

Jimena D. Gorfinkiel

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APPOINTMENTS

Professor	07/22-present
School of Physical Sciences, The Open University	
Senior Lecturer	10/11-07/22
School of Physical Sciences, The Open University	
Lecturer	12/05-09/11
Department of Physics and Astronomy, The Open University	
Postdoctoral Research Fellow	01/00-11/05
Department of Physics and Astronomy, University College London	

EDUCATION

Ph. D. in Theoretical Chemistry (Cum Laude)	1999
Theoretical study of non-adiabatic processes in ion-diatomic molecule collisions. The $C^{4+}+H_2$ system.	
Universidad Autónoma de Madrid. Supervisor: Dr. Luis Mendez	
M. Sc. in Theoretical Chemistry (Special Award)	1996
Universidad Autónoma de Madrid.	
Degree in Chemistry (main field: Quantum Chemistry)	1994
Universidad Autónoma de Madrid	

FUNDING (last 6 years)

Exploiting novel software developments in atomic, molecular and optical physics 2 year project, ARCHER2, £120,640,	07/23
Molecular B-spline algebraic diagrammatic construction: High-performance ab initio software package for attoscience	
6 month project, Embedded CSE Support (eCSE), EPCC ££44365 (to OU)	03/19
Positrons in biosystems	
4 year project, ARC, £10000 (to OU)	01/19

PUBLICATIONS

One edited book, 3 book chapters, 1 invited review article and 82 refereed papers.

List of 5 most significant papers in the last five years:

- Virtual photon exchange vs electron transfer in interparticle Coulombic electron capture
V. Graves, J. Šenk, P. Kolorenč, N. Sisourat and J. D. Gorfinkiel, J. Chem. Phys., 160, 204306 (2024)
- Laser-Induced Electron Diffraction in Chiral Molecules
D. Rajak, S. Beauvarlet, O. Kneller, A. Comby, R. Cireasa, D. Descamps, B. Fabre, J. D. Gorfinkiel, J. Higuier, S. Petit, S. Rozen, H. Ruf, Nicolas Thiré, V. Blanchet, N. Dudovich, B. Pons and Yann Mairesse, PRX, 14 011015 (2024)
- Analysis of RABITT time delays using the stationary multiphoton molecular R-matrix approach
J. Benda, Z. Mašín and J. D. Gorfinkiel, Phys. Rev. A, 105, 053101 (2022)
- Perturbative and nonperturbative photoionization of H_2 and H_2O using the molecular R-matrix-with-time method
J. Benda, J. D. Gorfinkiel, Z. Mašín, G. S. J. Armstrong, A. C. Brown, D. D. A. Clarke, H. van der Hart and J. Wragg, Phys. Rev. A, 102, 052826 (2020)

- UKRmol+: a suite for modelling of electronic processes in molecules interacting with electrons, positrons and photons using the R-matrix method
Z. Mašín, Jakub Benda, Jimena D. Gorfinkiel, Alex G. Harvey, Jonathan Tennyson, Comp. Phys. Comm., 249, 107092 (2020)

List of 5 selected additional publications:

- Positron Scattering from Pyrazine
D. Edwards, D. Stevens, Z. Cheong, V. Graves, J. D. Gorfinkiel, F. Blanco, G. García, M. J. Brunger, R. D. White and J. P. Sullivan, Phys. Rev. A, 104, 042807 (2021)
- A complete cross section data set for electron scattering by pyridine: modelling electron transport in the energy range 0-100 eV
F. Costa, A. Traoré-Dubuis, L. Álvarez, A. I. Lozano, X. Ren, A. Dorn, P. Limão-Vieira, F. Blanco, J. C. Oller, A. Muñoz, A. García-Abenza, et al., Int. J. Mol. Sci., 21, 6947 (2020)
- Resonances in low-energy electron scattering from para-Benzoquinone
A. Loupas and J. D. Gorfinkiel, PCCP, 19, 18252 (2017) Selected as PCCP HOT Article
- Absolute cross sections for electronic excitation of pyrimidine by electron impact
K. Regeta, M. Allan, Z. Mašín and J. D. Gorfinkiel, J. Chem. Phys., 144, 024302 (2016)
- UKRmol: low-energy electron- and positron-molecule scattering suite
J. M. Carr, P. G. Galiatsatos, J. D. Gorfinkiel, A.G. Harvey, M. A. Lysaght, D. Madden, Z. Mašín, M. Plummer, J. Tennyson and H. N. Varambhia, Eur. Phys. J D, 66, 58 (2012)

JOURNAL REVIEWING AND EDITORSHIP

Member of the Executive Editorial Board of the Journal of Physics B (since 07/25) and Specialist Editor for Computer Physics Communications (2019-2024).

Referee for Physical Chemistry Chemical Physics, Journal of Physics B (Outstanding Reviewer award 2020), Physical Review A, New Journal of Physics, European Journal of Physics D, Journal of Chemical Physics, Computer Physics Communications, Radiation Physics and Chemistry, International Journal of Quantum Chemistry, Chemical Physics Letters, Plasma Sources Science and Technology, etc.

PROPOSAL REVIEW

Panel member for EPSRC: ARCHER2 Embedded Computational Science and Engineering (eCSE) Programme, Distributed European Computing Initiative (DECI) and ARCHER Resource allocation panel. Reviewer for EPSRC and NSF.

LEADERSHIP AND OTHER SERVICE (selected)

Co-chair of the POSMOL international advisory committee	08/23-07/25
Vice-Chair of the Commission on Atomic, Molecular, and Optical Physics (C15) of the International Union of Pure and Applied Physics (IUPAP)	11/21-12/24
Chair of CCPQ, Quantum Dynamics in AMO Physics	since 10/21
Member of the ExCALIBUR (Exascale Computing Algorithms and Infrastructures Benefiting UK Research) Hardware and Enabling Software Delivery Board	09/20-2023
Member of the ICPEAC Executive Committee	07/19-07/2023
Co-Chair of UK-AMOR High-End Computing Consortium	since 6/18
Member of the POSMOL international advisory committee	06/18-08/23
Chair of the IOP Atomic and Molecular Interactions (AMIG) group	2011-2016
Member of the ICPEAC General Committee	2007-2011

INVITED TALKS AND LECTURES

39 Invited (3 national, 36 international) and 2 Plenary Lectures since 2003.