



12TH INTERNATIONAL MEETING
OF THE SPANISH SOCIETY ON
NEUTRON TECHNIQUES

13~15 JULY 2026 BILBAO

PROGRAMME





SETN 2026
Book of abstracts

Scan the QR Code or access
<https://setn2026.es/book-of-abstracts/>

Welcome to the 12th International Conference of the SETN – Bilbao 2026

On behalf of BCMaterials and the University of the Basque Country (EHU), we invite you to participate in the 12th Meeting of the Spanish Society of Neutron Techniques (SETN 2026), which will be held from July 13th to 15th, 2026, at the emblematic Bizkaia Aretoa of the EHU in Bilbao.

For this edition, we wanted to design a program aimed at fostering scientific discussion within the community. Our purpose is to create a vibrant forum where experimental results, new hypotheses, and future challenges take center stage. We want to discuss how neutron science allows us to decipher complex problems at the frontier of knowledge, covering fields as diverse as materials science, magnetism, soft matter, chemistry, biology, and fundamental physics.

To encourage this exchange of ideas, the program will prioritize time dedicated to debating oral communications and poster sessions, accompanied by an excellent panel of plenary and keynote speakers. Furthermore, to support all this science, it is vital to stay connected with large-scale infrastructures. Therefore, the program will include sessions exclusively dedicated to presenting updates on the main neutron sources of reference for the Spanish community. Similarly, we will have specific spaces to learn about the status and latest developments of the Spanish CRG instruments, whose strategic role remains fundamental in boosting our research capacity.

Bilbao, with its innovative and welcoming character, will provide the perfect environment to get inspired, debate openly, and continue consolidating the excellence of our community. We look forward to welcoming you in Bilbao!

**José M^a Porro Azpiazu, on behalf of the
organizing committee BCMaterials and UPV/EHU**



MONDAY, JULY 13

08:15-09:00 **Registration / Registro**

09:00-09:30 **Opening / Inauguración**

Session 1 Chairperson: Jose María Porro

- 09:30-10:15 Plenary: Sarah Rogers (ISIS)
"Studying Soft Matter and Bioscience Systems with Neutrons"
- 10:15-10:30 Navid Qureshi (ILL)
"Toroidicity as a route towards non-volatile quaternary memory in antiferromagnets"
- 10:30-10:45 Manuel Salado (BCMaterials)
"Unravelling Buried Interfaces: Using Neutron Reflectometry to Optimize Interphase Design and Mitigate Device Degradation"
- 10:45-11:00 Jon Maiz (CFM-MPC)
"Resolving Polymer Dynamics in Dipolar Glass Systems"

11:00-11:30 **Coffee Break / Pausa Café**

Session 2 Chairperson: Luis Fernández Barquín

- 11:30-12:00 Keynote: Andreas Michels (Uni Lux)
"Neutron Scattering as a Tool to Study Spin Textures in Magnetic Nanomaterials"
- 12:00-12:15 Marité Cárdenas (Biofisika Inst.)
"The role of the lipid helper in LNP structure, composition, and how protein corona forms"
- 12:15-12:30 Jonathan F. Gebbia (UPC)
"Reorientational dynamics across a solid–solid transition in tetrachloro-m-xylene studied by quasielastic neutron scattering"
- 12:30-12:45 Claudia Mondelli (CNR-IOM-OGG)
"Neutrons for conservation of stone materials and organic based artefacts in cultural heritage. The project nanoHERCULES"
- 12:45-13:00 Javier Campo (INMA)
"Is there a new magnetic phase in MnSi, known as the B phase, at low temperatures?"
- 13:00-13:15 Ignacio Porras (UGranada)
"Producing an optimal accelerator-based clinical neutron beam for Boron Neutron Capture Therapy"
- 13:15-13:30 Roberto Fernandez (BCMaterials)
"Definitive Mapping of Correlated and Uncorrelated Defectivity in Zr(IV)-MOFs studied by means of High-Resolution X-Ray and Neutron Diffraction"

LUNES, 13 DE JULIO

13:30-14:45 **LUNCH / ALMUERZO**

Session 3 Chairperson: Arantxa Arbe

- 14:45-15:15 Keynote: Mónica Jiménez (ILL)
"From Molecular Vibrations to Energy Materials: Insights from Inelastic Neutron Scattering"
- 15:15-15:30 Aritz Herrero (EHU)
"Impact of Si–Ge Substitution on the Magnetic Ordering and Magnetocaloric Performance of Tb₂Co(Si,Ge)₂ Intermetallics"
- 15:30-15:45 Henrik L. Andersen (ICMM)
"Structural disorder and lithium diffusion pathways in lithium halide solid electrolytes"
- 15:45-16:00 Aritz Villar (BCMaterials)
"Comparison of Spin depths profiles in Ta-Buffered and Unbuffered Co/Pt thin films via polarized neutron reflectometry: Impact on All-Optical Switching"

Sesión Fuentes / Sources Session

Chairperson: Jon Maiz

- 16:00-16:15 **ILL Update**
- 16:15-16:30 **ISIS Update**
- 16:30-16:45 **ARGITU Update**

16:45-17:30 **Poster session & Coffee Break**

17:30-18:30 **Round table / Mesa redonda**

19:00-21:00 **SOCIAL ACTIVITY**

TUESDAY, JULY 14

Session 4 Chairperson: Jose Luis García Muñoz

- 09:00-09:45 Plenary: Gwenaëlle Rousse (USorbonne)
"Li-ion Batteries: a gateway to new compounds and new structures"
- 09:45-10:00 Cristian Mendes Felipe (BCMaterials)
"Photocurable carbonaceous composites with tunable piezoresistive response"
- 10:00-10:15 Alba Sanz Prada (Uni. Oviedo)
"Simple-collinear 30° off-c-axis ferromagnetic structure of GdFeSi"
- 10:15-10:30 Armando Maestro (CFM-MPC)
"Neutron and X-ray Scattering for Probing Protein-Membrane Interactions and Peptide Self-Assembly"
- 10:30-10:45 Natalia Río (EHU)
"Role of Fe, Co and Cu addition in the structural and magnetic properties of Ni-Mn-Ga Magnetic Shape Memory Alloys"
- 10:45-11:00 Alexander Bittner (CIC nanoGUNE)
"Water layers on a virus – scanning probe microscopy & neutron reflectometry"

11:00-11:30 Coffee Break / Pausa Café

Session 5 Chairperson: Elena Solana

- 11:30-12:00 Keynote: Lukas Helfen (ILL)
"New opportunities for Neutron Imaging at the Institut Laue-Langevin"
- 12:00-12:15 Noelia Marcano (Uni. Cantabria)
"Evolution at the nanoscale of magnetic clustering of the Griffiths-like phase in magnetocaloric $Tb_{5-x}La_xSi_2Ge_2$ "
- 12:15-12:30 Eneko Sebastian (BCMaterials)
"Elucidating the nanostructure of screen-printed high-resolution gas sensors using neutron scattering"
- 12:30-12:45 Matilde Saura-Murquiz (UCM)
"Neutron Scattering Insights into Structure and Disorder in Functional Oxides"
- 12:45-13:00 Pablo Álvarez Alonso (Uni. Oviedo)
"The Interplay of Temperature, Magnetic Field, and Pressure on the First-Order Magnetoelastic Phase Transition in $Fe_{49}Rh_{51}$ Bulk Alloy"
- 13:00-13:30 Keynote: Jose M. Martin Garcia
"From Static Structures to Molecular Movies: Time-Resolved Crystallography at X-ray Free-Electron Lasers"
 AUSE invited talk

MARTES, 14 DE JULIO

13:30-15:00 LUNCH / ALMUERZO

Session 6 Chairperson: Viktor Petrenko

- 15:00-15:30 Keynote: J. Alberto R. Velamazán (ILL)
"Polarized neutron diffraction for the study of novel (and not so novel) quantum materials"
- 15:30-15:45 Manuel Gómez (CFM-MPC)
"Structural relaxation in complex liquids with non-covalent interactions"
- 15:45-16:00 Víctor Ramírez (Uni. Alicante)
"Post synthetic amine modification of MIL-101(Cr): Effects on water distribution and methane hydrate formation in confined nanospace"
- 16:00-16:15 Paula Rodríguez (BNC/BCMaterials)
"Protein Adsorption on Self-Polarized β -PVDF Ultrathin Film by Neutron Reflectometry"

Instruments Session / Sesión Instrumentos

Chairperson: Patricia Lázpita

- 16:15-16:30 D1B Update
- 16:30-16:45 XtremeD Update
- 16:45-17:00 Miracles Update

17:00-18:00 Poster session & Coffee Break

- 18:00-18:30 Asamblea Ordinaria SETN
- 18:30-19:00 Asamblea Extraordinaria SETN

21:00 CONFERENCE DINNER

WEDNESDAY, JULY 15

Session 7 Chairperson: Antonio Urbina

- 09:00-09:45 Plenary: Arantxa Arbe (CFM-MPC)
"Neutron Scattering with Polarization Analysis: New Insights into Collective and Self Dynamics of Liquids and Glass-forming Systems"
- 09:45-10:00 Jose Luis Garrido (Uni. Cantabria)
"Zero and Negative Thermal Expansion in Tb_2Fe_{17} alloy Investigated by Neutron Diffraction"
- 10:00-10:15 Vanessa Galván (BCMaterials)
"Neutron scattering study of polysaccharide hydrogels with magnetic-piezoelectric bi-fillers"
- 10:15-10:30 Silvia Arrese-Igor (CFM-MPC)
"Tuning Polymer Dynamics with Dipolar Side Chains"
- 10:30-10:45 Chenjun Tang (ICMAB)
"The antiferromagnetic transition of β - Fe_2O_3 iron oxide"
- 10:45-11:00 Lucía S. de Bustamante (ICMM)
"Synergistic Effects between Ni Exsolution and B-site Doping in $SrMoO_3$ Perovskites for SOFC Applications"

11:00-11:30 **Coffee Break / Pausa Café**

MIÉRCOLES, 15 DE JULIO

Session 8 Chairperson: Armando Maestro

- 11:30-12:00 Keynote: Viktor Petrenko (BCMaterials)
"Neutron scattering for study bio-macromolecules"
- 12:00-12:15 Romualdo Santos (ICMM)
"Revealing the Structural, Magnetic, Transport, and Magnetocaloric Properties of High-Pressure Synthesized $R_xTi_2S_4$ ($R = Fe, Ni$) Sulfides"
- 12:15-12:30 Purushottam S. Dubey (CFM-MPC)
"NSAIDs Induced Dynamical Heterogeneity in Brain Lipid Membrane Mimetics"
- 12:30-12:45 Maite Perfecto (EHU)
"Bringing Mechanochemistry to the Neutron Beam: Set-up Development, Real-Time ND Monitoring, and the Scale Trade-off"
- 12:45-13:00 Luis Fernández Gallego (UCM)
"Magnetic order and magnetocaloric effect in $A_2MMn_3O_8$ hyperkagome spinels"
- 13:00-13:30 Elvira Vidal (BCMaterials)
"Insights into the Local and Long-Range Structure of Metal-Doped ZIF-8 under CO_2 and CH_4 loading via Rietveld Refinement and Inelastic Neutron Spectroscopy"
- 13:15-13:30 Miguel Angel González (ILL)
"Influence of water in the dynamics of a prototypical ionic liquid: Revisit of QENS results using molecular dynamics simulations"

13:30-13:45 **Closure / Cierre**

13:45-15:00 **LUNCH / ALMUERZO**



POSTER PRESENTATIONS

PRESENTACIONES DE POSTER

Poster #	Presenter
1	Luis Fernández Barquín (Universidad de Cantabria) <i>"On the low transition magnetic transition of bulk and magnetosome magnetite"</i>
2	Pablo Ferrer Fernandez (Biofisika) <i>"Lipid bilayers membranes: Relevance of curvature in phase separation characteristics"</i>
3	Jose Pereira (ESS Bilbao) <i>"Methyl Group Dynamics in the Conformational Flexibility of Methacetin"</i>
4	Marta Aldecoa (CFM-MPC) <i>"Topology-Controlled Dynamics and Phase Segregation in Bottlebrush Polymers"</i>
5	Mariana Ríos (BCMaterials) <i>"Exploring anisotropic magnetocaloric performance via Fe/Ti substitution in Ni-Co-Mn-Ti Heusler-type melt-spun ribbons"</i>
6	Iñaki Perez Landazabal (UPNA) <i>"Inelastic Neutron Scattering Analysis of Silica Xerogels"</i>
7	Antonio Urbina (UPNA) <i>"Vibrational spectroscopy of phenol absorption on functionalized Fe-C core-shell nanoparticles for water cleaning"</i>
8	Maidier Pinillos (BCMaterials) <i>"Magnetostuctural evolution in Ni-Mn-Co-Ti metamagnetic shape memory alloys: a temperature-dependent neutron diffraction study"</i>
9	Navid Qureshi (ILL) <i>"Mag2Pol: A user-friendly software for the analysis of powder and single-crystal diffraction data"</i>

Poster #	Presenter
10	Vicente Recarte (UPNA) <i>"Microstructural evolution during crystallization process in Ni-Co-Mn-Sn and Ni-Co-Mn-In metamagnetic shape memory alloys"</i>
11	Cristian Mendes (BCMaterials) <i>"Unveiling microstructure domains in novel bio-based polymer matrix doped with expand particles for shut-down capabilities for battery applications"</i>
12	Chenjun Tang (ICMAB) <i>"New type of high-T_s magnetic spiral in layered YBCFO type perovskites"</i>
13	Gabriele Dilena (BCMaterials) <i>"Linking interphases' structure and optical response in CdS quantum dots: the role of SANS"</i>
14	Elena Solana (U. Complutense Madrid) <i>"Exploring low dimensional and frustrated magnets as magnetocalorics for efficient refrigeration"</i>
15	Luis Fernandez Gallego (U. Complutense Madrid) <i>"Structural evolution and magnetic behaviour in the $La_{0.3}Ca_{0.7}Fe_{1-x}Cr_xO_{3.5}$ solid solution"</i>
16	Teresa Blasco (ITQ) <i>"Ammonia adsorption on small pore Ag-containing zeolites"</i>
17	Cristina Echevarria (Universidad de Oviedo) <i>"Pressure-Dependent Nitrogenation of Nd-Based $ThMn_{12}$-Type Alloys for Rare-Earth-Lean Permanent Magnets"</i>
18	Elena Solana (U. Complutense Madrid) <i>"Devil's staircase magnetic spirals in $Ni_{2-x}Co_xScSbO_6$"</i>





12TH INTERNATIONAL MEETING
OF THE SPANISH SOCIETY ON
NEUTRON TECHNIQUES

13~15 JULY 2026 BILBAO

PLATINUM SPONSORS



SILVER SPONSOR

