



Microscopy at the Frontiers
of Science Conference 2025
València, Spain · 23rd-26th September



Microscopy at the Frontiers of Science Conference (MFS25)

València, Spain, 2025 September 23rd - 26th

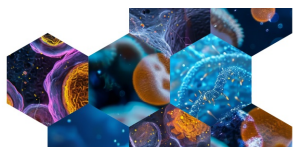
Conference organizers: Juan de Dios Alche, Patricia Casino, Paulo Ferreira, Mari Angeles Juanes, Jose Luis Llacer Guerri, Clara Marco Marín and Santiago Ramón Maiques

Conference Program

September 23rd - Day 1 (Tuesday) 1	
15:00 - 18:30	Workshop to Cryo-EM Single Particle Analysis
18:30 - 19:30	Welcome reception
September 24th - Day 2 (Wednesday) 2	
09:00 - 09:15	Opening Ceremony. Organizers and Director CIPF
09:15 - 10:15	Opening Lecture. Sjors Scheres. Chair: José Luis Llacer
10:15 - 10:20	PhD Awards on Life Sciences sponsored by Zeiss
10:20 - 10:40	PhD Award: Álvaro de la Gándara
10:40 - 11:00	PhD Award: M^a Jesús Rodríguez Espinosa
11:00 - 11:30	Coffee Break
11:30 - 12:30	Technical Developments Lecture. Manos Mavrikis. Chair: María Angeles Juanes
12:30 - 13:30	Material Sciences Lecture. José Sánchez Costa. Chair : Paulo Ferreira
13:30 - 13:35	Group Photo
13:35 - 14:40	Lunch + Poster Session
Session 1.3 Life Sciences+CryoEM Chair: Ivan Ubarrechena	
14:40 - 14:55 Sciences+CryoEM-O1	<u>Juan M. Martínez-Romero</u> (<i>Department of Macromolecular Structures, Centro Nacional de Biotecnología (CNB-CSIC), Madrid, Spain.</i>), Mariana Castrillo, José M. Fernandez-Palacios, Guy Novoa, Esther Martín-Forero, Javier M. Rodríguez, Daniel Luque, José R. Castón Native Helical Assemblies of IBDV VP4 Protease
14:55 - 15:10 Sciences+CryoEM-O2	<u>Alicia Santos-Aledo</u> (<i>Centro de Investigaciones Biológicas Margarita Salas, CSIC</i>), Tommy Darriere, Carlos Fernández-Tornero Like Two Peas in a Pod? A Combined Strategy To Obtain Two Distinct High-Resolution Structures of RNA Polymerase I from One Grid.
15:10 - 15:25 Sciences+CryoEM-O3	Sara Otaegi-Ugartemendia, Roberto Marabini, Pablo Herrera, Gabriela N. Condezo, Lars Mühlberg, Haina Wang, Lucía Ortiz, Fan Liu, Ruth-Anne Sandaa, <u>Carmen San Martín</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>) INTEGRATIVE STRUCTURAL BIOLOGY OF A T=219 MARINE GIANT VIRUS
15:25 - 15:40 Sciences+CryoEM-O4	<u>Elena Macías-Sánchez</u> (<i>Institute of Parasitology and Biomedicine López Neyra, CSIC</i>), Emeline Raguin, Nadezda Tarakina, Peter Fratzl Three-dimensional imaging to study early bone mineralization
15:40 - 15:55 Sciences+CryoEM-O5	Alicia Santos-Aledo, Adrián Plaza-Pegueroles, Marta Sanz-Murillo, Federico M. Ruiz, Peini Hou, Jun Xu, David Gil-Carton, Dong Wang, <u>Carlos Fernández-Tornero</u> (<i>Centro de Investigaciones Biológicas Margarita Salas (CIB), CSIC, 28040 Madrid, Spain</i>) Cryo-EM uncovers a sequential mechanism for RNA polymerase I pausing and stalling at abasic DNA lesions
15:55 - 16:10 Sciences+CryoEM-O6	<u>Hanxing Jiang</u> (<i>Instituto Biofisika (UPV/EHU, CSIC), University of the Basque Country, Leioa, Spain.</i>), Jesús Vílchez-García, Adrián Martínez-Jiménez, Borja Ochoa-Lizarralde, Jorge Pedro López-Alonso, Jerónimo Pérez-Lorente, Paola Bartocconi, Raúl Estévez, Víctor Guallar, Ekaitz Errasti-Murugarren, Iban Ubarretxena-Belandia, Igor Tascón Structural basis of high-affinity choline translocation across bacterial membranes
16:10 - 16:25 Sciences+CryoEM-O7	<u>Jorge Pedro López-Alonso</u> (<i>Instituto Biofisika (UPV/EHU, CSIC), Leioa, Spain</i>), Paula Polonio, Hanxing Jian, Fátima Escobedo, Gustavo Titau, Iban Ubarretxena-Belandia, Miguel Mompeán Structural Basis for the Compact Fold of Human RIPK1 Amyloid Fibrils
16:25 - 16:40 Sciences+CryoEM-O8	<u>Maria A. Oliva</u> (<i>Centro de Investigaciones Biológicas Margarita Salas (CIB), CSIC, Madrid 28040, Spain</i>), Ana de Lucas, Ana J Perez-Berna, Transito García-García, Laura Mendoza, Blanca Dies, Federico Gattini, Raul Fernandez-Rodriguez, Sara Zaldivar-Lopez, Maria J. Rodriguez, Biaggio Mandracchia, Diego Megias, Daniel Luque, Eva Pereiro, Juan Garrido, Maria Montoya ORF3a reshapes host cell architecture through vesicle remodeling and lipid mobilization
16:40 - 16:45 Sciences+CryoEM-T1	<u>Antonio Ruiz-Albor</u> (<i>Instituto de Biomedicina de Valencia (IBV), CSIC, Valencia 46010, Spain</i>), Belén Chaves-Arquero, Mariola Ferreras-Gutierrez, Miriam Barbera, Amaia Gonzalez-Magaña, Rafael Núñez Ramírez, Alfredo De Biasio, Francisco J. Blanco Reconstitution of the complex of DNMT1 with hemimethylated DNA, doubly monoubiquitinated PAF15, and PCNA, for structural analysis
16:45 - 16:50 Sciences+CryoEM-T2	<u>Marta Huerta</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Trinity Cookis, Ana Cuervo, Jorge Cuellar, Mary Dayne S Tai, Aurora Martínez, Eva Nogales, Jose María Valpuesta Advancing Cryo-EM Sample Preparation with Streptavidin Affinity Grids
16:50 - 16:55 Sciences+CryoEM-T3	Elsa-N Astorga-Simón, <u>David Blázquez-Ruano</u> (<i>Instituto Biofisika (UPV/EHU, CSIC), Leioa, Spain</i>), Soledad Baños-Mateo, Adriana Rojas-Cardona, Aitor Hierro Mechanistic Insights on GTPase-Mediated Control of Endosomal Sorting Machinery
16:55 - 17:00 Sciences+CryoEM-T4	Amparo Picard Sánchez, Ethel Queral, Isabel Reillo, <u>Isabel Vernia García</u> (<i>Instituto de Biomedicina de Valencia-IBV-CSIC</i>) NIPBL disruption in Cornelia de Lange Syndrome alters cohesin/NIPBL chromatin association
Session 1.3 Materials Chair: Francesca Peiró	



14:40 - 15:00 Materials-O1	<u>José Juan Calvino</u> (<i>Departamento de Ciencias de los Materiales e Ingeniería Metalúrgica y Química Inorgánica, Facultad de Ciencias, Universidad de Cádiz, Campus Río San Pedro S/N, Puerto Real, 11510 Cádiz, Spain</i>), Paula Aniceto-Ocaña, José Marqueses-Rodríguez, José Antonio Perez-Omil, Carmen Esther Castillo, Miguel López-Haro Combining UHR-HAADF, Image Simulation, Deep-Learning Methods and Density Functional Theory (DFT) Calculations to Understand the Ultimate Details of Metal-Support Interactions in High Surface Area Single-Atom Catalysts
15:00 - 15:20 Materials-O2	<u>Ihsan Caha</u> (<i>International Iberian Nanotechnology Laboratory (INL), Avenida Mestre José Veiga, Braga, Portugal</i>), Francis Leonard Deepak Probing Nanoscale Strain and Electronic Structure in 1D CrX ₃ (X=I and Cl) Encapsulated in Carbon Nanotubes
15:20 - 15:40 Materials-O3	<u>Mohammad Furgan</u> (<i>Instituto de Nanociencia y Materiales de Aragon (INMA), CSIC-U. Zaragoza (Zaragoza), Spain</i>), Simon Hettler, M. B. Sreedhara, Azat Khadiev, Reshef Tenne, Raul Arenal Structure and Property Analysis of (Sm _{1-x} Y _x)S-TaS ₂ Nanotubes from Quaternary Misfit Layered Compounds.
15:40 - 16:00 Materials-O4	<u>Simon Hettler</u> (<i>Laboratory for Electron Microscopy, Karlsruhe Institute for Technology, Karlsruhe, Germany</i>), Martin Peterlechner, Ute Zschieschang, Hagen Klauk, Yolita M. Eggeler Analysis of Organic Thin-Film Transistors by Transmission Electron Microscopy
16:00 - 16:20 Materials-O5	<u>Carina Babu Maliakkal</u> (<i>Catalan Institute of Nanoscience and Nanotechnology Nanotechnology - ICN2, (CSIC and BIST)</i>), Athique Ahmed Ali, Giulia Meucci, Helena Rabelo Freitas, Aziz Genc, Damon J. Carrad, Christian Reichl, Thomas Sand Jespersen, Jordi Arbiol TEM-based failure analysis of GaAs/AlGaAs undoped-2DEG semiconductor devices
16:20 - 16:25 Materials-T1	<u>Timothy Gutu</u> (<i>INL- International Iberian Nanotechnology Laboratory</i>), Belgacem Tiss, Carlos Miguel Silva Costa, Francis Leonard Deepak Aberration Corrected STEM/TEM of LFP and TiO ₂ Electrode Materials for Solid State Thin Film Battery Applications
16:25 - 16:30 Materials-T2	Joan Miquel Vaquero-Crespí, <u>Rubén Santamarta</u> (<i>Physics Department, University of the Balearic Islands, Palma, ES 07122, Spain</i>), Jaume Pons, Daniel Salas, Joan Torrens-Serra, Woohyun Cho, Serdar Torun, Ibrahim Karaman Phase Characterization of All-d-Metal Ni-(Co)-Mn-Ti Magnetic Shape Memory Alloys by Transmission Electron Microscopy
16:30 - 16:35 Materials-T3	<u>Tahir Muhmood</u> (<i>INL- International Iberian Nanotechnology Laboratory</i>), Isilda Amorim Morphological Analysis of NiFeP-Coated Nickel Felt via SEM and FIB-SEM: Structural Transformations Under OER Conditions
16:35 - 16:40 Materials-T4	<u>Eduardo Domínguez-Ojeda</u> (<i>Institut Català de Nanociència i Nanotecnologia, Bellaterra, Spain</i>), Felipe A. Garcés-Pineda, Viktoria Golovanova, Alba Garzón Manjón, Jordi Arbiol Atomic-Level Insight into Multi-Carbon Product Formation via CO ₂ RR on Chiral Catalysts
16:40 - 16:50 Materials-S1	<u>Irene Izquierdo</u> (<i>Milexia</i>) Milexia Industry
17:00 - 17:30	Coffee Break
Session 1.4 Life Sciences+CryoEM Chair: Vicente Rubio	
17:30 - 17:45 Sciences+CryoEM-O1	<u>Oier Lauzirika Zarrabeitia</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC). Darwin, 3. 28049 Madrid, Spain</i>), José Luis Vilas Prieto, José María Carazo García, Carlos Oscar Sorzano Sánchez Fast and robust heterogeneity analysis in CryoEM through Orthogonal Group Synchronization
17:45 - 18:00 Sciences+CryoEM-O2	<u>Jose Miguel De la Rosa Trevin</u> (<i>St.Jude Children's Research Hospital</i>) Facilitating CryoEM single-particle and tomography data analysis with EMhub
18:00 - 18:15 Sciences+CryoEM-O3	<u>Clara Marco-Marín</u> (<i>Instituto de Biomedicina de Valencia of the CSIC and Centro para Investigación Biomédica en Red sobre Enfermedades Raras CIBERER-ISCIII, Valencia, Spain.</i>), Juan Manuel Escamilla-Honrubia, Maria Luisa López-Redondo, Sara Pla Fanjul, José Luis Llácer, Vicente Rubio CryoEM structures of human P5CS reveal its oligomeric organization and provide insight into dominant and recessive pathogenic mechanisms
18:15 - 18:30 Sciences+CryoEM-O4	<u>Andrea Modrego</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Lucía Solanas, Diego Carlero, María Teresa Bueno-Carrasco, Noelia Zamarreño, Jaime Martín-Benito, Rocío Arranz From Biochemistry to Structure and Back: A Complementary Cycle to Discover Novel Influenza A Inhibitors
18:30 - 18:45 Sciences+CryoEM-O5	<u>Jaime Martín-Benito</u> (<i>Centro Nacional de Biotecnología, 28049, Madrid, Spain.</i>), Rocío Arranz, César Santiago, Simonas Masiulis, Esperanza Rivera-de-Torre, Juan Palacios-Ortega, Diego Carlero, Diego Heras-Márquez, Ernesto Arias-Palomo, Álvaro Martínez-del-Pozo, Sara García-Linares Elucidating the Structure and Assembly Mechanism of Actinoporin Pores in Complex Membrane Environments
18:45 - 19:00 Sciences+CryoEM-O6	<u>Carlos Vega-Gutiérrez</u> (<i>Institute for Biocomputation and Physics of Complex Systems, University of Zaragoza.</i>), Javier Picañol-Parraga, Irene Sánchez-Valls, Victoria Ribón-Fuster, David Soto, Beatriz Herguedas Insights into the dynamic architecture of GluA4-containing AMPA Receptors
19:00 - 19:15 Sciences+CryoEM-O7	<u>César Santiago</u> (<i>CENTRO NACIONAL DE BIOTECNOLOGIA (CNB-CSIC)</i>), Eva M. Garcia-Cuesta, Javier Collado-Ávila, José Miguel Rodríguez-Frade, Mario Mellado Precision Modulation of CXCR4 Function Through Allosteric Inhibition of Receptor Clustering
Session 1.4 Materials Chair: Paulo Ferreira	
17:30 - 17:50 Materials-O1	<u>Enrique Gallero</u> (<i>Department of Condensed Matter Physics, Faculty of Sciences, University of Cadiz. Puerto Real (Spain)</i>), Javier Ledesma, Javier Outón, Jorge Salguero, Lionel C. Gontard In-Situ 3D SEM-EDX of Laser-Modified WC-Co Composite Material: Unveiling Oxidation and Surface Topography
17:50 - 18:10 Materials-O2	<u>Núria Baqués</u> (<i>ALBA Synchrotron Light Source Facility, Cerdanyola del Vallès, Spain</i>), Ana Arché-Núñez, Muhammad Waqas Khaliq, David Llorens, Alba Garzón Manjón, Hui Chen, Yongchao Zhang, Antoni Garcia de Herreros, Judith Oró-Solá, Belén Ballesteros, Sandra Ruiz-Gómez, Jordi Arbiol, Lucía Aballe InCAEM - STEM for In Situ and Correlative Characterization of Energy Materials
18:10 - 18:30 Materials-O3	<u>Rui Serra Maia</u> (<i>International Iberian Nanotechnology Laboratory - INL</i>), Maryam Karimi, Rajashree Konar, Pedro Costa, Paulo Ferreira Degradation of LCO in aqueous electrolytes through in situ liquid-cell S/TEM
18:30 - 18:50 Materials-O4	<u>Abhijit Roy</u> (<i>Advanced Microscopy Laboratory (LMA) and Institute of Nanoscience of Aragon (INA)</i>), Simon Hettler, Raul Arenal Breaking Miscibility: Temperature-Triggered Phase Separation in Completely Miscible Au-Pd Alloys Uncovered by In-Situ TEM
18:50 - 19:10 Materials-O5	<u>Avnish Singh Pal</u> (<i>International Iberian Nanotechnology Laboratory-INL Braga, Portugal</i>), Puspendu Guha, Francis Deepak Correlative In-Situ Liquid Cell Electron Microscopy of faceted HEA-Zr Nanoparticles used for electrocatalysis



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SCIENCE & TECHNOLOGY ORGANIZERS

19:10 - 19:15 Materials-T1	<u>Pedro Costa</u> (<i>International Iberian Nanotechnology Laboratory (INL), Braga-4715-330, Portugal</i>), Rui Maia, Margarida Santos, Filipa Valente, Hugo Cortez, Cristiana Alves, Enrique Carbo-Argibay, Leonard Deepak, Paulo Ferreira Design, construction and testing of a robust and safe gas line for in-situ gas TEM experiments
19:15 - 19:20 Materials-T2	<u>Maryam Karimi</u> (<i>International Iberian Nanotechnology Laboratory - INL</i>), Rui Maia, Rajashree Konar, Pedro Costa, Paulo Ferreira Investigating the Degradation Mechanisms of IrO ₂ Catalysts for Proton Exchange Membrane Water Electrolysis Using In-Situ Scanning Transmission Electron Microscopy
19:20 - 19:30 Materials-S1	<u>Mike Millar</u> (<i>Oxford Industry</i>) Oxford Instrument Industry



September 25th - Day 3 (Thursday) 3

Session 2.1 Life Sciences+CryoEM

Chair: Maria Rosario Fernandez-Fernandez

- 09:00 - 09:15 **Sciences+CryoEM-O1** Kevin Mamprin (*ALBA Synchrotron Light Source, Cerdanyola del Vallès (Barcelona), Spain*), Ana Joaquina Pérez Berná
Multimodal Correlative Imaging Using Cryo-SXT, Cryo-SIM, and Cryo-EM to Study Membranous Rearrangement Morphology in West Nile Virus-Infected Cells
- 09:15 - 09:30 **Sciences+CryoEM-O2** Lidia Rodriguez, Luis Fernandez, Ignacio Arechaga (*Instituto de Biomedicina y Biotecnología de Cantabria (CSIC-UC). c/ Abert Einstein 22. PCTCAN. 39011 Santander*)
New opportunities for Electron Microscopy in Santander
- 09:30 - 09:45 **Sciences+CryoEM-O3** Gonzalo Alvarez Viar (*Human Technopole*), gaia pigo, nikolai klena, Fabrizio Martino, adrian nievergelt, davide bolognini, paola capasso
Protofilament-specific nanopatterns of tubulin post-translational modifications regulate the mechanics of ciliary beating
- 09:45 - 10:00 **Sciences+CryoEM-O4** Esther Gonzalez-Almela (*National Center for Biotechnology (CNB-CSIC)*), Alvaro Castells-Garcia, François Le Dily, Manuel F. Merino, Davide Carnevali, Pol Cusco, Luciano Di Croce, Pia Cosma
Super-resolution microscopy reveals how viral infection reshapes host genome structure
- 10:00 - 10:15 **Sciences+CryoEM-O5** Joao Rodrigues, Rui Matias, Isabel Dias Nogueira, Luisa Jordao (*Instituto Nacional de Saude Dr Ricardo Jorge (INSA), Departamento de Saude Ambiental (DSA), Lisboa, Portugal*)
Following the Interaction Between Microplastics, Biofilms and Antimicrobials Resistance
- 10:15 - 10:20 **Sciences+CryoEM-T1** Enric Perez-Parets (*Instituto de Ciencias Fotónicas (ICFO) Mediterranean Technology Park, Avinguda Carl Friedrich Gauss, 3, 08860 Castelldefels, Barcelona*), Denitza Denkova, Gustavo Castro, Marina Cunquero, Helena Isla-Magrané, Martin Eriksen, Gonzalo Merino, Anna Duarri, Pablo Loza-Alvarez
Studying Retinal Repair Through 2D and 3D Calcium Imaging with Two-Photon Excitation Fluorescence Microscopy

Session 2.1 Materials

Chair: Miguel López Haro

- 09:00 - 09:20 **Materials-O1** Jing Yu (*Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Barcelona, Spain*), Jordi Arbiol, Andreu Cabot
Atomic-Scale Dual-Atom Detection for Lithium-Sulfur Battery Catalysts via Advanced STEM Techniques
- 09:20 - 09:40 **Materials-O2** Maurya Sandeep Pradeepkumar (*International Iberian Nanotechnology Laboratory (INL), Braga-4715-330, Portugal*), Meera Mohan, M. Helena Braga, Francis Leonard Deepak
Atomic-Scale Insights into Ba-Doped LiOCl₃ Anti-Perovskite Electrolytes for Solid-State Batteries
- 09:40 - 10:00 **Materials-O3** Sirous Khabbazzabkenar (*Istituto Italiano di Tecnologia, Electron Spectroscopy and Nanoscopy, Genova 16163, Italy.*), Alexander Schleusener, Mehrdad Faraji, Roman Krahne, Giorgio Divitini
Composition-Strain Correlation in 2D Metal-Halide Perovskite Lateral Heterostructures: A 4D-STEM Study
- 10:00 - 10:20 **Materials-O4** M. Chiara Spadaro (*Physics and Astronomy Department, University of Catania, S. Sofia 64, Catania I-95123, Italy*), Daniela Russo, Alessia Fischetti, Giacometta Mineo, Claudio Lentini-Campalleggio, Elena Bruno, Maria Grazia Grimaldi, Francesco Salutari, Jordi Arbiol, Giorgia Franzò, Salvo Mirabella, Vincenzina Strano
Optimised earth abundant electrodes for energy storage applications
- 10:20 - 10:30 **Materials-S1** Guillaume Bruneti (*IZASA*)
IZASA Industry
- 10:30 - 11:00 **Coffee Break**

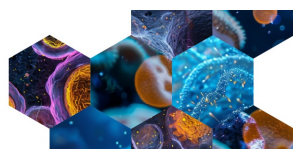
Session 2.2 Life Sciences+CryoEM

Chair: José M. Valpuesta

- 11:00 - 11:15 **Sciences+CryoEM-O1** Álvaro de la Gándara, Mercedes Spínola-Amilibia, Lidia Araújo-Bazán, Irene Rizzuto, Rafael Núñez-Ramírez, James M. Berger, Ernesto Arias-Palomo (*Centro de Investigaciones Biológicas Margarita Salas (CIB), CSIC*)
Stranger Strands: Dissecting Transposition Through Cryo-EM and AI Prediction.
- 11:15 - 11:30 **Sciences+CryoEM-O2** Ivan Ubarrechena (*Instituto Biofisika (UPV/EHU, CSIC), Leioa, Spain*), Adnan Halim, Javier O Cifuentes, Lorenzo Povolito
Structure and mechanism of human O-mannosyltransferase TMEM260 implicated in congenital heart disease
- 11:30 - 11:45 **Sciences+CryoEM-O3** Juan de Dios Alché (*Estacion Experimental del Zaidin (EEZ-CSIC)*), José Luis Canón, Rocío Pacheco, Elena Lima, Antonio Jesús Castro
Fluorescence Localization and Quantitation of Nitric oxide-mediated PTMs in pollen grains
- 11:45 - 12:00 **Sciences+CryoEM-O4** David Herreros (*Spanish National Center for Biotechnology CNB-CSIC, Madrid, Spain*), Carlos Oscar Sánchez Sorzano, José María Carazo
Validation of experimental CryoEM conformational landscapes with FlexConsensus
- 12:00 - 12:15 **Sciences+CryoEM-O5** Sonia Huecas (*Centro de Investigaciones Biológicas Margarita Salas (CIB), CSIC*), Adrian Plaza-Pegueroles, Carlos Fernández-Tornero
Cryo-EM studies on RNA polymerase III transcriptional pausing
- 12:15 - 12:30 **Sciences+CryoEM-O6** Lautaro Baro (*Cytoskeletal Dynamics in Cell Migration and Cancer Invasion Laboratory, Centro de Investigación Príncipe Felipe, 46012 Valencia, Spain.*), María Angeles Juanes Ortiz
Multiscale Imaging Reveals the Role of APC-driven Actin Nucleation in Collective Cell Remodelling, Motility and Mechanotransduction in Cancer Cells
- 12:30 - 12:45 **Sciences+CryoEM-O7** Ignacio Francés-Castillo (*Instituto Universitario de Investigación en Biotecnología y Biomedicina (BIOTECMED), Burjassot 46100, Valencia, Spain*), Ana Hernandez Grimalt, Sergi Morais Ezquerro, Pilar Domingo Calap, Marisa López-Redondo, Patricia Casino
Structural Characterization of the K50 Depolymerase
- 12:45 - 12:55 **Sciences+CryoEM-O8** Eva Estevan-Morió (*Molecular Biology Institute of Barcelona (IBMB-CSIC)*), Laia González-Pérez, Julia Hedengrahn, Ulrich Eckhard
Structural characterization and functional testing of surface-enhanced bacterial flagella

Session 2.2 Materials

Chair: Josep Cruaños



11:00 - 11:20 Materials-O1	<u>Irene Piedra</u> (<i>Departamento de Ciencias de los Materiales e Ingeniería Metalúrgica y Química Inorgánica, Facultad de Ciencias, Universidad de Cádiz, Campus Río San Pedro S/N, Puerto Real, 11510 Cádiz, Spain</i>), Ramón Manzorro, Rafael Nuez, Miguel López-Haro, José Antonio Pérez-Omil, José Juan Calvino, Ana Belén Hungría Comparative Analysis of In-situ STEM Techniques in the Reduction Study of CeO₂-Based Catalysts
11:20 - 11:40 Materials-O2	<u>Mingqing Sun</u> (<i>Catalan Institute of Nanoscience and Nanotechnology Nanotechnology (ICN2)</i>), Jordi Arbiol From Nano to Micro Scales: Probing Multi-Element Redox Dynamics in Sodium Manganese Oxide for Sodium-Ion Batteries Using SEM and TEM
11:40 - 12:00 Materials-O3	<u>Luc Lajaunie</u> (<i>Departamento de Ciencia de los Materiales e IM y QI. F. Ciencias. IMEYMAT. Campus Río San Pedro. Universidad de Cádiz. 11510 Puerto Real (Cádiz). Spain.</i>), Antonio Jesus Medina Olivera, Céline Maynau, Conrado Valero Hernández, Ramón Manzorro, Ana Hungría, Juan Carlos Hernández Garrido Exploring the Electrocatalytic, Photoelectrocatalytic, and Structural Properties of Metal@MoS₂ Core-Shell Nanostructures
12:00 - 12:20 Materials-O4	<u>Lluís Yedra</u> (<i>Laboratory of Electron Nanoscopies - MIND - IN2UB - Dept. Enginyeria Electrònica i Biomèdica, Universitat de Barcelona</i>), Pranjali Nandi, Beatriz Vargas, Daniel del-Pozo-Bueno, Sergi Plana-Ruiz, Kevin Castelló, Fernanda Monteiro Freitas, Juan Carlos González-Rosillo, Alex Morata, Sònia Estradé, Francesca Peiró All Solid-State Batteries in the TEM: Novel Tools for Battery Degradation Assessment
12:20 - 12:40 Materials-O5	<u>Francesco Salutarì</u> (<i>Catalan Institute of Nanoscience and Nanotechnology Nanotechnology - ICN2, (CSIC and BIST)</i>), Maria Chiara Spadaro, Simon Escobar Steinvall, Aidas Urbonavicius, Kimberly Dick, Jordi Arbiol In-depth TEM characterization of the earth-abundant photovoltaic absorber ZnSnP₂ for sustainable energy production
13:00 - 14:15	Lunch + Poster Session
Session 2.3 Life Sciences+CryoEM Chair: Jose Maria Carazo Garcia	
14:15 - 14:30 Sciences+CryoEM-O1	<u>Olivia Muriel</u> (<i>Department of Macromolecular Structures, Centro Nacional de Biotecnología (CNB-CSIC), Madrid, Spain.</i>), Beatriz Sancho-González, Jonathan Gabriel Piccirillo, David Delgado-Gestoso, Ana Cuervo, Jorge Cuéllar, Noa Beatriz Martín-Cófreces, Francisco Sánchez-Madrid, José María Valpuesta In situ characterization of CCT during immune synapse
14:30 - 14:45 Sciences+CryoEM-O2	<u>Francisco Javier Chichón</u> (<i>Spanish National Center for Biotechnology CNB-CSIC, Madrid, Spain</i>), Noelia Zamarreño, David Delgado, Olivia Muriel, Cesar Santiago, Jonathan Gabriel Piccirillo, Maria Teresa Bueno, Mikel Iceta, Irene Sánchez, Rocio Arranz A New Era for the CryoEM Facility (CNB-CSIC)
14:45 - 15:00 Sciences+CryoEM-O3	<u>Ane Martínez-Castillo</u> (<i>Structure and Cell Biology of Viruses Lab, Center for Cooperative Research in Biosciences (CIC bioGUNE) Basque Research and Technology Alliance (BRTA); Derio, Spain.</i>), Diego Charro, Susanne Koethe, Chistopher Maffeo, Isaac Santos-Perez, Parth Chaturvedi, Mikel Azkargorta, Andrea Aebischer, Ander Vidaurrezaga, Daniel Castaño-Diez, Kyle Dent, Martin M Walsh, Felix Elortza, Aleksei Aksimentiev, Martin Beer, Nicola GA Abrescia Pestivirus assembly by cryo-ET and computational analysis
15:00 - 15:15 Sciences+CryoEM-O4	<u>Andrea Sorrentino</u> (<i>ALBA Synchrotron Light Source, Cerdanyola del Vallès, Barcelona, Spain</i>), Francesca Rossi, Yael Noy, Yuval Barzilay, Ana Perez, Emil Malucelli, Zohar Eyal, Dvir Gur, Stefano Iotti Calcium and nitrogen biomineralization studies in frozen hydrated whole cells using transmission soft x-ray microscopy
15:15 - 15:30 Sciences+CryoEM-O5	<u>Pablo Guerra</u> (<i>Cryo Electron Microscopy Platform IBMB-CSIC</i>) EM01-CRYO-TEM: a New Cryo Electron Microscopy Platform at ALBA
15:30 - 15:45 Sciences+CryoEM-O6	Saúl Alcalá-Pérez, José-Jesús Fernández, <u>María Rosario Fernández-Fernández</u> (<i>Centro de Investigación en Nanomateriales y Nanotecnología-Consejo Superior de Investigaciones Científicas (CINN-CSIC). El Entrego, Asturias, Spain.</i>) In vivo Labelling of Specific mRNAs Using CRISPR-deadCas13 Strategies as a Tool for Cryo-correlative Light Electron Microscopy
15:45 - 16:00 Sciences+CryoEM-O7	André Gouveia, Sharon Wolf, Michael Elbaum, <u>Célia Romão</u> (<i>ITQB NOVA - Universidade NOVA de Lisboa</i>) Cryo-STEM and X-ray fluorescence imaging reveals Electron-Dense granules as dynamic metal reservoirs in response to stress
16:00 - 16:05 Sciences+CryoEM-T1	<u>Andrés López-Perrote</u> (<i>Spanish National Cancer Research Centre (CNIO), Structural Biology Programme, Melchor Fernández Almagro 3, 28029 Madrid, Spain</i>), Eva María Martín-Cuevas, José Antonio Mérida-Cerro, Clara Aicart-Ramos, Ana González-Corpas, Johanne Le Coq, Jasminka Boskovic, Isabel Chillón, Oscar Llorca, Fernando Moreno-Herrero, Maite Huarde Structure of CONCR, a lncRNA that regulates DNA replication and chromatid cohesion
16:05 - 16:10 Sciences+CryoEM-T2	Marcos Gragera, David Herreros, <u>Roberto Melero</u> (<i>Centro Nacional de Biotecnología (CNB), CSIC, 28049, Madrid, Spain</i>), Carlos Oscar Sanchez Sorzano, Jose Maria Carazo Introducing FlexibilityHub, a new service for the analysis of molecular motions in cryoEM data.
Session 2.3 Materials Chair: Alvaro Mayoral	
14:15 - 14:35 Materials-O1	Malcolm Dearn, <u>Rafael V. Ferreira</u> (<i>GFMC, Departamento de Física de Materiales, Universidad Complutense de Madrid, Madrid 28040, Spain</i>), Juan I. Beltrán, Ellie-Mae Bambrick-Sattar, Javier Tornos, Jacobo Santamaría, Maria Varela, Gabriel Sánchez-Santolino, Laura Clark Charged domain walls revealed by electron ptychography
14:35 - 14:55 Materials-O2	<u>Mario Pelaez-Fernandez</u> (<i>Unité Matériaux et Transformations (UMET UMR 8207), U. Lille (Villeneuve d'Ascq), France</i>), Daniel del-Pozo-Bueno, Maya Marinova, Adrien Teurtrie, Marta Estrader, Germán Salazar-Alvarez, Raul Arenal, Hugues Leroux, Francesca Peiró, Sonia Estradé, Francisco de la Peña Low-energy Core-loss EELS as a Dose-effective Approach for Oxidation State Mapping
14:55 - 15:15 Materials-O3	<u>Daniel del Pozo Bueno</u> (<i>Departament d'Enginyeria Electrònica i Biomèdica & Institute of Nanoscience and Nanotechnology, Universitat de Barcelona, Martí i Franquès, 1, 08028 Barcelona.</i>), Andrea Sorrentino, Dino Tonti, Gabriel Jover Manas, Sònia Estradé, Francesca Peiró Advanced unsupervised clustering of Scanning Transmission X-Ray Microscopy spectral imaging using a UMAP and HDBSCAN framework
15:15 - 15:35 Materials-O4	Paula Aniceto-Ocaña, José Marqueses-Rodríguez, Juan M. Muñoz-Ocaña, María J. Fernandez-Trujillo, Andrés G Algarra, Antonio M Rodriguez-Chia, José J. Calvino, Carmen E. Castillo, <u>Miguel Lopez-Haro</u> (<i>Departamento Ciencia de los Materiales, Ing. Metalúrgica y Química Inorgánica, Universidad de Cádiz, 11510 Puerto Real, Cádiz, Spain.</i>) Quantitative Analysis of Metal-Metal Interactions in C-SACs from HAADF-STEM Images via Deep Learning, Mathematical Optimization, and DFT
15:35 - 15:40 Materials-T1	<u>Marta Navarro</u> (<i>Instituto de Nanociencia y Materiales de Aragón (INMA) CSIC-Universidad de Zaragoza, Zaragoza 50018, Spain</i>), Andoni Moriones, José Miguel Luque, Carlos Téllez, Patricia Gorgojo Atomic Force Microscopy and Electron Microscopy for the Autopsy of MD Desalination Membranes Containing 2D Nanoabsorbents



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15:40 - 15:45 Materials-T2	<u>Athique Ahmed Ali</u> (<i>Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, 08193 Barcelona, Catalonia, Spain</i>), Sangeeth Kallatt, Carina Babu Maliakkal, Aziz Genç, Peter Krogstrup, Jordi Arbiol Atomic-Scale Characterization of Josephson Junctions for Superconducting Quantum Devices
15:45 - 15:55 Materials-S1	<u>Min Wu</u> (<i>ThermoFisher Industry</i>) ThermoFisher Industry
16:15 - 16:45	Coffee Break
Session 2.4 Life Sciences+CryoEM Chair: Maria Luisa Jordao	
16:45 - 17:00 Sciences+CryoEM-O1	<u>Jorge Gutiérrez Seijo</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Sergio Pipaón, Ana Cuervo, Jesús G Ovejero, Cesar Santiago, María del Puerto Morales, José María Valpuesta, Jorge Cuéllar Structural Engineering of Poly-CCT5 Chaperonin: A Novel Platform for Nanoparticle Delivery
17:00 - 17:15 Sciences+CryoEM-O2	<u>Jimena Muntaner</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Moises Maestro-López, Tat Cheung Cheng, Jorge Cuéllar, José María Valpuesta, Eri Sakata Structural characterization of a complex involved in chaperone-assisted UPS degradation
17:15 - 17:30 Sciences+CryoEM-O3	Iker Arriaga, Aitor Navarro, Esther Uribe-Echeverría, María Isábal, Elisa Silva, Thomas Guarinoni, Valérie Lang, Haizea Iribar, César Trigueros, Philippe Moullier, Achille François, <u>Nicola G. A Abrescia</u> (<i>Structure and Cell Biology of Viruses Lab, CIC bioGUNE, Basque Research and Technology Alliance (BRTA), Derio, Bizkaia, 48160, Spain.</i>) Insights into AAV stability and particle integrity during viral vector biopharmaceutical manufacturing
17:30 - 17:45 Sciences+CryoEM-O4	<u>Sergio Pipaón Alcázar</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC). Darwin, 3. 28049 Madrid, Spain</i>), Ana Cuervo, José Moreno-Bautista, Elena Pascual, Isabel García-Álvarez, Aurora Martínez, José María Valpuesta, Jorge Cuéllar Functional and Structural Insights into the Modulation of the Chaperonin CCT by Small Molecules
17:45 - 18:00 Sciences+CryoEM-O5	<u>Inés Sáenz de Santa María Fernández</u> (<i>Institut Pasteur, Université Paris Cité, CNRS UMR 3691, Membrane Traffic and Pathogenesis Unit, Paris, France</i>), C Brou, JY Tinevez, I Vitrenko, T Cokelaer, E Moyal-Jonathan- Cohen, R Weigert, C Zurzolo Microscopy Across Scales: Visualizing Tunneling Nanotube-Mediated Mitochondrial Transfer in Glioblastoma
18:00 - 18:05 Sciences+CryoEM-T1	<u>Ana Cuervo</u> (<i>Centro Nacional de Biotecnología, CSIC, Campus de Cantoblanco. Madrid. Spain</i>), Hongtao Liu, Julia Kowal, Patricia Losana, David Herreros, Carlos Oscar Sorzano, Kaspar P Locher, José María Carazo Exploring Different Conformations of Hepatic ABCB11 Transporter
Session 2.4 Materials Chair: Lionel Cervera Gontard	
16:45 - 17:05 Materials-O1	<u>Partha Pratim Das</u> (<i>NanoMEGAS SPRL, Rue Émile Claus 49 bte 9, Brussels, 1050, Belgium</i>), Alejandro Gomez-Perez, Evangelos Grivas, Stavros Nicolopoulos, Simon J. L. Billinge, Athanassios S. Galanis, Edgar F. Rauch, Joaquim Portillo, Martijn J. Fransen ePDF Mapping: Revealing Amorphous Structures at Nanometer Resolution in TEM
17:05 - 17:25 Materials-O2	<u>Shunrui Luo</u> (<i>INL International Iberian Nanotechnology Laboratory, Braga</i>), Fatemeh Latifi, Rui Maia, Paulo Ferreira Advanced EELS Analysis of σ/π Bonding in Beam-Sensitive Materials
17:25 - 17:45 Materials-O3	<u>Ivan Pinto-Hugué</u> (<i>Catalan Institute of Nanoscience and Nanotechnology Nanotechnology - ICN2, (CSIC and BIST)</i>), Marc Botifoll, Jordi Arbiol Automating data processing in STEM: From micrographs to atomic models
17:45 - 17:50 Materials-T1	<u>Miguel Ángel Pérez García</u> (<i>IMEYMAT: Institute of Research on Electron Microscopy and Materials of the University of Cadiz. Puerto Real (Spain)</i>), Lionel Cervera Gontard Three-Dimensional Characterization of the Cathodoluminescence of as-Prepared Fluorite with 3DSEM-CL
17:50 - 17:55 Materials-T2	<u>Luis Eduardo Piedra Marín</u> (<i>International Iberian Nanotechnology Laboratory-INL Braga, Portugal</i>), Pedro Costa, Paulo Ferreira Atomic-Scale Visualization of Moiré Patterns in Graphene Using TEM
17:55 - 18:00 Materials-T3	Daiyuan Li, Sara Kayani, Qing Zhang, Zhuoya Dong, Daniel Pizarro, <u>Alvaro Mayoral</u> (<i>Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-Universidad de Zaragoza, 50009 Zaragoza, Spain</i>) Atomic-Scale Imaging of Beam-Sensitive Frameworks Using Electron Ptychography
18:00 - 18:10 Materials-S1	<u>Emilio Martín Zambrano</u> (<i>IESMAT</i>) IESMAT Industry
18:15 - 19:15	SME Annual Assembly
18:15 - 19:15	SPMicros Annual Assembly
21:00 - 23:00	Social Dinner



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September 26th - Day 4 (Friday) 4

Session 3.1 Life Sciences+CryoEM

Chair: María A. Oliva

09:10 - 09:30 Sciences+CryoEM-O1	María J Rodríguez-Espinosa (<i>National Center for Biotechnology (CNB-CSIC)</i>), Javier Collado-Ávila, César Santiago, Partha P. Das, Stavros Nicolopoulos, Jaime Martín-Benito Resolving crystal structures through serial electron diffraction - Presenters: María J Rodríguez-Espinosa and César Santiago
09:30 - 09:45 Sciences+CryoEM-O2	Beatriz Sancho-González (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Olivia Muriel-López, Jonathan Gabriel Piccirillo, David Delgado-Gestoso, José Javier Conesa, Noa Beatriz Martín-Cofreces, Francisco Sanchez-Madrid, José María Valpuesta Correlative multimodal cryo-microscopy for the structural characterization of oxaliplatin-induced immunogenic cell death
09:45 - 10:00 Sciences+CryoEM-O3	Martín Alcorlo-Pages , Samuel Miguez-Amil, Svein I. Støve, Marte Innselset Flydal, Aurora Martinez, Juan A. Hermoso, Rafael Fernandez-Leiro (<i>Centro Nacional de Investigaciones Oncológicas (CNIO)</i>) Structural and Mechanistic Insights into Human Phenylalanine Hydroxylase
10:00 - 10:05 Sciences+CryoEM-T1	David Delgado-Gestoso (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Diego Carlero, Andrea Modrego, Daniel Cenisergue, Noelia Zamarreño, Jaime Martín-Benito, Rocío Arranz Implementing Cryo-CLEM Methodologies to Study Host-Pathogen Interactions in Influenza Infection
10:05 - 10:10 Sciences+CryoEM-T2	Rafael Nuñez-Ramirez (<i>Centro de Investigaciones Biológicas Margarita Salas (CIB), CSIC, Madrid 28040, Spain</i>), Begoña Pou, Ernesto Arias-Palomo Single particle analysis in a Talos L120C G2 cryo-electron microscope
10:10 - 10:15 Sciences+CryoEM-T3	Marta Pardo-Piñón (<i>Instituto Biofisika (UPV/EHU, CSIC), Leioa, Spain</i>), Raffaele Coray, María Lucas, Miguel Romano-Moreno, Adriana L. Rojas, Daniel Castaño, Aitor Hierro Spatial organization of the Retromer-SNX12 membrane coat
10:15 - 10:25 Sciences+CryoEM-S1	Abel Sainz (<i>Carl Zeiss Iberia</i>) ZEISS Industry

Session 3.1 Materials

Chair: Daniel del Pozo Bueno

09:15 - 09:35 Materials-O1	Francisco Fernandez-Canizares (<i>Departamento de Física de Materiales, Universidad Complutense de Madrid, Madrid 28040, Spain</i>), Javier Rodríguez-Vazquez, Rafael V. Ferreira, Isabel Tenreiro, Alberto Rivera-Calzada, Amalia Fernando-Saavedra, Miguel A. Sanchez-García, Yong Xie, Andres Castellanos-Gomez, Maria Varela, Gabriel Sánchez-Santolino Automated Atomic Site Identification by 4D - Scanning Transmission Electron Microscopy
09:35 - 09:55 Materials-O2	Beatriz Galiana (<i>Departamento de Física, Universidad Carlos III de Madrid</i>), Elisa García-Tabares, Alicia Gonzalo, Jose Miguel Reynolds, Mario Santiuste STEM characterization of III-V nanowires using 4D-STEM and Differential Phase Contrast
09:55 - 10:15 Materials-O3	David Llorens Rauret (<i>ICN2 (CSIC and BIST), 08193 Campus UAB, Bellaterra, Barcelona, Spain</i>), Ranit Ram, F. Pelayo García de Arquer, Alba Garzón Manjón, Jordi Arbiol Atomic-Scale Insights into CoWO4 for Water Splitting

10:30 - 11:15 **Coffee Break**

11:15 - 12:15 **CryoEM Lecture. Giulia Zanetti. Chair: Javier García Nafria**

12:15 - 12:20 **PhD Awards on Material Science sponsored by Thermofisher**

12:20 - 12:40 **PhD Award: Daniel del Pozo Bueno**

12:40 - 13:00 **PhD Award: Marc Botifoll Moral**

13:00 - 14:15 **Lunch**

14:15 - 15:15 **Life Sciences Lecture. Wiebke Mobius. Chair: Juan de Dios Alché Ramírez**

15:15 - 15:20 **PhD Award on Technical Developments sponsored by Izasa**

15:20 - 15:40 **PhD Award: David Herreros Calero**

15:40 - 15:45 **PhD Award on Technical Developments sponsored by Milexia**

15:45 - 16:05 **PhD Award: Rafael V. Ferreira**

16:05 - 17:05 **Closing Lecture: Amadeo López Vázquez de Parga. Chair: Francesca Peiró**

17:05 - 17:15 **SME Exhibition presentation. Juande Alché**

17:15 - 17:40 **Closing Ceremony and Awards**



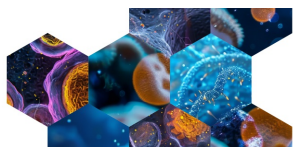
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Poster Contribution

005	<u>Xinxin Hu</u> (<i>Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, 08193 Barcelona, Catalonia, Spain</i>), Yingzhuo Lun, Umair Saeed, Iván Pinto-Huguet, Kapil Gupta, Bernat Mundet, José Santiso, David Pesquera, Gustau Catalan, Jordi Arbiol Twist-induced Polar Structures in Free-standing Oxide Membranes
012	Ivan Pinto, Jordi Arbiol, <u>Josep Cruaños</u> (<i>ICN2 (CSIC and BIST), 08193 Campus UAB, Bellaterra, Barcelona, Spain</i>) FFneT Project: Automated Approach to FFT Peak Detection
042	<u>Luisa María Valencia Liñán</u> (<i>Instituto de Ciencia de Materiales de Sevilla, Universidad de Sevilla, CSIC, Av Americo Vespucio, Seville, Spain</i>), Miriam Herrera Collado, Sergio Ignacio Molina Rubio Chemical evolution of polymer materials for additive manufacturing during STEM-EELS electron beam irradiation
043	<u>Vanessa Costa-Ledesma</u> (<i>Laboratory of Electron Nanoscopies - MIND - IN2UB - Dept. Enginyeria Electrònica i Biomèdica, Universitat de Barcelona</i>), Daniel del Pozo-Bueno, Francesca Peiró, Sònia Estradé WhatEELS 2.0: open source software based in Python for EELS analysis
054	<u>Jinhai LIU</u> (<i>ICN2 (CSIC and BIST), 08193 Campus UAB, Bellaterra, Barcelona, Spain</i>), Jing YU, Andreu Cabot, Jordi Arbiol Transmission electron microscopy studies on the changes in the cathode structure of high-load electrodes with spatial arrangements
061	<u>Jonathan Gabriel Piccirillo</u> (<i>Centro Nacional de Biotecnología (CNB-CSIC)</i>), Jose Javier Conesa, David Delgado-Gestoso, Francisco Javier Chichon Chichon, Rocio Arranz, Jose Maria Valpuesta Cryo FIB-SEM Volume Imaging: issues and solutions
082	<u>Simon Hettler</u> (<i>Laboratory for Electron Microscopy, Karlsruhe Institute for Technology, Karlsruhe, Germany</i>), Raul Arenal Detailed STEM-EELS Investigations of Iron-Oxide Nanoparticles with Co/Ni-Ferrite Shells
093	<u>Daiyuan Li</u> (<i>Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-Universidad de Zaragoza 50009, Spain</i>), Itziar Arnaiz, Yaregal Awoke, Sara Kayani, Qing Zhang, Isabel Diaz, Daniel Pizarro, Mayoral Alvaro Electron Microscopy Study of the Interzeolite Transformation from Natural Mordenite to ZSM-5
097	<u>Enrique Carbo-Argibay</u> (<i>International Iberian Nanotechnology Laboratory, Braga, Portugal.</i>), Dmitri Y. Petrovykh Access to State-of-the-Art Electron Microscopy Facilities through INFRACHIP Project
102	<u>Rocio Coloma</u> (<i>Department of Macromolecular Structures, Centro Nacional de Biotecnología (CNB), CSIC, Madrid, Spain</i>), Irene Cancela, Diego Carlero, Andrea Modrego Virus-Free High-Throughput Screening of Influenza Antivirals Using Widefield Microscopy and a Fluorescent Mini-Replicon System
108	<u>Esther Masia Sanchis</u> (<i>Laboratorio Polimeros terapeuticos y plataforma de cribado del CIPF</i>), Snezana Đorđević, Esther Martínez, María J. Vicent IDENTIFICATION OF EXOSOME MODULATORS IN 3D BREAST CANCER MODELS USING EXOSCREEN AND CELL PAINTING TECHNOLOGIES
111	<u>Carmen Majano López de Madrid</u> (<i>CENTRO NACIONAL DE BIOTECNOLOGIA (CNB-CSIC)</i>), Rebeca Bocanegra, Borja Ibarra, Julia Rubio, José Requejo, Javier María Rodríguez, Jorge Cuellar, José María Valpuesta Single-Molecule and Cryo-EM Approaches to Study the Folding Mechanism of Human CCT
113	<u>Carmen García</u> (<i>Spanish National Cancer Research Centre (CNIO), Structural Biology Programme, Melchor Fernández Almagro 3, 28029 Madrid, Spain</i>), Andrés López-Perrote, Jasminka Boskovic, Óscar Llorca Cryo-EM reveals conformational changes in the RUVBL1-RUVBL2 ATPase induced by ATP binding
114	<u>Javier Coloma</u> (<i>Structural Biology Programme, Spanish National Cancer Research Centre (CNIO), Madrid, Spain.</i>), Nayim Gonzalez-Rodriguez, Jaime Alegrio Louro, Neal F. Lue, Oscar Llorca Characterization of the yeast Cdc13 dimeric protein
116	<u>Laura Villamayor-Belinchón</u> (<i>Instituto de Biomedicina de Valencia (IBV-CSIC)</i>), Rosendo Bresó, José Luis Llácer, Teresa Cortés Reconstitution of the Mycobacterium tuberculosis translation system to understand translation initiation control
117	<u>Javier Pérez-Rueda</u> (<i>Departamento de Bioquímica y Biología Molecular, Universidad de Valencia, Burjassot 46100, Valencia, Spain</i>), María Jesús Marcote, Fernando Aniento COPII (Coat Protein II) vesicles and response to stress in plants
118	<u>Kapil Gupta</u> (<i>Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, 08193 Barcelona, Spain</i>), Lavinia Saltarelli, Carla Torres, Juri Banchewski, Mahel Voulhoux, Silvia Rasi, Diana Garcia, Emma Ghiara, Aiswarya Kethamkuzhi, Ona Mola, Elzbieta Pach, Eduardo Solano, Cristian Mocuta, Xavier Obradors, Teresa Puig Understanding the Microstructure of High Current Carrying REBCO Superconducting Films grown via Transient Liquid Assisted Growth (TLAG)
120	<u>Javier Collado-Ávila</u> (<i>CENTRO NACIONAL DE BIOTECNOLOGIA (CNB-CSIC)</i>), Eva García-Cuesta, Rocío Arranz, Jose Miguel Rodríguez, Mario Mellado, César Santiago Structural studies for the development of allosteric drugs against CXCR4
121	<u>Ángela Carrión-Antolí</u> (<i>Institute for Biocomputation and Physics of Complex Systems (BIFI) and Laboratory of Advanced Microscopy (LMA), University of Zaragoza, Zaragoza, Spain</i>), Tomasz Maciej Stepniewski, Andrés Gonzalez Ramirez, Sandra Arroyo-Urea, Jana Selent, Javier García-Nafria Atypical G Protein Coupling and Activation Mechanism of GPR15 Revealed by Cryo-EM
123	<u>Irene Rizzuto</u> (<i>Centro Investigaciones Biológicas Margarita Salas</i>), Mercedes Spinola Amilibia, Ernesto Arias Palomo Structural and Dynamic insights into the IS21 Transpososome
125	<u>Juan Ortiz Mateu</u> (<i>University of Valencia (Spain). Biotecmed Institute, Faculty of Biochemistry and Molecular Biology.</i>), Guy Pearson, Jeremy Carlton, Mark Skehel, Manuel Mateo Sánchez del Pino, María Jesús García Murria, Luis Martínez Gil, Ismael Mingarro Role of the SARS-CoV-2 Membrane protein hinge region and C-terminus tail on protein trafficking and virus assembly
126	<u>Joaquín Otón</u> (<i>ALBA Synchrotron - CELLS</i>), Kevin Mamprin, Josué Gómez-Blanco, Johannes Groen, Ana Joaquina Pérez-Berná, Eva Pereiro CryoSIM at ALBA: a new facility for high-resolution correlative cryo fluorescence and soft X-ray tomography
128	<u>Milagros Buffa</u> (<i>Targeted Therapies on Cancer and Inflammation, Príncipe Felipe Research Center (CIPF), Av. Eduardo Primo Yúfera 3, 46012 Valencia, Spain</i>), Diego Leiva, Alicia García-Jareño, Ana García-Sáez, Raed Shalaby, Mónica Sancho, Mar Orzáez Structural Insights into the Regulation of BOK Pore Formation by MCL1: First Findings
129	<u>M.Teresa Bueno-Carrasco</u> (<i>Instituto de Investigaciones Químicas (IIQ) - cicCartuja</i>), Francisco Javier Chichón, Noelia Zamarreño, David Delgado, Jonathan Piccirillo, Olivia Muriel, Andrea Modrego, César Santiago, José María Valpuesta, Rocío Arranz Accelerating Drug Discovery with CryoEM: An Expanding Strategic Infrastructure
130	<u>Ona Falcó</u> (<i>LENS-MIND, Departament d'Enginyeria Electrònica i Biomèdica, U. Barcelona (Barcelona), Spain</i>), Alicia Ruiz-Caridad, Paul Nizet, Francesco Chiabrera, Albert Tarancon, Sònia Estradé, Lluís Yedra, Francesca Peiró Strain and phase evolution in SrFeO _{3-x} thin films: an HRTEM and EELS analysis of oxygen-induced structural distortions



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131 Jose Manuel Aquilella Porcar (*CENTRO NACIONAL DE BIOTECNOLOGIA (CNB-CSIC)*), Eduardo Muñoz Guijarro, Esther Ortega Portero
Structural characterization of macromolecular complexes involved in PCNA unloading and deubiquitination (K164).