Prof. Dr. Gianaurelio Cuniberti — one-page résumé, April 10, 2025

personal

date of birth:	April 28, 1970
citizenships:	Italian, German
marital status:	married, three daughters
office:	Institute for Materials Science and Max Bergmann Center of Biomaterials TU Dresden, 01062 Dresden, Germany +49 (0)351 463 -31420 (secretariat) -31414 (direct) gianaurelio.cuniberti@tu-dresden.de http://nano.tu-dresden.de/gc/
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career

since 09.2019:	Guest Professor of Materials Science at Shanghai Jiao Tong University, China
since 01.2018:	Courtesy Appointment to the TU Dresden – King's College London *transcampus*
since 01.2013:	Courtesy Appointment to the Physics Department at TU Dresden, Germany
since 11.2011:	Adjunct Professor of Chemistry at the University of Alabama, USA
since 11.2009:	Honorary Professor of Electronic Engineering at POSTECH, South Korea
since 10.2007:	Chair "Materials Science and Nanotechnology" (full professor, W3), School of Engineering Sciences (Department of Materials Science) at TU Dresden
2003-2007:	Head of the VW-Foundation independent research group *Molecular Computing*, Department of Physics, University of Regensburg, Germany
2001-2002:	Schloeßmann award fellow, Max Planck Institute PKS, Dresden, Germany
1998–2000:	Guest scientist, Max Planck Institute PKS, Dresden, Germany
1997–1998:	Postdoctoral Research Associate, Università di Genova, Italy

education

grad:	1997 Ph.D. in Physics, Università di Genova, Italy
undergrad:	1994 Laurea (M.Sc.) in Physics, Università di Genova, Italy

publications & presentations

525	works in international journals and refereed volumes including *4* book (edited for Springer Lecture Notes in Physics), *9* reviews and *46* letters (including Nature Journals Papers), *279* works as first or last author
10	patents
499	abstracts in conferences, workshops, or sci-schools (*91* as invited talks)
116	invited talks at universities, research centers including invited public talks

keywords

materials modeling and transport phenomena, electronic olfaction sensors, bottom-up assembly and molecular biosensing, molecular (bio)electronics, heat and charge migration from mesoscopic to molecular systems

grants & awards

since 2003:	more than €30m third party grants among others from the European Union, the German Research Foundation (DFG), the German Ministry of Education and Research (BMBF), the Volkswagen Foundation.
since 2023:	Fellow of the Royal Society of Chemistry (RSC)
since 2022:	Member of the Germany National Academy of Science and Engineering (acatech) Fellow of the American Physical Society (APS)
since 2021:	Member of the Academia Europaea
since 2019:	Member of the European Academy of Sciences

author IDs

Google Scholar:	https://scholar.google.com/citations?user=ru9OwLUAAAAJ
ORCID:	https://orcid.org/0000-0002-6574-7848
Scopus:	https://scopus.com/authid/detail.uri?authorId=56273831400
ResearcherID:	https://researcherid.com/rid/B-7192-2008

selected recent publications (out of *525*)

- A. Prasoon, S. Ghouse, N. Ngan Nguyen, H. Yang, A. Müller, C. Naisa, S. Paasch, A. Herbawe, M. Al Aiti, G. Cuniberti, E. Brunner, and X. Feng,
  Mimicking on-water surface synthesis through micellar interfaces,
  Nature Communications (2024).
  doi: 10.1038/s41467-024-54962-z

- T. Georgiou, J. L. Palma, V. Mujica, S. Varela, M. Galante, V. J. Santamaría-García, L. Mboning, R. N. Schwartz, G. Cuniberti, and L.-S. Bouchard,
  Enantiospecificity in NMR enabled bychirality-induced spin selectivity,
  Nature Communications **15**, 7367 (2024).
  doi: 10.1038/s41467-024-49966-8

- J. Liu, Y. Chen, X. Huang, Y. Ren, M. Hambsch, D. Bodesheim, D. Pohl, X. Li, M. Deconinck, B. Zhang, M. Löffler, Z. Liao, F. Zhao, A. Dianat, G. Cuniberti, Y. Vaynzof, J. Gao, J. Hao, S. C. B. Mannsfeld, X. Feng, and R. Dong,
  On-liquid-gallium surface synthesis of ultrasmooth thin films of conductive metal–organic frameworks,
  Nature Synthesis (2024).
  doi: 10.1038/s44160-024-00513-9

- A. Prasoon, X. Yu, M. Hambsch, D. Bodesheim, K. Liu, A. Zacarias, N. N. Nguyen, T. Seki, A. Dianat, A. Croy, G. Cuniberti, P. Fontaine, Y. Nagata, S. C. B. Mannsfeld, R. Dong, M. Bonn, and X. Feng,
  Site-selective chemical reactions by on-water surface sequential assembly,
  Nature Communications **14**, 8313 (2023).
  doi: 10.1038/s41467-023-44129-7

- Z. Wang, Z. Zhang, H. Qi, A. Ortega-Guerrero, L. Wang, K. Xu, M. Wang, S. Park, F. Hennersdorf, A. Dianat, A. Croy, H. Komber, G. Cuniberti, J. J. Weigand, U. Kaiser, R. Dong, and X. Feng,
  On-water surface synthesis of charged two-dimensional polymer single crystals via the irreversible Katritzky reaction,
  Nature Synthesis **13**, 69-76 (2021).
  doi: 10.1038/s44160-021-00001-4

- E. Baek, N. R. Das, C. V. Cannistraci, T. Rim, G. S. C. Bermúdez, K. Nych, H. Cho, K. Kim, C. K. Baek, D. Makarov, R. Tetzlaff, L. Chua, L. Baraban, and G. Cuniberti,
  Intrinsic plasticity of silicon nanowire neurotransistors for dynamic memory and learning functions,
  Nature Electronics **3**, 398-408 (2020).
  doi: 10.1038/s41928-020-0412-1

- R. Gutiérrez, R. A. Caetano, B. P. Woiczikowski, T. Kubar, M. Elstner, and G. Cuniberti,
  Charge transport through bio-molecular wires in a solvent: Bridging molecular dynamics and model Hamiltonian approaches,
  Physical Review Letters **102**, 208102 (2009).
  doi: 10.1103/PhysRevLett.102.208102

- E. Shapir, H. Cohen, A. Calzolari, C. Cavazzoni, D. A. Ryndyk, G. Cuniberti, A. Kotlyar, R. Di Felice, and D. Porath,
  Electronic structure of single DNA molecules resolved by transverse scanning tunneling spectroscopy,
  Nature Materials **7**, 68 (2008).
  doi: 10.1038/nmat2060

- M. Del Valle, R. Gutiérrez, C. Tejedor, and G. Cuniberti,
  Tuning the conductance of a molecular switch,
  Nature Nanotechnology **2**, 176 (2007).
  doi: 10.1038/nnano.2007.38

- N. Nemec, D. Tománek, and G. Cuniberti,
  Contact dependence of carrier injection in carbon nanotubes: An ab initio study,
  Physical Review Letters **96**, 076802 (2006).
  doi: 10.1103/PhysRevLett.96.076802

- G. Cuniberti, G. Fagas, and K. Richter (Eds.),
  Introducing Molecular Electronics (book),
  Lecture Notes in Physics **680**, (2005).
  doi: 10.1007/b101525