



IBER 2022

XVI IBERIAN JOINT MEETING ON
ATOMIC AND MOLECULAR PHYSICS

Málaga (Spain), 21-23 September 2022

THIRD CIRCULAR – August, 31, 2022

IBER-2022 PROGRAM ANNOUNCEMENT. LATE REGISTRATIOINS WELCOME

Please check:

www.iber2022.com

The **Division of Atomic and Molecular Physics (DFAM)** of the Portuguese Physics Society (SPF) and the **Group of Atomic and Molecular Physics (GEFAM)** of the Spanish Royal Societies of Physics (RSEF) and Chemistry (RSEQ) are proud to announce the 16th edition of our International Conference Series

IBERIAN JOINT MEETING ON ATOMIC AND MOLECULAR PHYSICS – IBER 2022

which will be held in **Málaga** (Spain) the days **September 21 to 23, 2022**. The Conference Venue will be the Faculty of Medicine of the University of Málaga.

The IBER meeting Series follows a tradition of international biannual Conferences sequentially organized in Portugal and Spain, the last editions being organized in Aveiro (IBER 2015), Barcelona (IBER 2017) and Évora (IBER 2019). The IBER 2022 extends the history of the Conference after the interruption caused by the COVID-19 pandemic.

This Third Circular contains specific information on:

1. IBER 2022 PROGRAM
2. SOCIAL ACTIVITIES
3. VENUE ACCESS

1. IBER 2022 PROGRAM

The Conference will be organized around **Plenary Talks, Invited Talks, Oral Talks** and **Poster sessions**, allowing a fast, interactive interaction between all participants. Finally, the Conference will contain 10 Plenary Talks, 10 Invited Talks, 24 Oral Communications and 13 Posters. Please see below both a compact and detailed description of the program. Please take into account that last minute changes may be possible.



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PROGRAM AT A GLANCE:

WEDNESDAY		SEPTEMBER 21		THURSDAY		SEPTEMBER 22		FRIDAY		SEPTEMBER 23	
8:00-9:00	REGISTRATION	Hall									
9:00-09:10	OPENING SESSION	Aula Magna									
Session	1			Session	5	Session	6	Session	9	Session	10
09:10-09:50	PLENARY P1: MEYER	Aula Magna	Aula IV	09:10-09:50	PLENARY P5: LUCCHINI	Aula IV		09:10-09:50	PLENARY P9: GANS	Aula IV	
09:50-10:30	PLENARY P2: CRESPO	Aula Magna	Aula IV	09:50-10:30	PLENARY P6: ANTOGNINI	Aula IV		09:50-10:30	PLENARY P10: ARUNAN	Aula IV	
10:30-11:00	COFFE BREAK			10:30-11:00	COFFE BREAK			10:30-11:00	COFFE BREAK		
Session	2			Session	6			Session	10		
11:00-11:30	INVITED I1: AMARO	Room IV	Room IV	11:00-11:30	INVITED I4: HENRIQUES	Room IV	Room IV	11:00-11:30	INVITED I7: VELOSO	Room IV	Room IV
11:30-12:00	INVITED I2: GARCÍA-VELA	Room IV	Room IV	11:30-12:00	INVITED I5: MARTÍNEZ-HAYA	Room IV	Room IV	11:30-12:00	INVITED I8: COCINERO	Room IV	Room IV
12:00-12:15	ORAL O1: SOLÁ	Room IV	Room IV	12:00-12:15	ORAL O10: PROSMITI	Room IV	Room IV	12:00-12:15	ORAL O19: VILLARREAL	Room IV	Room IV
12:15-12:30	ORAL O2: FERNÁNDEZ	Room IV	Room IV	12:15-12:30	ORAL O11: MELLADO-ALCEDO	Room IV	Room IV	12:15-12:30	ORAL O20: REVUELTA	Room IV	Room IV
12:30-12:45	ORAL O3: ALVAREZ	Room IV	Room IV	12:30-12:45	ORAL O12: FERREIRA DA SILVA	Room IV	Room IV	12:30-12:45	ORAL O21: BELLO	Room IV	Room IV
12:45-13:00	ORAL O4: SILVA	Room IV	Room IV	12:45-13:00	ORAL O13: RECIO	Room IV	Room IV	12:45-13:00	ORAL O22: TORRES	Room IV	Room IV
13:00-13:15	ORAL O5: MORCILLO	Room IV	Room IV	13:00-13:15	ORAL O14: MANDADO	Room IV	Room IV	13:00-13:15	ORAL O23: ROQUE	Room IV	Room IV
13:15-14:30	LUNCH	Cafeteria		13:15-14:30	LUNCH	Cafeteria		13:15-14:30	LUNCH	Cafeteria	
Session	3			Session	7			Session	11		
14:30-15:10	PLENARY P3: GOMEZ-CADENAS	Aula Magna	Aula Magna	14:30-15:10	PLENARY P7: MATA	Aula Magna	Aula Magna	14:30-15:00	INVITED I9: FRONTERA	Aula Magna	Aula Magna
15:10-15:50	PLENARY P4: GARCIA RUIZ	Aula Magna	Aula Magna	15:10-15:50	PLENARY P8: MARQUES	Aula Magna	Aula Magna	15:00-15:30	INVITED I10: GUERRA	Aula Magna	Aula Magna
15:50-16:05	ORAL O6: FERRO-COSTAS	Aula Magna	Aula Magna	15:50-16:05	ORAL O15: MARTÍNEZ-NUÑEZ	Aula Magna	Aula Magna	15:30-15:45	ORAL O24: ANGUIITA-ORTIZ	Aula Magna	Aula Magna
16:05-16:20	ORAL O7: GONZÁLEZ	Aula Magna	Aula Magna	16:05-16:20	ORAL O16: DOMINGOS	Aula Magna	Aula Magna				
16:20-16:50	COFFE BREAK			16:20-16:50	COFFE BREAK			16:00-16:30	COFFE BREAK		
Session	4			Session	8			Session	12		
16:50-17:20	INVITED I3: GAWELDA	Aula Magna	Aula Magna	16:50-17:20	INVITED I6: GLOWACKI	Aula Magna	Aula Magna	16:30-16:45	CLOSING SESSION	Aula Magna	Aula Magna
17:20-17:35	ORAL O8: HERNANDEZ-ROJAS	Aula Magna	Aula Magna	17:20-17:35	ORAL O17: MONTERO	Aula Magna	Aula Magna	16:45-17:30	GEFAM MEMBERS ASSEMBLY	Aula Magna	Aula Magna
17:35-17:50	ORAL O9: MATEO	Aula Magna	Aula Magna	17:35-17:50	ORAL O18: TEIXEIRA	Aula Magna	Aula Magna	20:00-22:00	GALA DINNER and DELGADO-BARRIO AWARD	Restaurant downtown	Restaurant downtown
18:00-19:00	POSTER SESSION			19:00-21:00	TOURISTIC ACTIVITY	Harbor					

DETAILED PROGRAM:

WEDNESDAY		SEPTEMBER 21
8:00-9:00	REGISTRATION	Hall
9:00-9:10	OPENING SESSION	Aula Magna
Session	1 Chair: L. Bañares	
9:10-9:50	PLENARY P1: M. Meyer, Multi-Photon Processes and Molecular Dynamics in the Soft X-Ray Regime: The Small Quantum Systems (SQS) Instrument at the European XFEL	Aula Magna
9:50-10:30	PLENARY P2: J. R. Crespo López-Urrutia, Highly Charged Ions from the Core of the Sun to Optical Clocks	Aula Magna
10:30-11:00	COFFE BREAK	
Session	2 Chair: B. Martínez Haya	
11:00-11:30	INVITED I1: F. D. Amaro Gas Based Neutron Detectors: Recent Developments and Future Prospects	Room IV
11:30-12:00	INVITED I2: A. García-Vela The Role of Non-Adiabatic Couplings in the Photodissociation of the Methyl Radical	Room IV
12:00-12:15	ORAL O1: I. Solá Spatiotemporal Control of Trapped Rydberg Qubits	Room IV
12:15-12:30	ORAL O2: J. M. Fernández Raman Spectroscopy of High-Temperature Supersonic Jets of CO ₂	Room IV
12:30-12:45	ORAL O3: C. Álvarez Rotational and Vibrational Relaxation of CO ₂ in Supersonic Jets	Room IV
12:45-13:00	ORAL O4: P. A. O. C. Silva A Different Concept for Gas Proportional Scintillation Counter: The Annular Anode	Room IV

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13:00-13:15	ORAL O5: M. F. Morcillo Arencibia Does the Molecular Position Affect the Structure and Stability of the H ₂ @ C ₆₀ Complex?	Room IV
13:15-14:30	LUNCH	Cafeteria
Session	3 Chair: C. A. O. Henriques	
14:30-15:10	PLENARY P3: J. J. Gómez-Cadenas Desperately Seeking for Majorana	Aula Magna
15:10-15:50	PLENARY P4: R. F. García Ruíz Exotic Atoms and Molecules for Nuclear Science	Aula Magna
15:50-16:05	ORAL O6: D. Ferro-Costas The Cathedral Package: User-Friendly Tools for Chemical Kinetics	Aula Magna
16:05-16:20	ORAL O7: D. González Simulating Gas-Phase Interstellar Chemistry Using the CRESU Technique	Aula Magna
16:20-16:50	COFFE BREAK	
Session	4 Chair: S. Vázquez	
16:50-17:20	INVITED I3: W. Gawelda Observing Solute-Solvent Coupled Structural Dynamics in Solvated Cu Photosensitizer with Ultrashort X-rays	Aula Magna
17:20-17:35	ORAL O8: J. Hernández-Rojas Trihydrogen Cation Helium Clusters: A New Potential Energy Surface	Aula Magna
17:35-17:50	ORAL O9: H. Mateo Computational Characterization of the Emission of the Keto Derivative of Oxyluciferin within Luciferase	Aula Magna
18:00-19:00	POSTER SESSION	

THURSDAY	SEPTEMBER 22
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Session	5 Chair: A. Longarte	
9:10-9:50	PLENARY P5: M. Lucchini, Few-fs Limit of The Floquet Theory	Room IV
9:50-10:30	PLENARY P6: A. Antognini, From the Proton Radius to the Best Tests of Quantum Electrodynamics	Room IV
10:30-11:00	COFFE BREAK	
Session	6 Chair: A. García-Vela	
11:00-11:30	INVITED I4: C. A. O. Henriques Neutral Bremsstrahlung Emission in Xenon Unveiled	Room IV
11:30-12:00	INVITED I5: B. Martínez-Haya Proton in the Ring: Wandering Protons Inside Molecular Cavities	Room IV
12:00-12:15	ORAL O10: R. Prosmi Quantum Simulations of Halogen Anions Hydration: Data- Driven Potential Models from Aqueous Clusters to Solutions	Room IV
12:15-12:30	ORAL O11: D. Mellado-Alcedo Electronic Structure of Triatomic Ultra-Long Rydberg Molecules	Room IV
12:30-12:45	ORAL O12: R. Ferreira da Silva Calculation of Atomic Inputs for Probing r-Process in Kilonovae	Room IV
12:45-13:00	ORAL O13: P. Recio Photodissociation dynamics of bromiodomethane in the B band, 193 nm	Room IV
13:00-13:15	ORAL O14: M. Mandado Predicting Electron Transport in Molecular Electronic Devices from Electron Deformation Orbitals	Room IV
13:15-14:30	LUNCH	Cafeteria



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Session	7 Chair: J. M. Sampaio	
14:30-15:10	PLENARY P7: R. Mata Coupling of Proton Dynamics to Reaction Pathways in Biomolecular Systems	Aula Magna
15:10-15:50	PLENARY P8: J. P. Marques Biomedical and Astrophysical Applications of Atomic Parameters	Aula Magna
15:50-16:05	ORAL O15: E. Martínez-Núñez Automated Reaction Discovery Through Reactive MD Simulations	Aula Magna
16:05-16:20	ORAL O16: S. Domingos Beyond Structure Solving with Microwave Spectroscopy	Aula Magna
16:20-16:50	COFFE BREAK	
Session	8 Chair: E. Martínez-Núñez	
16:50-17:20	INVITED I6: D. R. Glowacki Virtual Reality for Molecular Simulation and Design: From Quantum Chemistry to Drug Binding	Aula Magna
17:20-17:35	ORAL O17: R. Montero Time-Resolved Photoionization of Simple Aromatic Molecules in Water	Aula Magna
17:35-17:50	ORAL O18: J. M. R. Teixeira Primary Scintillation Yield in Xenon for Electrons and Alpha Particles	Aula Magna
19:00-21:00	TOURISTIC ACTIVITY	Málaga Harbour

FRIDAY	SEPTEMBER 23
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Session	9 Chair: J. P. Marques	
9:10-9:50	PLENARY P9: B. Gans, Photoionization Spectroscopy of Free Radicals Using Synchrotron- and Laser-based Experiments	Room IV
9:50-10:30	PLENARY P10: E. Arunan, Molecular Beam Microwave Spectroscopy: Structure, Bonding and Dynamics	Room IV
10:30-11:00	COFFE BREAK	
Session	10 Chair: I. Solá	
11:00-11:30	INVITED I7: J. Veloso X-Ray Fluorescence Spectroscopy and Imaging Analysis Using Gaseous Detectors Based Neutron Detectors	Room IV
11:30-12:00	INVITED I8: E. J. Cocinero Carbohydrate Research by High Resolution Spectroscopy and Other Applications	Room IV
12:00-12:15	ORAL O19: P. Villarreal Electron Transfer Between Heliophobic and Heliophylic Species in Helium Nanodroplets	Room IV
12:15-12:30	ORAL O20: F. Revuelta Observation of Confinement-Induced Resonances in a 3D Lattice	Room IV
12:30-12:45	ORAL O21: R. Y. Bello Angle-resolved Phases in Photoemission: From Atomic to Molecular Systems	Room IV
12:45-13:00	ORAL O22: F. Torres Exploring Carvacrol Interactions by Laser Spectroscopy in Jets	Room IV
13:00-13:15	ORAL O23: R. Roque How do Hydrocarbons Affect the Electroluminescence of He-CF ₄	Room IV
13:15-14:30	LUNCH	Cafeteria

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Session	11 Chair: M. Mandado	
14:30-15:00	INVITED I9: A. Frontera Unconventional Electron Donors: Metals as σ/π -Hole Acceptors	Aula Magna
15:00-15:30	INVITED I10: M. Guerra High-Resolution X-ray Metrology in the Search for Physics Beyond the Standard Model	Aula Magna
15:30-15:45	ORAL O24: N. Anguita-Ortíz Computational Study of Ion Conduction through Eukaryotic Ion Channels by Molecular Dynamics	Aula Magna
16:00-16:30	COFFE BREAK	
Session	12 Chair: Organizing Committee	
16:30-16:45	CLOSING SESSION	Aula Magna
16:45-17:30	GEFAM MEMBERS ASSEMBLY	Aula Magna
20:00-22:00	GALA DINNER AND DELGADO-BARRIO AWARD	Restaurant Downtown

2. SOCIAL ACTIVITIES

The conference will include the Gala Dinner and a touristic activity. The touristic activity (Thursday 22) will consist of a 2-hours boat tour and will start at 19 h from Dock 1 of the Málaga Harbor (*Flye Blue Málaga*). The Gala Dinner (Friday 23), including the presentation of the Delgado-Barrio Award and the announcement of the next IBER meeting, will take place on Friday 23 (20 h) at the restaurant “*Los Patios de las Beatas*”, located at *Calle Beatas, 43*, close to the Picasso Museum.

3. VENUE

The IBER 2022 Conference venue is the Faculty of Medicine of the University of Málaga, located at the Boulevard Louis Pasteur, 32 (29010 Málaga) of the Teatinos University Campus. The Teatinos Campus is on the west side of the city, see Figures 1-3.



Figure 1. The Teatinos University Campus in Málaga.



Figure 2. Map of the Faculty of Medicine in the Teatinos University Campus.



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Figure 3. The Faculty of Medicine building.

The scientific activities will take place at the Aula Magna (Main Hall) and Aula IV (Room IV). Registration, conference information and the poster session will be close to the conference rooms. Coffee breaks will be also provided next to the conference halls.



Figure 4. Metro access to the Faculty of Medicine (Line 1 in red, stop *Universidad*)

The Faculty of Medicine is ca. 6 km away from the city center and is accessible by walk, subway (Metro Málaga, Line 1, Stop Universidad), urban bus (EMT Málaga, Lines 8, 11, 22, 25) or taxi. The Metro stop is just 170 m (2 min) from the Conference venue.

We welcome you to the next IBER 2022 in Málaga!

Scientific Committee & Organizing Committee



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