



Union Internationale Pour La Science, La Technique et Les Applications du Vide  
International Union for Vacuum Science, Technique and Applications  
Internationale Union für Vakuum Forschung, Technik und Anwendung

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IUVSTA Communications Committee Co-Chair

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## Report on ECM 139, a Hybrid Meeting

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The 139<sup>th</sup> Executive Council Meeting of IUVSTA (ECM 139) and the meetings associated therewith took place from Friday, January 27<sup>th</sup> to Saturday, January 28<sup>th</sup>, 2023 at the Université libre de Bruxelles (ULB), in Brussels Belgium. The formal events like committee sessions and the session of STD were accompanied by an extremely interesting visit to the microelectronics facility of IMEC and by other social events which allowed the on-site participants to meet again after the long period of the COVID crisis. A presentation of the funding opportunities of the European Union took place at the beginning of the committee sessions. The meeting was held as a hybrid meeting and was very well attended. For the online part of the meeting, delegates were invited to join via a ZOOM teleconference, while on-site delegates were attending the meeting in the facilities at ULB. The President, François Reniers, started the meeting and welcomed the participants. Thereafter the Secretary General, C. Eisenmenger-Sittner in collaboration with the Recording Secretary, Ana G. Silva checked the attendance to determine the Quorum. This was confirmed to be 88%, so ECM 139 was found to be safely quorate.

In his opening statement of the President, François Reniers first expresses his gratitude to all members and officers for their concise reports presented in the committee sessions preceding ECM 139. He was pleased to see the engagement of all members. He also warmly thanked the Japan Society of Vacuum and Surface Science and Science Council of Japan for the great success of IVC 22 in Sapporo and acknowledged the past officers and the previous team for the great work and then thanked the new officers for their acceptance for serving IUVSTA. Finally, he expressed his happiness regarding the number of proposals for Workshops, Schools, Technical Training Courses and Short Courses and for the promising webinar activities and generally for the positive spirit within in the Union, which prevailed besides the pandemic crisis and the actual inflation period.

Following suit, the Treasurer, Arnaud Delcorte, presented the finance and budget reports for 2022 and 2023. He highlighted the need to think about a solution for the future to consider marketing and inflation which includes the need for serious advice regarding the funds of the Union. Finally, the validated budget 2022 and the proposed budget for 2023 were for ratification in AGM 08. Immediately after this presentation, the 8<sup>th</sup> Annual General Meeting (AGM 08) of the Union was opened.



**Group picture of the participants in the hybrid ECM 139**



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The Meeting was quorate with 84% of the representatives of the member societies present either on-site or online. Both the validated budget 2022 and the proposed budget for 2023 were unanimously ratified.

After closing AGM 08, the Scientific Director, Katsuyuki Fukutani, reported on the meeting of the Scientific and Technological Directorate (STD). There the IUVSTA Scientific Divisions presented their activity reports, past Workshops and Schools were briefly presented, the status of existing proposals was given and finally new proposals for Workshops, Schools, Technical Training Courses, and Short Courses were presented, followed by a lively discussion. The new Technical Training Course and Short Course proposals had also been previously discussed during the Education Committee meeting.

All votes on new proposals for Workshops, Schools, Technical Training Courses and Short Courses, were performed as anonymous electronic ballots based on the list of Proposals compiled by the Scientific Secretary, Anton P. Stampfl. The voting process was organized by the Recording Secretary, Ana G Silva, and the Secretary General, Christoph Eisenmenger-Sittner. The proposed events were:

- the School entitled " Vacuum Gas Dynamics: from theory to practical applications", to be held from 17-21 September 2023, France (approved as the 20<sup>th</sup> IUVSTA School),
- the Workshop entitled "Metal-oxide Ultrathin Films and Nanostructures: Experiment meets Theory", to be held in Zaragoza, Spain, July 2023 (approved as the 99<sup>th</sup> IUVSTA Workshop)
- the Workshop entitled "How sustainable are thin films and thin films processing? Pathways towards responsible surface engineering", to be held in Germany, 2024 (approved as the 100<sup>th</sup> IUVSTA Workshop)
- the Technical Training Course entitled "Training on Applied Surface Science", to be held in Islamabad, Pakistan, October 24-28, 2023, (approved as the 29<sup>th</sup> IUVSTA Technical Training Course) and finally
- the Short Course entitled "X-ray Photoelectron Spectroscopy" to be held in Poland, Aug 28, 2023 in conjunction to ECOS-36. (Approved)

Finally, after the votes, Scientific Director, Katsuyuki Fukutani, shared present his vision for the triennium 2022-2025. ECM 139 then continued with committee reports. Jay Hendricks, Chair of the Long-Range Planning Committee (LRPC) shared some ideas for a vision of the future of IUVSTA to keep it as modern as possible and to be even more inclusive. Christoph Eisenmenger-Sittner, Chair of the Statutes Committee, briefly reported on procedures for previous virtual meetings, focusing his presentation and discussion on the development of procedures for hybrid meetings. He mentioned that the discussions regarding this subject were very fruitful and useful for the procedure's definition and implementation. Ivan Petrov, Co-Chair of the Communications Committee, focused his presentation on the IUVSTA website, encouraging and asking to all the division chairs to update the information on the website. Carlos Tavares, Chair of the Congress Planning Committee, presented a timeline of IUVSTA workshops, schools, conferences, and congresses planned for 2023 to 2025. A brief report on ICTF 2023 was also given. Then Anton Stampfl, the Chair of IVC-23 presented a very detailed report on the preparation of the congress. Carlos Tavares shortly reported on ECOS 36, to be held in Lodz, Poland in September 2023, focusing his report on the budget. Timo Gans, Chair of the Awards and Scholarships Committee gave an overview on the several types of IUVSTA awards and scholarships. Finally, Alberto Tagliaferro, Chair of the Education committee, informed about a zoom meeting of the Education Committee held before ECM139 during which, amongst other items, proposals for TTCs and SCs were discussed. Another important item of this teleconference meeting was the interaction with IOP regarding the IUVSTA webinars.



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**Meeting at the center of Brussels' Grand-Place before the banquet**

Moving on in the agenda, the next item was the selection of the venue of ECM 140 in the fall of 2023. There were two bids from the Pakistan Vacuum Society and the Spanish Vacuum Society. Both proposals were presented to the council and were thoroughly discussed. After the discussion a secret vote was held, and the Spanish proposal was selected with a solid majority. Therefore, ECM140 will be organized by the Spanish Vacuum Society (ASEVA), from September 29<sup>th</sup> to October 1<sup>st</sup>, 2023, in Burgos, Spain, which is right after ICTF 19 to be held from September 26<sup>th</sup> -29<sup>th</sup>, also in Burgos. Within the last item of the Agenda, Any other Business, Alberto Tagliaferro, Chair of the Education Committee, encouraged members to volunteer to join the education committee.

As there was no other competent business, the IUVSTA President, François Reniers, expressed his gratitude to all members which contribute to the success of IUVSTA and ECM 139 was closed.



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## WELCOME

It is our pleasure to welcome you to the nineteenth International Conference on Thin Films (ICTF-2023), that in this occasion is organized by the Spanish Vacuum Society (ASEVA) in Burgos (Spain) September 26-29th, 2023. The venue of the conference is in Burgos, a beautiful modern city in northern Spain, located 240 km north of Madrid. In brief, let's mention that Burgos is the historic capital of the Crown of Castile and has many historic 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. Besides, a large number of churches, palaces and other buildings from the medieval age remain.

**Abstract submission open: March 1<sup>st</sup> – April 15th, 2023**  
**Starting date for registration, May 16<sup>th</sup>, 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 IUVSTA.

The 19<sup>th</sup> ICTF conference will be set-up together with the Iberian Vacuum and Applications Conference (RIVA), a joint meeting of ASEVA and the Portuguese Vacuum Society (SOPORVAC). The RIVA event is of high relevance in scientific fields related to surface science and engineering, biointerfaces, plasma science, materials and thin film processing technologies involving vacuum equipment, thus closely related to those of the ICTF.

ICTF-2023 event will be 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.

**For more information visit:**

**<https://ictf2023.com/>**





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ECOSS is a well-established annual meeting directed jointly by the Surface Science Division of the International Union for Vacuum Science, Technique and Applications (IUVSTA) and the Surface and Interface Section of the European Physical Society (EPS).

The conference provides an excellent opportunity for scientists from Europe and from all over the world to meet and discuss the latest advances in the physics and chemistry of surfaces. Furthermore, it is a forum to discuss the progress of surface science in related innovation fields such as heterogeneous catalysis, organic molecular nano-architectures, two-dimensional materials and graphene, nanoelectronics, bio-nanoscience and functional and energy materials studied both using theoretical and experimental methods.

**Plenary speakers:**

**Klaus von Klitzing**, Max Planck Institute for Solid State Research, Germany

**Beatriz Roldan Cuenya**, Fritz Haber Institute of the Max Planck Society, Germany

**Cristiana Di Valentin**, Università di Milano Bicocca, Italy

**Michelle Simmons**, University of New South Wales, Australia

**Yuri Gogotsi**, Drexel University, United States

**Christian A. Nijhuis**, University of Twente, The Netherlands

**Abstract submission opens: March 13, 2023**

**Registration opens: March 20, 2023**

**Abstract submission closes: May 14, 2023**

**Notification of abstract acceptance: June 16, 2023**

**For more information visit:**

**<https://www.ecoss36.uni.lodz.pl/>**



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## 93<sup>rd</sup> IUVSTA workshop on Advances in the Characterization of Surface Engineering Structures, Coatings, and Thin Films in Seggau, Austria, October 15 - 19, 2023

The workshop aim is to address significant advances in characterization techniques for nanostructure, composition and properties of surface engineering structures, coatings and thin films within the past decade. Invited talks given by well recognized experts will cover mainly, but not only, (synchrotron) X-ray diffraction-based techniques, scanning and transmission electron microscopy, atom probe tomography, micro-mechanical testing and in-situ/in-operando and temperature variable setups. The necessity to use a combination of advanced characterization techniques to fully understand composition-structure-properties relationships will be highlighted.

The topical key areas of the workshop will be divided into three groups:

- microstructural, chemical and residual stress characterization,
- nano-/micro-mechanics,
- in-situ/in-operando studies and thermal properties

For details see:

**Web Page:** <https://iuvsta93.unileoben.ac.at/>

## The 20<sup>th</sup> IUVSTA School Vacuum Gas Dynamics 17-21 September 2023 in island of Porquerolles near Marseille in France

The School is designed for scientists, engineers and postgraduate students who are not the experts in the rarefied gas dynamics but need to apply this field in their every-day work.

The aim of the school is to educate the participants in applying vacuum gas dynamics and also to fill the gap between complicated theory and practical needs. The lectures and practical sessions will be given by experts in rarefied gas dynamics, vacuum science, and metrology. In total, 10 lectures and 8 practical sessions will be given covering many topics in the field of Vacuum Gas Dynamics. The theoretical and computational parts will be focused on kinetic theory, kinetic models, diffusion models, gas-surface interaction, test particles and direct simulation Monte Carlo methods, while the experimental part will be dedicated to methods of measurements and standards in vacuum systems and vacuum metrology. The part related to applications will cover the gas flows through pipes, pumps, gauges, in small and large vacuum systems using the Molflow software as well as numerical codes based on the Monte Carlo and discrete velocity methods. During the practical sessions, the students will be asked to resolve specific exercises related to material of the lectures using their own laptops. These sessions will be running in two parallel groups supervised by 2 or 3 lecturers at the same time in order to help the students more effectively and to increase the interaction between students and lecturers.

For details see:

**Web Page:** <https://www.iuvsta-school-2023.com/>



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## Report on the 92nd IUVSTA workshop on Advanced Spectroscopy and Transport for 2D Materials at Surfaces

**Chairs: Shuji Hasegawa (NSD) and Fumio Komori (SSD)**



The 92nd IUVSTA workshop on Advanced Spectroscopy and Transport for 2D Materials at Surfaces was held at Okinawa Institute of Science and Technology Graduate University (OIST), Okinawa, Japan from September 18th to 21st, 2022. The workshop was co-hosted by Japan Society for Promotion of Science through Japan Society of Vacuum and Surface Science and OIST. The topics discussed in the workshop were highly advanced subjects of surface/nanoscale physics/science including atomic layer superconductivity, topological materials, 2D Xene materials, and one-dimensional metallic states. This workshop had been originally scheduled to be held in September 2020, but was postponed to 2022 due to COVID-19. Although there were still some restrictions on travel to Japan from overseas during the workshop, more than 10 participants came to Okinawa by overcoming difficulties.

The oral sessions including 20 invited and 5 contributed talks were conducted in a hybrid mode with both on-site and online presentation and discussion. In the on-site poster session, 17 posters were presented with short presentations before the session. The total number of the participants were 56: 44 on site from France, Germany, U.S.A., Korea, Taiwan, Japan, and 12 online from Singapore, China, Taiwan, and Russia. The discussion was very fruitful not only during the sessions, but also during the on-site free discussion time, and even dinner time. The on-site participants also enjoyed the wonderful campus of OIST during the laboratory tour just after the workshop. We really reaffirmed the importance of face-to-face workshops.