

### **Scientific Member and Managing Director**

Max Planck Institute for the Structure and Dynamics of Matter (MPSD)

*Luruper Chaussee 149, 22761 Hamburg, Germany*

### **Distinguished Research Scientist**

Center for Computational Quantum Physics (CCQ) at the Simons Foundation's Flatiron Institute

*160 Fifth Avenue New York, NY 10010*

and

**Distinguished Professor: Condensed Matter Physics**

Department of Materials Science and ETSF

*Edificio I+D+I Korta, Avd.Tolosa 72, Donostia, Spain  
University of the Basque Country (UPV/EHU)*

### **Education**

University of Valladolid, Spain Ph.D. in Physics ("Apto Cum Laude"), 1991.

University of Valladolid, Spain, Summa Cum Laude, B.S. in Physics, 1988.

### **Professional Experience**

- Distinguished Research Scientist, Center for Computational Quantum Physics (CCQ) at the Simons Foundation's Flatiron Institute, New York (since September 2017-)
- Full Professor, University of Hamburg, Hamburg (since June 2016-)
- Scientific Member and Director of the Max Planck Institute for the Structure and Dynamics of Matter (MPSD) in Hamburg (since August 2014-)
- Faculty member of the Wolfgang Pauli Centre, Hamburg (2015-)
- Managing Director (2016 - 2019), Max Planck Institute for the Structure and Dynamics of Matter Hamburg (Germany)
- Miller Visiting Professor, University of California at Berkeley (August-September 2014)
- Full Professor Condensed Matter Physics (Chair), University of the Basque Country, Spain, April-2001-present
- *Visiting Professor (Iere class)*, Universidad de Montpellier 2, Francia, June-July 2007.
- *Visiting Professor (Humboldt)*, Freie Universitat Berlin, 2005.
- Associated to Centro Mixto CSIC-UPV/EHU and DIPC, San Sebastián, Spain, April-2001-present
- *Visiting Professor*, Department of Physics, Freie Universität Berlin, Berlin, Germany, (June-2006-July 2007)
- *Visiting Professor*, Laboratoire des Solides Irradiés, Ecole Polytechnique, Palaiseau, France. Dec.2000-Apr.2001.
- *Visiting Professor (Iberdrola)*, Dpto. Física de Materiales, Universidad del País Vasco, Donostia Apr-Sep.1998.
- *Associate Professor*, Dpt.Física Teórica, Atómica, Molecular y Nuclear, University of Valladolid, Dec.93-Apr.01
- *Fulbright Postdoctoral and Research Associate Fellow* Department of Physics, University of California at Berkeley, and Materials Sciences Division LBL, Berkeley, USA. Oct.92-Sep.94
- *Assistant Professor*, Dpt. Física Teórica, Atómica, Molecular y Nuclear, University of Valladolid, Oct.91-Oct.92
- *Research Fellow of "Ministerio de Educación y Ciencia"* Dpt. Física Teórica. Universidad de Valladolid. Spain. January 1988-October 1991 and *Research Felows "Caja de Ahorros y Monte de Piedad de Madrid"*

## Selected Awards and Fellowships

- Fellow of the European Academy of Sciences 2020
- 2018 Max Born Medal and Prize
- Medal of the Spanish Royal Physics Society, Madrid, December 2016
- Elected Member of the Academia Europaea 2016
- European Research Council (ERC) Advanced Grant (2016-2021) (QSpec-NewMat)
- JSPS Invitation Fellowship for Research in Japan, 2016
- XV Manuel Laborde Werlinden Prize for the best technology-based business initiative based on innovative ideas: "Materials Evolution", December 2015
- Premio Jaime I de Investigación Básica 2014.
- Foreign associate member of the National Academy of Sciences (NAS) of United States (2014)
- External Scientific Member of the Fritz-Haber-Institute of the Max-Planck-Gesellschaft, (Nov. 2011-)
- Fellow of American Association for Advanced Science (AAAS) Physics Section (2010)
- European Research Council (ERC) Advanced Grant (2011-2016) (DYNamo)
- "Distinguished Visiting Scientist", Fritz Haber Institute der Max-Planck-Gesellschaft, Berlin (2009-)
- *Outstanding Referee*, American Physical Society (2009)
- Dupont Prize in Nanotechnology, Dupont Foundation (2006)
- Friedrich Wilhelm Bessel Research Award, Humboldt Foundation (2005)
- Fellow of the American Physical Society, Division of Materials Science (2004)
- Sir Allan Sewell Fellowship, Australia, 2004
- JSPS Invitation Fellowship Programs for Research in Japan, 2001
- Salvador de Madariaga Fellow, 2000-1
- Fulbright Fellow, 1992-94
- *Real Spanish Physical Society Prize "Jóvenes Investigadores"* Madrid. Spain. July, 1992
- *Honor Prize for the best Ph.D. Thesis in Physics* University of Valladolid. Spain. June, 1992.
- *1<sup>st</sup> National Prize for Graduated in Physics* October 25, 1989.
- *Honor Prize for the Master in Physics* and *Caja de Ahorros y Monte de Piedad de Salamanca Prize for the best graduate curriculum in the Faculty of Science in the 1988 academic year* University of Valladolid. Spain. 1989.

## Research Interests

The main activity of my research group is focussed on the field of theory and modelling of electronic and structural properties in condensed matter and on developing novel theoretical tools and computational codes to investigate the electronic response of solids and nanostructures to external electromagnetic fields. Present research activities are: new exotic/emergent states of matter out of equilibrium, topological and correlated materials, new developments within many-body theory and TDDFT, including ab-initio description of electron excitations (including electron phonon and photons on the same footing), optical spectroscopy, time-resolved spectroscopies, STM/STS, XAFS and lifetimes, novel techniques to calculate total energies and assessment and development of exchange-correlation functionals for TDDFT calculations; improvements on transport theory within the real-time TDDFT formalism; characterization of the electronic and optical properties of solids, nanostructures and biomolecules. The main research interest of the group spans the following lines:

- New exotic states of matter out of equilibrium: Topological materials
- QED-Chemistry and Materials
- Fundamental aspects of Time-Dependent Density Functional Theory and Many-Body Perturbation Theory
- Extended systems: solids, liquids, Applications (e. g. photovoltaics)
- Theory of Open quantum systems. Strong light-matter interactions and Optimal control Theory
- Theoretical Spectroscopy: photoemission, time-resolved optical and magnetic spectroscopies, Raman, IR ...
- Biotechnology and hybrid materials: photovoltaic applications
- Nanostructures, 2D materials and nanotubes. Nanoplasmonics
- Electronic and Thermal transport
- Code development

The research is supported at present by different European Research Networks and projects and by the Spanish and Basque research agencies.

## Summary of CV

More than 400 publications with over 37000 ISI Web of Science (h-index=95; over 3,500 cites per year and growing). 36 of his publications are ranked as "highly cited papers"

More than 200 invited talks, 40 colloquia numerous outreach talks and press releases

Originator of the widely-use ab initio computational materials research open-source project octopus (<http://www.tddft.org>).

It simulates the dynamics of electrons and nuclei under the influence of time-dependent field, used by more than 1000 groups worldwide.

Director of 44 PhD students (12 running); supervisor of 80 postdoctoral researchers. Twenty of my former graduate students and 39 of the postdocs now hold academic positions at major universities in and outside Spain (Germany, Italy, Austria, Denmark, France, USA, Japan). Eleven other students/postdocs now have leading positions in the industry.

Member of four graduate schools: International Max Planck Research School for Ultrafast Imaging and Structural Dynamics; Physics of nanostructures and advanced materials, International master on Nanoscience and molecular nanotechnology, Leibniz graduate school DinL: Dynamics in new Light

Two **Patents**: one Field emission source with BN nanotubes, University of Valladolid, Spain P-9802690 (3-9-2001) and another on "ultraviolet optical device with bn-nanotubes" (2011).

## Memberships

U.S. National Academy of Sciences, American Physical Society (APS), American Chemical Society (ACS), American Association for the Advancement of Science (AAAS), European Physical Society (EPS), Royal Spanish Physical Society (RSEF), Alexander von Humboldt Network (AvH)

## **Selected Professional and Synergetic Activities**

### **Scientific Editorial role**

- Editorial Board Member of Oxford Materials Science (2020-)
- Editorial Board Member of Springer Series in Solid-State Sciences (2019-)
- Editorial Board Member of Electronic Structure, IOP (June 2018-)
- Associate Editor of PNAS, Proceedings of the National Academy of Science, (Applied Physical Sciences) (June 2017-2023)
- Associate Editor of NanoLetters (April 2017-)
- Editorial Board of ChemPhysChem (2016-)
- Editorial Board of Springer Lecture Notes in Physics (2011-)
- Editor in Chief European Journal of Physics B (July 2011-March 2017)
- Editorial Board Member for Scientific Reports, Nature (2016-2019)
- ‘Editorial Board’ of the International Journal of Materials Science and Semiconductors and of Physics Research International (2007-2017)

### **Scientific Prize Panels**

- Selection committee for the Hamburg Prize for Theoretical Physics (2016-)
- Member of the judging panel for the CECAM Berni J. Alder prize (2016)
- Member of the 2015 Tsungming Tu Award (TTA), Ministry of Science and Technology (MOST), Taiwan
- Panel Member for the Francqui Prize, given King of Belgium (2015)
- Member of the Prize Committee ‘Psi-k Volker Heine Young Investigator Award’, 12-16 September 2010, Berlin, Germany.

### **Advisory and Evaluation Panels**

- Member of the External Review Committee of The Center for Computational Sciences (CCS), University of Tsukuba (17-21 February 2020)
- Member of the Scientific advisory board (SAB) of the research field ‘Information’ at the Karlsruhe Institute of Technology (KIT)(2019-2023)
- Member of the Scientific advisory board of the FET project ‘Proto-Opto-Electro-Mechanical Hybrid Systems for Generation-Next Bionic Devices, PROGENY (2020-2023)
- Scientific Academic Advisory Committee (SAAC) review of the area of Organic Chemistry and Material Science (2018) at the Weizmann Institute of Science in Israel (2018)
- Member of the Scientific Advisory Board of the ‘Fundacion GADEA por la Ciencia’, Spain (2017-)
- Member of the External Scientific Advisory Board of CIQUIS (‘Centro Singular de Investigación en Química Biolóxica e Materiais Moleculares’) Universidad de Santiago de Compostela (USC) (2017-)
- Member of the Scientific advisory board (SAB) of the C2SEPEM computational center funded by the National Science Foundation, Berkeley USA (2017-)
- Member of the Science and Software advisory board (SSAB) Molecular Sciences Software Institute (MolSSI) (molssi.org) funded by the National Science Foundation (2017-)
- Member of the Scientific advisory board (SAB) of MICCoM (Midwest Integrated Center for Computational Materials), a DOE Computational Materials Science (CMS) Center at Argonne, Chicago, U.S. Department of Energy, Office of Science, Office of Basic Energy Sciences (2016-)

- Miembro del "Alto Consejo Consultivo en I+D+I de la Generalitat Valenciana" (since 2015)
- Member of the Scientific Advisory Committee of CECAM (since 2015-)
- Evaluator for the Office of Science Early Career Research Program, Office of Basic Energy Sciences U. S. Department of Energy (2016)
- Co-director of the series of Schools and workshops on: "Time-Dependent Density-Functional Theory: Prospects and Applications", Benasque Center for Science, Benasque, Huesca (Spain) August 29-September 11, (2004); August 26-September 11, (2006); August 31-September 14, (2008); 2-15 January (2010); 4-17 January (2012); 4-18 January (2014); 12-23 September (2016)
- Panel Member for the Russian Science Foundation (RSF), the Russian International Affairs Council (RIAC) (2015)
- Panel Chair European Research Council (ERC) (2015) (Physical and Analytical Sciences P4 Panel- Starting Grants)
- Chair of the European Theoretical Spectroscopy Facility (ETSF) (<http://www.etsf.eu>) (since 2012-); Vice-President for Scientific Development (since 2008) and member of the Steering Committee.
- Member of the "Centro de excelencia en Nanociencia Molecular ISIC-NANO", Valencia (2012-)
- Member of the Scientific Council of ZCAM ("Zaragoza Scientific Center for Advance Modeling") (2013-)
- Member of the "Centro de excelencia en Nanociencia Molecular ISIC-NANO", Valencia (2012-)
- Panel member of the Deutsche Forschungsgemeinschaft (DFG) program "Excellence Initiative" (Physics, Mathematics, Geosciences) (2011-)
- Member of the "Comissão Externa Permanente de Aconselhamento Científico -CEPAC" (Permanent External Commission for Scientific Advising) of the "Centro de Física Computacional-CFC" (Centre for Computational Physics, Coimbra Portugal (since 2010-)
- Member of Board Meeting and Evaluation Panel of the IFW Dresden (October 2008; and 2011)
- Referee for the European Research Council (ERC) (2008-) (Physical and Analytical Sciences Panel)
- Referee for the Academy of Finland; Academy Professor evaluation (2011-)
- Referee Fundación General CSIC (2011-)
- Referee for CEA Eurotalents program (2010-)
- Scientific reviewer for PRACE (the Partnership for Advanced Computing in Europe) (2011-)
- ESF Pool of Reviews (European Science Foundation established a global, quality-driven pool of scientific peer reviewers across all areas of research) (2008)
- Member of the expert Panel "Área de Física" of the Ministerio de Ciencia e Innovación for I+D projects (Mayo 2009)
- Referee for the national funding agencies: i) Agencia Nacional de Evaluación y Prospectiva (ANEP), ii) UNI-QUAL, iii) Agencia para la Calidad del Sistema Universitario de Castilla y León (ACSUCYL)
- Host group for the HPC++ Europe [http://www.hpc-europa.org/index.php?section=Transnational&subsection=host\\_departments&page=host\\_departments.BSC](http://www.hpc-europa.org/index.php?section=Transnational&subsection=host_departments&page=host_departments.BSC)
- Member of the BIFI "Instituto de Biocomputación y física de sistemas complejos", Zaragoza, Spain (since January 2008-)
- Member of the Scientific Council of the GDR-E Nano-I on Science and Applications of Nanotubes, CNRS (France) (2007-)
- Steering Committee and council member of the Marie Curie Series of Events program: Psi-k Training in Computational Nanoscience (<http://www.mc-psi-k-training.cecama.org/>) MSCF-CT-2005-029252 (2006-)

- Member of the Board of Directors (Trustee) of the Psi-k: UK Charity Commission (Psi-K-1126308): Daresbury Laboratory, Daresbury Science and Innovation Campus, Daresbury, Warrington WA4 4AD Registered in England under company number 06440198 (<http://www.psi-k.org/>).
- External Advisory Board Member of *The center for Nanotechnology and Molecular Materials*, Wake Forest University, North Caroline, USA (Director Prof. D.L. Carroll). (2007-)
- Advisory Board Member and Physical Scientist associated to the *ITR: Institute for the Theory of Advanced Materials in Information Technology* University of Minnesota, (Director Prof. J. Chelikowsky). Supported by the National Science Foundation (2003-)
- Spanish representative in the Steering Committee of ESF Research Networking Programmes- INTELBIOMAT ("Interdisciplinary Approaches to Functional Electronic and Biological Materials") (2008-)
- Co-cordinator of the Working group of the Spanish network on nanoscience (NANOSPAIN): Nanobiotecnologia de la red NANOSPAIN" (<http://www.nanospain.org/>)
- Core-group member of the ESF programme "Towards Atomistic Materials Design" (2002-present)
- Spokesperson of the Nanostructures and nanotechnologies working group of the psi-k network (European Science Foundation Programme "Electronic Structure Calculations for Elucidating the Complex Atomistic Behaviour of Solids and Surfaces" and now "Towards Atomistic Materials Design"). Member of the International Advisory Board for the Psi-k 2000 and 2005 Conferences in Schwäbisch Gmünd, Alemania (22-26 Agosto 2000) and (17-21 September 2005); and member of the next one in 2010.
- Member of the International Advisory Board of the European Conference on Molecular Electronics (ECME-2011), September 7-10, 2011, Barcelona (Spain).
- Co-chairman of the "Density functional methods for electronic structure calculations symposium" at the XXII Congress and General Assembly of the International Union of Crystallography, Madrid, Spain, Aug.22-30, 2011
- Co-organiser of the CECAM workshop on "Challenges and Solutions in GW Calculations for Complex Systems" 7-10 June 2011, CECAM HQ, EPFL, Lausanne, Switzerland
- Co-organiser of the "2011 MRS Spring Meeting (Symposium YY: Computational Semiconductor Materials Science)", Moscone West and San Francisco Marriott, San Francisco, California, from April 25 to 29, (2011)
- Co-organiser of the ZCAM workshop "Databases in Quantum Chemistry", Zaragoza 22-14 September 2010.
- International Scientific Committee of the Pan American Advance Study Institute (PASI) on "Electronic Properties of Complex Systems" Cartagena, Colombia. (2010)
- Co-organiser of the CECAM workshop Electronic-structure challenges in materials modeling for energy applications, 1-4 June 2010, CECAM HQ, EPFL, Lausanne, Switzerland
- Scientific Committee of the "International Conference on Advanced Materials Modelling (ICAMM-2010)", Institut des Matériaux Jean Rouxel (IMN), Nantes France 8-10 July 2010
- Co-organiser of the Symposium "Theoretical Spectroscopy: density functional theory and beyond for real materials" at the Deutsche Physikalische Gesellschaft (DPG) Spring Meeting, Regensburg March 22-26 (2010)
- Scientific Advisory Board of the GDR-E meeting, 19-23 October 2009 , Hotel Marvel Coma-Ruga, Salou
- Co-organiser of the CECAM workshop "Computational Challenges emerging from Next Generation Light Sources ", 12-15 October 2009, DESY Hamburg, Germany
- International Advisory Board of the Cnano'09 International Conference on Carbon Nanostructured Materials , October 4-8, 2009 Santorini, Greece
- Member of the Scientific Organising Committee of the 10th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures, ACSIN 10, September 21-25 2009 Granada, Spain.
- Local Organiser of "Summer School on Simulation Approaches to Problems in Molecular and Cellular Biology", Directors P. Carloni, M. Parrinello. U. Rothlisberger, Palacio Miramar, 31-Agosto, 5 Septiembre 2009, Donostia, Spain.

- Member of the Scientific Committee of Cargèse International School, Cargèse, Corsica, France 3-15 Julio 2006 and NATO ASI School on *Carbon Nanotubes: From Basic Research to Nanotechnology* Sozopol, Bulgaria 21-31 May (2005).
- “Programm Committee” of *International Winterschool on Electronic Properties of Novel Materials Molecular Nanostructures (IWEPNM)* (2003-to date), Marzo, Kirchberg/Tirol, Austria
- Co-director of the SANES workshop ” Integrated Self-Adjusting Nano-Electronic Sensors” San Sebastián, 26-27 February 2009
- Chair of the Gordon Research Conference Time-Dependent Density Functional Theory, New Hampshire, USA, 5-10/07 2009 (Co-chair: M. Marques and vice-chairs Troy Van Voorhis and Fillipp Furche)
- Vice-chair of the Gordon conference ”Time-Dependent Density-Functional Theory”, Colby College Waterville, ME, USA, July 15-20, 2007
- Advisor to ”Information Science and Technology Program” of the European Union (2000-present)
- Chair and organising committee member to numerous international conferences/workshops: APS, MRS in USA and EPS, ESF, CECAM in Europe.
- Referee for the following financial agencies: Spanish Ministry of Science and Education and member of the panel evaluating projects in Physics; National Science Foundation (NSF), USA (2001-present); European Commission (2000-present), European Science Foundation (2002-present); Fundamental Onderzoek der Materie (FOM), The Netherlands, (Nov. 2001); Council for Chemical Sciences (CW) of the Netherlands Consejo Nacional de Ciencia y Tecnología Mexicano (CONACYT 2001) (Oct. 2001); INFN italiano (Dec. 2000 y 2001), National Research Council of Canada (NRC), and NRC - Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren e.V. (HGF) (2002), Austrian Academy of Sciences (2003); Council for Chemical Sciences (CW) of the Netherlands (NWO) (2005); The Research Council of Norway, Division of Science (2005); BSF (United States-Israel Binational Science Foundation) (2005); Agence National de la Recherche (ANR), France (2005-); Gordon Research Conferences, (2005-) Research Frontiers Programme 2007 of Science Foundation Ireland (SFI) (2006), Consejos Superiores de FONDECYT Chile (2006); Selection Committee member for research positions in the ”Centre for Computational Physics”, Coimbra, Portugal (2007-)
- Referee for permanent research positions at the CNRS in France, CNR Italy and CSIC in Spain.

## Invited Talks in the last 5 years

1. *Fundamentals of TDDFT for nonlinear phenomena of light-matter interactions: application to hybrid organic photovoltaics and charge transfer processes*  
CECAM workshop "Calculation of Optical Properties of Nanostructures from First Principles", February 19-22, CECAM-HQ-EPFL, Lausanne, Switzerland 20-February-2013
2. *TDDFT for Nonlinear Light-Matter Interactions: Application to Hybrid Organic Photovoltaics and Charge Transfer Processes*  
Seminar of the Theory Department of the Fritz-Haber-Institut, Berlin 28-February-2013
3. *New nanoscale hybrid structures made of C and BN from first principles: optoelectronic devices*  
International Winterschool on Electronic Properties of Novel Materials (IWEPNM2013), March 2-9 (2013), Kirchberg/Tirol, Austria 3-March-2013
4. *How non linear and charge transfer processes are captured in time-dependent density functional theory*  
TD-DFT (Time-Dependent Density Functional Theory ) conference, University of Nantes, France, 23-26 April (2013) 23-April-2013
5. *Non equilibrium dynamical processes in finite and extended systems: a TDDFT and many-body perspective*  
Workshop on "Dynamics of Matter: Advances in Theory", CFEL, Hamburg 25-April-2013
6. *Time-dependent density functional theory for non-linear phenomena in solids and nanostructures: fundamentals and applications*  
Electronic structure calculations with the GPAW code: Users and developers meeting, Technical University of Denmark, May 21-23, 2013 22-May-2013
7. *A TDDFT perspective on nonlinear electronic processes: optics, photoemission and resonant tunneling*  
Workshop: "Learning from the past, looking to the future" from July 2-5, 2013 in Berlin, Germany 4-July-2013
8. *Static and time-dependent density-functional schemes for bond-breaking and bond formation, correlation effects including Mott insulators*  
Humboldt Universitaet zu Berlin, Institut fuer Chemie (AG Quantenchemie, Prof. Sauer) 10-July-2013
9. *Light-induced dynamical processes in finite and extended systems from TDDFT*  
Modeling Single-Molecule Junctions: Novel Spectroscopies and Control Berlin, Germany, October 14th - 16th, 2013 15-October-2013
10. *Non equilibrium dynamical processes in finite and extended systems from a time-dependent density functional (TDDFT) perspective*  
Max-Planck-Institut für Quantenoptik (MPQ) Colloquium, Munich 17-October-2013
11. *Impacto de la teoría en Nanociencia: nuevos materiales y dispositivos*  
Nanotecnología, Fundación Valenciana de Estudios Avanzados, Valencia 15-November-2013
12. *Non linear processes in low dimensional systems within time-dependent density functional theory*  
The "March" meeting, a symposium in honor of Professor Norman H. March. Namur, Belgium 21-23rd November 2013 22nd-November-2013
13. *Open session about challenges and standing problems*  
6th Time-Dependent Density-Functional Theory: Prospects and Applications, Benasque, 4-18 January 2014 13-January-2014
14. *Light-induced processes in finite and extended systems from TDDFT*  
VI International Conference of the Institute for Biocomputation and Physics of Complex Systems (BIFI), "Exploring the role of computation in Science: from Biology to physics", Zaragoza (Spain), January, 22-24, 2014. 22-January-2014
15. *Non equilibrium dynamical processes in low dimensional systems from a time-dependent density functional perspective*  
Colloquium of the Institut für Physikalische Chemie Universität Würzburg, Germany 11-February-2014
16. *Multi-scale modeling in chemistry and materials science: combining classical and quantum mechanics*  
Colloquium of the Instituto de Ciencia de Materiales de Madrid (ICMM), Madrid 20-February-2014



17. *Extensions of density functional theory approaches to treating quantum phenomena and quantum entanglement*  
March meeting of the American Physical Society (APS), March 3-7, 2014; Denver, Colorado, USA 3-March-2014
18. *Modeling energy materials from first principles simulations: optoelectronic and hybrid-photovoltaic devices*  
Colloquium of the Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain 28-March-2014
19. *Understanding light-induced processes in energy materials from first principles TDDFT simulations*  
Workshop on Material Challenges in Devices for Fuel Solar Production and Employment, ICTP, Trieste, Italy, 19-23 May (2014) 23-May-2014
20. *Modeling optoelectronic and hybrid-photovoltaic devices within TDDFT*  
Colloquium Physikalische Chemie, Department of Chemistry, Universität München 4th-June-2014
21. *Hybrid-organic photovoltaic devices from first principles simulations*  
White nights of materials science: From physics and chemistry to data analysis, and back, Saint Petersburg, Russia – June 16 - 20, 2014 hfill18-June-2014
22. *Non equilibrium light-induced dynamical processes in energy materials from first principles*  
2nd Workshop on Surfaces, Interfaces and Functionalization Processes in Organic Compounds and Applications - SINFO II Trieste, 25-27 June 2014 27-June-2014
23. *Optoelectronic and hybrid-photovoltaic devices from first principles simulations*  
Seminar of the Physical Chemistry department (ISIC) at the EPFL, Lausanne 12-July-2014
24. *Ab initio modelling of light-induced non equilibrium dynamical processes in organic materials*  
Department of Physics, Stanford University, USA 22-August-2014
25. *Efficient implementation of time-dependent density-functional theory to treat non-linear dynamical processes in molecular nanostructures and solids*  
Applied Mathematics Seminar, Department of Mathematics, University of California, Berkeley 3-September-2014
26. *First principles modeling of photovoltaic and optoelectronic devices: fundamentals and applications*  
Department of Chemistry, University of California, Berkeley, USA 12-September-2014
27. *Modeling non equilibrium dynamical processes in TDDFT: optoelectronic and photovoltaic applications*  
Physical Seminar, University of Rochester, USA 15-September-2014
28. *Non equilibrium dynamical processes in TDDFT: organic photovoltaic applications*  
Colloquium Molecular Foundry, Lawrence Berkeley Laboratory, Berkeley 16-September-2014
29. *Theoretical Spectroscopy: TDDFT*  
7th European School on Molecular Nanoscience (ESMOLNA2012), Gandia (Spain), 26th to 30th October 2014 27th-October-2014
30. *Novel electronic and structural properties of two-dimensional materials: silicene, germanene and stanene*  
"Emerging Non-Graphene 2D Atomic Layers and van der Waals Solids" Symposium of the Fall Materials Research Society (MRS) meeting, Boston, (November 30 - December 5, 2014). 3-December-2014
31. *Ab initio simulation of photon-matter interactions: non equilibrium dynamical processes within QED-TDDFT*  
Colloquium of Center for Free-Electron Laser Science (CFEL), Hamburg, Germany 7th November 2014
32. *Novel electronic and structural properties of two-dimensional materials: silicene, germanene and stanene*  
Emerging Non-Graphene 2D Atomic Layers and van der Waals Solids. Symposium of the Fall Materials Research Society (MRS) meeting, Boston 3-December-2014
33. *TDDFT or how to describe non-linear dynamical processes in many-electron systems: quantum phenomena and quantum entanglement*  
Mini-Symposium "Formal and practical aspects of Electronic Structure Simulations with DFT", Department of Theoretical Chemistry Vrije Universiteit Amsterdam, The Netherlands 29-January-2015
34. *Simulation of photon-matter interactions within QED-TDDFT*  
SWOCS V, Symposium of Computational Science, POSCO International Center, Pohang, Korea 3-February-2015

35. *Non equilibrium dynamical processes in TDDFT: optoelectronic and photovoltaic applications*  
IBS Center for Multidimensional Carbon Materials , Ulsan National Institute of Science and Technology (UNIST),  
South Korea 4-February-2015
36. *Novel electronic and structural properties of two-dimensional materials: from carbon-nanostructures to silicene, germanene and stanene*  
IBS Center for Multidimensional Carbon Materials , Ulsan National Institute of Science and Technology (UNIST),  
South Korea 5-February-2015
37. *A TDDFT framework for describing light-induced non equilibrium dynamical processes:optoelectronic applications*  
Division of Materials Physics, Department of Physics University of Helsinki, Finland 25-March-2015
38. *Simulating strong light-matter interactions: a TDDFT perspective*  
Columbia University (Depts of Physics and Electrical Engineering) 30-April-2015
39. *Simulation of Optoelectronic and Photovoltaic processes within a TDDFT formalism*  
Colloquium of the Physical Chemistry department at EPFL, Lausanne 21-May-2015
40. *Modeling photon matter interactions within QED-TDDFT: optoelectronic applications*  
Colloquium University of Konstanz, Konstanz 2-June-2015
41. *Light induced non-linear dynamical processes in molecules and solids within TDDFT*  
The Batsheva de Rothschild Seminar on Molecular Electronics 2015: 40 Years Later, Orchid Jerusalem View  
Hotel (Maale Hachamisha), Israel 7-12 June 2015 8-June-2015
42. *Ab-initio simulations of light-matter interactions*  
XFEL Theory seminar, Hamburg 9-July-2015
43. *Pressure induced phase transition in correlated oxides and simple metals: Mott and charge-transfer insulators*  
Keynote Speaker AIRAPT-EHPRG "International Conference on High Pressure Science and Technology" Madrid  
30-August-4-September 2015 3-September-2015
44. *Quantum Electrodynamical time-dependent density functional theory (QEDFT): an ab-initio framework for the simulation of photon-matter interactions*  
"3rd International Conference on Correlation Effects in Radiation Fields 2015" (CERF15) Sep. 13-18 in Rostock, Germany 18-September-2015
45. *Simulating light-induced dynamical processes in light harvesting complexes*  
"Chemistry, Materials & Light", in the framework of the International Year of Light IYL2015, Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, 21-23 September 2015. 22-September-2015
46. *Extending time-dependent density functional theory to account for many body photon-electron quantum phenomena: towards QED-chemistry*  
Exploration of ultra-fast timescales using time dependent density functional theory and quantum optimal control theory, September 28-October 2, 2015, CECAM-HQ-EPFL, Lausanne, Switzerland 30-September-2015
47. *Simulating light-induced dynamical processes within TDDFT: application to light harvesting complexes*  
3a jornada de supercomputación, Cátedra UAM-Fujitsu en Computación Científica y Big Data, Madrid, 23-October-2015
48. *First principle simulations of energy materials for optoelectronic and hybrid-photovoltaic applications*  
Colloquium of the Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain 15-October-2015
49. *Group IV two-dimensional materials : Novel electronic and structural properties*  
Colloquium Institute of Solid State and Materials IFW Dresden, Germany, 24th November 2015
50. *Extensions of time density functional theory to treat strong light-matter interactions and quantum entanglement*  
CECAM-SMEE Workshop on Open quantum Systems, November 30th - December 4th, 2015, The University of Hong Kong, China 2-December-2015
51. *A TDDFT formulation for strong light matter interactions : applications to energy conversion*  
Coloquium Institut fuer Theoretische Physik, Technische Universitaet Dresden, Dresden, Germany, 26-January-2016

52. *First principles modeling of light-induced ultrafast phenomena in nanostructures and solids*  
Workshop "The Frontier of ultrafast science: integrating XFEL and fs-TEM for a novel approach to time-resolved science" 1-3 February 2015, Trieste, Italy 2-February-2016
53. *Strong light-matter interactions and quantum entanglement: merging QED and TDDFT*  
Colloquium Nano/Bio Interface Center & Pennergy, University of Pennsylvania, Philadelphia, USA 16-February-2016
54. *Extensions of time density functional theory to QED: QED-Chemistry*  
DCP Symposium for the March 2016 Meeting of the APS in Baltimore. APS March Meeting 2016, March 14-18, 2016, Baltimore, MD. 15-March-2016
55. *Group IV two-dimensional materials : Novel electronic and structural properties*  
National Institute for Materials Science (NIMS) Colloquium, Tsukuba, Japan 4-April-2016
56. *Electronic and structural properties of 2D elemental materials: applications in nanoscience*  
Department of Physics, Tohoku University, Sendai, Japan, 7-April-2016
57. *Strong light-matter interaction and quantum entanglement: merging QED and TDDFT*  
National Institute of Advanced Industrial Science & Technology (AIST) Specialized Seminar, Tsukuba, Japan 11-April-2016
58. *Strong light-matter interaction in materials science: merging QED and TDDFT*  
Colloquium, Department of Physics Tokyo Institute of Technology, Oh-okayama Tokyo, Japan 12-April-2016
59. *Strong light-matter interaction in materials science: merging QED and TDDFT*  
Colloquium Institute for Solid State Physics, University of Tokyo Kashiwa, Tokyo, Japan 13-April-2016
60. *Strong light-matter interaction in materials science: merging QED and TDDFT*  
Colloquium Wako RIKEN, Japan 14-April-2016
61. *Strong light-matter interaction in materials science: merging QED and TDDFT*  
Colloquium Center for Computational Sciences University of Tsukuba, Tsukuba, Japan 15-April-2016
62. *Time-resolved angle resolved photoelectron spectroscopy within TDDFT: what can we learn and what are the limitations?*  
Focus Workshop: "Prospects and Limitations of Electronic Structure Imaging by Angle Resolved Photoemission Spectroscopy", 25-27 April 2016, Max Planck Institute for the Physics of Complex Systems MPIPKS Dresden 26 April 2016
63. *Group IV two-dimensional materials : Novel electronic and structural properties* Physical Chemistry Colloquium, Caltech, USA 17-May-2016
64. *A Quantum of Light for Materials Science: merging QED and TDDFT* Materials Research Lecture, Caltech, USA 18-May-2016
65. *"New states of matter": merging quantum electrodynamics and TDDFT to model light-matter interactions*  
Special Seminar, Physic Departmnet, McCullough , Stanford university 23-August-206
66. *Modeling Light-Matter interaction: From Weak to Strong Coupling in QED Chemistry and Materials*  
Symposium on Frontiers in Physical Sciences, International Center for Advanced Studies (ICAS), 16-18 November 2016, Buenos Aires, Argentina 18-November-2016
67. *Modeling Light-Matter interactions: Quantum Electrodynamics (QED) Chemistry and Materials within TDDFT*  
18th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods, January 12-14, 2017, ICTP, Miramare, Trieste, Italy 12-January-2017
68. *Modeling Weak to Strong Coupling in QED Chemistry and Materials*  
Colloquium Institut für Theoretische Physik und Astrophysik Christian-Albrechts-Universität Kiel, Germnay 24-January-2017
69. *"New states of matter": merging quantum electrodynamics and TDDFT to model light-matter interactions*  
Colloquium at the Physics Department, Lund University, Sweden 28-February-2017

70. *Elemental two-dimensional materials : Novel electronic and structural properties*  
International Winterschool on Electronic Properties of Novel Materials Molecular Nanostructures (IWEPNM2017),  
March 4-11 (2017), Kirchberg/Tirol, Austria 9-March-2017
71. *Ab-initio spin and time-resolved ARPES in real materials with QED-TDDFT: driving WSe2 out of equilibrium*  
Workshop on Spectroscopy and Dynamics of Photoinduced Electronic Excitations, ICTP, Trieste 8-12 May 2017  
11-May-2017
72. *First principles modeling of Light-Matter interactions within QED-TDDFT: From Weak to Strong Coupling in QED-Chemistry and Materials*  
Max-Planck-Institut für Quantenoptik (MPQ) Colloquium, Garching 6-June-2017
73. *QED-Chemistry and Materials: A First principles modeling of Light-Matter interactions within QED-TDDFT*  
29th Annual Workshop on Recent Developments in Electronic Structure Methods (ES17) June 25-28, 2017,  
Princeton University, USA 27-June-2017
74. *QED-Chemistry and Materials: A new theoretical framework for the first principles modelling of Light-Matter interactions, from weak to strong coupling*  
Colloquium Department of Chemistry and Chemical Biology, University of Harvard, Cambridge USA 10-July-2017
75. *First principles modeling of time-resolved ARPES in real materials with QED-TDDFT: driving WSe2 out of equilibrium*  
Condensed Matter and Biophysics Experimental Physics, MIT Cambridge USA 11-July-2017
76. *Non equilibrium driven phenomena in 2d materials from first principles*  
Workshop on Quasi-particle Dynamics in Quantum Confined and Emerging Materials Columbia University  
MRSEC, New York 14-July-2017
77. *Modeling out of equilibrium time-resolved ARPES in real materials with QED-TDDFT: application to WSe2*  
Department of Chemistry, Yale University 2-August-2017
78. *QED-Chemistry and Materials: First principles modeling of Light-matter interactions within QED-TDDFT*  
Mini-symposium on light-matter interactions, University of Strasbourg, 15-September-2017
79. *How photons change the properties of matter from an ab initio QED-TDDFT formalism*  
Zurich Theoretical Physics Colloquium, ETH Zurich, Switzerland 27-November-2017
80. *How photons change the properties of matter: QED-TDDFT an ab initio framework for modeling Light-Matter interactions*  
Plenary Talk at the Annual DPG Spring Meeting in Berlin, Germany, March 11th - 16th, 2018 (held jointly with  
the annual European Physical Society (EPS) Meeting of the Condensed Matter Divisions) 16th-March-2018
81. *Photons and matter cooperate: new states of matter from an ab-initio QED-TDDFT formalism*  
Strong Coupling with Organic Molecules (SCOM 2018), Eindhoven, April 16-18 (2018) 17th-April-2018
82. *Non equilibrium light driven phenomena in materials from first principles: merging quantum electrodynamics QED and TDDFT*  
Q-MAC Symposium, May 22 - 25, 2018, Venice, 23-May-2018
83. *QED-TDDFT: A new theoretical framework for the first principles modelling of Light-Matter interactions, from weak to strong coupling*  
Quantum electrodynamic effects/processes in molecules and materials "QED-M2", Collège de France, Paris,  
June 18-19 2018 18-June-2018
84. *Modeling light-induced ultrafast phenomena in nanostructures and solids*  
Pre-SAAC Symposium on 'Recent progress in chemistry and in advanced materials', Sunday 28th October  
2018, Departments of Materials and Interfaces and Organic Chemistry, Weizmann Institute of Science , Israel  
28-October-2018
85. *How photons change the properties of matter: QEDFT a first principles framework for modeling light-matter interactions*  
"Quantum and Classical Light-Matter Interactions" CUNY Graduate Center, New York 12-13 November 2018  
12-November-2018

86. *Photons and matter cooperate: new states of matter from a novel first principles QEDFT formalism*  
Zemansky Lecture at CUNY 14th November 2018
87. *New states of matter from an ab-initio QED-TDDFT formalism*  
Colloquium of the Centre for Doctoral Training in Cross-Disciplinary Approaches to Non-Equilibrium Systems (CANES), London 19th-November-2018
88. *Quantum Electrodynamical Density Functional Theory (QEDFT): a novel theoretical framework for the simulation of photon-matter interactions*  
"Ultrafast Science from the infrared to the X-rays", Rolex Centre of the Ecole Polytechnique Fédérale de Lausanne (EPFL), 28-30 November 2018 29-November-2018
89. *Photons and matter cooperate: new states of matter from QED-TDDFT*  
Wednesday-Colloquium, Institut für Theoretische Physik, Johann Wolfgang Goethe-Universität, Frankfurt 16-January-2019
90. *New states of matter from a novel first principles quantum electrodynamics density functional formalism (QEDFT)*  
Zernike Colloquium, Zernike Institute for Advanced Materials Colloquia, University of Groningen hfill7th February 2019
91. *Materials in QED cavities*  
Q-MAC Symposium, 24 - 27, 2019, Paris, 'Fondation Hugot' Du Collège De France 25-Feb-2018
92. *Quantum Electrodynamical Density Functional Theory (QEDFT): towards new states of matter*  
Symposium in Honor of the 70th Birthday of Steven G. Louie, Berkeley USA 2-March-2019
93. *Modelling Floquet and Quantum-Cavity Engineered new states of matter*  
Quantum Matter Physics Seminar, University of Geneva, Switzerland. 19th-March-2019
94. *Light and cavity induced new states of matter: Quantum Electrodynamical Density Functional Theory (QEDFT)*  
Plenary Talk at the Annual DPG Spring Meeting in Rostock, Germany, March 10th - 15th, 2019 12th-March-2019
95. *Strong light-matter interaction and New States of Matter*  
Centro Singular de Investigación en Química Biológica y Materiales Moleculares (CIQUS), Universidad de Santiago de Compostela 30th-April-2019
96. *Novel Electronic and Structural Properties of Two-Dimensional Materials and Floquet and cavity-engineering of molecular and materials properties*  
Seminar in Harvard.School of Engineering and Applied Sciences.SEAS, Harvard, Cambridge, MA 27-28th June 2019
97. *Engineering materials properties with light*  
Workshop "A light touch for quantum material control", Department of Physics, University of Oxford, UK , 5th July 2019 5-July-2019
98. *Quantum-Cavity and Floquet-Engineered new states of matter from a QEDFT perspective*  
Molecular and materials simulation at the turn of the decade: Celebrating 50 years of CECAM (CECAM50). 9-12 September Lausanne, Switzerland 10-September-2019
99. *Floquet and cavity-engineered materials*  
Department Seminar, Molecular Spectroscopy Group of the Max Planck Institute for Polymer Research Mainz, Germany 24-September-2019
100. *Cavity-engineering of molecular and materials properties from first principles QEDFT*  
Quantum light for investigating complex molecules and materials, Theo Murphy international scientific meeting, The Royal Society at Chicheley Hall, Buckinghamshire, 25-26 November 2019 26-November-2019

## Research projects (in the last 5 years)

1. *Tailoring Electronic and Phononic Properties of Nanomaterials: Towards Improved Thermoelectricity (nanOTHERM)*  
Programa Consolider-Ingenio 2010, Ministerio de Ciencia e Innovación (Grant No. CSD2010-00044) cinco años (1.1.2011 a 31.12.2015) Dotación: 385.000 €(Total 3.900.000 €)  
Research coordinator: Clivia Sotomayor Torres
2. *Dynamical processes in open quantum systems: pushing the frontiers of theoretical spectroscopy (DYNamo)*  
European Research Council (ERC) Advanced Grant (ERC-2010-AdG -Proposal No. 267374) cinco años (1.4.2011 a 31.3.2016) Dotación: 1.877.497 €  
Investigador Principal: **Angel Rubio**
3. *Computer simulations of thermally excited molecules and materials by first principles (TEMMIP)*  
International Research Staff Exchange Scheme (FP7-PEOPLE-2011-IRSES)(grant 295172) cuatro años (2012-2015)  
Dotación: 29400 €  
Coordinator: Dr. T. Heine (Jakobs University, Germany)  
Co-ordinator in Spain: **Jesus Ugalde and Angel Rubio**
4. *CRONOS. Time dynamics and Control in nanostructures for magnetic recording and energy applications*  
FP7-NMP-2011-SMALL-5 "Modelling of ultrafast dynamics in materials" (Contract Number: 280879-2 CRONOS CP-FP7) tres años (June-2012-2015) Dotación: 232600 €  
Coordinator: Dr. S. Sanvito (Trinity College, Dublin)  
Co-ordinator in Spain: **Angel Rubio**
5. *POCAONTAS. Polymer / Carbon Nanotubes Active Systems*  
Marie Curie Actions Initial Training Networks, FP7-PEOPLE-2012-ITN (Project number 316633) cuatro años (1-Nov-2012-31-Oct-2016) Dotación: 237,296.62€  
Coordinator: Dr. L. Lauer (IMDEA, Madrid)  
Co-ordinator in San Sebastian: **Angel Rubio**
6. Marie Curie Actions-Intra-European Fellowships (IEF) ( FP7-PEOPLE-2011-IEF, Project: 302603) "Electron Correlation-Electron Correlation - The Electronic Ground State of Graphene Nanoribbons", Dr. Daniel Rohr (2013-2015) Host in Spain: **Angel Rubio** 168,896.40 €
7. Marie Curie Actions-International Incoming Fellowships (IIF) (FP7-PEOPLE-2012-IIF, Project: 326435) "First-principles theory of spatial dispersion in electromagnetic response of solids: Applications to natural optical activity and magnetoelectric effect (RespSpatDisp)", Dr. Irina Lebedeva (2013-2015) Host in Spain: **Angel Rubio** 166,336.20 €
8. *Plasmon dispersion in layered transition-metal dichalcogenides(TMDC)*  
European Synchrotron Radiation Facilities (ESRF); Beamline Round Beam time allocated ID20 (6/2013) 18 shifts, Proposal number: HC-730 Co-proposers: Simo Houtari, Pierluigi Cudazzo, Matteo Gatti and, **Angel Rubio**
9. *LHC-ABS - The optical absorption spectra of a real Light Harvesting Complex from first-principles: the spinach case*  
7th PRACE Call for project access, 21.560.000 core hours on MARENOSTRUM (BSC, Spain) (3-Sep-2013; 2-Sep-2014)  
Coordinator : **Angel Rubio**
10. *COST ACTION CM1204 "XUV/X-ray light and fast ions for ultrafast chemistry (XLIC)* Chair: Dr. M. Alcami, Vice-Chair P. Bolognesi (2013-2016)
11. *Simulación de sistemas cuánticos nanoestructurados fuera del equilibrio: desarrollos fundamentales y aplicaciones energéticas (fotosíntesis artificial, materiales fotovoltaicos, interfaces orgánico-inorgánico, óxidos correlacionados, termoelectricidad, electrónica molecular)*  
Grupos Consolidados y Alto Rendimiento, UPV/EHU. Gobierno Vasco, Convocatoria de Ayudas para apoyar las actividades de los grupos de investigación del sistema universitario vasco (IT578-13) seis años (2013-2018)  
Dotación: 538398€  
Investigador Principal: **Angel Rubio**

12. *COST ACTION MP1306 "Modern tools for spectroscopy on advanced materials: a European modelling platform (EUSpec)"*  
Chair: H. Ebber, Member of the Management Committee: **A. Rubio** (2014-2016)
13. *Desarrollos fundamentales para la simulación y caracterización de procesos dinámicos fuera del equilibrio en sistemas moleculares: materiales para aplicaciones energéticas (FUNEMAT)*  
Proyecto Coordinado del Ministerio de Economía y Competitividad (MINECO)) tres años (1-1-2014;31-12-2016) (FIS2013-46159-C3-1-P) Dotación: 129.470,00 €  
Investigador Principal y Coordinador del Proyecto global: **Angel Rubio**
14. *2D Materials and Devices beyond Graphene Science & Emerging Technology of 2D Atomic Layered Materials and Devices, US Air Force*  
The Air Force Office of Scientific Research (AFOSR): Awarded Grant No. FA2386-15-1-0006 AOARD 144088, Funding 120000 \$ (Feb-2015-2017)  
Principal Investigator in Spain **Angel Rubio**
15. *Marie Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2014, Proposal ID: 657424*  
"QuantumLaP (Quantum Effects in Multicolor Ultrafast Laser Processing: Broadening Boundaries of Classical Descriptions)", Dr. Derrien Thibault(2015-2017)  
Host in Germany (Hamburg): **Angel Rubio** 142721 €
16. *Marie Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2014, Proposal ID 660231*  
"Electrical Spin Manipulation in Atoms and Molecules (SpinMan)", Dr. Andrea Droghetti(2015-2017) Host in Spain: **Angel Rubio** 166,336.20 €
17. *Modelling stability of organic phosphorescent light-emitting diodes (MOSTOPHOS)*  
H2020-NMP-2014: Widening Materials Models Proposal number: SEP-210187476 tres años (June-2015-2018)  
Dotación: 242,689 €  
Coordinator: Dr. D. Andrienko (Max Planck Institute for Polymer Research, Mainz )  
Co-ordinator in Spain: **Angel Rubio**
18. *Nanoscience foundries and fine analysis for Europe (NFFA-EUROPE)*  
Call: H2020-INFRAIA-2014-2015 "Integrating and opening research infrastructures of European interest"  
Project number: 654360, (2015-2019) Dotación: 127553 € Coordinator: Prof. Giorgio Rossi, Co-ordinator in Spain: **Angel Rubio**
19. *The Novel Materials Discovery (NOMAD) Laboratory H2020-EINFRA-5-2015, Centers of Excellence for Computing applications ( Grant agreement number — 676580 — NoMaD) (1-11-2015-2018) Dotación: 1544,228€*  
Coordinator: Prof. Matthias Scheffler Co-ordinator at MPSD (Hamburg): **Angel Rubio**
20. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 701796*  
"Density Functional Theory for Thermoelectirc Phenomena (ThermalDFT)", Dr. Florian Eich (2016-2018)  
Host in Hamburg (MPSD) Germany: **Angel Rubio** 159640,80 €
21. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 702406*  
"Correlated Electron-Nuclear Dynamics: A novel mixed quantum-semiclassical approach (CoEND)", Dr. Ali Abedi (2016-2018)  
Host in Spain: **Angel Rubio** 170121,60 €
22. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 702418*  
"Strong Field Dynamics of Atoms and Molecules: History-dependent Functionals and Exact Kohn-Sham Potentials of the Time-dependent (multi-component) Density Functional Theory (AMO-dance)", Dr. Elham Khosravi (2016-2018) Host in Spain: **Angel Rubio** 170121,60 €
23. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 706890*  
"Thermodynamics of Quantum Transport (QFluctTrans)", Dr. Cesar A. Rodriguez-Rosario (2016-2018)  
Host in Spain: **Angel Rubio** 170121,60 €
24. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 706890*  
"Spin-Orbit Coupling at Interfaces from Spintronics to new Superconducting effects (SOCISS)". Dr. Juan Borge de Prada (2016-2018)  
Host in Spain: **Angel Rubio** 158121,60 €

25. *Marie Skłodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2015, Proposal ID 746520*  
 "Modelling 2D Transition Metal Dichalcogenide Heterostructures (MODHET)", Dr. Lede Xian (2017-2019)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 159640 €
26. *Quantum Spectroscopy: exploring new states of matter out of equilibrium (QSpec-NewMat)*  
 European Research Council (ERC) Advanced Grant (ERC-2015-AdG -Proposal No. 694097) cinco años (1.10.2016  
 a 30.9.2021) Dotación: 2.492.500 €  
 Investigador Principal: **Angel Rubio**
27. *Nano Ionic Conducting Engineered materials for information application (NICE)*  
 Funded by: DFF-Research Project Grants from the Danish Council for Independent Research — Technology  
 and Production Sciences Duration: 1/1/2017 to 31/12/2019 (3 years) Awarded Amount: DKK 5,801,760  
 (779.302 €) PIs: **J.M. Lastra and A.Rubio**
28. *Transporte Electrónico, Térmico, y de Espin con la Teoría de Funcionales de Densidad (SELECT-DFT)*  
 Proyectos EXCELENCIA del Ministerio de Economía y Competitividad (MINECO) tres años (29-12-2016;31-  
 12-2019) (FIS2016-79464-P) Dotación: 91.000,00 €  
 Investigador Principal: Stefan kurth and R. D'Agosta
29. *Marie Skłodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2016, Proposal ID 751047*  
 "Modelling superconductivity and spin-related effects in hybrid molecular/two-dimensional materials (Super-  
 SpinHyMol)", Dr. Jose Baldovi (2018-2019)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 159460,80 €
30. *Marie Skłodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2016, Proposal ID 753874*  
 "Excitonic quasiparticles in Titania", Dr. Adriel Dominguez (2017-2019)  
 Host in Spain (UPV/EHU) : **Angel Rubio** 158121,60 €
31. *Marie Skłodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2016, Proposal ID 793609*  
 "Topological New Fermions under Laser and New Topological Material Exploring via Machine Learning (TNFL-  
 TMML)", Dr. Peizhe Tang (May-2018-2020)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 171460,80 €
32. *Marie Skłodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2016, Proposal ID 795246*  
 "Controlling Photoinduced Transitions with Strong Light Pulses in Condensed Matter (StrongLights)", Dr.  
 Joaquim Jornet-Somoza (Oct-2018-20)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 171460,80 €
33. Shunsuke Sato Alexander von Humboldt Fellow – 01.05.2017-31.05.2019, 82800 €
34. Simone Latini Alexander von Humboldt Fellow – 01.06.2018 – 30.06.2020 82800 €
35. *QuantERA ERA-NET Cofund in Quantum Technologies*  
 Towards Room Temperature Quantum Technologies ("RouTe") 13N14839 (Jul-2018; Jun-2021) PI in Hamburg  
 (MPSD) Germany: **Angel Rubio** 130634 €
36. *DFG Priority Programme 1840: Quantum Dynamics in Tailored Intense Fields (QUTIF)*  
 "SOLids in Strong Terahertz and Infrared CE-phase-stable waveforms" (SOLSTICE) (2018;2021) Principal  
 Investigator: **Franz Kaertner, Angel Rubio** 194650,80 €
37. *DFG Graduate School*  
 Research Training Group "Quantum Mechanical Materials Modelling - QM<sup>3</sup>" (Jan-2017;Dec-2019) Principal  
 Investigator in Hamburg: **Angel Rubio** 160000 €
38. *DFG Germany's Federal Excellence Initiative*  
 Cluster of Excellence "Advanced Imaging of Matter" (AIM) (Jan.2019 – Dec.2025), Integrated Research Project  
 B3.1 Principal Investigator: **Angel Rubio** 828 000€/per subproject
39. *Max Planck – New York City Center on "non-equilibrium Quantum Phenomena"* (2019-2023) Principal Inves-  
 tigator: **Angel Rubio** 4.828000  
 €



40. *DFG Collaborative Research Center SFB925*  
 “Light induced dynamics and control of correlated quantum systems”  
 (Jul 2019 – Jun 2023), Project A7 Principal Investigators: **Francesca Calegari, Angel Rubio** 101750 €
41. *Marie-Sklodowska-Curie Innovative Training Network SMART-X*  
 “Study of carrier transport in Materials by time-Resolved Spectroscopy with ultrashort soft X-ray light” (H2020-  
 MSCA-ITN-2019, GA 860553) (March-2020 – Febr-2023) Principal Investigator: **Angel Rubio** 252788,40  
 €
42. *Fundamental Theoretical Materials Science (FunTheMaS)*  
 Grupos Consolidados y Alto Rendimiento, UPV/EHU. Gobierno Vasco, Convocatoria de Ayudas para apoyar  
 las actividades de los grupos de investigación del sistema universitario vasco (IT1249-19) seis años (2018-2021)  
 Dotación: 325500€  
 Investigadores Principales: Stefan Kurth and **Angel Rubio**
43. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2019, Proposal ID 895747*  
 “Novel molecular spectroscopies by nanoconfined light shaping and ab initio quantum dynamics (NanoLight-  
 QD)”, Dr. Franco Bonafe (April-2020-22)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 162806,40 €
44. Dongbin Shin, Alexander von Humboldt Fellow – 01.09.2020-31.08.2022, 82800 €
45. *Marie Sklodowska-Curie Individual Fellowships (IF) Call: H2020-MSCA-IF-2019, Proposal ID 886291*  
 “Photo-excited State Dynamics and Non-equilibrium States under Laser in Van der Waals Stacked Two-dimensional  
 Materials (PeSD-NeSL)”, Dr. Jin Zhan (April-2020-22)  
 Host in Hamburg (MPSD) Germany: **Angel Rubio** 174,806.40€

## Teaching

### PhD Thesis

1. *Mixed Quantum-Classical Dynamics in Cavity Quantum Electrodynamics*  
Norah Hoffmann (2nd June 2020)  
Universität Hamburg, Directors: Prof. Dr. Angel Rubio and Prof. Dr. Neepa Maitra  
Magna Cum Laude.
2. *On the interface of quantum electrodynamics and electronic structure theory: Cavity QED*  
Christian Schaefer (13th May 2020)  
Universität Hamburg, Directors: Prof. Dr. Angel Rubio and Dr. Michael Ruggenthaler  
Magna Cum Laude.
3. *Novel Approaches in Quantum Chemistry: Self-Consistent Density-Functional Embedding and Polaritonic Coupled-Cluster Theory*  
Uliana Mordovina (22nd April 2020)  
Universität Hamburg, Directors: Prof. Dr. Daniela Pfannkuche and Prof. Dr. Angel Rubio  
Magna Cum Laude.
4. *Numerical simulations for the nonequilibrium control of quantum materials*  
Gabriel Topp (22nd April 2020)  
Universität Hamburg, Directors: Dr. Michael Sentef and Prof. Dr. Angel Rubio  
Magna Cum Laude.
5. *Fully coupled Maxwell Kohn Sham systems: electromagnetic field propagation in Schrödinger-like form and ab-initio self-consistent light-matter interactions*  
René Jestaädt (10th April 2019)  
Technische Universität Hamburg, Directors: Prof. Dr. Andreas Knorr and Prof. Dr. Angel Rubio  
Magna Cum Laude.
6. *Density Matrix Embedding Theory Foundations, Applications and Connection to Functional Theories*  
Teresa Reinhard (26th March 2019)  
Universität Hamburg, Directors: Prof. Dr. Daniela Pfannkuche and Prof. Dr. Angel Rubio  
Magna Cum Laude.
7. *Quantum Electrodynamical Time-Dependent Density Functional Theory*  
Camilla Pellegrini (21st September 2017) Director: Prof. Dr. Angel Rubio and Prof. Ilya Tokatly  
Sobresaliente Cum Laude.
8. *Modeling linear and non-linear light-matter interactions: From classical to atomistic nanoplasmonics*  
Alejandro J. Varas Barbosa (4rd September 2017) Director: Prof. Dr. Angel Rubio and Prof. Pablo García González  
Sobresaliente Cum Laude.
9. *Exact Maps in Density-Functional Theory*  
Tanja Dimitrov (9th February 2017) Director: Prof. Dr. rer. nat. Andreas Knorr and Prof. Dr. Angel Rubio  
Magna Cum Laude.
10. *Modelling of Polymer-Carbon Nanotube Heterojunctions for Photovoltaic Applications*  
Livia Noemi Glanzmann, (31st January 2017) International PhD Thesis Directed by Duncan Mowbray and Ángel Rubio  
Sobresaliente Cum Laude
11. *Theoretical study on the photoswitching mechanism of negative reversibly photoswitchable uorescent proteins*  
Bruno Torcal Embeita (25th October 2016)  
PhD Thesis Directed by Marius Wanko and Ángel Rubio  
Sobresaliente Cum Laude
12. *Modeling and Analysis of Thermoelectric Energy Conversion Efficiency in Nanostructures*  
Kaiké Yang (22nd June 2016)  
International PhD Thesis Directed by Roberto D'Agosta and Ángel Rubio  
Sobresaliente Cum Laude

13. *Modelling Thermo-Electric Transport and Excited States in Low Dimensional Systems*  
Robert Biele (17nd June 2016)  
International PhD Thesis Directed by Roberto D'Agosta and Ángel Rubio  
Sobresaliente Cum Laude
14. *Exact Nonadiabatic Many-Body Dynamics: Electron-Phonon Coupling in Photoelectron Spectroscopy and Light-Matter Interactions in Quantum Electrodynamical Density-Functional Theory*, Johannes Flick, (30th May 2016) Humboldt-Universität zu Berlin, PhD Thesis Directed by Ángel Rubio, Heiko Appel and M. Scheffler  
Magna Cum Laude
15. *Analysis and Control of Transient Spectra Using Time-Dependent Density Functional Theory*  
Jessica Walkenhorst (29th January 2016)  
International PhD Thesis Directed by Alberto Castro and Ángel Rubio  
Sobresaliente Cum Laude
16. *Density-potential mapping in the standard and quantum electrodynamical time-dependent density functional theory*  
Mehdi Farzanehpour (30th October 2015)  
International PhD Thesis Directed by Ilya Tokatly and Ángel Rubio  
Sobresaliente Cum Laude
17. *Spectroscopic analysis of atoms and molecules*  
Alison Crawford Uranga (11th September 2015)  
International PhD Thesis Directed by Ángel Rubio and Stefan Kurth  
Sobresaliente Cum Laude
18. *Optimisation of the first principle code octopus for massive parallel architectures: application to light harvesting complexes*  
Joseba Alberdi-Rodriguez (4rd June 2015)  
International PhD Thesis Directed by Ángel Rubio and Javier Muguerza  
Sobresaliente Cum Laude
19. *Theoretical Description of the Optical Properties of Nanostructures Within Time Dependent Density Functional Theory*, Leonardo Andrés Espinosa Leal, (22nd October 2013) European PhD Thesis Directed by Ángel Rubio and Daniele Varsano  
Apto Cum Laude
20. *Self-consistent GW approach for the unified description of ground and excited states of finite systems*  
Doktor der Naturwissenschaften (Dr.rer.nat). Fachbereich Physik, Freie Universität Berlin, Fabio Caruso, July 2013, Director M. Scheffler, Co-director: . Rubio
21. *Density-Functional Theory for f-Electron Systems: The  $\alpha - \gamma$  Phase Transition in Cerium*  
Doktor der Naturwissenschaften (Dr.rer.nat). Fachbereich Physik, Freie Universität Berlin, Marco Casadei, July 2013, Director M. Scheffler, Co-director: . Rubio
22. *Theoretical Description of the Optical Properties of Nanostructures Within Time Dependent Density Functional Theory*, Leonardo Andrés Espinosa Leal, European PhD Thesis Directed by Ángel Rubio and Daniele Varsano,
23. *Static and time-dependent density functionals for non-linear processes*, Johanna I. Fuks, (18th June 2013), European PhD Thesis Directed by Ángel Rubio  
Apto Cum Laude
24. *Development and applications of time-dependent density matrix functional theory*, Ali Akbari, (27th September 2012), European PhD Thesis Directed by Ángel Rubio  
Apto Cum Laude
25. *Improving simulation of biological molecules: refining mathematical, physical and computational tools*, Pablo García Risueño, 15th December 2011, European Thesis Directed by José Luis Alonso, Pablo Echenique and Ángel Rubio  
Sobresaliente Cum Laude
26. *Linear and non-linear response phenomena of molecular systems within time-dependent density functional theory*. Xavier Andrade, 8th October 2010. European Thesis directed by Angel Rubio and Silvana Botti  
Sobresaliente Cum Laude

27. *Relativistic effects in the optical response of low-dimensional structures: new developments and applications within a time-dependent density functional theory framework*. Micael Oliveira, 29-Enero-2009. Tesis cotutelada con el Profesor Fernando Nogueira (U. Coimbra)  
Sobresaliente Cum Laude
28. *First principles description of response functions in low dimensional systems* . Daniele Varsano. 13-Julio-2006.  
Sobresaliente Cum Laude.
29. *Synthèse de nanotubes de nitrure de bore: études de la structure et des propriétés (vibrationnelles et électroniques)*  
Raul Arenal de la Concha. (empezada en el 2001; cotutelada con Annick Loiseau del LEM Unité Mixte ONERA-CNRS, Paris, Francia). Cum Laude (4-Febrero-2005)
30. *Una metodología de primeros principios, basada en la teoría del funcional de la densidad dependiente del tiempo, para el cálculo de la respuesta electromagnética de nanoestructuras*. Alberto Castro Barrigón. Apto Cum Laude (13-Julio-2004)
31. *Efectos de la temperatura y la masa isotópica en las propiedades de los semiconductores: influencia en el comportamiento de los fonones y los estados electrónicos*. Jorge Serrano Gutiérrez (se leyó en Stuttgart Junio 2003)
32. *Resonancia Magnética Nuclear en Nanotubos de Carbono* Sylvain Latil. (Septiembre 2001) (codirigida con el Dr. Patrick Bernier de la Universidad de Montpellier)

## **Supervision of postdocs, sabbatical and permanent staff**

1. Dr. Zahra Nourbaksh, Postdoctoral Researcher SOLSTICE (DFG) (July-2019-)
2. Dr. Dominik Sidler, Postdoctoral Researcher RouTE (QuantERA-ERA-NET) (June-2019-)
3. Dr. Jin Zhang, Postdoctoral Researcher MPSD (July-2017-)and Marie Sklodowska-Curie Fellow (July 2020-2022)
4. Dr. Emil Vinas Boström , Postdoctoral Researcher MPSD (May-2019-)
5. Dr. Dongbin Shin, Korean postdoctoral fellow (Sept. 2019-); Postdoctoral Researcher MPSD (March-2019-August 2019)
6. Dr. Franco Bonafe, Postdoctoral Researcher MPSD (Feb-2019-) and Marie Sklodowska-Curie Fellow (April 2020-2022)
7. Dr. Martin Lüders, Technician MPSD (2019-)
8. Dr. Shunsuke Sato, AvH Postdoctoral Researcher MPSD (April-2016-May-2019) and hosting in Hamburg his Tenure Track Assistant Professor position at Tsukuba University in Japan (May-2019-)
9. Dr. Oleg Kristanvoski, Postdoctoral Researcher MPSD (Feb 2019- Dec 2019)
10. Dr. Julian Gebhardt, Guest DFG Postdoc MPSD (2018-Mayo 2019)
11. Dr. Peizhe Tang, MPSD Postdoc ((Nov-2017- May-2018) and Marie Curie Actions- Individual Fellowships (IF) (May-2018-2020)
12. Dr. Derrien Thibault, Postdoc MPSD (March 2018-2019)
13. Dr. Joaquim Sornet Somoza, Beatriu de Pinós fellowship, Montpellier-Donostia (December 2012-2014); Juna de la Cierva (Oct. 2015-2018), Marie Curie Actions- Individual Fellowships (IF) (Oct-2018-)
14. Dr. Markus Penz, Schrödinger Fellow Austrian Science Foundation (October-2017-)
15. Dr. Wenjuan Yang, Postdoctoral Researcher MPSD (October-2017-September 2019)
16. Dr. José J. Baldovi, Marie Curie Intra European Fellowship (IEF) (Oct-2017-Srp. 2019); Postdoctoral Researcher UPV/EHU- ERC (Jan-September 2017)
17. Dr. Guillermo Albareda, Marie Curie Intra European Fellowship (IEF) (Oct-2017-2019)
18. Dr. Enrico Ronca, Postdoctoral Researcher MPSD (September-2017-)
19. Dr. Simone Latini, Postdoctoral Researcher MPSD (March-2017-)
20. Dr. Micael Oliveira, Technician MPSD (2016-)
21. Dr. Nikko Säkkinen, Postdoctoral Researcher MPSD (March-September 2017)
22. Dr. Florian Eich, Marie Curie Intra European Fellowship (IEF) (Oct-2016-Dec.2019); Postdoctoral fellow MPSD (Oct-2015-Sept-2016)
23. Dr. Cesar A. Rodriguez-Rosario, Marie Curie Intra European Fellowship (IEF) (April-2016-MArch 2018)
24. Dr. Aaron T. Kelly, Postdoctoral Researcher MPSD (March-2016-June-2017)
25. Dr. Juan Borje, Marie Curie Intra European Fellowship (IEF) (May-2016-); Postdoctoral Fellow (March-2015-April-2016)
26. Dr. Ali Abedi, Marie Curie Intra European Fellowship (IEF) (May-2016-); Postdoctoral Fellow (Jan-2015-April-2016)
27. Dr. Elham Khosravi, Marie Curie Intra European Fellowship (IEF) (May-2016-); Postdoctoral Fellow (Jan-2015-April-2016)
28. Dr. Andrea Droghetti, Contrato Juan de la Cierva (octubre 2014-2015); Marie Curie Intra European Fellowship (IEF) (2016-2019)

29. Dr. Nicolas Tancogne-Dejean, Contrato postdoctoral MPSD (Jan-2016-)
30. Dr. Henning Glawe, Contrato postdoctoral-NOMAD MPSD (Nov-2015-)
31. Dr. Soren Nielsen, Contrato postdoctoral MPSD (Nov-2015-2018)
32. Dr. Iris Theophilou, Contrato postdoctoral MPSD (Oct-2015-)
33. Dr. Arun Debnath, Contrato postdoctoral MPSD (Sep-2015-May 2019)
34. Dr. Thomas Brumme, Contrato postdoctoral MPSD (Sep-2015-2017)
35. Dr. Michael Ruggenthaler, Contrato postdoctora Senior MPSD (Sep-2015-)
36. Dr. Adriel Dominguez, Contrato postdoctoral MPSD (Jun-2015-2019)
37. Dr. Michael Sentef, Contrato postdoctoral MPSD (Apr-2015-2016)
38. Dr. Lede Xian, Contrato Postdoctoral (Jan-2014-March 2017); Marie Curie International Fellowships (H2020- MSCA-IF-2016) (2017-2019)
39. Dr. Umberto de Giovannini, Contrato postdoctoral MPSD (Jan-2017-); Contratado Postdoctoral UPV/EHU (2010-2016)
40. Dr. Heiko Appel, Contrato postdoctoral MPSD (March-2015-); FHI-postdoc (2010-2015)
41. Dr. Hannes Huebner, Contrato postdoctoral MPSD (Oct-2016-); Marie Curie Intra European Fellowship (IEF) (Oct-2014-2016)
42. Dr. Ask Hjorth Larsen, Contrato Postdoctoral (March-2012-2019)
43. Dr. Philipp Wopperer, Contrato Postdoctoal (Junio-2014-2017)
44. Dr. Stefan Kurth, Profesor Ikerbasque, (Octubre 2008 -)
45. Dr. Ilya Tokatly, Profesor Ikerbasque, (Diciembre 2007-)
46. Dr. Roberto D'Agosta, Contratado Postdoctoral del Proyecto FANCYNANO (19-Noviembre-2008;31-Marzo-2009); Profesor Ikerbasque (Abril 2009-)
47. Dr. Ravindra Laxman Shinde, Contrato Postdoctoral (Setp-2014-Oct-2015)
48. Dr. Sener Sen, Contrato Postdoctoral (5-May-2014-June 2017)
49. Dr. Seymour Cahangirov, JAE-doc CSIC (Sep-2012-March 2013); Marie Curie (April 2014-Aug-2015)
50. Dr. Alejandro Pérez Paz, Contratado Postdoctoral (Oct-2010-Abril 2017)
51. Dr. Irina Lebedeba, Contratado Postdoctoral DYNAPLEX (Oct-2012-June-2013); Marie Curie Actions-International Incoming Fellowships (IIF) (FP7-PEOPLE-2012-IIF, Project: 326435) (June-2013-May-2015)
52. Dr. Guillermo Albareda, Beatriu de Pinós fellowship FHI-Berlin (April 2012-2014)
53. Dr. Victor Morón Tejero, Contratado Postdoctoral UPV/EHU (Oct-2012-2014)
54. Dr. David Cardamone, Contrato Postdoctoral (Oct-2011-Dec-2014)
55. Dr. Duncan Mowbray, DIPC Postdoc (15-Noviembre-2009-April-2011); Juan de la Cierva (April-2011-March 2014); GV Postdoc (April-Dec 2014)
56. Dr. Marius Wanko, Consolider postoc (2009-2010); Juan de la Cierva (January-2011-Dec.-2013); GV Postdoc (Jan-2014-2015)
57. Dr. Yann Pouillon, Becario Postdoctoral del Programa Europeo IST, SANES (Sep.-2006, Dic.2008), Técnico doctor (2009-2016)
58. Dr. Amilcare Iacomino, JAE-doc CSIC (May 2010,-Nov. 2013)

59. Dr. Daniel Rohr Marie Curie Actions-Intra-European Fellowships (IEF) ( FP7-PEOPLE-2011-IEF, Project: 302603) (April-2013-March-2015)
60. Dr. Ermin Malic Fritz-Haber-Institut Max-Planck-Gesellschaft, Berlin (Germany) (Jan-2013-Apr-2013)
61. Dr. Elena Cannuccia, Contratado Postdoctoral (June-2011-January 2013)
62. Dr. Annapaola Migani. JAE-doc CSIC (Sep-2010-Dic.-2012)
63. Dr. Lorenzo Stella, Contratado Postdoctoral UPV/EHU (Sep-2010-Jan.2013)
64. Dr. Matteo Gatti, Contratado Juan de la Cierva, Enero 2009-2011, Postdoc Grupos Consolidados (2012).
65. Dr. Federico Iori, Contratado Postdoctoral (Sep-2010-Apr-2011); Postdoc UPV/EHU (May 2011- Nov. 2011)
66. Dr. Jose Luis Cabellos Quiroz, Postdoc del Gobierno Mexicano (Dec-2010-Dec-2011)
67. Dr. Claudio Attaccalite, Contratado Juan de la Cierva, Diciembre 2007-2010
68. Dr. Juan Maria Garcia-Lastra, Contratado Juan de la Cierva, Dic. 2006-2009; Contratado Postdoctoral del Proyecto Europeo THEMA-CNT (Dic.-2009-Dic.2010)
69. Dr. Pierluigi Cudazzo, Contratado Postdoctoral del Proyecto FANCYNANO (1-Junio-2009-August 2014) y ERA-CHEMISTRY (10-Febrero-2009;30-Mayo-2009)
70. Dr. Letizia Chiodo Contratada Postdoctoral del Proyecto Europeo NANO-ERA Chemistry(15-June;Octubre-2008) y Postdoc UPV/EHU ( 1-Noviembre-2008-31-Enero-2010)
71. Dr. Nicole Helbig, Contrato Postdoctoral asociado a NANOQUANTA/ETSF, Noviembre-2007,Diciembre 2010.
72. Dr. Matthieu Verstreat, Contratado Postdoctoral del Proyecto Europeo NANO-ERA Chemistry (May-2008; Agosto 2009)
73. Dr. Kristian Sommer Thygesen, Becario Postdoctoral del Programa Europeo IST, SANES (Sept-2005, Sept-2006)
74. Dr. Michel Bockstedte, DFG-postdoctoral fellowship (Abril-2005, Diciembre 2006)
75. Dr. Francesco Sottile, Becario Postdoctoral de la Red de Excelencia NANOQUANTA (Nov-2004, Apr-2006)
76. Dr. Mathieu Dubois, Beca Postdoctoral, (Enero-Febrero 2005)
77. Dr. Myrta Gruening: Contrato Postdoctoral del DIPC (Noviembre-2003-Diciembre 2005)
78. Dr. Ludger Wirtz: Contrato Postdoctoral del Programa Europeo RTN, COMELCAN (Febrero-2002,Diciembre-2004)
79. Dr. Andrea Marini: Contrato Postdoctoral del Programa Europeo RTN, NANOPHASE (Junio-2002,Junio-2004)
80. Dr. François Triozon: Becario Postdoctoral del Programa Europeo RTN, COMELCAN (Septiembre-2002,Febrero-2003)
81. Dr. Miguel Marques: Contrato Postdoctoral del Programa Europeo RTN, NANOPHASE (Junio-2000,Diciembre-2002)
82. Dr. Franck Rabilloud: Contrato Postdoctoral del Programa Europeo RTN, COMELCAN (Enero-2001,Octubre-2001)
83. Dr. Stephan Roche: Contrato Postdoctoral del Programa Europeo TMR, NAMITECH (Agosto-1999,Septiembre-2000)
84. Dr. Juan Arellano, Universidad de Valladolid (1999-2000)
85. Dr. Eduardo Hernández: Contrato Postdoctoral del Programa Europeo TMR, NAMITECH (Febrero-1997,Enero-1999).
86. Dr. Christophe Goze. Estancia de Doctores Comunitarios en España dentro del Programa Europeo TMR, NAMITECH (Julio-Agosto 1997)

87. Dr. Ihsam Boustani: Estancias de Investigadores Extranjeros en Régimen de año sabático. Programa Sectorial de Promoción del Conocimiento, Ministerio de Educación y Ciencia. Ref. SAB95-0670 (Enero-Junio 1998; Febrero-Julio 1999).
88. Oleg Gritsenko, Cátedra BBVA (1998)
89. José M. Cabrera Trujillo, Universidad de Valladolid (1994-1995).

### **Supervision of predoctoral students**

1. Matteo Vandelli, PhD Student (AIM Cluster, MPSD-Hamburg, IMPRS) (15-1-2019;-)
2. Lukas Windgätter, PhD Student (SFB925, MPSD-Hamburg, IMPRS) (1-6-2018; )
3. Damian Hofmann, PhD Student (MPSD-Hamburg, IMPRS) (1-12-2018;-)
4. Kevin Lively, PhD Student ERC-QSpec-NewMat (MPSD-Hamburg, IMPRS) (1-10-2018;-)
5. Mona Kalthoff, PhD Student (MPSD-Hamburg, IMPRS) (1-10-2018;-)
6. Chang-Ming Wang, PhD Student (MPSD-Hamburg, IMPRS) (1-9-2017;-)
7. Mary-Leena Tchenkoue, PhD Student (MPSD-Hamburg, IMPRS) (1-9-2017;-)
8. Alexandra Gobel, PhD Student (MPSD-Hamburg, IMPRS) (1-6-2017;-)
9. Carlos Manuel de Armas, Becario ERC-QSpec-NewMat (11-Nov-2016- )
10. Vasil Rokaj, PhD Student (MPSD-Hamburg, IMPRS) (1-12-2016;-)
11. Davis Welakuh, PhD Student (MPSD-Hamburg, IMPRS) (15-9-2016;-)
12. Gabriel Topp, PhD Student (MPSD-Hamburg, IMPRS) (1-12-2015;-)
13. Fabio Covito, PhD Student ERC-QSpec-NewMat (MPSD-Hamburg, IMPRS) (1-11-2015;-)
14. Christian Schaefer, PhD Student (MPSD-Hamburg, IMPRS) (1-11-2014;-)
15. Nora Hoffmann, PhD Student, (MPSD-Hamburg, IMPRS) (1-1-2015;31-12-2019)
16. Florian Buchholz, PhD Student, (MPSD-Hamburg) (4-1-2015;-)
17. Uliana Mordovina, PhD Student, (MPSD-Hamburg, IMPRS) (1-11-2014;-)
18. Teresa Reinhard, PhD Student ERC-QSpec-NewMat (MPSD-Hamburg, IMPRS) (1-12-2014;31-May-2019)
19. Tanja Dimitrov, PhD Student (FHI + MPSD ) (2011-2017)
20. René Jüstadt, Becario ERC (1-Ago-2013-May-2014); MPG-PhD (June 2014-July 2019)
21. Alejandro Varas, Becario ERC-DYNamo (15-Feb-2013-Dec-2017)
22. Camila Pellegrini, Becaria ERC-DYNamo, (26-Nov-2012-30-Sep-2017)
23. Kyung-Min Lee, PhD Student (MPSD-Hamburg, IMPRS) (27-8-2015-30-7-2017)
24. Raison Dzousa, PhD Student (MPSD-Hamburg, IMPRS) (15-9-2015;1-11-2016)
25. Livia Noemi Glanzmann, Marie Curie Fellowship (ITN-POCAONTAS) (20-May-2013Dec-2016)
26. Johannes Flick, PhD Student (FHI + MPSD ) (2011-2016)
27. Robert Biele becario Consolider NanoTherm (2011-2017)
28. Kaike Yang, becario Consolider NanoTherm (2011-2016)
29. Bruno Torcal Embeita, becario FPI (Dynaplex) (oct-2011-2016)



30. Jessica Walkenhorst, becaria UPV (2010-2016)
31. Jean-Pierre Inchaustegui, Master Student, (MPSD-Hamburg) (9-2-2015;2016)
32. Mehdi Farzanehpour, becario UPV (2011-2015)
33. Alison Crawford Uranga, becaria GV (2010-2015)
34. Joseba Alberdi, becario UPV/EHU (2010-2015)
35. Fulvio Berardi, becario CSIC (2009-2014)
36. Martin Madel, Becario ERC-DYNamo, (26-Nov-2012-5-May-2014)
37. Marco Casadei, FHI-fellow (Jan-2009-Apr. 2014)
38. Fabio Caruso, FHI-fellow (Jan-2009-Dec-2013)
39. Johanna Fuks, Becaria asociada al proyecto FANCYNANO del MEC (3-Noviembre-2008-Junio 2013)
40. Peizhe Tang, Tsinghua University, Beijing P.R.China (Oct-2012-Apr-2013)
41. Paul Giraud Université de Lille, France (April-September 2012)
42. Leonardo Andres Espinosa Leal, Becario asociado al Proyecto Europeo NANO-ERA Chemistry; (Octubre 2007-Junio 2008); CSIC fellow (July-2008-Dec-2012)
43. Ali Akbari, Becario asociado al Proyecto Europeo DNA-NANODEVICES y NANO-ERA Chemistry; (Agosto 2006-Junio-2008); CSIC Fellow (July 2008-Dec-2012)
44. Xavier Andrade, Becario Marie Curie del Proyecto Europeo NANOQUANTA e ETSE, Tesis codirigida con S. Botti y M.A.L. Marques (Apr.2005- Dec.2010)
45. Micael Oliveira, Becario del Gobierno Portugues (2003-2008), Tesis cotutelada con el Profesor Fernando Nogueira de la Universidad de Coimbra, Portugal.
46. Sebastien Le Roy, Stage from Ecole Polytechnique, France (May-July 2006)
47. Daniele Varsano, Becario de la Comunidad Europea asociado al Proyecto COMELCAN (2001-2003), y NANOQUANTA (2004-2005)
48. Raul Arenal de la Concha, Becario de la Comunidad Europea asociado al Proyecto COMELCAN (2001-2003) Tesis cotutelada con la Profesora Annick Loiseau (ONERA- CNRS-U. Paris-Sud XI, Francia)
49. Alberto Castro, Beca de Colaboración de la Universidad de Valladolid (1999); Becario Predoctoral del Subprograma de Formación de Profesorado Universitario del MEC (2000-2004).
50. Sylvain Latil, Becario asociado al Proyecto NAMITECH, Universidad de Montpellier (1999-2001)
51. Jorge Serrano Gutiérrez, Beca de Colaboración MEC (1998); Becario Predoctoral del Subprograma de Formación de Profesorado Universitario del MEC (1999-2001).
52. Teodófilo del Caño González, Beca de Colaboración de la Universidad de Valladolid (1998); Beca de Colaboración MEC (1999).