

Allegato alla domanda di partecipazione
Curriculum formativo, didattico, scientifico e professionale del candidato

Dichiarazione sostitutiva di certificazioni

(Art. 46, D.P.R. 28 dicembre 2000 n. 445)

Dichiarazione sostitutiva dell'atto di notorietà

(da sottoscrivere davanti all'impiegato addetto o da presentare o spedire con la fotocopia di un documento di identità)

(Art. 47, D.P.R. 28 dicembre 2000 n. 445)

Estremi del bando di selezione	02 – Scienze Fisiche S.C. 02/B2-Fisica teorica della materia – S.S.D. FIS/03
Informazioni aggiornate al	05/05/2020
Nome e Cognome	Miquel López Suárez
Data di nascita	17/10/1984

Si raccomanda di indicare con precisione tutti gli elementi valutabili ai sensi del bando di selezione (aggiungere o togliere righe secondo necessità).

Esperienza professionale

Periodo	Ente	Principali attività e responsabilità
01/10/2013 - 01/09/2017	Università degli Studi di Perugia	Study of dissipative processes at the micro and nanoscale both theoretically and experimentally. The activity was mainly focused on understanding the mechanisms ruling energy dissipation during physical transformations and, in particular, those used for computation.
01/09/2017 - 31/08/2019	Institut de Ciència de Materials de Barcelona ICMAB-CSIC	Study of thermal transport from a theoretical point of view, with special focus on energy transfer in nanostructured systems. He worked in collaboration with several experimental groups belonging to different institutions helping in the interpretation of the results and the preparation of their experimental realizations.
01/09/2019 - 30/04/2020	King Abdullah University of Science and Technology	full atomistic description of the mechanisms involved in cation exchange reactions occurring in systems composed by CdSe in the presence of Cu ₂ Se

Istruzione, formazione (es. titoli di studio, certificazioni professionali/linguistiche/informatiche)

Data	Titolo / Principali tematiche	Ente
01/02/2009	Graduated in Physics	UAB
01/09/2011	M. Sc in Micro and Nanoelectronics	UAB
01/04/2014	Ph. D. in Electronic Engineering and Telecommunications	UAB

Pubblicazioni / Convegni

Carrete J.; López-Suárez M.; Bochkarev A. S.; Royo M.; et al. Phonon transport across crystal-phase interfaces and twin boundaries in semiconducting nanowires. *Nanoscale*, Royal Society of

Chemistry, (2019)
G Abadal G.; Bramon P.; López-Suárez M.; Agustí J.; Torres F; A microcantilever mechanical antenna. <i>Applied Physics Letters</i> , 115 (8), 083902 (2019)
De Luca M.; Cartoixà X.; Martín-Sánchez J.; López-Suárez M.; Trotta R.; et al. New insights in the lattice dynamics of monolayers, bilayers, and trilayers of WSe ₂ and unambiguous determination of few-layer-flakes' thickness. <i>2D Materials</i> , IOP Publishing (2019)
Gammaitoni L.; Neri I.; López-Suárez M.; Chiuchiù D.; Diamantini M. C.; The Cost of Remembering. <i>Proceedings of the 5th International Conference on Applications in Nonlinear Dynamics</i> . Springer, Cham, (2019)
Royo M.; Torres P.; López-Suárez M.; Rurali R.; Low-temperature thermal rectification by tailoring isotope distributions. <i>Physical Review B</i> , 99, 024103 (2019)
López-Suárez M.; Neri I.; Rurali R.; Interface driven thermal rectification in a graphene–bilayer graphene junction from nonequilibrium molecular dynamics. <i>Journal of Applied Physics</i> , 124 (22), 224301 (2018)
López-Suárez M.; Royo M.; Rurali R.; Interface-driven thermal rectification in nanoscale systems. <i>Physical Review Materials</i> , 2 (11), 113001 (2018)
López-Suárez M.; Neri I.; Electronic transport modulation on suspended few-layer MoS ₂ under strain. <i>Physical Review B</i> , 97, 241408 (2018)
López-Suárez M.; Neri I.; Micro electro-mechanical logic device at fundamental energy limit. <i>The European Physical Journal B</i> , 91, 135 (2018)
Neri I.; López-Suárez M.; Thermodynamic reversible transformations in micro-electro-mechanical systems. <i>The European Physical Journal B</i> , 91, 102 (2018)
Neri I.; López-Suárez M.; Gammaitoni L.; Operating gravitational wave detectors far from equilibrium. <i>Classical and Quantum Gravity</i> , 35, 15 (2018)
Chiuchiu D.; López-Suárez M.; Neri I.; Diamantini M. C.; Gammaitoni L.; The cost of remembering a bit of information. <i>Physical Review A</i> , 97, 052108 (2018)
Gammaitoni L.; Neri I.; López-Suárez M.; Computing below the expected energy limits. <i>Proceedings of the 4th International Conference on Applications in Nonlinear Dynamics (Icand 2016)</i> , 6, 111-117 (2017)
López-Suárez M.; Neri I.; Rurali R.; Band gap engineering of MoS ₂ upon compression. <i>Journal of Applied Physics</i> , 119, 165105 (2016)
Neri I.; López-Suárez M.; Heat production and error probability relation in Landauer reset at effective temperature. <i>Scientific Reports</i> , 6, 34039 (2016)
López-Suárez M.; Neri I.; Micro-electromechanical memory bit based on magnetic repulsion. <i>Applied Physics Letters</i> , 109, 133505 (2016)
López-Suárez M.; Neri I.; Gammaitoni L.; Sub-kBT micro-electromechanical irreversible logic gate. <i>Nature Communications</i> , 7, 12068 (2016)
López-Suárez M.; Abadal G.; Gammaitoni L.; Rurali R.; Noise energy harvesting in buckled BN nanoribbons from molecular dynamics. <i>Nano Energy</i> 15, 329-334 (2015)
Neri I.; López-Suárez M.; Chiuchiu D.; Reset and switch protocols at Landauer limit in a graphene buckled ribbon. <i>European Physics Letters</i> , 111, 10004 (2015)
López-Suárez M.; Torres F.; Mestres N.; Abadal G.; Fabrication of highly regular suspended graphene nanoribbons through a one-step electron beam lithography process. <i>Microelectronic Engineering</i> , 129, 81-85 (2014)
El Aroudi, A.; López-Suárez M.; Alarcon E.; et al. Nonlinear Dynamics of an Ambient Noise Driven Array of Coupled Graphene Nanostructured Devices for Energy Harvesting. <i>2014 International Conference on Structural Nonlinear Dynamics and Diagnosis</i> , 16 (2014)
López-Suárez M.; Pruneda M.; Abadal G.; Rurali R.; Piezoelectric monolayers as nonlinear energy harvesters. <i>Nanotechnology</i> , 25, 175401 (2014)

López-Suárez M.; Rurali R.; Abadal G.; Buckling suspended graphene nanoribbons to harvest energy from noisy vibrations, <i>Microelectronic engineering</i> , 111, 122-125 (2013)
López-Suárez M.; Agustí J.; Torres F.; Rurali R.; Abadal G.; Inducing bistability with local electret technology in a microcantilever based non-linear vibration energy harvester. <i>Applied Physics Letters</i> , 102, 153901 (2013)
El Aroudi A.; López-Suárez M.; Alarcon E.; et al. Nonlinear Dynamics in a Graphene Nanostructured Device for Energy Harvesting. 2013 IEEE International Symposium on Circuits and Systems, 2727-2730 (2013)
Murillo G.; Agustí J.; López-Suárez M.; et al. Heterogeneous integration of autonomous systems in package for wireless sensor networks. <i>Euroensors XXV</i> , 25 (2011)
López-Suárez M.; Rurali R.; Gammaitoni L.; Abadal G.; Nanostructured graphene for energy harvesting. <i>Physical Review B</i> , 84, 161401-5 (2011)

Altre attività scientifiche

BOOK CHAPTER: Aroudi A.; López-Suárez M.; Alarcón E.; Rurali R.; Abadal G.; Non-linear dynamics in a graphene nanostructured device for energy harvesting. 2727 – 2730. Springer (2016)
BOOK CHAPTER: Murillo G.; Agustí J.; López-Suárez M.; Abadal G.; Heterogeneous integration of autonomous systems in package for wireless sensor networks. <i>Procedia Engineering</i> , 88-91. (2011)
NON INDEXED: López-Suárez M.; Neri I.; Gammaitoni L.; Verso computer a zero energia. GEDI Gruppo Editoriale S. P. A., Edizione italiana di <i>Scientific American</i> (2017)
NON INDEXED: López-Suárez M.; Neri I.; Gammaitoni L.; Hacia la computación de energía cero. Prensa Científica S. A., Edición española de <i>Scientific American</i> (2017)

Sant Cugat del Vallès, 4 maggio 2020