

# **BRIEF CURRICULUM VITAE**

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

## **ACADEMIC DEGREES**

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

## **APPOINTMENTS**

2014 - Director of the Center for Ultrafast Lasers (CLUR), Complutense University Madrid (Spain)  
2007 - *Catedrático de Universidad* (Full Professor) at Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)  
1998 - 2006 *Profesor Titular de Universidad* at Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)  
1995 - 1998 Associate Professor at Physical Chemistry Department, Chemical Sciences Faculty, Complutense University Madrid (Spain)  
1995 - 1996 Alexander von Humboldt Stiftung Visiting Associate. Institute of Physics, University of Würzburg, Germany. Supervisor: Prof. Gustav Gerber  
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  
1989 - 1995 Assistant Professor at Physical Chemistry Department, Chemical Sciences Faculty, Madrid Complutense University (Spain)

## **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 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 ultrafast pulsed laser deposition and materials ultrafast laser micromachining.

## MERITS

Author of about 200 peer reviewed papers published in international journals, 5 book chapters, 1 book editor and about 250 contributions to International Conferences including many invited talks. Person in charge and principal investigator of research projects at National and European levels.

More than 20 years teaching experience in Physical Chemistry and training of PhD students and postdocs. Supervisor of eight PhD theses.

Fellow of the Royal Society of Chemistry (FRSC). Member of the Spanish Royal Society of Chemistry and the Spanish Royal Society of Physics. He has been president of the Spanish Specialized Group of Atomic and Molecular Physics (GEFAM) and member of the Spanish Specialized Group of Photochemistry. He is president of the Specialized Group of Ultrafast Lasers (GELUR).

Associate Editor of *Physical Chemistry Chemical Physics* edited by the Royal Society of Chemistry. Member of several Scientific Committees of International Conferences such as the Femtochemistry Conference and the International Molecular Beams Symposium. Chairman and organizer of national and international conferences and several summer schools. He is acting routinely as reviewer of national and International research projects and of a large number of scientific journals.

### Fifteen Relevant Publications

1. *Control of ultrafast molecular photodissociation by laser induced potentials*, M. E. Corrales, J. González-Vázquez, G. Balerdi, I. R. Solá, R. de Nalda, **L. Bañares**, *Nature Chem.*, **6**, 785 (2014).
2. *Strong field control of predissociation dynamics*, M. E. Corrales, G. Balerdi, V. Lorient, R. de Nalda, **L. Bañares**, *Faraday Discuss.*, **163**, 447 (2013).
3. *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).
4. *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).
5. *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).
6. *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).
7. *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).
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. *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).
10. *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).
11. *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).
12. *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).
13. *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).
14. *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).
15. *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).

### Web of Knowledge statistics (December 27, 2015)

h-index: 43

Total citations: 5215

Average citations per item: 25.56