

CURRICULUM VITAE

Gérald Dujardin

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Academic experience :

1971 : Ecole Normale Supérieure de Cachan
1974 : DEA de Physique Nucléaire à Orsay, Agrégation de Physique
1975 : Attaché de Recherche at CNRS
1978 : PhD thesis (Paris VI)
1982 : State thesis (Paris XI)
1982 : Chargé de Recherche at CNRS
1991 : Visiting Scientist at IBM Yorktown (USA)
1992 : Directeur de Recherche 2^{ème} classe at CNRS
2002 : Directeur de Recherche 1^{ère} classe at CNRS
2011 : Directeur de Recherche Classe Exceptionnelle at CNRS
2015 : Directeur de Recherche Emerite

Research awards :

1998 : Nanotechnology price
2004 : Elected Fellow of the Institute of Physics

Leadership :

1994-2014 : Head of the « Molecular Nanoscience » group of the Institute for Molecular Science in Orsay (14 researchers)
1998-2000 : Member of the OFTA committee « Design and fabrication of nano-devices »
2004-2018 : Member of the OMNT committee on « Molecular electronics »
2006-2009 : Director of the PPF (Plan PluriFormation) of the University Paris XI « Individual Nano-Objects »
2006-2014 : Member of the board « Quantum molecular electronics » of the C'Nano Ile de France
2007-2012 : Member of the board « Nano-World » of the PRES Ile de France Sud
2008-2017 : Member of the committee « Network of near-field microscopies »
2012-2017 : President of the association « Collectif Nanotechnologies sur le Plateau de Saclay »

Editorial board :

2003-2007 : Member of the editorial board of J. Phys. C (IOP)
2002-2019 : Associate Editor of « Progress in Surface Science » (Elsevier)

Previous relevant research work:

- Molecular electronics
- Molecular nanomachines

- Nanoplasmonics
- Nanophotonics
- Growth and opto-electronic properties of 2D materials
- Organic photovoltaics
- Quantum physics
- Atom-scale technologies
- Synthetic and bio-inspired nano-objects
- Nearfield microscopies
- Synchrotron radiation

Publication records

Five most representative publications within recent five years

(1) Scanning tunneling microscope-induced excitonic luminescence of a two-dimensional semiconductor

D. Pommier, R. Bretel, L. E. Parra Lopez, F. Fabre, A. Mayne, E. Boer-Duchemin, G. Dujardin, G. Schull, S. Berciau and E. Le Moal, *Phys. Rev. Lett.* 123, 027402 (2019)

(2) Epitaxial Synthesis of Blue Phosphorene

W. Zhang, H. Enriquez, Y.F. Tong, A. Bendounan, A. Kara, A.P. Seitsonen, A.J. Mayne, G. Dujardin, H. Oughaddou, *Small* 14, 1804066 (2018)

(3) S. Sadeddine, H. Enriquez, A. Bendounan, P.K. Das, I. Vobornic, A.J. Mayne, G.

Dujardin, F. Sirotti, A. Kara, H. Oughaddou, « Compelling experimental evidence of a Dirac cone in the electronic structure of a 2D Silicon layer », *Scientific Reports* 7, 44400 (2017)

(4) B. Rogez, S. Cao, G. Dujardin, G. Comtet, E. Le Moal, A. Mayne, E. Boer-Duchemin, "The mechanism of light emission from a scanning tunnelling microscope operating in air", *Nanotechnology* 27, 465201 (2016)

(5) E. Le Moal, S. Marguet, D. Canneson, B. Rogez, E. Boer-Duchemin, G. Dujardin, T.V. Teperik, D.C. Marinica, A.G. Borisov, « Engineering the emission of light from a scanning tunneling microscope using the plasmonic modes of a nanoparticle », *Phys. Rev. B* 93, 035418 (2016)

Five most representative publications beyond recent five years

(1) T. Wang, E. Boer-Duchemin, Y. Zhang, G. Comtet, G. Dujardin "Excitation of propagating surface plasmons with a scanning tunneling microscope" *Nanotechnology* 22, 175201 (2011)

(2) H. Yang, A.J. Mayne, M. Boucherit, G. Comtet, G. Dujardin and Y. Kuk
Quantum interference channelling at graphene edges
Nano Lett. 10, 943 (2010)

(3) D. Riedel, M.-L. Bocquet, H. Lesnard, M. Lastapis, N. Lorente, Ph. Sonnet and G. Dujardin "Selective Scanning Tunnelling Microscope Electron-Induced Reactions of Single Biphenyl Molecules on a Si(100) Surface" *J. Am. Chem. Soc.* 131, 7344 (2009)

(4) A. Bellec, F. Ample, D. Riedel, G. Dujardin, C. Joachim "Imaging Molecular Orbitals by Scanning Tunneling Microscopy on a Passivated Semiconductor" *Nanoletters* 9, 144 (2009)

(5) M. Lastapis, M. Martin, D. Riedel, L. Hellner, G. Comtet, G. Dujardin
Picometer-scale electronic control of molecular dynamics inside a single molecule
Science 308, 1000 (2005)