IBERLEEM

Madrid 2025

Place:
Salón de Actos
Instituto de Química Física Blas Cabrera
c/Serrano, 119
Madrid 28006

Dates: 15-17 October 2025

Comité Organizador

Adrian Quesada
Arantzazu Mascaraque
Clara Gutiérrez-Cuesta
José Emilio Prieto
Juan de la Figuera
Michael Foerster
Miguel Angel Niño
Victor Rojo

Organization details

A laptop computer with Windows will be available for the presenters. Personal computers can be used, provided they have HDMI output.

Talks at the Salón de Actos of the Instituto de Química Física. Posters at the main hall.

Tutorials and Status talks

30 minutes total (25 min talk + 5 min discussion)

Contributed Talks

25 minutes total (20 min talk + 5 min discussion)

Posters

A0 Size.

Thursday Lunch at the CSIC Mensa.

IBERLEEM PROGRAM

Short Scientific Program

Wednesday 15th, October

14:45 Opening Ceremony
15:00-16:30 Status and perspectives
16:30-18:00 tutorials

Thursday 16th, October

9:15 am-10:55 am Session I Magnetism: oxides
10:55 am-11:25 Coffee Break
11:25 am-1:05 pm Session II Electronic Structure
1:05 pm-3:00 pm Lunch Break
3:00 pm- 4:40 pm Session III Magnetism: Interfacial effects in heterostructures
4:40 pm-6:00 pm Posters
8:00 pm-10 pm Conference dinner

Friday 17th, October

10:00 am- 11:15 am Session IV Thin films and nanostructures growth
11:15 am-11:45 am Coffee Break
11:45 am-12:45 am Session IV Continuation
12:45 pm Closing remarks and visit to the Madrid LEEM

Complete Scientific Program

Wednesday 15th, October

Chairperson: Adrian Quesada
14:45-15:00 Opening Ceremony
15:00-15:30 Juan de la Figuera, “State and Future of the Madrid LEEM“
15:30-16:00 Michael Foerster , “State and Future of the Alba PEEM”
16:00-16:30 Manuel Izquierdo, “Perspectives for Femtosecond Time-Resolved PEEM Experiments at Free Electron Laser Facilities”
16:30-17:15 Miguel Angel Niño, LEEM Tutorial
17:15-18:00 Natalia Kwiatek-Maroszek, PEEM Tutorial
18:00 End of day one

Thursday 16th, October

I Magnetism: oxides

Chairperson: Saúl Vélez
9:15-9:40 Anna Mandziak “Distribution of antiferromagnetic domains in Fe-doped NiO thin films on Ru(0001)”

9:40-10:05 Arantxa Fraile Rodríguez “Size-dependent antiferromagnetism and direct observation of Néel axes in NiO nanoparticles”
10:05-10:30 Clara Gutiérrez Cuesta “Structural and magnetic properties of the Fe_3O_4 (110) surface below the Verwey transition”
10:30-10:55 Álvaro Blázquez “Microspectroscopy study of the magnetic textures in a permalloy/hematite bilayer across the Morin transition”

10:55-11:25 Coffee break

II Electronic structure

Chairperson: Manuel Izquierdo
11:25-11:50 Mariela Menghini “Resistive switching in a Mott insulator initiated by topological defects”
11:50-12:15 Raquel Sánchez “Correlating LEEM and NAP-XPS in ceria-based model catalysts for CO_2 activation”
12:15-12:40 Trung-Phuc “Layered multiple scattering approach to X-ray photoelectron diffraction: theory and application”
12:40-13:05 Nekane Aramburu “Electronic structure of Gd/W(110): from one atomic layer to bulk”

13:05-15:00 Lunch (at the CSIC mensa)

III Magnetism: Interfacial effects in heterostructures

Chairperson: Arantxa Fraile Rodríguez
15:00-15:25 Saúl Vélez “X-ray detection of current-induced orbital angular momentum accumulation at Cu/oxide interfaces”
15:25-15:50 Alba Guio “Chiral Magnetic Configurations in Graphene-Based Heterostructures with Tuned Dzyaloshinskii–Moriya Interaction”
15:50-16:15 Alejandro Álvarez-Chico “Synthetic ferrimagnets based on Fe/Gd ultrathin films: the role of interfaces in ultrafast magnetization dynamics”
16:15-16:40 Adrián Quesada “A SPLEEM study of the non-monotonic behavior of magnetic anisotropy near the spin reorientation transition of Fe ultrathin films”

16:40-18:00 Poster Session

P1-Bejarano, Iván “Fundamental understanding of the magnetism of $SmCo_5$ nanostructures”
P2-Fornal, Kalina, “High-temperature oxygen-assisted MBE growth and characterization of MnO on Ru(0001)”
P3-Kwiatek-Maroszek,Natalia “ Implementation of the virtual electrode method in a synchrotron LEEM-PEEM station for in-situ studies of Li and Na anode formation in solid state batteries”
P4-Orero, Guzmán “Magnetic Optical Kerr Effect Microscopy for studying magnetic textures”
P5-Perna, Paolo “Enhanced spin-orbit torque efficiency via graphite thickness in Co/Pt multilayers”
P6-Santos, Benito “Tailoring the spin reorientation transition of Co films by Pd monolayer capping”

20:00-22:00 Conference Dinner

Friday 17th, October

IV Thin films and nanostructures growth

Chairpersons: Anna Mandziak, Mariela Menghini
10:00-10:25 José Emilio Prieto “Growth and characterization of nanostructures of Ba, Fe and Mn tungstates by single-metal MBE on W(110)”

10:25-10:50 Pablo Hernández “Nanoscale imaging of solid-state battery anodes grown by VE-LEEM”
10:50-11:15 Bjon Riedel “Heteroepitaxial Growth of Sm_2O_3 Nanoislands on Cu(111)”

11:15-11:45 Coffee break

11:45-12:10 Carmen del Pino “*In-situ* solid-state dewetting of Ag nanoparticles by LEEM”
12:10-12:45 Adrián Sáez “Synthesis and characterization of a two-dimensional ionic hydride”

12:45-13:30 Final remarks and visit to Madrid LEEM

Contributions

Contribution List: Talks

1- Álvarez-Chico, Alejandro “Synthetic ferrimagnets based on Fe/Gd ultrathin films: the role of interfaces in ultrafast magnetization dynamics”
2- Aramburu, Nekane “Electronic structure of Gd/W(110): from one atomic layer to bulk”
3- Blázquez, Álvaro “Microspectroscopy study of the magnetic textures in a permalloy/hematite bilayer across the Morin transition”
4- Fraile Rodríguez, Arantxa “Size-dependent antiferromagnetism and direct observation of Néel axes in NiO nanoparticles”
5- Guio, Alba “Chiral Magnetic Configurations in Graphene-Based Heterostructures with Tuned Dzyaloshinskii–Moriya Interaction”
6- Gutiérrez Cuesta, Clara “Structural and magnetic properties of the Fe_3O_4 (110) surface below the Verwey transition”
7- Hernández, Pablo “Nanoscale imaging of solid-state battery anodes grown by VE-LEEM”
8- Izquierdo, Manuel “Perspectives for Femtosecond Time-Resolved PEEM Experiments at Free Electron Laser Facilities”
9- Mandziak, Anna “Distribution of antiferromagnetic domains in Fe-doped NiO thin films on Ru(0001)”
10- Menghini, Mariela “Resistive switching in a Mott insulator initiated by topological defects”
11- del Pino, Carmen “*In-situ* solid-state dewetting of Ag nanoparticles by LEEM”
12- Prieto de Castro, José Emilio “Growth and characterization of nanostructures of Ba, Fe and Mn tungstates by single-metal MBE on W(110)”
13- Quesada, Adrián “A SPLEEM study of the non-monotonic behavior of magnetic anisotropy near the spin reorientation transition of Fe ultrathin films”
14- Riedel, Bjon “Heteroepitaxial Growth of Sm_2O_3 Nanoislands on Cu(111)”
15- Sáez, Adrián “Synthesis and characterization of a two-dimensional ionic hydride”
16- Sánchez, Raquel “Correlating LEEM and NAP-XPS in ceria-based model catalysts for CO_2 activation”
17- Trung-Phuc “Layered multiple scattering approach to X-ray photoelectron diffraction: theory and application”
18- Vélez, Saúl “X-ray detection of current-induced orbital angular momentum accumulation at Cu/oxide interfaces”

Contribution List: Posters

1- Bejarano, Iván “Fundamental understanding of the magnetism of $SmCo_5$ nanostructures”
2- Fornal, Kalina, “High-temperature oxygen-assisted MBE growth and characterization

of MnO on Ru(0001)”
2- Kwiatek-Maroszek,Natalia “ Implementation of the virtual electrode method in a synchrotron LEEM-PEEM station for in-situ studies of Li and Na anode formation in solid state batteries”
3- Orero, Guzmán “Magnetic Optical Kerr Effect Microscopy for studying magnetic textures”
4- Perna, Paolo “Enhanced spin-orbit torque efficiency via graphite thickness in Co/Pt multilayers”
5- Santos, Benito “Tailoring the spin reorientation transition of Co films by Pd monolayer capping”

Cena de la conferencia (16th October, 20:00

TABERNA LA GADITANA S.L
C/ PASEO DE LA CASTELLANA 56, 28046 - MADRID
Telf. 91 115 37 51