



2023
ICTF
International Conference
on Thin Films

PROGRAMME

Forum Evolution
Conference Center

19th International
Conference on Thin Films

Burgos, Spain. September 26-29th 2023



ictf2023.com



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1. Welcome

Dear ICTF2023 delegate

It is our pleasure to welcome you to the 19th International Conference on Thin Films (ICTF2023), that in this occasion is organized by the Spanish Vacuum Society (ASEVA) in Burgos (Spain) September 26-29th, 2023.

The International Conference on Thin Films is a well established conference series (first edition took place in Boston, Massachusetts, US in 1969) for all researchers interested in thin films and coatings. It is organised after every three years and supported by the Thin Film Division of the International Union for Vacuum Science, Technique and Applications (IUVSTA), a union of national member societies whose role is to stimulate international collaboration in the fields of vacuum science, techniques and applications and related multi-disciplinary topics.

The venue of the conference is Burgos, a beautiful modern city in northern Spain. In brief, let's mention that Burgos is one of the historic capitals of the Crown of Castile and has many landmarks of particular importance. The city has the privilege to host three of UNESCO World Heritage Sites: the Burgos Cathedral, the Archaeological Site of Atapuerca, and the Routes of Santiago de Compostela.

The conference takes place at Forum Evolution Conference Centre with excellent facilities to host under one roof the scientific activities and commercial exhibition linked to the conference.

In this occasion, the ICTF conference is set-up together with the Iberian Vacuum and Applications Conference (RIVA), a joint meeting of ASEVA and the Portuguese Vacuum Society (SOPORVAC).

The list of topics addressed by this conference is rather wide and covers recent scientific and technological aspects related to thin films such as simulation and growth methods, advanced analytical techniques (including cultural heritage coating analysis), performance when used in technological fields such as biology, energy harvesting and storage, plasmonic and photonic sensing, protective/hard/tribological coatings, photo-, electro-, thermo-, gas-chromic and luminescent coatings, catalysts for the energy transition, opto/nano/organic electronics, spintronics, magnetism, piezoelectricity, vacuum and outer space applications, and developments of industrial thin film technology.

The ICTF2023 event is a good opportunity for the scientific community involved on thin films research to make dissemination of their latest results, to get new ideas to carry back home, and, of course, to meet colleagues and hopefully start collaboration activities. We encourage you to heavily participate in all the activities organised within the conference. We wish you a fruitful meeting and a pleasant stay in Spain.

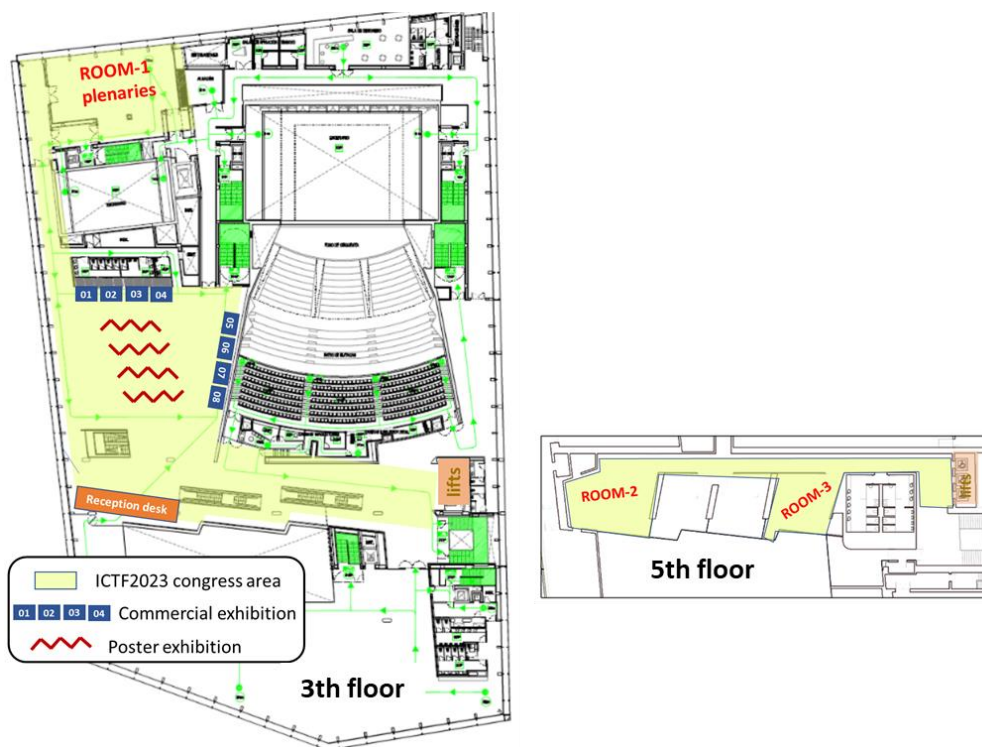


Francisco YUBERO (ICMS-CSIC, Spain)
Irene PALACIO (ICMM-CSIC, Spain)
Conference chairs

Seville & Madrid, September 2023

2. Conference venue

The venue of the conference is at the Forum Evolution Conference Centre, in the city center of Burgos (SPAIN), a modern space combining culture and knowledge. It has a unique architecture, which makes the light and the well-lit spaces its arterial connection. An inspiring meeting place: it generates a favorable environment for the development of talent and ideas, a space that reaches another architectural dimension thanks to its concept of perspective, transparency and simplicity of form. It is equipped with state-of-the-art stage equipment to host conferences. The Forum is located right at the city center, at a walking distance from the historic downtown, main hotels, restaurants and commercial area.



Layout of the commercial exhibition and conference rooms

3. Sponsors and commercial exhibition

IRIDIUM SPONSOR



SURF-ERA: Spanish excellence network on surface functionalization technologies.

<https://www.ain.es/archivo-proyectos/surfera-cervera-navarra/>

Profile: SURF-ERA is a Spanish national excellence network aimed to research, promote and disseminate surface engineering technologies to industry and society. The network is constituted by the research and technology centers AIN, IDONIAL, TEKNIKER and CIDETEC. SURF-ERA has developed 4 pre-industrial PILOT PLANTS based on PVD sputtering (HIPIMS), Laser micro-nano patterning/texturing, Sol-Gel in-line and automated (electro)chemical technologies which are ready to provide innovation value to the industries of different sectors of applications such as Steel, machine-tooling, renewable and conventional energy, transport, home-appliances, or optics. The network has invested more than 1.6 M€ in new equipment, and has mobilized more than 8 M€ in industrial research contracts during its first two years of activities. The consortium and the activities of the network have been funded by Centro para el Desarrollo Tecnológico Industrial of Spain (CDTI), under contract nr CER2019-1003.



<https://www.ain.es/>

Profile: AIN is a private non-profit entity, founded in 1963. Its activities cover consultancy applied to different fields (training, environment and sustainability) and areas of surface technology and advanced materials, industrial IT, and development. The area of Surfaces and Advanced Materials is a national reference in vacuum coating deposition sciences and technologies. AIN counts on pre-industrial equipment for the deposition of arc PVD coatings and pulsed-DC sputtering and HIPIMS and its laboratories equipped with scientific facilities for the investigation of advanced coatings. AIN leads the Excellence Network SURF_ERA framed as priority technology within the Spanish national program CERVERA boosted by CDTI-innovation.



<https://idonial.com/>

Profile: Fundación IDONIAL is a private non-profit industrial Technological Center, owned by industrial companies from Asturias, as well as the Government of the Principality of Asturias and the University of Oviedo. Its mission is to contribute to business competitiveness through the application of innovation and technology. It works developing R&D+i projects with industrial companies through and the provision of knowhow and advanced services, both in the field of advanced materials and in products and manufacturing processes



<https://www.cidetec.es/>

Profile: CIDETEC Surface Engineering is a reference center in coating technologies and member of a pole of innovation specialized in the development of surface science areas. The center provides innovation based solutions throughout the entire value chain for automotive, aerospace, power generation and other industrial sectors. Its activity is focused on the development of surfaces and coatings compliant with the current REACH regulations, with multifunctional properties such as resistance to corrosion and wear, protection against hydrogen embrittlement or fouling, electromagnetic transparency, customized aesthetics and improvement of omniphobicity and conductivity.



<https://www.tekniker.es/>

Profile: Fundación Tekniker is a technology center aimed to contribute to the general benefit of society and to improve the competitiveness of companies by generating technological knowledge, carrying out and promoting R+D+i activities and developing novel applications. TEKNIKER has manufacturing PVD technology for thin films (arc, sputtering and HIPIMS), sol-gel, and micro- and nano-structured surfaces both at laboratory level (reduced dimensions) and at pre-industrial scale, covering components with 2D and 3D geometry. Likewise, the center has the capacity to design and manufacture its own designed equipment for internal use and for third parties, which include also roll to roll systems for continuous surface structuring.

Other sponsors



ELSEVIER

<https://www.elsevier.com/>

Profile: As a global leader in information and analytics, Elsevier helps researchers and healthcare professional's advance science and improve health outcomes for the benefit of society. We do this by facilitating insights and critical decision-making for customers across global research and healthy ecosystems. In everything we publish, we uphold the highest standards of quality and integrity at scale to provide value to our customers. We bring that same rigor to our data analytics solutions for researchers, health professionals, academic institutions, and funders. We have supported the work of our research and health partners for more than 140 years. Growing from our roots in publishing, we offer knowledge and valuable analytics that help our users make breakthroughs and drive societal progress.



AUSE (Asociación Usuarios Sincrotrón España)

<https://ause.es/>

Profile: AUSE is the Association of Synchrotron Users of Spain. Our objective is the promotion and use of the existing experimental facilities as well as the stimulation of the relationship within the members of our association through, promoting the use of synchrotron radiation for the study of matter, the development and improvement of all aspects related to the instrumentation, generation and handling of this type of facility, and Unite and defend the common interests of synchrotron users. We encourage you to become a member through our website ause.es to receive the latest news regarding events, conferences, courses, etc... Follow us in [twitter@ause.es](https://twitter.com/ause.es)



ICMM-CSIC (Institute of Materials Science of Madrid, Spanish National Research Council)

www.icmm.csic.es

Profile: The Material Science Institute of Madrid, ICMM-CSIC, aims to generate cutting-edge knowledge on materials and processes crucial for addressing societal challenges.

Commercial exhibition



NEYCO

Contact email: contact@neyco.fr
<https://www.neyco.fr/>

Profile: Neyco is the French specialist in the vacuum/UHV and inorganic materials market. Benefiting from a high level of expertise (over 65 years old) and a rigorous desire for improvement, our consulting capacity and adaptability are reinforced. Neyco is, above all, experts with a spirit of initiative, focused on people and the quality of relationships, concerned about the well-being and development of their colleagues and partners. Neyco stands for quality and expertise in inorganic materials, thin film deposition, vacuum and ultra-high vacuum



AVACTEC

Contact email: info@avactec.es
<https://avactec.es/>

Profile: Avactec is a distributor of equipment for vacuum deposition from some of the world's leading suppliers. We are based in Madrid and serve the research communities in Spain and Portugal. Our product range includes evaporation materials, deposition sources, quartz crystal monitors, power supplies for sputtering, as well as complete PVD systems.



KORVUS TECHNOLOGY

Contact email: info@korvustech.com

<https://korvustech.com/>

Profile: Korvus Technology's HEX series are highly modular, cost effective, compact thin-film coating systems. The HEX's open-frame architecture allows panels, sample tables, sources, and in-situ measurement instruments to be interchanged with no specialist tools, providing a unique level of freedom to those in the thin-film R&D sector. The novel, modular design offers researchers unmatched flexibility in retrofitting this PVD system with upgrades and third-party components. Korvus is built on over 20 years of experience in the thin film technology market, designing, manufacturing, and installing HV and UHV deposition systems. Founded in 2015, Korvus has installed over 100 systems worldwide. HEX systems are utilized in academic and industry settings to advance research into novel thin film materials.



PHOTONEXPORT

Contact email: info@photonexport.com

<https://photonexport.com/es/>

Profile: PhotonExport is dedicated to enabling cutting-edge R&D, thin films, and nanotechnology innovation by providing high-quality specialty materials and equipment that are tailored to your specifications and delivered on time and at the lowest possible cost. We strive to enable cutting-edge research and development innovation for those seeking a bright and sustainable future through scientific discovery



HELIUM³

Contact email: customer.care@helium3.es

<https://www.helium3.es/>

Profile: At **Helium3** we are experts in vacuum, cryogenics and mass spectrometry. Our customers receive the best equipment and get a 360° service that accompanies them from the beginning of each project. We will go the whole way with you. Our strong commitment to quality allows us to have a wide range of top brands capable of meeting the most demanding expectations. We are official distributors of Kashiyama, Janis Research, Picosun ALD Solution, NanoMagnetics and InProcess Instruments. We are passionate about what we do and it is reflected in what we offer.



KASHIYAMA VACUUM SOLUTIONS

Contact email: eu-sales@kashiyama.com

<https://www.kashiyama.com/en/>

Profile: **Kashiyama** is a manufacturer of reliable and low-maintenance dry Multi-Stage Roots Pumps offering a wide range of pumping speed options from 7 m³/h to 300 m³/h with the NeoDry series. Since our founding in 1951, we have supplied Multi-Stage Roots and Screw Vacuum Pumps for semiconductor and various coating applications and continue to be the market leader in Japan to this day. In 2018, **Kashiyama** opened a new way for European customers with “Quality made in Japan”. The growing Munich team will support you in all matters of sales and service.



4. Social events (free of charge for ICTF2023 delegates)

September 25th (Monday)
from 19:00 to 21:00

Welcome reception

Before the scientific activity of the conference starts, a drink will be offered to the ICTF2023 delegates at the cafeteria of Facultad de Derecho. Burgos University. Hospital del Rey s/n, 09001 Burgos, Spain

September 27th (Wednesday)
from 16:30 to 20:00

The Human Evolution Museum

The Museum of Human Evolution (in front of the conference venue) offers free admission on Wednesday evenings. It holds findings from Atapuerca Sites and gives a holistic vision of human presence on Earth.

September 28th (Thursday)
after lunch

Guided tour to Atapuerca Sites

The delegates attending ICTF2023 are offered a guided tour to the Archaeological Sierra de Atapuerca Sites located 15 km east of Burgos city. They gained scientific and social prominence in the early ninetens, when ancient fossils were unearthed in *Sima de los Huesos* with the discovery of 900,000 year-old human remains which defined a new species, Homo antecessor. In 2000, the sites were declared part of the UNESCO World Heritage.
Meeting point and time: In front of Forum Evolution Conference Center at 15.00

September 28th (Thursday)
20:45 - 23.00

Conference Gala dinner

Offered at NH Collection Palacio de Burgos****,
C/ de la Merced 13, 09002 - Burgos, Spain

5. Satellite course



QUASES XPS Master Class

by Prof. Sven Tougaard

Audience: This master class is for students and researchers interested in making accurate and detailed analysis of nano-structured thin films and surfaces by XPS, using the facilities in the QUASES-Tougaard software package (www.quases.com).

When: September 25th, 2023 at 15:00

Where: “Aula Romeros”, Facultad de Derecho, Burgos University (Hospital del Rey s/n, 09001 Burgos, Spain).

The master class consists of three sessions (about 45 min each):

1. A lecture on quantitative XPS surface analysis. Discussion of deficiencies in traditional quantitative XPS analysis and of how the accuracy can be enhanced considerably by analysis of both peak intensity and the background of inelastically scattered electrons.
2. From raw spectra to final evaluation. The steps needed to get from the raw XPS spectra to the complete quantitative analysis of the nano-structure is demonstrated live by practical examples such as thin films: determination of the layered structure; thin film growth: accurate determination of layer thickness, coverage, and distribution of islands; Nano- particles: determination of NP size; coated nano-particles: accurate determination of shell thickness, non-uniformity of shell thickness, and incomplete encapsulation of the core. HAXPES: determination of the position and thickness of deeply (up to ~200 nm) buried layers. Ambient Pressure XPS: removal of the spectral distortion caused by the ambient gas.
3. Discussion: answering your questions by practical demonstrations.

For an introduction to QUASES XPS analysis, see:

- the set of tutorial videos at <https://doi.org/10.5281/zenodo.5499741>
- the paper (open access): Practical guide to the use of backgrounds in quantitative XPS. J Vac Sci Technol A. 2021; 39: 011201. <https://avs.scitation.org/doi/10.1116/6.0000661>

6. Plenary speakers



Akhlesh LAKHTAKIA
Pennsylvania State University, USA

Architecting thin-film morphology for optical, electronic, acoustic, biological, and other applications

Plenary-1. 9:00-10:00 am. Tuesday September 26th, 2023



Ana I BORRÁS
ICMS-CSIC, Seville, Spain

Functional applications of nanostructured surfaces developed by plasma and vacuum technologies: from wetting and de-icing to drop energy harvesting

Plenary-2. 9:00-10:00 am. Wednesday September 27th, 2023



Jiri HOMOLA
Charles University, Czech Republic

Plasmonics for label-free optical sensing

Plenary-3. 9:00-10:00 am. Thursday September 28th, 2023



Mar GARCÍA-HERNÁNDEZ
ICMM-CSIC, Madrid, Spain

Can we exfoliate non-exfoliable materials? Down to the freestanding single layers of non Van der Waals materials

Plenary-4. 9:00-10:00 am. Friday September 29th, 2023

7. Keynote speakers



Xuemei WANG (SENTECH Instruments GmbH, Berlin, Germany)

Plasma enhanced chemical vapor deposition (PECVD) and plasma enhanced atomic layer deposition (PEALD) in advanced thin film processing

k02. WEDNESDAY, September 27th (10:00-10:30 am). Room 2.



Philippe STEYER (INSA de Lyon, France)

Advanced microscopic characterization strategies to better understand dynamics of PVD nanostructured films

k03. TUESDAY, September 26th (10:00-10:30 am). Room 3



Lorena DIEGUEZ (INL, Portugal)

Using microfluidics and nanobiosensors for precision diagnostics

k05. TUESDAY, September 26th (10:00-10:30 am). Room 2.



Mónica LIRA-CANTU (ICN2, CSIC & BIST, Barcelona, Spain)

Halide Perovskites/MXene thin films for Stable Perovskite Solar Cells

k06. TUESDAY, September 26th (10.00 - 10.30 am). Room 1.



Emiliano DESCROVI (POLIMI Torino, Italy)

Surface waves on dielectric stacks and related applications in photonics

k07. THURSDAY, September 28th (10:00-10:30 am). Room 1.



Edoardo ROSSI (Roma Tre University, Italy)

Surface and interface driven environmental reliability and crack propagation resistance of 3Dprinted ALD-coated nanoceramics

k08. FRIDAY, September 29th (10:00-10:30 am). Room 1.



Istvan CSARNOVICS (University of Debrecen, Hungary)

Surface enhanced Raman scattering in material research - Present and future trends

k09. TUESDAY, September 26th (15:20-15:50 pm). Room 2.



Albert TARANCON (IREC & ICREA, Spain)

Thin film ionic and mixed ionic-electronic conductors for energy and information applications

k10. TUESDAY, September 26th (15:20-15:50 pm). Room 3.



Frederik BONELL (University of Grenoble Alpes, CNRS, France)
Epitaxial van der Waals materials for spintronics
k11. WEDNESDAY, September 27th (10:00-10:30 am). Room 3.



Tae-Woo LEE (Seoul National University, Republic of Korea)
Efficient and stable perovskite light-emitting diodes
k12. TUESDAY, September 26th (12:20-12:50 pm). Room 2.



Stefania PIZZINI (Univ Grenoble Alpes, CNRS, Institut Néel, France)
Electric field manipulation of magnetic properties of Pt/Co/oxide thin films
k13. WEDNESDAY, September 27th (15:20-15:50 pm). Room 3.



Pedro COSTA (CERN, Switzerland)
Thin films in particles accelerators: Challenges future & opportunities
k14. WEDNESDAY, September 27th (12:20-12:50 pm). Room 2.



Tefvik Onur Mentès (Elettra Sincrotrone, Trieste, Italy)
Changing the skin of an ultrathin ferromagnet
k15. FRIDAY, September 29th (10:00-10:30 am). Room 2.



Victor BELLIDO-GONZALEZ (GENCOA Ltd, UK)
A Review in Magnetron Sputtering
k16. TUESDAY, September 26th (12:20-12:50 pm). Room 1.



Gonzalo GARCIA-FUENTES (AIN, Spain)
Advanced coatings in industrial systems with hybrid sputtering sources
k16a. TUESDAY, September 26th (10:00-10:30 am). Room 1.



Sergio IOPPOLO (Århus University, Denmark)
Laboratory astrochemistry in the era of JWST
k17. WEDNESDAY, September 27th (15:20-15:50 pm). Room 1.



Claire Pacheco (C2RMF, France)
Surface analysis of Cultural Heritage objects at the New AGLAE facility
k18. THURSDAY, September 28th (12:20-12:50 pm). Room 1.

Topic codes

- S01. Thin film growth simulation
- S02. Advanced methods for thin film growth
- S03. Advanced thin film analytical techniques
- S04. Wetting control through thin film and surface functionalization
- S05. Thin films and surfaces in biological applications
- S06. Thin films in energy harvesting and storage
- S07. Plasmonic and photonic sensors based on thin films
- S08. Protective, hard & tribological coatings
- S09. Photo-, electro-, thermo-, gas- chromic and luminescent coatings
- S10. Thin film catalyst for the energy transition
- S11. Thin films for opto- & nano-electronics and spintronics
- S12. Polymeric thin films for organic electronics
- S13. Magnetic & piezoelectric thin films
- S14. Thin films for vacuum and space applications
- S15. Beyond thin films: low dimensional materials
- S16. Industrial applications of thin film technology – SURF-ERA/CERVERA session
- S17. Thin film ices in space
- S18. Cultural heritage surface and coating analysis

8. Program overview

Registration Desk Opening Hours

Monday, Sept 25 th @ Facultad de Derecho. Burgos University	from 14.30 till 19.00
Tuesday, Sept 26 th & Wednesday, Sept 27 th @ Forum Evolution Conference Centre	from 8.00 till 13.30 and from 15.00 till 17.00
Thursday, Sept 28 th @ Forum Evolution Conference Centre	from 8.30 till 13.30
Friday, Sept 29 th @ Forum Evolution Conference Centre	from 8.30 till 13.00

MONDAY, September 25th, 2023	
Facultad de Derecho. Burgos University. Hospital del Rey s/n, 09001 Burgos, Spain	
15:00 - 18:00	<p>Satellite course @ "Aula Romeros"</p> <p>QUASES XPS Master class by S Tougaard</p>
19:00 -	<p>Cafetería</p> <p>Welcome reception</p>

Forum Evolution Conference Centre ROOM 1								
Tuesday September 26th		Wednesday September 27th		Thursday September 28th		Friday September 29th		
8:45-9:00	Welcome							
9:00-10:00	Plenary-1 / Lakhtakia		Plenary-2 / Borrás		Plenary-3 / Homola		Plenary-4 / García	
10:00-10:30	session Tu1A	k06 - Lira	session W1A	k16a - Fuentes	session Th1A	k07 - Descrovi	session F1A	k08 - Rossi
10:30-10:50		o06-01 - Núñez		o16-01 - Quintana		o07-01 - Allegreto		o08-01 - Netto
10:50-11:10		o06-02 - García-Tabarés		o16-02 - Florentino		o07-02 - Castillo-Seoane		o08-02 - Kim
11:10-11:30		o06-03 - Gong		o16-03 - Fdez de Ara		o07-03 - Borges		o08-03 - Drnovsek
11:30-11:50		o06-04 - Saucedo		o16-04 - Lloreda		o14-04 - Hendricks		o08-04 - Jang
11:50-12:20	Coffee break							
12:20-12:50	session Tu1B	*o06-05 - Contreras	session W1B	k16b - Bellido	session Th1B	k18 - Pacheco	session F1B	ASEVA award - Sanz Novo
12:50-13:10		o06-06 - Haro		o09-03 - Cánovas		o18-01 - Angurel		o08-05 - Thakur
13:10-13:30		o06-07 - Ciria Ramos		o09-05 - Padilla		*o18-02 - Alonso		o08-06 - Zin
13:30-13:50		o06-08 - Bonal		o09-06 - Torroba				Final remarks / Closure
13:50-15:20	Lunch							
15:20-15:50	session Tu1C	*o06-09 - Prieto	session W1C	k17 - Ioppolo	Excursion / Gala Dinner			
15:50-16:10		o06-10 - Ramírez		o17-01 - Tajuelo-Castilla				
16:10-16:30		o06-11 - Ribeiro		o06-14 - Mamedov				
16:30-16:50		o06-12 - Tavares		o06-15 - Laitao-Pinheiro				
16:50-17:10		o06-13 - Lugo-Loredo		o15-06 - Jin Hyo-Boo				
17:10-18:30	Coffee break & Poster Session		Coffee break & Poster session					

* Highlighted talk

kXX - invited keynote lecture

oYY-ZZ - oral presentation corresponding to Topic SYY

Forum Evolution Conference Centre ROOM 2								
Tuesday September 26th		Wednesday September 27th		Thursday September 28th		Friday September 29th		
10:00-10:30	session Tu2A	k05 - Diéguez	session W2A	k02 - Wang	session Th2A	*o11-06 – Fukutani	session F2A	k15 - Mentés
10:30-10:50		o05-01 - Manso		o02-01 - Szymczak		o01-01 - Gutwirth		o15-01 - Vass
10:50-11:10		o05-02 - Liebgott		o02-02 - Gonzalo		o01-02 - Verma		o15-02 - Kylian
11:10-11:30		o05-03 - Baishya		o02-03 - Arpapay		o01-03 - Houska		o15-03 - Tosi
11:30-11:50		o12-04 – Jaglarz		o02-04 - Kawamura		o01-04 - Martinez		o15-04 - Azpeitia
11:50-12:20	Coffee break							
12:20-12:50	session Tu2B	k12 - T-W Lee	session W2B	*o15-05 - Alpuim	session Th2B	K14 - P Costa		
12:50-13:10		o12-01 - C-L Lee		o02-05- Zhadko		o14-01 - Schotsaert		
13:10-13:30		o12-02 - Tanaka		o02-06 - Shaji		o14-02 - Montero		
13:30-13:50		o12-03 - Vicente		o02-07-Costa		o14-03 - Serincan		
13:50-15:20	Lunch							
15:20-15:50	session Tu2C	k09 - Csarnovics	session W2C	*o04-01 - López-Santos		Excursion / Gala Dinner		
15:50-16:10		o09-01 - Moldarev		o02-08 - Sharma				
16:10-16:30		o09-02 - Hdez-Rguez		o02-09 - Bliem				
16:30-16:50		o09-04 - Kaufmann		o02-10 - Ergürhan				
16:50-17:10				o02-11 - Frechilla				
17:10-18:30	Coffee break & Poster session		Coffee break & Poster session					

* Highlighted talk

kXX - invited keynote lecture

oYY-ZZ - oral presentation corresponding to Topic SYY

Forum Evolution Conference Centre ROOM 3				
Tuesday September 26th		Wednesday September 27th		
10:00-10:30	session Tu3A	k03 - Steyer	session W3A	k11 - Bonell
10:30-10:50		o03-01 - Aballe		o11-01 - Silva
10:50-11:10		o03-02 - Zidek		o11-02 - Panda
11:10-11:30		o03-03 - Escobar		o11-03 - Chemate
11:30-11:50		o03-04 - Peters		o11-04 - Vila-Santos
11:50-12:20	Coffee break			
12:20-12:50	session Tu3B	*o03-05 - Tougaard	session W3B	*o11-05 - Serna
12:50-13:10		o03-06 - Novak		o10-09 - Fernandez
13:10-13:30		o10-01 - Maggi		o10-07 - Sánchez-Sánchez
13:30-13:50		o10-02 - Gil-Rostra		o10-08 - Ko
13:50-15:20	Lunch			
15:20-15:50	session Tu3C	k10 - Tarancon	session W3C	k13 - Pizzini
15:50-16:10		o10-03 - Gago		o13-01 - de la Figuera
16:10-16:30		o10-04 - Gil		o13-02 - Tavares de Sousa
16:30-16:50		o10-05 - Villamayor		o13-03 - González-Barrio
16:50-17:10		o10-06 - Jeong		
17:10-18:30	Coffee break & Poster session		Coffee break & Poster session	

* Highlighted talk

kXX - invited keynote lecture

oYY-ZZ - oral presentation corresponding to Topic SYY

9. Detailed Scientific Program

Oral contributions

TUESDAY, September 26th, 2023		
Forum Evolution Conference Centre		
ROOM 1		
8:30 - 9:00	Welcome	
9:00 - 10:00	plenary 01	Akhlesh Lakhtakia <i>Architecting Thin-Film Morphology for Optical, Electronic, Acoustic, Biological, and Other Applications</i>
session Tu1A. Chair: Raquel Caballero		
10:00 - 10:30	keynote 06	Monica Lira <i>Halide Perovskites/MXene thin films for Stable Perovskite Solar Cells</i>
10:30 - 10:50	o06-01	Fernando Núñez <i>Environmental stability of perovskite solar cells encapsulated with water-repellent fluorinated thin films by plasma assisted technology</i>
10:50 - 11:10	o06-02	Elisa García-Tabarés <i>EBSA analysis of III-V layers on Ge:Si virtual substrates for multijunction solar cells</i>
11:10 - 11:30	o06-03	Yuancai Gong <i>Molecular inks route for high efficiency kesterite based solar cells</i>
11:30 - 11:50	o06-04	Edgardo Saucedo <i>Novel (Sb,Bi)(S,Se)(Br,I) van der Waals materials for thin film photovoltaic applications</i>
11:50 - 12:20	Coffee break	
session Tu1B. Chair: Monica Lira		
12:30 - 12:50	*o06-05	Lidia Contreras <i>Ultrathin plasma polymer for improved stability and reproducibility of perovskite solar cells</i>
12:50 - 13:10	o06-06	Marta Haro <i>New anodes beyond graphite for increasing the energy density of lithium-ion batteries</i>
13:10 - 13:30	o06-07	Isabel Ciria <i>Understanding and developing photorechargeable lithium-ion batteries</i>
13:30 - 13:50	o06-08	Victor Bonal / Raquel Caballero <i>Synthesis and characterization of 2D-GeSe for photovoltaic applications</i>
13:50 - 15:20	Lunch	
session Tu1C. Chair Ana C Silva		
15:30 - 15:50	*o06-09	Paula Prieto <i>Hydrogen Absorption and Desorption in Thin Mg Films Driven by Heat and Light</i>
15:50 - 16:10	o06-10	María Ramírez <i>Study of Oxide Equilibrium in Pulsed Laser Deposited LiCoO₂ for Li-Ion Batteries</i>
16:10 - 16:30	o06-11	Johana M Ribeiro <i>Transparent Niobium-doped Titanium Dioxide thin films by Reactive Magnetron Sputtering for thermoelectric modules</i>
16:30 - 16:50	o06-12	Carlos Tavares <i>Thermoelectric and structural properties of transparent Sb-doped ZnO thin films</i>
16:50 - 17:10	o06-13	Shadai Lugo-Loredo <i>Comparative study of QDSSC solar cells using TiO₂/QDs SnS solar paint and SnS thin films solar cells</i>
17:10 - 18:30	Coffee break & Poster session	

TUESDAY, September 26th, 2023		
Forum Evolution Conference Centre		
ROOM 2		
9:00 - 10:00		
session Tu2A. Chair: Pedro Alpuim		
10:00 - 10:30	keynote 05	Lorena Diéguez <i>Using microfluidics and nanobiosensors for precision diagnostics</i>
10:30 - 10:50	o05-01	Miguel Manso <i>Laser induced periodic asymmetric patterning of TiN thin films for the design of bio-electro-functional surfaces</i>
10:50 - 11:10	o05-02	Quentin Liebgott New promising self-nanostructured thin films surfaces for antibacterial applications
11:10 - 11:30	o05-03	Kaushit Baishya <i>Ultrathin TiO₂ ALD coatings strongly enhance biological response of biomedical materials</i>
11:30 - 11:50	o12-04	Janusz Jaglarz <i>Determination of phase transitions in organic thin films using the temperature hysteresis of optical depolarization determined from ellipsometric study</i>
11:50 - 12:20	Coffee break	
session Tu2B. Chair: Xuemei Wang		
12:20 - 12:50	keynote 12	Tae-Woo Lee <i>Efficient and stable perovskite light-emitting diodes</i>
12:50 - 13:10	o12-01	Chang-Lyou Lee <i>Highly Stable Perovskite Quantum Dots (PQDs) for Light Emitting Diodes Applications</i>
13:10 - 13:30	o12-02	Masaki Tanaka <i>Spontaneous dipole orientation of fluoroalkyl-based molecules in vacuum-deposited films leading thin film polarization formation</i>
13:30 - 13:50	o12-03	Adrian Vicente <i>Novel Development for SLIPS of Lubricating Film on PTFE Fibers for Icephobic Applications</i>
13:50 - 15:20	Lunch	
session Tu2C. Chair: Tae-Woo Lee		
15:20 - 15:50	keynote 09	Istvan Csarnovics <i>Surface-enhanced Raman scattering in material research: present and future trends</i>
15:50 - 16:10	o09-01	Dimitri Moldarev <i>Tuning of photochromic properties of rare-earth oxyhydride thin films</i>
16:10 - 16:30	o09-02	Oihane Hernández-Rodríguez <i>Optimization of electrochromic thin film by reactive magnetron sputtering controlled by plasma emission monitoring</i>
16:30 - 16:50	o09-04	Michal Kaufmann <i>High-performance thermochromic YSZ/W-doped VO₂/YSZ coatings for energy-saving smart windows</i>
16:50 - 17:10		
17:10 - 18:30	Coffee break & poster session	

TUESDAY, September 26th, 2023		
Forum Evolution Conference Centre		
ROOM 3		
8:30		
9:00 - 10:00		
session Tu3A. Chair: Gonzalo G Fuentes		
10:00 - 10:30	keynote 03	Phillippe Steyer <i>Advanced microscopic characterization strategies to better understand dynamics of PVD nanostructured films</i>
10:30 - 10:50	o03-01	Lucia Aballe <i>InCAEM: In-situ correlative facility for advanced energy materials</i>
10:50 - 11:10	o03-02	Karel Zidek <i>Probing buried interfaces of SiOxNy thin films via ultrafast acoustics: the optimization of transducing layer thickness</i>
11:10 - 11:30	o03-03	Ramón Escobar <i>In situ depth-resolved compositional, structural and optical characterization of functional thin films at high temperatures</i>
11:30 - 11:50	o03-04	Sven Peters <i>Spectroscopic Ellipsometry for the characterization of electrical percolation in thin metallic films</i>
11:50 - 12:20	Coffee break	
session Tu3B. Chair: Phillippe Steyer		
12:20 - 12:50	*o03-05	Sven Tougaard <i>XPS, APXPS, and HAXPES to characterize nano-structured materials</i>
12:50 - 13:10	o03-06	Stanislav Novak <i>A tool for analysing the electrical properties of composite thin films</i>
13:10 - 13:30	o10-01	Edoardo Maggi <i>BiSel: New van der Waals semiconductors for energy conversion applications</i>
13:30 - 13:50	o10-02	Jorge Gil-Rostra <i>Photoelectrochemical water splitting with ITO/WO3/BiVO4/CoPi multishell nanotubes enabled by a vacuum and plasma soft-template synthesis</i>
13:50 - 15:20	Lunch	
session Tu3C. Chair: Jorge Gil-Rostra		
15:20 - 15:50	keynote 10	Albert Tarancón <i>Thin film ionic and mixed ionic-electronic conductors for energy and information applications</i>
15:50 - 16:10	o10-03	Raul Gago <i>Phase Selectivity in Sputtered Titanium Dioxide Films Upon Flash-Lamp Annealing</i>
16:10 - 16:30	o10-04	Daniel Gil <i>Effect of Anode Nanostructure on Thin-Film Solid Oxide Fuel Cell Performance</i>
16:30 - 16:50	o10-05	Antia Villamayor <i>Low Pt loading electrode for hydrogen production in PEMECs by magnetron sputtering</i>
16:50 - 17:10	o10-06	Inyoung Jeong <i>Effects of Ni/YSZ Composition on Performance and Carbon Deposition in Syngas-Fueled Thin Film SOFC</i>
17:10 - 18:30	Coffee break & poster session	

WEDNESDAY, September 27th, 2023		
Forum Evolution Conference Centre		
ROOM 1		
9:00 - 10:00	plenary 02	Ana I Borrás <i>Functional applications of nanostructured surfaces developed by plasma and vacuum technologies: from wetting to energy harvesting</i>
session W1A. Chair: Javier Barriga		
10:00 - 10:30	keynote 16a	Gonzalo G Fuentes <i>New developments in industrial magnetron sputtering and arc PVD technologies. Equipment and examples of industrial processes</i>
10:30 - 10:50	o16-01	Iban Quintana <i>Manufacturing Smart Surfaces with Embedded Sensors via Physical Vapour Deposition and Laser Scribing</i>
10:50 - 11:10	o16-02	Lucia Florentino <i>Sol-Gel Coating for Levelling and Easy to Clean Multi-layer Systems</i>
11:10 - 11:30	o16-03	Jonathan Fernandez de Ara <i>Characterization of Tribological Properties of MoOx Magnéli-Phase Coatings Deposited by PVD-HIPIMS for Industrial Applications in Aluminum Processing</i>
11:30 - 11:50	o16-04	P Javier Lloreda <i>NIR optofluidic device for liquid analysis</i>
11:50 - 12:20	Coffee break	
session W1B. Chair: Joel Borges		
12:20 - 12:50	keynote 16b	Victor Bellido <i>A review in magnetron sputtering</i>
12:50 - 13:10	o09-03	Antonio Cánovas <i>Green-solvent deposition of electrochromic thin films of poly(3-hexylthiophene) nanoparticles</i>
13:10 - 13:30	o09-05	Javier Padilla <i>Defining standard characterization procedures for electrochromic films and devices</i>
13:30 - 13:50	o09-06	Tomás Torroba <i>From hidden explosive sensors to environmental plastic degradation: opportunities of the locally directed oxidation events on surfaces</i>
13:50 - 15:20	Lunch	
session W1C. Chair: J I Martínez		
15:20 - 15:50	keynote 17	Sergio Ioppolo <i>Laboratory Ice Astrochemistry at Larger Scale Facilities</i>
15:50 - 16:10	o17-01	Guillermo Tajuelo-Castilla <i>Revisiting the photochemistry of CO2 molecular ices in dense molecular clouds</i>
16:10 - 16:30	o06-14	Huseyn Mamedov <i>Effect of magnetic nanoparticles on the performance of triboelectric nanogenerators</i>
16:30 - 16:50	o06-15	Xavier A Leitão Pinheiro <i>Tailored nanolaminates for innovative photovoltaics</i>
16:50 - 17:10	o15-06	Jin Hyo-Boo <i>Black phosphorus analogue – SnS/CdS multidimensional structure for hydrogen evolution visible light photocatalyst</i>
17:10 - 18:30	Coffee break & poster session	

WEDNESDAY, September 27th, 2023		
Forum Evolution Conference Centre		
ROOM 2		
	session W2A. Chair: Ramón Escobar	
10:00 - 10:30	keynote 02	Xuemei Wang <i>Plasma enhanced chemical vapor deposition (PECVD) and plasma enhanced atomic layer deposition (PEALD) in advanced thin film processing</i>
10:30 - 10:50	o02-01	Patryk Szymczak <i>Oxygen plasma treated phenyl silsesquioxane as a scaffold for mesoporous TiO2 thin film growth.</i>
10:50 - 11:10	o02-02	José Gonzalo <i>A novel route for the preparation and characterization of active and integrable EuOOH crystalline thin films</i>
11:10 - 11:30	o02-03	Burcu Arpapay <i>Growth and Characterization of GaSb Based Semiconductor Saturable Absorber Mirror</i>
11:30 - 11:50	o02-04	Midori Kawamura <i>Al and Ag porous films prepared by low temperature sputtering</i>
11:50 - 12:20	Coffee break	
	session W2B. Chair: Stephania Pizzini	
12:20 - 12:50	*o15-05	Pedro Alpuim <i>Grapevine Varietal DNA Identification on a Portable Graphene Sensor Chip</i>
12:50 - 13:10	o02-05	Maria Zhadko <i>Enhancement of properties of magnetron sputtered Cu films by Zr addition</i>
13:10 - 13:30	o02-06	Kalyani Shaji <i>Deposition of multi-composite nanoparticle-based thin films for gas sensing</i>
13:30 - 13:50	o02-07	Jose CS Costa <i>The effect of ionic liquids on the Nucleation and growth of organic semiconductor films</i>
13:50 - 15:20	Lunch	
	session W2C. Chair: Jiri Houska	
15:20 - 15:50	*o04-01	Carmen López Santos <i>Omniphobic hierarchical stainless-steel surfaces by vacuum and plasma techniques for protective applications</i>
15:50 - 16:10	o02-08	Amit Sharma <i>Thermal Stability, Microstructure, and Micro-Mechanical Properties of Cu1-X – AlX Solid Solution Multilayered with Thin Al2O3 Barrier Layers</i>
16:10 - 16:30	o02-09	Roland Bliem <i>Controlling the electronic, optical, mechanical, and chemical properties of thin-film alloys via structural disorder</i>
16:30 - 16:50	o02-10	Ergürhan Ayşe Aygül <i>Properties of Quaternary Alloy Grown by Molecular Beam Epitaxy</i>
16:50 - 17:10	o02-11	Javier Frechilla <i>Laser processes to generate nitride layers on Nb surfaces</i>
17:10 - 18:30	Coffee break & poster session	

WEDNESDAY, September 27th, 2023		
Forum Evolution Conference Centre		
ROOM 3		
	session W3A. Chair: Chang-Lyou Lee	
10:00 - 10:30	keynote 11	Frederic Bonell <i>Epitaxial van der Waals materials for spintronics</i>
10:30 - 10:50	o11-01	Ana Silva <i>Highly surface and interface sensitive studies of oxidation mechanisms of thin amorphous Si films at room temperature.</i>
10:50 - 11:10	o11-02	Emila Panda <i>Defect-induced abnormalities in the bulk and surface electronic properties in semiconductor thin films</i>
11:10 - 11:30	o11-03	Dhanashree B Chemate <i>Ultrafast carrier dynamics in germanium thin films for Terahertz Optoelectronics applications</i>
11:30 - 11:50	o11-04	María Vila-Santos <i>Intensified luminescence performance of Methylammonium Lead Bromide Perovskite films by the introduction of Bathocuproine Organic Additive</i>
11:50 - 12:20	Coffee break	
	session W3B. Chair: Carlos Tavares	
12:20 – 12:50	*o11-05	Rosalía Serna <i>Thin films of p-block elements for the building of enhanced nanophotonic metasurfaces</i>
12:50 - 13:10	o10-09	Francisco Fernandez Alonso <i>Au – loaded Se – doped porous Ta2O5 thin films for enhanced visible-light photocatalytic activity</i>
13:10 - 13:30	o10-07	Carlos Sanchez-Sanchez <i>Tuning Photoelectrocatalytic Performance of Titania with Atomic Hydrogen Reduction</i>
13:30 - 13:50	o10-08	Suhyuk Ko <i>High-performance Nanocomposite Nickel Cermet Anode on Non-conductive Substrate for Thin Film Solid Oxide Fuel Cells</i>
13:50 - 15:20	Lunch	
	session W3C. Chair: Lucia Aballe	
15:20 - 15:50	keynote 13	Stefania Pizzini <i>Electric field manipulation of magnetic properties of Pt/Co/oxide thin films</i>
15:50 - 16:10	o13-01	Juan de la Figuera <i>Oxygen orbital magnetic moment in spinels studied by Oxygen K-edge dichroism</i>
16:10 - 16:30	o13-02	Celia Tavares de Sousa <i>Iron semi-shells in vortex state for biomedical applications</i>
16:30 - 16:50	o13-03	Miguel Ángel Gonzalez Barrio <i>Magnetic Domain Structure of Ferrimagnetic FeGd Thin Films</i>
16:50 - 17:10		
17:10 - 18:30	Coffee break & poster session	

THURSDAY, September 28th, 2023		
Forum Evolution Conference Centre		
ROOM 1		
9:00 - 10:00	plenary 03	Jiri Homola <i>Plasmonics for label-free optical biosensing</i>
session Th1A. Chair: Tomás Torroba		
10:00 - 10:30	keynote 07	Emiliano Descrovi <i>Surface Waves on dielectric stacks and related applications in photonics</i>
10:30 - 10:50	o07-01	Juan A Allegretto <i>Growth of Metal-Organic Framework films on nanostructured-SERS substrates</i>
10:50 - 11:10	o07-02	Javier Castillo Seoane <i>Vacuum soft-template methodology for perovskite-based core@shell nanotubes with enhanced optoelectronic properties</i>
11:10 - 11:30	o07-03	Joel Borges <i>Thin films manifesting localized surface plasmon resonances for applications in sensing and photosynthetic mechanisms</i>
11:30 - 11:50	o14-04	Jay Hendricks <i>NIST on a Chip, Quantum Based Sensors for Vacuum Metrology and Beyond!</i>
11:50 - 12:20	Coffee break	
session Th1B. Chair: Emiliano Descrovi		
12:20 - 12:50	keynote 18	Claire Pacheco <i>Surface analysis of cultural heritage objects at the new AGLAE facility</i>
12:50 - 13:10	o18-01	Luis A Angurel <i>Femtosecond laser cleaning of historical stained-glasses</i>
13:10 - 13:30	*o18-02	Pedro Alonso García <i>Unveiling Atapuerca. Latest discoveries from the magic mountain</i>
13:50 - 15:20	Lunch	
Excursion / Gala dinner		

THURSDAY, September 28th, 2023		
Forum Evolution Conference Centre		
ROOM 2		
	session Th2A. Chair: Sven Tougaard	
10:00 - 10:30	*o11-06	Katsuyuki Fukutani <i>Quantitative analysis of hydrogen during metal-insulator transition of rare-earth nickelate thin films</i>
10:30 - 10:50	o01-01	Jan Gutwirth <i>Prediction of Multisource Sputtering Conditions towards Required Chemical Composition of Thin Films</i>
10:50 - 11:10	o01-02	Ritu Verma <i>Unravelling the nucleation and growth mechanism of {11-22} twin in Titanium</i>
11:10 - 11:30	o01-03	Jiri Houska <i>Cu-Zr-Al thin film metallic glasses in a wide range of compositions and growth conditions</i>
11:30 - 11:50	o01-04	José I Martínez <i>On-Surface Design of a 2D Co-Organic Network Preserving Large Orbital Magnetic Moment</i>
11:50 - 12:20	Coffee break	
	session Th2B. Chair: Sergio Ioppolo	
12:20 - 12:50	keynote 14	Pedro Costa <i>Challenges and Opportunities in Thin Film Coatings for Particle Accelerators</i>
12:50 - 13:10	o14-01	Jeroen Schotsaert <i>The realization of the coating plant for the segments of the primary mirror of the Extremely Large Telescope (ELT) in Chile.</i>
13:10 - 13:30	o14-02	Isabel Montero <i>Electron Emission Yield of Ordered vs Disordered Structured Surfaces</i>
13:30 - 13:50	o14-03	Uğur Serincan <i>GaAs Based Flexible Solar Cells Grown by Molecular Beam Epitaxy</i>
13:50 - 15:20	Lunch	
	Excursion / Gala dinner	

FRIDAY, September 29th, 2023		
Forum Evolution Conference Centre ROOM 1		
9:00 - 10:00	plenary 04	Mar Garcia <i>Can we exfoliate non-exfoliable materials? Down to the freestanding single layers of non Van der Waals materials</i>
session F1A. Chair: Aranzazu Heras		
10:00 - 10:30	keynote 08	Edoardo Rossi <i>Surface and interface driven environmental reliability and crack propagation resistance of 3D-printed ALD-coated nanoceramics</i>
10:30 - 10:50	o08-01	Thais R Netto <i>Fabrication, characterisation and fretting wear testing of Cr and CrN coated Zr alloy cladding using magnetron sputtering for enhanced accident tolerance in light water reactors.</i>
10:50 - 11:10	o08-02	Yang Jae Kim <i>Development of High Durability and Low Cost Ta Coated Polymer Electrolyte Membrane Water Electrolysis (PEMWE) Bipolar Plate by DC Magnetron Sputtering</i>
11:10 - 11:30	o08-03	Aljaž Drnovšek <i>Wear of the arc deposited TiAlN coating at elevated temperatures</i>
11:30 - 11:50	o08-04	Yujae Jang <i>Advanced Coating Techniques using Sputtering and PEALD for Enhanced Corrosion Resistance and Interfacial Contact Resistance of PEMFC Bipolar Plate</i>
11:50 - 12:20	Coffee break	
session F1B. Chair: Miguel Manso		
12:20 - 12:50	ASEVA award	Miguel Sanz Novo <i>Pushing the limits of complexity of interstellar chemistry: a synergetic theoretical and experimental rotational study and beyond.</i>
12:50 - 13:10	o08-06	Deepika Thakur <i>Amorphous and dual-phase nanocomposite coatings within Zr-B-Cu system</i>
13:10 - 13:30	o08-07	Valentina Zin <i>Protective CoCrFeNiMo-based coatings via High Power Impulse Magnetron Sputtering</i>
13:30 -	Final remarks & Closure	

FRIDAY, September 29th, 2023		
Forum Evolution Conference Centre ROOM 2		
session F2A. Chair: Jose Angel Martín-Gago		
10:00 - 10:30	keynote 15	Tevfik O Mentès <i>Changing the skin of an ultrathin ferromagnet</i>
10:30 - 10:50	o15-01	Csaba Vass <i>The Band Structure of Two-Dimensional Hexagonal Boron Nitride on Au Coated Rh(111) Surface Studied by Momentum-Microscopy</i>
10:50 - 11:10	o15-02	Ondrej Kylian <i>Highly porous metal/metal-oxide nanoparticle-based coatings produced using gas aggregation sources of nanoparticles</i>
11:10 - 11:30	o15-03	Ezequiel Tosi <i>Epitaxial growth and characterization of SnSe phases on Au(111)</i>
11:30 - 11:50	o15-04	Jon Azpeitia <i>LiCl photodissociation on graphene: a new route for lithium intercalation</i>
11:50 - 12:20	Coffee break	

Poster contributions

Forum Evolution Conference Centre

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- p01 Jose CS Costa
Vacuum Thermal Evaporation of Ionic Liquid Mixture Films on Solid Surfaces
- p02 Xavier Sandua
Design of a functional photocatalytic coating by the combination of electrospinning and layer-by-layer spraying deposition techniques
- p03 Anna Chachaj-Brekiesz
Characteristics of Interactions Between Task-Specific Ionic Liquids and Model Antibacterial Membrane: Langmuir Monolayer Study
- p04 Anita Wnętrzak
Selective Mode of Action of Ionic Liquids in the Context of Antifungal Therapy – Langmuir Monolayer Study
- p05 Paola K Jejen-Salinas
Morphology, structure and chemical composition of Cs₃Bi₂I₉ thin films deposited by different techniques for energy harvesting and storage
- p06 Midori Kawamura
Preparation of low resistivity Pt film by Xe gas sputtering
- p07 Naia Barandica-Pérez
Development of Anti-Soiling Coatings for Solar Applications
- p08 Fernando Núñez-Gálvez
Transparent drop energy harvesters based on PDMS@TiO₂ nanowires
- p09 Javier Prieto-Serrano
Cu-based nanoparticles films to enhance photocathode performance
- p10 Clara Gutiérrez Cuesta
Growth of Barium on Graphene and Ru(0001)
- p11 Silvia Zecchi
Insight the composites for electromagnetic shielding applications
- p12 Arturo Galindo-Sanz
Characterization of LiFePO₄/LiCoO₂ Blends for the Design of “Zero-Strain” Composite Cathodes
- p13 Francisco Yubero
One-Dimensional Photonic Crystal for Surface Mode Polarization Control
- p14 Ramón Escobar
Physical Vapour Deposition of multifunctional coatings on ASA, ASA-FC and ASA-Cu printed using additive manufacturing
- p15 Ana Cueva
Comparative study of thermal behaviour of silver-based low-emissivity coatings
- p16 Elena Salagre-Rubio
Direct Observation of Surface Phase Coexistence in Epitaxial Li_xCoO₂ Films in the 0.5<x<1 Range
- p17 Kevin García
Aligning periodic arrays of 1D topological states in Bismuth single layers grown on stepped Ag and Au
- p18 Jorge O Álvarez-Pérez
Growth and characterization of ZnTe thin films for photovoltaic applications
- p19 Andres Redondo-Cubero
Upgraded time-of-flight spectrometer for accurate depth profiling of thin solid films
- p20 Alejandro Fernandez-Garcia
Fundamentals of the synthesis of out-of-plane MoTeSe flake films

- p21 Carlos Prieto
ZrN and TiN Films on Stainless Steel as Bipolar Plates in PEM Cells
- p22 Francisco Fernandez Alonso
Sol-Gel synthesis of Ta₂O₅ and Se-doped Ta₂O₅ porous films for photocatalytic applications
- p23 Hiroki Sato
Protective Iridium Film Coating by Chemical Vapor Deposition on Metal Substrate
- p24 Marisol Faraldos
Impact of deposition procedure on thin-film solar cells efficiency
- p25 Olha Khshanovska
An in-situ TEM study of the coexistence of metastable phases below the eutectic temperature in single AuGe nanoparticles
- p26 Francisco P Martin-Jimenez
Determination of the oxidation states of Mn in ZnMn₂O₄ symmetrical supercapacitor electrodes
- p27 David Abejon-Arribas
Hydrogenation of Pd-capped Mg films traced by ion beam techniques and optical methods
- p28 Chemate B Dhanashree
Role of a shadow mask on sputtered copper micro targets: simulation and experimental studies
- p29 Claudia I Parra-Montero
Influence of chromium oxide (CrO_x)-based layers as thermal diffusion barriers on 316L steel and Inconel 625 for solar selective absorbers applications
- p30 Sara Rozas
Computational approach to menthol – decanoic acid NADES lining 2D-materials towards CO₂ capture and separation purposes
- p31 Joana Ribeiro
Doping impact on thermal and electrical properties of transparent ZnO and TiO₂ thin films for thermoelectric applications
- p32 Dennis Berends
Black TiO₂ Integration on an IBC Silicon Wafer for Simultaneous Solar Energy and Green Hydrogen Generation
- p33 Nuria Aguilar
An environmentally friendly, safe and sustainable lubricant proposal: Hydrophobic type V Natural Deep Eutectic Solvents thin film formation in tribology.
- p34 Alejandro Hernandez Medel
Langmuir-Blodgett films of plasmonic semi-shells for biomedical applications
- p35 Pedro José Rivero Fuente
Evaluation of antibacterial activity of electrospun chitosan poly(ethylene oxide) nanofibers doped with silver nanoparticles
- p36 Young Sik Song
A study on the formation of multi-layered structures based on titanium and sputtering parameters
- p37 Irene Palacio
In-situ polymerization of covalent plasma assisted functionalized graphene
- p38 Irene Palacio
Graphene FET aptasensors: Attomolar detection of hepatitis C virus core protein
- p39 Chang-Lyoul Lee
Multi-Passivated Red-Emitting Halide Perovskite Quantum Dots by Alkali Metal and Thiocyanate
- p40 Chang-Lyoul Lee
Synthesis of Blue-Emissive Perovskite Quantum Dots through Bi-Functional Short Ligand and Anion Exchange
- p41 Amit Kumar Gangwar
Temperature-Dependent p-n Switching of Extremely Selective CO Gas Sensor Based on p-SnO/n-SnO₂ Heterojunction Thin Film

10. Committees

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Andreas Borgschulte, <i>EMPA, Switzerland</i>	Marco Finazzi, <i>Politecnico de Milano, Italy</i>	Roman Nevshupa, <i>IETcc-CSIC, Spain</i>
Andreas Thissen, <i>SPECS, Germany</i>	Arantzazu Mascaraque, <i>UCM, Spain</i>	Javier Barriga, <i>Tekniker, Spain</i>
Irene Palacio <i>ICMM-CSIC, Spain</i>	Adrián Durán, <i>University of Navarra, Spain</i>	

Local Organizing Committee (LOC)

Carlos Briones, <i>CSIC-INTA, Spain</i>	Ramón Escobar, <i>University of Seville, Spain</i>	Aránzazu Heras, <i>UBU, Spain</i>
Javier Barriga, <i>TEKNIKER, Spain</i>	Jorge Gil-Rostra, <i>ICMS-CSIC, Spain</i>	Carlos J. Tavares, <i>Univ Minho, Portugal</i>
Laia León, <i>ICMM-CSIC, Spain</i>	Tomás Torroba, <i>UBU, Spain</i>	Ana C Silva, <i>Univ Nova de Lisboa, Portugal</i>
	Fernando Agulló-Rueda <i>ICMM-CSIC, Spain</i>	

* IUVSTA TFD national representative

11. Grants & prices

IUVSTA-Elsevier Student Awards

Ayse Aygul ERGURHAN from the Eskisehir Technical University, Turkey

Contribution:

- *Structural and optical properties of quaternary alloy grown by MBE* (o02-10. Wednesday, Sept 27th, 16:30 - 16:50. Room2)

Chemate Dhanashree BHASKAR from the Department of electrical engineering, IIT Bombay, India

Contributions:

- *Ultrafast carrier dynamics in sputtered Germanium thin films for THz optoelectronic applications* (o11-03. Wednesday, Sept 27th. 11:10 - 11:30. Room 3.)
- *Role of a shadow mask on sputtered copper micro target: simulation and experimental studies* (p28)

Kaushik BAISHYA from the Central European Institute of Technology, Brno University of Technology, Czech Republic.

Contribution:

- *Ultrathin TiO₂ ALD coatings strongly enhance biological response of biomedical materials* (o05-03. Tuesday, Sept 26th. 11:10 - 11:30. Room 2)

Ritu VERMA, from the Institute of Physics of Materials, The Czech Academy of Sciences, Brno, Czech Republic

Contribution:

- *Unravelling the nucleation and growth mechanism of {11-22} twin in Titanium* (o01-02. Thursday, Sept 28th. 10:50 - 11:10. Room 2.)

ASEVA PhD-Thesis award (4th edition)

To the best thesis work defended on any topic related to the ASEVA scientific areas in a Spanish University in the period July 1st 2021 to April 30th, 2023

Awardee: **Miguel Sanz-Novo**

PhD Thesis title: *From interstellar systems to terrestrial organic and biomolecules: a synergetic theoretical and experimental rotational study*

Defended at Valladolid University (Spain) March 2022. Supervisors: José Luis Alonso Hernández and Carmen Barrientos Benito

ASEVA PhD-Thesis award invited talk: Friday, Sept 29th, 2023 (12:20 - 12:50 pm). Room1

Pushing the limits of complexity of interstellar chemistry: a synergetic theoretical and experimental rotational study and beyond

ICTF-AUSE poster award

Award supported by the Spanish Association of Synchrotron Radiation Users (AUSE) to the best posters presented at ICTF2023

Main prize. 300 EUR; Two runner-up prizes of 200 EUR

12. First announcement for International Conference on Thin Films 2026

Date and location

ICTF 2026 will be organized by the French Vacuum Society in **Biarritz** (France) from **08 to 11 June 2026**. Biarritz is a famous city located on the Atlantic coast close to the Spanish border (southwestern of France).

This city of 25,000 inhabitants is a high place of tourism in France. Each year, about 65,000 people come to Biarritz to participate in national or international conferences. The accommodation capacity in Biarritz is approximately 3,500 rooms. As tourist attendance is relatively low in June, ICTF 2026 participants should be able to easily find accommodation in Biarritz. ICTF 2026 will be organized in the “**Bellevue**” conference centre that is located in front of the Atlantic Ocean.

Main topics

Extensive research in the areas of surface science and engineering over the past 30 years has enabled knowledge-driven design and development of thin films and functional coatings with attributes tailored to desired applications for e.g., surface protection, optics and photonics, catalysis, energy storage, conversion and saving, and interaction with biological systems. The increasing demand for new materials with combined innovative functionalities necessitates control of thin film microstructure and architecture at the nanoscale. This conference will be dedicated to main development on thin films elaboration, characterization and applications. The following topics will be covered during the next ICTF conference:

- Thin films and sustainable development
- Thin films for renewable energies
- Thin films for health and life science
- Thin films for optics and electronics
- Thin films growth and modelling
- Protective and tribological coatings
- Thin films for catalytic and sensing applications
- Artificial intelligence applied to thin films
- Nanomaterials, nanostructured thin films
- Hybrid materials
- Surface science
- Applied surface science
- Advanced characterization methods
- Surface engineering

Chairs

The chair of the conference will be Prof. Jean-François Pierson from the University of Lorraine (Nancy). His research activities are centred on the development of sputtered thin films for energy applications.

The co-chair of the conference will be Prof. Corinne Champeaux from the University of Limoges. She is an expert of thin films deposited by pulsed laser deposition for optoelectronic applications.

Website

Further information will be available on the conference website: www.ictf2026.com



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