

# **BRIEF CURRICULUM VITAE**

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**PERSONAL DATA** Birth place and date: Madrid (Spain), 30th July 1962  
Citizenship: Spanish

## **ACADEMIC DEGREES**

1985 B.S. in Chemistry (Physical Chemistry) from Universidad Complutense de Madrid (Spain)

1990 Ph.D. in Chemistry from Universidad Complutense de Madrid (Spain)

## **APPOINTMENTS**

1989 - 1995 Assistant Professor at Departamento de Química Física I, Facultad de Ciencias Químicas, Universidad Complutense de Madrid (Spain)

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

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

1995 - 1998 Associate Professor at Departamento de Química Física I, Facultad de Ciencias Químicas, Universidad Complutense de Madrid (Spain)

1998 - 2006 *Profesor Titular de Universidad* at Departamento de Química Física I, Facultad de Ciencias Químicas, Universidad Complutense de Madrid (Spain)

2007 - *Catedrático de Universidad* (Full Professor) at Departamento de Química Física I, Facultad de Ciencias Químicas, Universidad Complutense de Madrid (Spain)

## **MERITS**

Co-author of 176 peer reviewed papers published in international journals, 4 book chapters and about 250 contributions to International Conferences including many invited talks in the research areas of 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 lasers 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 and on pulsed laser deposition.

He has been the person in charge and principal investigator of research projects at a National and European levels. He has more than 20 years teaching experience in Physical Chemistry and has trained a good number of PhD students and postdocs. He is/is has been supervisor of eight PhD theses.

He is member of the Royal Spanish Society of Chemistry and the Royal Spanish Society of Physics. He is president of the Spanish Specialized Group of Atomic and Molecular Physics (GEFAM) and member of the Spanish Specialized Group of Photochemistry.

He is a member of several Scientific Committees of International Conferences such as the Femtochemistry Conference and the Molecular Beams Symposium. He has organized National and International Conferences and several Summer Schools. He is acting routinely as referee of National and International research projects and of a large number of scientific journals.

### Fifteen Relevant Publications

1. *Femtosecond real-time probing of reactions IX: Hydrogen atom transfer*. J. L. Herek, S. Pederson, **L. Bañares**, A. H. Zewail, **J. Chem. Phys.**, **97**, 9046 (1992).
2. *Experimental studies and theoretical predictions for the  $H+D_2 \rightarrow HD+D$  reaction*. L. Schnieder, K. Seekamp-Rahn, J. Borkowski, E. Wrede, K. H. Welge, F. J. Aoiz, **L. Bañares**, M. J. D'Mello, V. J. Herrero, V. Sáez Rábanos, R.E. Wyatt, **Science**, **269**, 207 (1995).
3. *Quantum, classical and experimental beam studies of the simplest Cl reaction*. M. Alagia, N. Balucani, L. Cartechini, P. Casavecchia, E. H. van Kleef, G. G. Volpi, F. J. Aoiz, L. Bañares, D. W. Schwenke, T. C. Allison, S. L. Mielke, D. G. Truhlar, **Science**, **273**, 1519 (1996).
4. *Evidence for scattering resonances in the  $H+D_2$  reaction*. F. Fernández-Alonso, B. D. Bean, J. D. Ayers, A. E. Pomerantz, R. N. Zare, **L. Bañares**, F. J. Aoiz, **Angewandte Chemie, Int. Ed.**, **39**, 2748 (2000).
5. *Insertion and abstraction pathways in the reaction  $O(^1D)+H_2 \rightarrow OH+H$* . F. J. Aoiz, **L. Bañares**, J. F. Castillo, M. Brouard, W. Denzer, C. Vallance, P. Honvault, J.-M. Launay, A. J. Dobbyn, P. J. Knowles, **Phys. Rev. Lett.**, **86**, 1729 (2001).
6. *Quantum effects in the differential cross sections for the insertion reaction  $N(^2D)+H_2$* , N. Balucani, L. Cartechini, G. Capozza, E. Segoloni, P. Casavecchia, G. G. Volpi, F. J. Aoiz, **L. Bañares**, P. Honvault, J. M. Launay, **Phys. Rev. Lett.**, **89**, 013201 (2002).
7. *The cross-section for the  $H+H_2O$  abstraction reaction: experiment and theory*. M. Brouard, I. Burak, D. Minayev, P. O'Keeffe, S. Marinakis, C. Vallance, F. J. Aoiz, **L. Bañares**, J. F. Castillo, D. H. Zhang, D. Xie, M. Yang, S.-Y. Lee, M. A. Collins, **Phys. Rev. Lett.**, **90**, 093201 (2003).
8. *Adaptive control of molecular alignment*, C. Horn, M. Wollenhaupt, M. Krug, T. Baumert, R. de Nalda, **L. Bañares**, **Phys. Rev. A**, **73**, 031401(R) (2006).
9. *Dynamics of insertion reactions of  $H_2$  molecules with excited atoms*, F. J. Aoiz, **L. Bañares**, V. J. Herrero, **J. Phys. Chem. A**, **110**, 12546 (2006).
10. *A detailed experimental and theoretical study of the femtosecond A-band photodissociation of  $CH_3I$* , R. de Nalda, J. Durá, A. García-Vela, J. G. Izquierdo, J. González-Vázquez, **L. Bañares**, **J. Chem. Phys.**, **128**, 244309 (2008).
11. *Solvent-free MALDI investigation of the cationization of polyethers with alkali metals*, A. R. Hortal, P. Hurtado, B. Martínez-Haya, A. Arregui, **L. Bañares**, **J. Phys. Chem. B**, **112**, 8530 (2008).
12. *Direct observation of the primary bond-twisting dynamics of stilbene anion radical*, I.-R. Lee, **L. Bañares**, A. H. Zewail, **J. Am. Chem. Soc.**, **130**, 6708 (2008).
13. *Femtosecond pulsed laser deposition of nanostructured CdS films*, M. Sanz, R. de Nalda, J. F. Marco, J. G. Izquierdo, **L. Bañares**, M. Castillejo, **J. Phys. Chem. C**, **114**, 4864 (2010).
14. *First observation of ground state  $I(^2P_{3/2})$  atoms from the  $CH_3I$  photodissociation in the B-band*, M. G. González, J. D. Rodríguez, L. Rubio-Lago, **L. Bañares**, **J. Chem. Phys., Communication**, **135**, 021102 (2011).
15. *Accurate time-dependent wave packet study of the  $H^+LiH$  reaction at early universe conditions*, E. Aslan, N. Bulut, J. F. Castillo, **L. Bañares**, F. J. Aoiz, O. Roncero, **The Astrophysical Journal**, **759**:31 (2012).

### Web of Knowledge statistics (October 22, 2012)

h-index: 39

Total citations: 4291

Average citations per item: 24.38