

**Report of the Applied Surface Science Division to the ECM-133
held virtually October 9-10th, 2020**

A) Past events

1. Surface Analysis 2020

which was organised by the ASSD of AVS was scheduled to be held 2-4 June 2020 at the Colorado School of Mines in Golden, Colorado. Unfortunately, due to the COVID-19 pandemic, the meeting was cancelled.

B) Forthcoming events

1. The ASSD co-support the IUVSTA workshop (submitted by Surface Engineering Division and Austrian Vacuum Society) entitled: **“Advances in the characterization of surface engineering structures, coatings, and thin films”**. The aim of the workshop is to focus on the characterization techniques for nanostructures, composition, and properties of surface engineering structures, coating, and thin films. The topical key areas of the workshop will be divided into three groups, namely, microstructural, chemical and residual stress characterization, nanomechanics as well as in situ/in-operando studies and thermal properties. The workshop is planned to be held in spring fall of 2021 in Scholss Seggau, Austria.

2. The 67th International Symposium and Exhibition

scheduled for October 2020 in Denver, Colorado was cancelled by the Convention Center. However, AVS has organized an online virtual showcase for 27-29 October 2020 which is available without any registration fee. It will be held 10:00 am to 1:00 pm US eastern (New York) time and there will be live sessions on emerging topics related to materials, processes and interfaces, as well as presentations by the major award winners. The link is <https://avs67.avs.org/>

Unfortunately, due to the covid-19 pandemic many planned events have been cancelled or postponed to later dates.

Proposed goals for the Applied Surface Science Division for the 2019-2022 triennium

To sponsor a IUVSTA School and Workshops in a non-member country (preferably with intention to be a member country) and to enhance the Applied Surface Science related information available at the IUVSTA website (e.g. to make accessible the ISO Vocabulary on Surface Chemical Analysis).

Respectfully submitted, September 24th, 2020

Leszek Markowski - Chair of the Applied Surface Science Division of IUVSTA

Activity Report from IUVSTA BI division for ECM-133 (October 8-10, 2020)

In the last semester, activities of BID included:

- continued work on a review paper;
- examination of platform options for IUVSTA mailing lists;
- participation in conference planning.

1. BID continued work on a review article on surface analysis and modification of biointerfaces, coordinated by Miguel Manso. Progress has been affected by the disruptions related to the COVID-19 pandemic.

2. The chair of BID, Dmitri Petrovykh, has continued the analysis of the available platform options for moving mailing lists to a solution compliant with GDPR (General Data Protection Regulation, EU), CCPA (California Consumer Privacy Act), and other emerging regulations.

3. Joined the program committee for IVC-22.

4. Participation in the scientific committee for EVC-16.

Report for the EMP Division for the previous period could be summarized as follows:

all activities were related to the forthcoming conferences,

- 1) EVC-16, as a member of a scientific committee I was involved in the selection of the plenary and keynote speakers.
- 2) Invitation to join the Program Committee of IVC-22 (@Sapporo, Japan, Sept. 2022) has been received and accepted.

Ivana Capan

Chair of EMPD

Activities report of the IUVESTA Nanometer Structure Division (NSD) to ECM 133

This written report has been prepared by the division officers for the ECM 133 and covers the period between ECM 132 (Virtual meeting) and ECM 133 (Virtual Meeting) to be held between 8th – 10th October 2020.

OFFICERS of the Nanometer Structures division NSD for the triennium 2019-2022

| | |
|-----------------------|----------------------------|
| Chair: | Ana G. Silva, Portugal |
| Vice-chair: | Shuji Hasegawa, Japan |
| Scientific Secretary: | Carla Bittencourt, Belgium |

IUVESTA - NSD Workshops and Schools

Due to the ongoing pandemic Covid-19 crisis and following the recommendations of IUVESTA the Workshops and Schools, mentioned below, planned to take place in 2020 were postponed to 2021.

- 90th IUVESTA Workshop on **“Tuning properties of advanced energy materials using modern theoretical and experimental methods”** chaired by Juan Royo, Valencia University, by the chair of IUVESTA-NSD division Ana G Silva and by the chair of IUVESTA-SSD division Maria C. Asencio
- 91st IUVESTA Workshop on **“Surface Chemistry of Catalytic Systems”** chaired by Baran Eren, Weizmann Institute of Science, Rehovot, Israel, will be held at The David Lopatie Conference Centre, Weizmann Institute of Science (2021)
- Workshop on **“Advanced Spectroscopy and Transport for 2D Materials at Surfaces”**, chaired by Shuji Hasegawa, vice-chair of NSD division, to be held at Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan.

Other activities

Shuji Hasegawa, Vice-chair of NSD division is involved in the organization of IVC22 which will be held at Sapporo, Japan in 2022. Ana G Silva, Chair of NSD was kindly invited by professor Hidemi Shigekawa, Chair of the program committee of the 22nd IVC to join to the program committee of IVC22. The organizing committee is now preparing the Web site for IVC22 and discussing the form of online/real hybrid meeting. Carla Bittencourt, Secretary of NSD and Ana G Silva had plans to submit a proposal for workshop in Trieste. Due to Covid-19 crisis new approach as alternative to 100% face-to-face meetings needs to be considered

and discussed. Carla Bittencourt, is also involved in the organization of ECOSS which was postponed to 2021: ECOSS, The 35th European Conference on Surface Science, University of Luxembourg - Postponed to 2021 <https://ecoss2020.uni.lu/>, and in the organization of EVC 16 also to be held in 2021: 30 May – 4 June 2021, Marseille, France, EVC 16 16th European Vacuum Conference <https://www.evc16.org/>.

Ana G Silva was attending, virtually, “The Turn of Events, Bringing Business Events Back Virtual Platform organized by Arinex Team. The opportunity was kindly offered by Nicole Walker CEO of Arinex Team. It was a good opportunity to join a hybrid international event, especially appropriate in pandemic situations.



Ana G Silva

Chair of the NSD for the triennium 2019-2022

28 September 2020



28th September 2020

ECM-133
Teleconference
Divisional Report
Plasma Science and Technologies Divisional Committee

The following meetings have been postponed to future dates due to COVID-19 problems

47th IEEE International Conference on Plasma Sciences (ICOPS) will be held in Singapore (new dates, 6-10 Dec., 2020) => will be online

3rd International Workshop on Plasma Agriculture (IWOPA) at Greifswald, Germany (new dates: 28 Feb. 03 Mar, 2021) => will be online

3rd International Conference on Data Drive Plasma Science (ICDDPS)/12th EU-Japan Joint Symposium on Plasma Processing/15th Asia-Pacific Conference on Plasma Science and Technology (APCPST-15) at Okinawa, Japan (new dates: 28 March-2 April, 2021) => will be online (not announced yet).

8th International Conference on Plasma Medicine (ICPM) will be held Incheon, Korea (new dates: 2 – 6 Aug, 2021).

20th International Conference on Atomic Layer Deposition /7th International Atomic Layer Etching Workshop (ALD/ALE 2020) was held online from 28 June to 1 July, 2020. (originally scheduled at Ghent, Belgium)

73rd Annual Gaseous Electronics Conference (GEC) , originally scheduled at San Diego, USA, was held online from 5 to 9 Oct. 2020.

The 24th International School on Low Temperature Plasma Physics: Basics and Applications will be held online (5-15 October, 2020).

The 18th International Conference on Thin Films & 18th Joint Vacuum Conference, originally scheduled at Budapest, Hungary, from 22 to 26 Nov. 2020, will be held online.

AVS 67th International Symposium & Exhibition was cancelled this year and its Virtual Showcase (online) will be held from 27 to 29, 2020. AVS 67th International Symposium & Exhibition will be held from 24 to 29 Oct. 2021 at Charlotte, NC, USA.

The 23rd Symposium on Application of Plasma Processes (SAPP) will be held online in January 2021 (dates are not determined yet.)

“IUVSTA Workshop on reliable sensing and control of reactive plasmas,” which was proposed by Miran Mozetič and scheduled at Cerklje na Gorenjskem, Slovenia (7 – 12 March 2021), organized by Slovenian Vacuum Society, was approved at ECM-132 but now postponed (new dates are not determined yet.)

28th September 2020

Satoshi Hamaguchi

Chair of the Plasma Science and Technique Divisional Committee

Surface Engineering Division Report
ECM133, 8th-10th October 2020
Ivan Petrov, Chair

1. The Surface Engineering Division is working on one approved workshop – the 93rd workshop “Advances in the characterization of surface engineering structures, coatings, and thin films” which will take place at Schloss Seggau Castle near Graz, Austria. Initially the workshop was planned to be held in October 2021. Because of the uncertainty with the pandemic, the Division and the Austrian hosts decided to reschedule the 93rd IUVESTA workshop for March 2022.
2. The Surface Engineering Division has prepared a proposal for a new workshop entitled “HiPIMS Today - Recent Development of High Power Impulse Magnetron Sputtering” which will be considered at this ECM. It is intended to be entirely on-line event for three half days on January 20-22, 2021. See details in the submitted application form
3. Preliminary work has begun with the Union of the Physicists in Bulgaria (representative of Bulgaria in IUVESTA) to organize a workshop in the general topic of surface engineering for biomedical applications, tentatively for April-May 2022. The application will be submitted at the next ECM in 2021.

Surface Science Division report for the ECM133

8th-10th October 2020

Virtual meeting

The Surface Science Division has continued to contact its members representative of the National Vacuum societies. We were positively surprised by many SSD members who collaborated and improved the division's activities. We have also to mention that some SSD members, unfortunately, even representatives of large Nacional societies, did not show too much interest, being somewhat difficult to communicate with them because they do not answer our messages.

In these conditions and taking into account mainly the pandemic crisis, the SSD has succeeded to achieve/progress the following actions:

1.- The SSD officers have transmitted several documents to Dr. John Kodelka, the IUVSTA web-manager, to be added to the link: <https://iuvsta.org/divisions/#ss>. The target has been to update and make more attractive this WEBSITE, adding information describing the SSD structure and activities. Moreover, we have included a photo and the link for each SSD member. In this way, people interested in contacting any member of the SSD can easily do it. The SSD website now gives more visibility to its members, promoting and facilitating communication and collaboration between them. Moreover, the SSD website's recompiled information also allows external and internal scientists of IUVSTA to efficiently and quickly evaluate the Surface Science IUVSTA Division's multidisciplinary and valuable expertise.

2.- In close collaboration with Prof. Ana G Silva, chair of the NSD and Prof. Juan Sanchez and several members of the Surface Science Division, the SSD continues supporting the organization of the workshop 90#-[IUVSTA](#) Workshop: "Tuning properties of advanced energy materials using modern theoretical and experimental methods," which due to the pandemic problems will be held at the second semester of 2021, in Valencia, Spain.

3.- The SSD is also supporting the International Symposium on Surface Science, 34th edition, (the 3S21 conference) in Courmayeur, Italy from March 7th to March 13th, 2021 organized by Mario Rocca.

4.- The SSD members are also supporting the 9th International Symposium on Surface Science in Kagawa, Japan. (<https://www.jvss.jp/iss9/>), which planned for November 2020, and organized by the Japan Society of Vacuum and Surface Science (JVSS) has been postponed to November 2021. As a trial of virtual conference, JVSS will include international invited sessions in the program of the annual domestic meeting which will be held online in this November 2020.

5.- The SSD is also participating and supporting the IUVSTA workshop 92 in Okinawa Japan on Advanced Spectroscopy and Transport for 2D Materials at Surfaces, which has been postponed to September 2021.

Prof. Maria C. Asensio,
Chair of the Surface Science Division
5th October 2020, Madrid, Spain

Prof. Fumio Komiro
Secretary of the Surface Science Division
5th October 2020, Tokyo, Japan



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Zagreb, 7th October 2020

BRIEF REPORT OF ACTIVITIES OVER THE LAST TIME PERIOD

The Thin Film Division (TFD) during the last period (since ECM 132 Annecy to ECM 133) was focus to keep the incentive the members to participate with new idea for opportunities of of the participation on 18th International Conference on Thin Films & 18th Joint Vacuum Conference / ICTF-JVC 2020 and to keeping informed the national vacuum and thin film societies on the TFD activities. We have informed the division members with a IUVESTA Workshops and Schools call for proposals that will be due. Besides we keep improving the interaction of the members of the national societies and professional institutions offering the IUVESTA framework as relevant resource to expand thin film technology science.

We have also worked on how pay tribute at the huge contributions of Peter Barna to the organisation of the ICTF and JVC conferences – essentially, he was established both. We have prepared a special letter that we plan to include in the IUVESTA publications and which part will be presented at the opening ceremony of the ICTF-JVC 2020 congress in Budapest in November this year. We also want to publish it as an editorial in Vacuum and/or Thin Solid Films journals.

Mile Ivanda
Chair of Thin Film Division of IUVESTA

10 October 2020
Update: teleconference

Vacuum Sci. And Tech Division report for the ECM 133

The Vacuum Science and Technology Division (VSTD) during the last period (since ECM 132 Annecy to ECM 133) was focus to update the web page and keep the incentive the members to participate with new idea for opportunities of interaction. We still don't have members on clear communication with VSTD and more messages coming back.

The proposal is to ask for the representatives to list their local institutions with vacuum training. The list could incentive new student to the area, knowing where to look for. This could include a local Vacuum related conference with constant offer of vacuum course for more than 3 years in consecutive. This is part of a longer perspective to share the (challenging) experiences on doing Vacuum training by virtual. EX: one proposal was for the institution Vacuum tutor to host the "vacuum Lab" with an assistant, and the student should direct the assistant to perform the hands-on work. The same course also suggested to invite "external" professionals from well know facilities (across the globe), as part of a virtual visits.

The main goal is the same, keep improving the interaction of the members (including the correlated national societies and professional institutions) offering the IUVESTA frame work as relevant resource to expand and spread the vacuum science.

Best regards,

Dr. Marcelo Juni Ferreira
Chair of the Vacuum Science and Technology Division