**Daniel Sánchez-Portal**

Professor

Head of the Modelisation and Simulation group

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Daniel Sánchez-Portal is the Head of the Modelisation and Simulation group in the Materials Physics Center CSIC-UPV/EHU in San Sebastián. In 2005 he became a Tenured Researcher at CFM CSIC-UPV/EHU and a Research Professor in 2018. He was elected Fellow of the American Physical Society for his contribution to the development of methodologies for electronic structure calculations in 2016.

His expertise and research interest cover the methodology of DFT based first-principles electronic structure calculations and its application to the study of nanostructures and surfaces. He is currently focused on the study of the electronic properties of covalent molecular networks, graphene nanostructures and other low-dimensional structures on surfaces in collaboration with several experimental groups, as well as to the application of TDDFT and other first-principles techniques to problems in nanoplasmonics and ultrafast electron dynamics at surfaces. He has published over 160 scientific papers with a significant impact.

**ACCADEMIC PREPARATION**

* Ph.D. July 1998, Condensed Matter Physics, Univ. Autónoma de Madrid (Spain)
* B.Sc. July 1993, Physics, Univ. Autónoma de Madrid (Spain)

**PROFESSIONAL EXPERIENCE**

* Teaching Assistant, Universidad Autónoma de Madrid (Spain). October 1993-January1999
* Post Doctoral Research Associate, Dept. of Physics and Materials Research Laboratory, University of Illinois, Urbana, Illinois (USA), January 1999- January 2001
* Post Doctoral Fellow, Universidad del País Vasco, San Sebastián (Spain), 2001
* Research Associate, appointed under the “Ramón y Cajal” program, Centro Mixto UPV/EHU-CSIC, San Sebastián (Spain), January 2002-June 2005
* Tenured Research Scientist, Centro de Física de Materiales UPV/EHU-CSIC, San Sebastián (Spain), June 2005-present [appointed “Senior Research Scientist” (investigador científico del CSIC) since June 2007].

**PUBLICATIONS**

Author or co-author of 160+ articles in scientific journals in several areas of condensed matter physics and materials science. His papers have received 18100+ citations to date, with a Hirsch index (H) of 47.

Publons profile: <https://publons.com/researcher/2835107/daniel-sanchez-portal/>

Some recent representative publications:

* *Electronic transport in planar atomic-scale structures measured by two-probe scanning tunneling spectroscopy,* M. Kolmer, *et al.*, Nature Communications **10**, 1573 (2019)
* *Atomic-scale lightning rod effect in plasmonic picocavities: a classical view to a quantum effect,* M. Urbieta, *et al.,* ACS Nano***12****, 585-595 (2018)*
* *Doping of Graphene Nanoribbons via Functional Group Edge Modification,* E Carbonell-Sanromà, *et al.,* ACS Nano**11**, 7355 (2017)
* *Quantum dots embedded in graphene nanoribbons by chemical substitution,* E Carbonell-Sanromà, *et al.*, Nano Letters **17**, 50-56 (2016)
* *Atomistic near-field nanoplasmonics: reaching atomic-scale resolution in nanooptics*, M. Barbry, P. Koval, F. Marchesin, R. Esteban, A. G. Borisov, J. Aizpurua and D. Sánchez-Portal, Nano Letters, 354 216-219 (2015)
* *Fully self-consistent GW and quasiparticle self-consistent GW for molecules*, P. Koval, D. Foerster, D. Sánchez-Portal, Phys. Rev. B **89**, 155417 (2014)
* *Contacting a single molecule with electrodes engineered atom per atom,* G. Schull, T. Frederiksen, A. Arnau, D. Sánchez-Portal and R. Berndt, Nature Nanotechnology **6**, 23 (2011).
* *First-Principles Study of Substitutional Metal Impurities in Graphene: Structural, Electronic and Magnetic Properties*, E. J. G. Santos, A. Ayuela, D. Sánchez-Portal, New Journal of Physics **12**, 053012 (2010).
* *Mixed-valency signature in vibrational inelastic electron tunneling spectroscopy*, M. Alducin, D. Sánchez-Portal, A. Arnau, N. Lorente, Physical Review Letters **104,** 13610 (2010).
* *First-principles calculation of charge transfer at surfaces: The case of core-excited Ar\*(2p-13/2 4s) on Ru(0001)*, D. Sánchez-Portal, D. Menzel, PM Echenique, Phys. Rev. B **76**, 235406 (2007)
* *Electronic stopping power in LiF from first principles ,* JM.Pruneda, D. Sanchez-Portal , A. Arnau, JI Juaristi and E. Artacho, Phys. Rev. Lett. **99**, 235501 (2007)
* *Direct observation of electron dynamics in the attosecond domain,* A. Föhlisch, P. Feulner, F. Hennies, A. Fink, D. Menzel, D. Sánchez-Portal, P. Echenique, and W. Wurth, Nature **436**, 373-376 (2005)
* *First-principles study of the atomic and electronic structure of the Si(111)-Au-(5x2) surface,* S. Riikonen and D. Sánchez-Portal, Phys. Rev. B **71**, 235423 (2005)
* *Computing the properties of materials from first principles with Siesta,* D. Sánchez-Portal, P. Ordejón and E. Canadell, Structure and Bonding **113**, 103 (2004)
* *Role of spin-orbit splitting and dynamical fluctuations in the Si(557)-Au surface*, D. Sánchez-Portal, S. Riikonen and Richard M. Martin, Phys. Rev. Lett. **93**, 146803 (2004)
* *The Siesta method for ab-initio order-N materials simulations,* J. Soler, E. Artacho, J. Gale, A. García, J. Junquera, P. Ordejón and D. Sánchez-Portal, J. Phys.: Condensed Matter ***14***, 2745 (2002)