

BRIEF CURRICULUM VITAE

24 July 2025

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Scientific Production Portal (UCM; in Spanish):

<https://produccioncientifica.ucm.es/investigadores/142508/detalle>

PERSONAL DATA Birthplace and date: Madrid (Spain), 30th July 1962. Citizenship: Spanish

ACADEMIC DEGREES

1990 Ph.D. in Chemistry from Complutense University Madrid (Spain)
1985 B.S. (Licenciado) in Chemistry (Physical Chemistry) from Complutense University Madrid (Spain)

APPOINTMENTS

2025 **Doctor Honoris Causa** (Honorary Degree) from Universidad Nacional de Córdoba, Argentina

2024 **Humboldt Research Award** by the Alexander von Humboldt Foundation

2024-2025 Visiting Professor at Institut für Physik. Universität Kassel, Germany (October 2024-March 2025)

2024 - now Member of the *Ownership Board of Physical Chemistry Chemical Physics (Royal Society of Chemistry)* representing Real Sociedad Española de Química

2021 - now Coordinator at UCM of I+D+i Associate Unit to CSIC “Química Física Molecular”

2021 - now Director of the UCM research group “Dinámica de reacciones químicas y Femtoquímica”

2019 - now Research Associate at IMDEA-Nanoscience (Madrid, Spain)

2019 - 2025 Member of the *International Advisory Board of the Journal of Physics B: Atomic, Molecular and Optical Physics of IOP Publishing*

2017 - now Member of the *Advisory Board of The Journal of Physical Chemistry A,B,C, Letters (American Chemical Society)*

2015- now **Fellow of the Royal Society of Chemistry (FRSC)**

2015 - 2023 *Associate Editor of Physical Chemistry Chemical Physics (Royal Society of Chemistry)*

2014 - now Director of the Center for Ultrafast Lasers (CLUR), Complutense University Madrid (Spain)

2007 - now *Catedrático de Universidad* (Full Professor) at the Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)

1998 - 2006 *Profesor Titular de Universidad* at the Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)

1995 - 1998 Associate Professor at the Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)

1995 - 1996 **Alexander von Humboldt Stiftung Fellow.** Institute of Physics, University of Würzburg, Germany. Supervisor: Prof. Gustav Gerber

1990 - 1992 **Fulbright Postdoctoral Fellow** at the Arthur Amos Noyes Laboratory, California Institute of Technology, Pasadena, California, USA. Supervisor: Prof. Ahmed H. Zewail, Nobel Laureate in Chemistry 1999

1989 - 1995 Assistant Professor at the Physical Chemistry Department, Chemical Sciences Faculty, Madrid Complutense University (Spain)

MERITS

Author of 300 peer reviewed papers published in international journals, 5 book chapters, 1 book editor and about 390 contributions to International Conferences including many invited talks. Person in charge and principal investigator of research projects at Regional, National and European levels. More than 35 years

teaching experience in Physical Chemistry and training of PhD students and postdocs. Supervisor of 13 PhD theses and 5 PhD theses ongoing. He has supervised national and international undergraduate students, Master students, PhD students and postdocs.

Research areas: Molecular Reaction Dynamics, Femtochemistry and Laser Spectroscopy. He is an expert in the use of molecular beams, laser spectroscopy, ion and photoelectron imaging and ultrafast laser techniques in the experimental side and on quantum reactive scattering and quasiclassical trajectory calculations on the theoretical side, dedicated to study the dynamics of photodissociation and bimolecular reactions. He has also experience in laser desorption/ionization and matrix assisted laser desorption ionization coupled to time-of-flight mass spectrometry, on ultrafast pulsed laser deposition and materials ultrafast laser micromachining and ultrafast laser irradiation of metallic nanoparticles.

Fellow of the Royal Society of Chemistry (FRSC). Member of the Spanish Royal Society of Chemistry (RSEQ) and the Spanish Royal Society of Physics (RSEF). He has been president of the Spanish Specialized Group of Atomic and Molecular Physics (GEFAM) and of the Specialized Group of Ultrafast Lasers (GELUR) and now member of the steering committee of GEFAM and vicepresident of GELUR. Member of the Spanish Specialized Group of Photochemistry (GRUFO) of the RSEQ. Associate Editor of *Physical Chemistry Chemical Physics* (PCCP) edited by the Royal Society of Chemistry in the period 2015-2023. Member of the *Ownership Board of PCCP* since 2024 as representative of RSEQ. Member of the *Advisory Board* of the journals *Journal of Physical Chemistry A,B,C,Letters* of the American Chemical Society, *Journal of Physics B: Atomic, Molecular and Optical Physics* of IOP Publishing (2019-2025), and *Applied Sciences, Optics/Lasers/ Photonics* section edited by MDPI (Multidisciplinary Digital Publishing Institute). He is member of the *Editorial Board (Review Editor)* of the journal *Frontiers in Physics (Section Physical Chemistry Chemical Physics)*. He is *co-editor* of the *Journal of Physical Chemistry and Functional Materials* edited by JournalPark (TÜBİTAK ULAKBİM) Turkey. Guest Editor of special issues in *Phys. Chem. Chem. Phys.*, *J. Phys. Chem A.*, *Molecular Physics* and *Eur. Phys. J. D*. Secretary of Evaluation Committee (Panel 2 Chemistry) of Spanish Agency CNEAI for evaluation of six-year period of research at a National level during 2014 and 2015.

Member of several Scientific Committees of International Conferences such as the Femtochemistry Conference Series, the International Molecular Beams Symposium (ISMB), the International Meeting on Photodynamics and Related Aspects, the European Congress on Molecular Spectroscopy (EUCMOS), and the International Conference on Molecular Energy Transfer (iCOMET). Chairman and organizer of national and international conferences and several summer schools. He is acting routinely as reviewer of national (AEI) and international research projects (*National Science Foundation* and *US Department of Energy* of USA, FONCYT of Argentina, México, NWO of The Netherlands, DFG of Germany, National Research, Development, and Innovation (NRDI) Office of Hungary, Fonds de la Recherche Scientifique – FNRS of Belgium), and of many scientific journals in interdisciplinary science, chemistry, physics, photonics and physical chemistry. He has participated in numerous committees of PhD Theses and temporal and permanent positions at different Spanish Universities and the Spanish Research Council.

Quality indicators of publications by Web of Knowledge in the period 1986-2025

Articles: 300 **h-index: 53** Citations: 8567 Citations/item: 28.6

Relevant Publications in the period 2020-2025

1. A. Burgos-Caminal *et al.*, **L. Bañares**, A. F. Nogueira, L. A. Padilha, M. A. Schiavon, W. Gawelda, *Tracking specific charge carrier dynamics in CuInS₂ quantum dots*, **ACS Nano**, 19, 21950 (2025). IF =16.
2. J. González-Vázquez, G. A. García, D. V. Chicharro, L. Bañares, S. Marggi Poullain, *Evidencing an elusive conical intersection in the dissociative photoionization of methyl iodide*, **Chem. Sci.**, 15, 3203 (2024). IF = 8.4.
3. V. Manzaneda-González, K. Jenkinson, O. Peña-Rodríguez, O. Borrell-Grueiro, S. Triviño- Sánchez, L. Bañares, E. Junquera, A. Espinosa, G. González-Rubio, S. Bals, A. Guerrero- Martínez, *From multi- to single-hollow trimetallic nanocrystals by ultrafast heating*, **Chem. Mat.**, 35, 9603 (2023). IF = 8.6.
4. C. Sun, L. Bai, J. Lin, W. Huang, J. C. Roldao, J. Gierschner, A. Burgos-Caminal, O. Borrell-Grueiro, W. Gawelda, **L. Bañares**, J. Cabanillas-González, *Boosting the stimulated emission properties of host:guest polymer blends by inserting chain twists in the host polymer*, **Adv. Func. Mater.**, 32, 2207623 (2022). IF= 19.924.
5. G. González-Rubio, P. Díaz-Núñez, W. Albrecht, V. Manzaneda-González, **L. Bañares**, A. Rivera, L. M. Liz-Marzán, O. Peña-Rodríguez, S. Bals, A. Guerrero-Martínez, *Controlled alloying of Au@Ag core-shell nanorods induced by femtosecond laser irradiation*, **Adv. Opt. Mat.**, 19, 2002134 (2021). IF = 8.286.
6. M. L. Murillo-Sánchez, A. Zanchet, S. Marggi Poullain, J. González-Vázquez, **L. Bañares**, *Structural dynamics effects on the electronic predissociation of alkyl iodides*, **Sci. Rep.**, 20, 6700 (2020). IF = 3.998.

Relevant publications in period 1986-2025: 3 Science, 2 Nature Chem., 1 Nature Comm., 3 Phys. Rev. Lett., 1 Int. Rev. Phys. Chem., 1 Angewandte Chemie, 1 J. Am. Chem. Soc., 1 Nano Lett., 2 Chem. Sci., 1 Adv. Opt. Mat., 1 Adv. Func. Mat., 1 Nanophotonics, 1 ACS Nano, 1 Adv. Sci.

Number of plenary and invited talks at International Conferences (period 2020-2024): 20