: Vibrations at Surfaces 12
City of event: Erice, Italy
Date of event: 20/07/2007
- 49** **Title of the work:** Vibrational excitation by tunneling electrons and post-excitation molecular dynamics
Name of the conference: Energy dissipation at Surfaces
City of event: Essen-Heidhausen, Germany
Date of event: 23/06/2007
Organising entity: Universitat Duisburg-Essen
- 50** **Title of the work:** Vibronic effects in electron transport through atomic and molecular systems
Name of the conference: XIII International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods.
City of event: Trieste, Italy
Date of event: 11/01/2007
Organising entity: International School for Advanced Studies and INFM DEMOCRITOS National Simulation Center
- 51** **Title of the work:** Theory of electronic transport in the presence of vibrations on the atomic scale
Name of the conference: Electron-induced processing at the molecular level
City of event: Valetta, Malta
Date of event: 16/09/2006
Organising entity: The Open University
- 52** **Title of the work:** Vibrational effects in electron transport both in tunnelling and contact regimes.
Organizers: H. Weber, T. Frauenheim and K. Richter. 371. WE-Heraeus-Seminar:Quantum Transport at the Molecular Scale.
City of event: Bad Honnef, Germany
Date of event: 29/05/2006
Organising entity: Physikzentrum Bad Honnef
- 53** **Title of the work:** Vibronic effects in electron transport through atomic and molecular systems.
Name of the conference: CREST workshop on Transport properties of single molecules and atomic wires.
City of event: Kanagawa, Japan
Date of event: 16/05/2006



- 54** **Title of the work:** Theory of electronic transport in the presence of vibrations on the atomic scale.
Name of the conference: Nanospain
City of event: Pamplona, Spain
Date of event: 20/03/2006
Organising entity: Nanospain
- 55** **Title of the work:** Theory of electronic transport in the presence of vibrations on the atomic scale.
Name of the conference: Second Meeting in Molecular Electronics,
City of event: Grenoble, France
Date of event: 19/12/2005
Organising entity: ElecMol'05
- 56** **Title of the work:** Total-energy calculations as the basis of electronic transport calculations: the need of self-consistent electron-vibration couplings.
Name of the conference: CECAM
City of event: Lyon, France
Date of event: 20/06/2005
Organising entity: CECAM
- 57** **Title of the work:** Inducing controlled atomic dynamics by an electron current.
Name of the conference: Workshop on Molecule-surface interactions
City of event: San Sebastian, Spain
Date of event: 08/09/2004
- 58** **Title of the work:** Inelastic scattering and local heating in atomic gold wires
Name of the conference: TNT 2004
City of event: Segovia, Spain
Date of event: 09/2004
- 59** **Title of the work:** Inducing controlled atomic dynamics by an electron current.
Name of the conference: Workshop on Surface and Nano Science ISSP
City of event: Tokyo, Japan
Date of event: 02/08/2004
Organising entity: ISSP, Tokyo
- 60** **Title of the work:** Mode selective chemistry induced by tunneling electrons.
Name of the conference: Condensed Matter Theory conference
City of event: Toulouse, France
Date of event: 22/09/2003
- 61** **Title of the work:** Mode excitation and reaction pathways induced by the scanning tunneling microscope.
Name of the conference: 13th International Symposium on Electron-Molecule Collisions and Swarms
City of event: Prague, Czech Republic
Date of event: 30/07/2003
- 62** **Title of the work:** Mode excitation and reaction pathways induced by the scanning tunneling microscope.
Name of the conference: WORKSHOP ON Electronic Transport in Molecular Systems CECAM,
City of event: Lyon, France
Date of event: 02/06/2003
Organising entity: CECAM-ESF/Psi-k



- 63** **Title of the work:** Processus inélastiques induits par le microscope à effet tunnel : spectroscopie vibrationnelle et réactivité contrôlée.
Name of the conference: Atelier de printemps ``Physique des Surface et Nanostructures"
City of event: Cargèse, France
Date of event: 25/05/2003
- 64** **Title of the work:** Processus inélastiques induits par le microscope à effet tunnel : spectroscopie vibrationnelle et réactivité contrôlée.
Name of the conference: Colloque conjoint Molécules et Nanoscience
City of event: La Grande Motte, France
Date of event: 06/04/2003
Organising entity: l'Académie de science de l'Institut de France et l'Académie des sciences de la Société Royale du Canada.
- 65** **Title of the work:** Mode excitation and reaction pathways induced by the scanning tunneling microscope.
Name of the conference: DPG
City of event: Dresden, Germany
Date of event: 24/03/2003
Organising entity: Hauptvortrag Sociedad Alemana de Física
- 66** **Title of the work:** Scanning tunneling microscope theory: elastic and inelastic currents.
Name of the conference: Winter school on scanning probe microscopy and spectroscopy.
City of event: Delmenhorst, Germany
Date of event: 04/02/2003
- 67** **Title of the work:** Single Molecule Vibrational Spectroscopy and Microscopy
Name of the conference: 10th International Conference on Vibrations at Surfaces
City of event: Saint Malo, France
Date of event: 17/06/2001
- 68** **Title of the work:** Inelastic tunneling spectroscopy
Name of the conference: CECAM workshop: Future developments in the Study of structure-property relations by 'computational crystallography'
City of event: Lyon, France
Date of event: 10/2000
Organising entity: CECAM
- 69** **Title of the work:** First-principles calculations of single molecule vibrational spectroscopy and microscopy
Name of the conference: Psi_k 2000 conference: Ab-initio (from Electronic Structure) Calculations of Complex Processes in Materials
City of event: Schwäbisch, Gmünd, Germany
Date of event: 08/2000
- 70** **Title of the work:** Theory of vibrational spectroscopy and microscopy by STM
Name of the conference: Research Conference within the EU TMR program Manipulation of Individual Atoms and Molecules
City of event: Les Houches, France
Date of event: 01/2000



- 71** **Title of the work:** Study and manipulation of chemisorbed simple molecules by inelastic tunneling in STM
Name of the conference: EUROPEAN RESEARCH CONFERENCES: Particle-Solid Interactions: Dynamic Phenomena
City of event: San Sebastián, Spain
Date of event: 09/1999
- 72** **Title of the work:** Theoretical studies of charge transfer in simple molecular ions and metal surface collisions
Name of the conference: Twelfth International Workshop on Inelastic Ion-Surface Collisions
City of event: South Padre Island, Texas, United States of America
Date of event: 24/01/1999
- 73** **Title of the work:** C₂H₂ on Cu (100): STM studies
Name of the conference: APS March meeting
City of event: Atlanta, United States of America
Date of event: 1999
- 74** **Title of the work:** Neutralisation d'ions H₂⁺ lors de collisions sur une surface métallique
Name of the conference: Groupement de Recherche
City of event: Bombannes, France
Date of event: 05/1998
- 75** **Title of the work:** Charge transfer as responsible for H₂⁺ dissociation on aluminum surfaces
Name of the conference: ECOSS-17
City of event: Enschede, Holland
Date of event: 09/1997
- 76** **Title of the work:** Multielectron neutralization of He⁺ at metal surfaces
Name of the conference: EUROPEAN RESEARCH CONFERENCES: Particle-Solid Interactions: Strong Perturbations.
City of event: San Sebastián, Spain
Date of event: 09/1997
- 77** **Title of the work:** Auger and resonant neutralization rates in H₂⁺-Al collisions
Name of the conference: HCM European Network Meeting Charge transfer at surfaces
City of event: Hirschegg, Austria
Date of event: 03/1997
- 78** **Title of the work:** LD-LCAO approach to the neutralization of H⁺ scattered off Al(100)
Name of the conference: GCMCD-16, EPS
City of event: Baveno, Italy
Date of event: 04/1996
- 79** **Title of the work:** H⁺ -> Al(100) at 4 keV
Name of the conference: European Network Meeting. HCM Charge transfer at surfaces.
City of event: Les Houches, France
Date of event: 03/1996
- 80** **Title of the work:** Electron emission in the neutralization of multiply-charged ions at low velocities on metal surfaces: the effect of secondary-electron cascades
Name of the conference: Tenth International Workshop on Inelastic Ion Surface Collisions

City of event: Wyoming, United States of America
Date of event: 08/1994

- 81** **Title of the work:** Surface-state engineering for interconnects on H-passivated Si (100)
Name of the conference: 1st international workshop on nanopackaging
City of event: Grenoble, France
Organising entity: Leti **Type of entity:** Public Research Body
City organizing entity: Grenoble,
Roberto Robles Rodríguez; Mikael Kepenekian; Christian Joachim; Nicolás Lorente Palacios.

Works submitted to national or international seminars, workshops and/or courses

- 1** **Title of the work:** Molecules on metallic surfaces
Name of the event: Seminar
City of event: Seoul, Republic of Korea
Date of event: 30/10/2017
Organising entity: Center for quantum nanoscience **Type of entity:** Public Research Body
IBS
City organizing entity: Seoul, Republic of Korea
Nicolas Lorente Palacios.
- 2** **Title of the work:** Modelization of superconductors and their properties
Name of the event: Seminar
City of event: Seoul, Republic of Korea
Date of event: 20/10/2017
Organising entity: Seoul National University
Nicolas Lorente Palacios.
- 3** **Title of the work:** The spintronics of adsorbates
Name of the event: Seminar
City of event: Daejon, Republic of Korea
Date of event: 18/10/2017
Organising entity: Center for theoretical physics of complex systems IBS **Type of entity:** Public Research Body
City organizing entity: Daejon, Republic of Korea
Nicolas Lorente Palacios.
- 4** **Title of the work:** Dynamical processes on single atoms
Name of the event: Seminar SNU
City of event: Seoul, Republic of Korea
Date of event: 16/08/2016
End date: 16/08/2016
Organising entity: Seoul National University **Type of entity:** University
City organizing entity: Seoul, Republic of Korea
Nicolas Lorente.
- 5** **Title of the work:** Physics of magnetic adsorbates
Name of the event: Institutsseminar Theoretische Physik
City of event: Kiel, Germany
Date of event: 17/12/2015



End date: 17/12/2015

Organising entity: Institut für Theoretische Physik, CAU, Kiel

Type of entity: University

City organizing entity: Kiel, Germany

6 Title of the work: Magnetic properties of molecules studied with the STM

Name of the event: Seminar Sondervortrag im SFB 677

City of event: Kiel, Germany

Date of event: 18/11/2015

End date: 18/11/2015

Organising entity: Institut für Experimentelle und Angewandte Physik, CAU, Kiel

City organizing entity: University Christian Albrechts, Germany

7 Title of the work: Magnetic excitations and electronic currents on the atomic scale

Name of the event: Seminar in Kavli Institute of Nanoscience

City of event: Delft, Holland

Date of event: 01/07/2015

End date: 01/07/2015

Organising entity: TU Delft

Type of entity: University

City organizing entity: Delft, Holland

Nicolas Lorente.

8 Title of the work: Single-molecule spectroscopies with the scanning tunneling microscope

Name of the event: coloquios del departamento de física FCEYN-UBA

City of event: Buenos Aires, Argentina

Date of event: 21/05/2015

End date: 21/05/2015

Organising entity: Universidad de Buenos Aires

Type of entity: University

City organizing entity: Buenos Aires, Argentina

Nicolas Lorente.

9 Title of the work: Singel-molecule spectroscopies with the scanning tunneling microscope

Name of the event: Seminar Department of Chemistry ENS

City of event: Paris, Île de France, France

Date of event: 24/03/2015

End date: 24/03/2015

Organising entity: Ecole Normale Supérieure

Type of entity: University

City organizing entity: Paris, Île de France, France

Nicolas Lorente.

10 Title of the work: Spontaneous magnetic switching due to spin decoherence

Name of the event: Seminar

City of event: Kiel, Germany

Date of event: 13/10/2014

End date: 13/10/2014

Organising entity: Christian Albrechts Universität

Type of entity: University

City organizing entity: Kiel, Germany

Nicolás Lorente Palacios.



- 11 Title of the work:** Physical Concepts of Scanning Tunneling Microscopy and its application of excitations and magnetic substrates
Name of the event: DIPC Summer School on Scanning Probe Microscopy: A tribute to Heinrich Rohrer
City of event: San Sebastián, Basque Country, Spain
Date of event: 05/09/2014
End date: 12/09/2014
Organising entity: Donostia International Physics Center
Type of entity: 1
City organizing entity: San Sebastián, Basque Country, Spain
Nicolás Lorente Palacios.
- 12 Title of the work:** "The machine to see everything at the atomic scale."
Name of the event: Institutskolloquium
Type of event: Seminar
Date of event: 23/04/2013
Organising entity: Technische Universität Ilmenau
- 13 Title of the work:** "Single-molecule spectroscopies with the scanning tunneling microscope"
Name of the event: Colloquium
Type of event: Seminar
City of event: Jülich,
Date of event: 01/02/2013
Organising entity: Peter Grünberg Institut
- 14 Title of the work:** STM image calculations and inelastic tunneling
Name of the event: Quantum resources for single molecule-machines. AtMol Winter School
City of event: Les Houches, France
Date of event: 27/01/2013
End date: 01/02/2013
Organising entity: Ecole de Physique Les Houches
Type of entity: Foundation
City organizing entity: Les Houches, France
Nicolas Lorente Palacios.
- 15 Title of the work:** "Many-body effects in magnetic inelastic electron tunneling spectroscopy."
Name of the event: SFB 668 – Kolloquium
Type of event: Seminar
City of event: Hamburg, Germany
Date of event: 13/12/2011
Organising entity: Hamburg University
Type of entity: University
- 16 Title of the work:** " Vibrational excitation with tunneling electrons: spectroscopy and single-molecule chemical reactions. "
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Sendai, Japan
Date of event: 13/05/2009
Organising entity: Institute of Multidisciplinary Research for Advanced Materials, Tohoku University,
- 17 Title of the work:** " Inelastic effects in electron transport. "
Name of the event: INVITED SEMINAR
Type of event: Seminar



City of event: Kiel,

Date of event: 03/02/2009

Organising entity: University of Kiel-Institute of Experimental and Applied Physics

Type of entity: University Research Institute

18 Title of the work: " Inelastic effects in electron transport. "

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: Hamburg, Germany

Date of event: 02/02/2009

Organising entity: University of Hamburg -Scanning Probe Methods Group, Institute of Applied Physics, **Type of entity:** University Research Institute

19 Title of the work: " Electron-induced dynamics with an STM. "

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: Birmingham, United Kingdom

Date of event: 03/05/2006

Organising entity: University of Birmingham-Nanoscale Physics Laboratory,

20 Title of the work: " Total-energy calculations as the basis of electronic transport calculations: the need of self-consistent e-vibration couplings "

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: Freie-Universitat Berlin, Germany

Date of event: 19/07/2005

Organising entity: Berlin

21 Title of the work: " Vibronic effects in electron transport through atoms and molecules. "

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: Berlin, Germany

Date of event: 19/07/2005

Organising entity: Freie-Universitat Berlin

22 Title of the work: " Inducing controlled atomic dynamics by an electron current "

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: Montréal Québec, Canada

Date of event: 23/02/2005

Organising entity: Centre for the Physics of Materials, McGill University,

23 Title of the work: " Metallic and semi-metallic silicon nanowires"

Name of the event: INVITED SEMINAR

Type of event: Seminar

City of event: San Sebastian, Spain

Date of event: 23/11/2004

Organising entity: Donostia International Physics Center



- 24** **Title of the work:** " Inducing controlled atomic dynamics by an electron current"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Barcelona, Spain
Date of event: 08/10/2004
Organising entity: Institut Català de Nanotecnologia de Catalunya
- 25** **Title of the work:** " Mode excitation and reaction pathways induced by the scanning tunneling microscope"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Tokyo, Japan
Date of event: 09/08/2004
Organising entity: RIKEN
- 26** **Title of the work:** " Excitation vibrationnelle et réactivité induites par le microscope à effet tunnel"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Lyon, France
Date of event: 13/11/2003
Organising entity: ENS-Chimie
- 27** **Title of the work:** " Mode excitation and reaction pathways induced by the scanning tunneling microscope"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Lyngby, Denmark
Date of event: 29/04/2003
Organising entity: Mikroelektronik Centret, DTU
- 28** **Title of the work:** " Mode excitation and reaction pathways induced by the scanning tunneling microscope "
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Liverpool, United Kingdom
Date of event: 14/02/2003
Organising entity: Surface Science Research Centre, University of Liverpool **Type of entity:** University Research Institute
- 29** **Title of the work:** " Mode-selective chemistry with the STM "
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Spain
Date of event: 17/10/2002
Organising entity: Donostia International Physics Center
- 30** **Title of the work:** " Controlled dehydrogenation of small organic molecules "
Name of the event: INVITED SEMINAR
Type of event: Seminar
Date of event: 22/07/2002
Organising entity: Nanoscale Physics Laboratory, University of Birmingham



- 31 Title of the work:** " Controlled dehydrogenation of small organic molecules "
Name of the event: Siesta Meeting
Type of event: Seminar
City of event: Cambridge, United Kingdom
Date of event: 18/07/2002
Organising entity: Clarence Hall, Cambridge University
- 32 Title of the work:** " Espectroscopía y microscopía vibracionales de una sola molécula ",
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Bellaterra,
Date of event: 25/04/2002
Organising entity: Institut de Ciència de Materials de Barcelona et Centro Europeo de Programación de Barcelona,
- 33 Title of the work:** " Etude théorique (ab initio) des processus inélastiques en nano-objets ",
Name of the event: Présentation à la commission d'évaluation du Laboratoire CAR,
Type of event: Seminar
City of event: Toulouse, France
Date of event: 06/03/2002
Organising entity: IRSAMC
- 34 Title of the work:** " First-Principles calculations of single molecule vibrational spectroscopy and microscopy "
Name of the event: INVITED SEMINAR
City of event: Kiel, Germany
Date of event: 17/02/2002
Organising entity: Applied Physics Institute, CAU
- 35 Title of the work:** " Etude de la chimisorption de petites molécules sur des surfaces des métaux nobles "
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay,
Date of event: 12/02/2002
Organising entity: Université Paris-Sud, Orsay-Laboratoire des Collisions Atomiques et Moléculaires
- 36 Title of the work:** "Excitation et manipulation par STM de molécules déposées sur une surface"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Talence,
Date of event: 31/05/2001
Organising entity: Laboratoire de Physico-chimie Moléculaire, Bordeaux III
- 37 Title of the work:** "Excitation et manipulation par STM de molécules déposées sur une surface",
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay, France
Date of event: 21/02/2001
Organising entity: Laboratoire des Collisions Atomiques et Moléculaires. Univ. Paris-Sud Orsay



- 38** **Title of the work:** "Étude et manipulation de petites molécules par tunnel inelastique avec le STM".
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay, France
Date of event: 27/10/1999
Organising entity: Laboratoire des Collisions Atomiques et Moléculaires, Université Paris-Sud, Orsay
- 39** **Title of the work:** "Étude et manipulation de petites molécules par tunnel inelastique avec le STM"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Toulouse, France
Date of event: 18/10/1999
Organising entity: CEMES-CNRS
- 40** **Title of the work:** "Transfert de charge lors de collisions d'ions moléculaires sur une surface métallique".
Name of the event: INVITED SEMINAR
City of event: Toulouse, France
Date of event: 14/10/1999
Organising entity: IRSAMC, Université Paul Sabatier,
- 41** **Title of the work:** "Electron emission in low-energy molecular ion scattering off metal surfaces"
Name of the event: INVITED SEMINAR
City of event: Denmark
Date of event: 10/07/1998
Organising entity: Physics department, Odense University
- 42** **Title of the work:** "Charge transfer in molecule-surface interactions"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Sweden
Date of event: 05/07/1998
Organising entity: Department of Applied Physics, Chalmers University of Technology
- 43** **Title of the work:** "Dissociation and electron emission during the collision of H₂⁺ with an Aluminum surface"
Name of the event: INVITED SEMINAR
City of event: Berlin,, Germany
Date of event: 15/04/1998
Organising entity: Humboldt University
- 44** **Title of the work:** "Étude théorique de l'acetylene chimisorbé sur Cu(100) vu par STM".
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay, France
Date of event: 12/02/1998
Organising entity: Laboratoire de Photo Physique Moléculaire, Université Paris-Sud, Orsay
- 45** **Title of the work:** "Neutralización multielectrónica de iones simples (He⁺ y H₂⁺) en superficies metálicas",
Name of the event: INVITED SEMINAR
City of event: Alicante, Spain
Date of event: 10/02/1997
Organising entity: Departamento de física aplicada, universidad de Alicante

- 46** **Title of the work:** "Photon emission in low energy ion neutralization of Ag+n (n=1-5) at simple metal surfaces"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay, France
Date of event: 22/01/1997
Organising entity: Laboratoire des Collisions Atomiques et Moléculaires, Université Paris-Sud
- 47** **Title of the work:** "Auger neutralization at solid surfaces"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: San Sebastián, Spain
Date of event: 26/10/1995
Organising entity: Dpt. Física de Materiales, facultad de Ciencias Químicas Universidad del País Vasco
- 48** **Title of the work:** "Auger neutralization on solid surfaces"
Name of the event: INVITED SEMINAR
Type of event: Seminar
City of event: Orsay, France
Date of event: 12/07/1994
Organising entity: Laboratoire des Collisions Atomiques et Moléculaires, Université Paris-Sud

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Evaluation of Jülich Young Investigator Group
Primary (UNESCO code): 221117 - Magnetic properties; 221128 - Surfaces
Affiliation entity: Jülich Forschungszentrum **Type of entity:** Foundation
City affiliation entity: Jülich, Germany
Start-End date: 27/11/2014 - 27/11/2014
- 2** **Committee title:** Création de l'institut de sciences moléculaires d'Orsay (ISMO) AERES
Primary (UNESCO code): 220900 - Optics; 221128 - Surfaces
Affiliation entity: CNRS Université Paris-Sud **Type of entity:** Public Research Body
City affiliation entity: Orsay, Île de France, France
Start-End date: 26/11/2008 - 28/11/2008

Organization of R&D activities

- 1** **Title of the activity:** Spin on Surfaces
Type of activity: Workshop **Geographical area:** European Union
Convening entity: Universidad del País Vasco **Type of entity:** University
City convening entity: San Sebastian, Spain
Start-End date: 05/09/2016 - 09/09/2016



- 2** **Title of the activity:** Controlled Atomic Dynamics on Solid Surfaces: Atom and Molecular Manipulation
Type of activity: Organización de Workshop
Convening entity: Unidad de Física de Materiales
City convening entity: San Sebastián,
Start-End date: 31/05/2013 - 16/05/2013

- 3** **Title of the activity:** Architecture and design of molecule logic gates and atomic circuits
Type of activity: AtMol Workshop
Convening entity: AtMol
City convening entity: Barcelona,
Start-End date: 12/01/2012 - 13/01/2012

- 4** **Title of the activity:** Inelastic effects in transport at the atomic scale: from realistic current simulations to chemical detections at the atomic scale via IET spectroscopy
Type of activity: Organización Workshop CECAM
Convening entity: CECAM
City convening entity: Lyon,
Start-End date: 18/12/2006 - 20/12/2006

- 5** **Title of the activity:** Single molecules and nanostructures probed by STM
Type of activity: Organización Simposium
Convening entity: ECOSS-23
City convening entity: Berlin, Germany
Start-End date: 04/09/2005 - 09/09/2005

R&D management

- 1** **Name of the activity:** Memo EU-ICT H2020 project
Type of management: Group management
Performed tasks: Principal Investigator of the San Sebastian group
Entity: CSIC
Start date: 01/11/2017
Type of entity: Public Research Body
Duration: 4 years

- 2** **Name of the activity:** AtMol EU-ICT FP7 project
Type of management: Group management
Performed tasks: Principal Investigator of the Barcelona group
Entity: CSIC
Start date: 01/01/2011
Type of entity: Public Research Body
Duration: 4 years



Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Center for Quantum Nanoscience IBS
City of entity: Seoul, Republic of Korea
Start-End date: 12/10/2017 - 31/10/2017 **Duration:** 18 days
Goals of the stay: Guest
Provable tasks: Collaboration with Prof. Andreas J. Heinrich
- 2** **Entity:** Christian Albrechts Universität **Type of entity:** University
City of entity: Kiel, Germany
Start-End date: 01/06/2016 - 30/06/2016 **Duration:** 1 month
Goals of the stay: Guest
Provable tasks: Collaboration and Lecturing
- 3** **Entity:** Christian Albrechts Universität **Type of entity:** University
City of entity: Kiel, Germany
Start-End date: 01/11/2015 - 30/11/2015 **Duration:** 1 month
Goals of the stay: Guest
Provable tasks: Collaboration and lecturing
- 4** **Entity:** Université Paris-Sud
City of entity: Orsay, France
Start-End date: 01/05/2010 - 31/05/2010 **Duration:** 1 month
Goals of the stay: Guest
- 5** **Entity:** Tohoku Daigaku **Type of entity:** University
City of entity: Sendai, Japan
Start-End date: 05/05/2009 - 04/06/2009 **Duration:** 1 month
Goals of the stay: Guest
- 6** **Entity:** Toyama Daigaku **Type of entity:** University
City of entity: Toyama, Japan
Start-End date: 06/05/2008 - 28/06/2008 **Duration:** 1 month - 22 days
Goals of the stay: Guest
- 7** **Entity:** Université Paul Sabatier, Toulouse III
City of entity: Toulouse, France
Start-End date: 2006 - 2006 **Duration:** 1 year
Goals of the stay: Contracted
Provable tasks: Professeur des Universités
- 8** **Entity:** Université Paul Sabatier, Toulouse III,
City of entity: Toulouse, France
Start-End date: 2000 - 2006 **Duration:** 6 years
Goals of the stay: Contracted
Provable tasks: Maître de Conférences



- 9** **Entity:** Chalmers Tekniska Högskola
City of entity: Göteborg, Sweden
Start-End date: 1998 - 2000
Goals of the stay: Post-doctoral
Duration: 2 years
- 10** **Entity:** Université Paris-Sud, Orsay
City of entity: Orsay, France
Start-End date: 1996 - 1998
Goals of the stay: Post-doctoral
Duration: 2 years

Prizes, mentions and distinctions

Description: Member of the Institut Universitaire de France
Awarding entity: Institut Universitaire de France
City awarding entity: France
Conferral date: 01/02/2007