

# Minutes of the IUVESTA STD meeting at virtual ECM 136

March 25<sup>th</sup> (Friday), 2022

Due to the delay of previous committees, the order of reports/discussion was changed as:

## 1. Opening

The opening address was given by STD Director Jay Hendricks.

The activity of STD in relation with the IUVESTA divisions was briefly introduced:

1. International communication hub to connect Vacuum scientists around the world.
2. Science & education:

Development of Workshops, Schools, Short Courses and Tech. Training Courses

Promotion of IVC program

Development of new Focus Topics

3. Society Impact

Finding applications in the society

Support for science in less developed countries

(See STD Scientific Director's Report ECM 136 V2 on the web)

4. A slide on the pros and cons of virtual vs in person events was presented....

What has become clear is that discussion should be about 100% Virtual Vs. Hybrid

As we look to the future, I think the discussion should be on ways to make the hybrid meetings better and more inclusive.

2. **Attendance:** see attached sheet

3. **Adoption of agenda:** The agenda was adopted as proposed.

4. **Approval of minutes:** The Minutes of ECM 135 were approved.

5. **Divisional reports:** see attached Division Report\_2022-03-25.

6. **Report of past TTC and SC (see the details in STD Scientific Director's Report ECM 136 V2)**

The report of the 22nd TTC on “Vacuum Technology Applications”, which was held on 7-9 of December (2021), was given the Pakistan Vacuum Society.

The 91st Workshop on “Surface Chemistry of Catalytic Systems” was held in Israel on February 27-28 (2022) and also virtually on March 1-3 (2022), which was reported by Ana Gomes Silva.

7. **Status of existing Workshops, Schools, Technical Training Courses and Short Courses**

See STD Scientific Director's Report ECM 136- Virtual Meeting V2 on the web in the “meantime” folder.

8. **Proposals for new Technical Training Courses and Short Courses**

There were presentations (5 min + 3 min discussion) for two SC and three TTC proposals. There were some comments on the budget, speaker diversity, and so on. Then, voting on the five proposals was conducted with the Zoom chat (votes were sent to the secretary general).

The voting results for all proposals: 9 Yes / 0 Abstention / 0 No

Attendance at STD: March 25, 2022 recorded by K. Fukutani

Attendance of STD			ECM-132	ECM-133	ECM-134	ECM-135	ECM-136
Member							
STD	Director	Jay Hendricks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Sec.	Katsuyuki Fukutani	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC	Chair	Alberto Tagliaferro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
ASSD	Chair	Leszek Markowski		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BI	Chair	Dmitri Petrovykh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EMPD	Chair	Ivana Capan					
NSD	Chair	Ana Gomes Silva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PSTD	Chair	Satoshi Hamaguchi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
SED	Chair	Ivan G. Petrov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SSD	Chair	María Carmen Asesio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>
TFD	Chair	Mile Ivanda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
VSTD	Chair	Marcelo J. Ferreira	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Observer</b>							
ASSD	Vice Chair	John T. Grant					
	Secretary						
BI	Vice Chair	Miguel Manso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>
	Secretary	Carlos R. Grandini					
EMPD	Vice Chair	Reinhard Schwarz					
	Secretary	Monika Kwoka		<input type="radio"/>			<input type="radio"/>
NSD	Vice Chair	Shuji Hasegawa					
	Secretary	Carla Bittencourt			<input type="radio"/>	<input type="radio"/>	
PSTD	Vice Chair	Deborah O'Connell	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Secretary	Miran Mozetič	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SED	Vice Chair	Peter Schaaf					
	Secretary	Monika Jenko					
SSD	Vice Chair	Mario Rocca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Secretary	Fumio Komori	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TFD	Vice Chair	Papken Hovsepian					
	Secretary	Diederik Depla					
VSTD	Vice Chair	Martin Wüest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Secretary	Joe Herbert			<input type="radio"/>		<input type="radio"/>
		Anouk GALTAYRIES	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Christoph Eisenmenger-Sittner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Francois Reniers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Lars Montelius	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Arnaud Delcorte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Sylvie Bourgeois	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Anton Stampfl	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Anton Tadic	<input type="radio"/>	<input type="radio"/>			
		Pedro A. P. Nascente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Stanislav Novák	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		Yasunori Tanimoto	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Geun Young Yeom	<input type="radio"/>				
		Andrej Vincze	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Pär Omling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Emmanuel Haro Poniatowski	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Manfred Leisch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Greg Exarhos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Timo Gans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Javaid Ahsan Bhatti	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Tatyana Bendikov	<input type="radio"/>				
		Hernando S. Salapare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Joel Borges	<input type="radio"/>				
		Maja Mičetić		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		Jennifer MacLeod		<input type="radio"/>			
		Ulf Karlsson		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		Kathrina Lois Taaca		<input type="radio"/>			
		Attila Csik		<input type="radio"/>			
		Jörg Patscheider		(leaves 15:50)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Ulf Helmersson		<input type="radio"/>	<input type="radio"/>		
		Sven Ulrich		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>
		Zhang Yu-Yang			<input type="radio"/>		
		Ryszard Czajka				<input type="radio"/>	
		Dongxia Shi			<input type="radio"/>		
		Sarah Burke			<input type="radio"/>		
		Dietrich RT Zahn				<input type="radio"/>	
		László ÓVÁRI				<input type="radio"/>	
		Fabrizio Grogis				<input type="radio"/>	
		Carlos Tavares					<input type="radio"/>
		Arantazu Mascaraque					<input type="radio"/>
		Anna Belu					<input type="radio"/>
		Yong					
		Maja Micetic					<input type="radio"/>
		Antonin Fejfar			<input type="radio"/>	<input type="radio"/>	
Total					45	38	39

## **Report of the Applied Surface Science Division to the ECM-136 held as a virtual meeting on March 24-26, 2022**

### **A) Past events**

#### **1. The AVS ASSD Business Meeting**

This Meeting was held virtually on 8th November 2021. Mark Englehard was the Chair for 2021, Greg Fisher is the Chair for 2022, and Alex Shard is the Chair-Elect. During the Business Meeting, presentations were given in memory of two of our members who had passed away, Martin P. Seah and Charles S. Fadley. Alex Shard gave the presentation in memory of Martin and Greg Herman gave that in memory of Chuck. It was mentioned that M. Tom Thomas passed away in 2021. AVS ASSD is looking for a permanent home for the former SIMS USA Workshop. Possibly, it will be held in conjunction with the Symposium on Applied Surface Analysis and/or the International Conference on Metallurgical Coatings and Thin Films. The AVS elevated 12 of its members to Fellow in 2021, and we were proud that 4 of them are from the ASSD.

#### **2. The Vácuo 2021 Workshop,**

The Portuguese Vacuum Society, SOPORVAC, and its ASS division, held an in-person meeting last November, under the series of annual national workshops in Vacuum: Vacuo. The VACUO 2021 Workshop aim to bring together national and international experts in a more intimate meeting that promotes discussion on deposition methods, materials synthesis and characterization techniques using vacuum technologies. The 2021 edition was held on Tuesday November 9th at the Instituto Pedro Nunes in Coimbra. The topics of the Workshop were focused on vacuum technology and applications, functional coatings for the industry and fundamental research, with applications in the field of tribology, biosensors, electronic devices, solar cells and nanostructured surfaces (In attach follows the programme of this workshop and a photo of the attendees).

### **B) Forthcoming events**

#### **1. AVS 68th International Symposium & Exhibition**

The AVS 68<sup>th</sup> International Symposium & Exhibition is planned for Pittsburgh, Pennsylvania, as an in-person event, 6-11 November 2022. The AVS International Symposium and Exhibition addresses cutting edge issues associated with materials, processing and interfaces in both the research and manufacturing communities. The weeklong Symposium fosters a multidisciplinary environment that cuts across traditional boundaries between disciplines, featuring papers from AVS Technical Division, Groups, Focus Topics on emerging technologies and more. An extensive Exhibition of related equipment, tools, materials, supplies, chemicals, services, consulting, technical literature, and new technologies are showcased during the week. Abstract Submission Deadline is May 2, 2022., and the link to the Symposium website is <https://avs68.avs.org/>

#### **2. The RIVA XII Iberian Vacuum Conference**

SOPORVAC, and its ASS division, is currently actively organizing the RIVA XII conference.

The Iberian Vacuum and Applications Conference, RIVA, is a biennial joint meeting of the Spanish Vacuum Society (ASEVA) and the Portuguese Vacuum Society (SOPORVAC), and follows the series started in Braga, Portugal, in 1988, alternatively changing the location between Portugal and Spain. SOPORVAC will organize in **Braga (Portugal)** the next edition, **RIVA XII, during May 16-17 2022**, at the Vila Galé Collection Hotel. The event is of high relevance in scientific fields related to surface science and engineering, biointerfaces, plasma science, materials processing technologies involving vacuum equipment, such as thin films, nanostructures, amongst other fundamentals and applications in vacuum science technology. Hope to see you there. The link to RIVA XII is <https://www.riva2022.pt/>

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Respectfully submitted, March 17th, 2022

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

A handwritten signature in blue ink, appearing to read 'Leszek Markowski', is positioned to the right of the typed name.

## **Activity Report from IUVSTA BI division for ECM-136 (March 25, 2022)**

1. Participation in the program committee for IVC-22.
2. NAP School originally scheduled for 2022, but primary funding cancelled due to COVID-19. We will have priority for a resubmission for next triennium.
3. Continued work on Mailchimp platform for IUVSTA communications.
  - Shortly after ECM-135, Mailchimp has been acquired by Intuit, creating concerns about the privacy and use of data by the service
  - Intuit is a US-based provider of financial products, primarily for individuals and small businesses: quickbooks (accounting), turbotax (tax filing), mint (consolidated management of accounts at financial institutions), credit karma (credit reports and monitoring), and now mailchimp
  - The privacy statement of Intuit is complicated (and primarily deals with other services, but mailchimp is being integrated in examples)
  - The most important aspect of Intuit policy is that all the data from different services are linked in an Intuit account

There were no particular activities for the EMP division since the last ECM.

March 3, 2022

EMP division chair      Ivana Capan

## Activities report of the IUVSTA Nanometer Structure Division (NSD) to ECM 136

This written report has been prepared for the ECM 136 and covers the period between ECM 135 (Hybrid meeting) and ECM 136 (Virtual Meeting) to be held between 24<sup>th</sup> – 27<sup>th</sup> March 2022.

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

### Activities of the members of NSD division

1<sup>o</sup> Sidney Cohen national representative of Israel Vacuum Society reported on several activities, not organized within NSD Nanometer scientific division, however related with Nanometer science:

- a. The IVS set up over the past year a series of webinars. Although these are not specifically designated as nano, many of them are, you can look at the titles and abstracts (nanotubes, graphene, atomic-scale investigation of battery surfaces, etc.). They are all on this website:

<https://www.ivs.org.il/IVS2016/Templates/showpage.asp?DBID=1&LNGID=1&TMID=84&FID=3501>

All talks are archived and can be watched.

- b. The Israel annual conference online: It also contained sessions on nano

<https://www.ivs.org.il/IVS2016/Templates/showpage.asp?DBID=1&LNGID=1&TMID=84&FID=2434>

2<sup>o</sup> Wojciech Koczorowski, of Polish National Vacuum Society in the considered period mainly provided information to the Polish vacuum society members regarding the activities of the NSD and the possibility of obtaining support in the organization for workshops and training.



3<sup>o</sup> Lamberti Andrea member of Italian National Vacuum Society has informing and communicate the activities of NSD scientific division and IUVSTA among the members of Italian Vacuum society and scientific networks.

4<sup>o</sup> Ana G. Silva, Chair of NSD division and national representative of Portuguese Vacuum society, is member of the scientific committee for the RIVA XII \_Iberian Vacuum Conference, a biennial joint meeting of the Spanish Vacuum Society (ASEVA) and SOPORVAC, to be held between 16-17 May 2022 in Braga, Portugal  
<https://riva2022.pt/>

#### **IUVSTA - NSD Workshops and Schools**

5<sup>o</sup> Ana G. Silva, Chair of NSD division is preparing a workshop/school on Nano-optics as the 3<sup>rd</sup> Edition of the Nano-Optics International School. The purpose is to have a join organized event with other member of the NSD division. The proposal for organizing next edition of Nano-optics school is under preparation. The organization of this event has been postponed due to Pandemic situation.

#### **IUVSTA IVC 22, Sapporo, Japan, 11-16 September 2022**

The IUVSTA NSD division, officers, and members, while members of the NS subcommittee of the IVC22 Programme Committee, has been very active and strongly involved contributing for the organization of IVC22 suggesting and proposing Plenary, Keynote and Invited speakers and proposing Topics for the several Sessions. Shuji Hasegawa and Ana G Silva, respectively vice-chair and chair of the NSD, are the domestic chair and international vice-chair of the NS subcommittee of IVC22.

Ana G Silva

Chair of the NSD for the triennium 2019-2022

15 March 2022



25th March 2022

ECM-136  
Teleconference  
Divisional Report  
Plasma Science and Technologies Divisional Committee

1. Latest news (09 Feb. 2022): EURO fusion JET produced record-breaking 59 MJ fusion energy over 5 sec., strengthening the case for ITER

<https://www.euro-fusion.org/news/2022/european-researchers-achieve-fusion-energy-record/>

2. Ongoing Online Seminars in the PST area

GEC International Online Plasma Seminar – IOPS;  
<https://www.apsgec.org/main/iops.php>

Online Low Temperature Plasma (OLTP) Seminar Series;  
[https://mipse.eecs.umich.edu/ltip\\_seminars.php](https://mipse.eecs.umich.edu/ltip_seminars.php)

Physics informed Artificial Intelligence in Plasma Science (PiAI) Seminar Series;  
[http://www.ppl.eng.osaka-u.ac.jp/JSPS\\_Core/seminars.html](http://www.ppl.eng.osaka-u.ac.jp/JSPS_Core/seminars.html)

3. The following on-site/hybrid international meetings were held recently in the PST area

The 39<sup>th</sup> Annual Conference, Israel Vacuum Society (IVS) & Israel Conference Plasma Science and Technology Association (IPSTA) (Nov 17, 2021), online

The 42<sup>nd</sup> International Symposium on Dry Process: 18-19 Nov. 2021, online.

The 16<sup>th</sup> European Vacuum Conference (EVC16): 22-26 Nov. 2021, Marseille, France.

The 67<sup>th</sup> Annual Meeting of the Israel Physical Society (Feb. 22, 2022, Ben-Gurion University, Campus, Beer Sheba, Israel).

ISPlasma2022/IC-PLANT2022 (Mar. 6-10 Mar. 2022), Japan, online

4. Currently, two COST actions are running in the PST area;

CA19110 – Plasma Applications for Smart and Sustainable Agriculture (Oct. 2020-Oct. 2024)

CA20114 - Therapeutical applications of Cold Plasmas (Sept. 2021-Sept. 2025)

5. The following meetings are scheduled in 2022 or have been postponed to later dates;

Sherwood Fusion Theory Conference (4-6 April, Santa Rosa, CA, USA)

4th International Symposium of the Vacuum Society of the Philippines (ISVSP 2022) (20 to 22 April 2022) online

65<sup>th</sup> Annual SVC Technical Conference (2-5 May 2022, Long Beach, CA, USA).

The 29<sup>th</sup> Symposium on Plasma Physics and Technology: 20-23 June 2022, Czech Republic.

ALD/ALE 26 -29 June, Ghent, Belgium

The 9<sup>th</sup> International Conference on Plasma Medicine, 27 June to 1 Jul. 2022, Utrecht, Netherlands

The 48<sup>th</sup> EPS on Plasma Physics, 27 June to 1 July 2022, Maastricht, Netherlands

Gordon Research Conference: Plasma Processing Science (24-29 July 2022, Proctor Academy, NH, USA)

The 25<sup>th</sup> Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAPMFIG 2020): New Dates: 11-15 July 2022, Paris, France.

The 23<sup>rd</sup> International Conference on Gas Discharges and their Applications (GD2022), 28 Aug. -2 Sep. 2022, Greifswald, Germany

Workshop on ion chemistry and plasmas (30, 31 Aug. 2022, Bratislava, Slovakia)

9<sup>th</sup> Central European Symposium on Plasma Chemistry (CESPC-9) & COST Action CA19110 workshop Central Europe (4-9 Sep. 2022, Vysoke Tatry, Slovakia)

The 22<sup>nd</sup> International Vacuum Congress (IVC-22), 11-16 Sep. 2022, Sapporo Japan.

25<sup>th</sup> International Plasma School on “Low Temperature Plasma Physics: Basics and Applications” (October 1-5, 2022) and its Master Class “Electric Propulsion” (October 6-8, 2022).

11<sup>th</sup> International Conference on Reactive Plasmas/ 2022 Gaseous Electronics Conference (3-7 Oct. 2022, Sendai, Japan)

64<sup>th</sup> Annual Meeting of the APS Division of Plasma Physics (17-21 Oct. 2022, Splane, WA, USA)

AVS 68<sup>th</sup> International Symposium & Exhibition (6-11, Nov. 2022, Pittsburgh, PA, USA)

43<sup>rd</sup> International Symposium on Dry Process (DPS) (24-25 Nov. 2022, Osaka, Japan, Hybrid)

4<sup>th</sup> International Conference on Data-Driven Plasma Science (ICDDPS-4) (16-21 Apr. 2023, Okinawa, Japan)

The 25<sup>th</sup> International Symposium on Plasma Chemistry (21-26 May 2023, Kyoto, Japan)

The 35<sup>th</sup> International Conference on Phenomena in Ionized Gases (ICPIG) (9-15 July 2023, Egmond aan Zee, the Netherlands).

20<sup>th</sup> International Symposium on Laser-Aided Plasma Diagnostics (10-14 Sep. 2023, Kyoto, Japan)

IUVSTA Workshop on reliable sensing and control of reactive plasmas [organized by Slovenian Vacuum Society (contact: Miran Mozetič)] ??

Satoshi Hamaguchi  
Chair of the Plasma Science and Technologies Divisional Committee

**Surface Engineering Division Report**  
ECM136, March 2022  
Ivan Petrov, Chair

1. The Surface Engineering Division is working on one approved workshop – the 93<sup>rd</sup> 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 93<sup>rd</sup> IUVSTA workshop for October 2022. The final dates will be determined during the ICMCTF meeting in San Diego in May.
2. The SED has been working with Professor Eiji Kusano on the SE/ISSP(4) and SE/ISSP/PST(4) joint sessions with respective keynote and invited speakers at IVC22.
3. We have been working with Francois Reniers on organizing the IUVSTA highlight seminar in the honor of Joe Greene at IVC22
4. The International Conference on Metallurgical Coatings and Thin Films is taking place in San Diego, May 22-27, 2022, <https://icmctf2022.avs.org/>

## Surface Science Division report

ECM136

On line meeting

24<sup>th</sup>-26<sup>th</sup> March 2022

*Hybrid meeting associated with the 16<sup>th</sup> European Vacuum Conference (EVC16)*

During this last semester, the Surface Science Division has continued promoting its scientific activities and connecting field actors of the multidisciplinary domains related to Surface Science. Our actions have been realized online, following health safety protocols because of the challenging global pandemic context. In Asian countries, because of the strict health check in the entry immigration, short stay from abroad has been impossible. However, international online workshops and seminars have attracted many participants and have the advantages of easy access and instant connection.

Our main objective has been to keep all Division members informed of changes in the IUVSTA plan and update the organizers of scientific events according to the evolution of the health restrictions due to the COVID epidemic. In particular, we ensured the actualized information of previously scheduled IUVSTA congresses and meetings-related activities.

### **The SSD keeps developing the following actions:**

- 1- The SSD members closely support the program committee of IVC-22, Sapporo, by inviting the plenary and invited speakers and organizing sessions of Focus Topics in collaboration with NDS, ASSD, and VSTD.
- 2- We continue the collaboration with Prof. Ana G Silva, chair of the NSD, Prof. María C. Asensio, chair of the SSD, and Prof. Juan Sanchez as co-chairs of the IUVSTA 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 in September 2022, with a similar venue to the initially planned in Valencia, Spain. As soon as the site's reserve and the forum are confirmed, the SSD officers will inform IUVSTA sec repatriate and division members.
- 3- The SSD is also actively supporting the IUVSTA workshop 92 in Okinawa, Japan, on Advanced Spectroscopy and Transport for 2D Materials at Surfaces with Prof. Shuji Hasegawa, vice-chair of the NSD. The workshop will be held as the satellite meeting of IVC-22 on the next week of IVC.
- 4- The SSD also supports the 34th edition of the International Symposium on Surface Science (3S22 conference) postponed to 2023. The event will be held in Arlberg (Austria) and organized by Mario Rocca.
- 5- Many SSD members participated at the 9th International Symposium on Surface Science, which was organized by JVSS and held virtually from November 28th to December 1st, 2021.
- 6- The SSD has also participated at the VASSCAA meeting through the actions of Prof. Dr. María C. Asensio, that been invited as organizer and co-chair together with Prof. Dr. Donglai Feng to organize a special session entitled "The Latest Developments in Synchrotron Radiation," within the 10th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-10) & CVS 2021, Shanghai, China from October 11 to 14, 2021.

Respectfully,

Prof. Maria C. Asensio,  
Chair of the Surface Science Division  
7<sup>th</sup> November 2021, Madrid, Spain

Prof. Fumio Komiro  
Secretary of the Surface Science Division  
7<sup>th</sup> November 2021, Tokyo, Japan

20-22 March 2020  
Annecy, France  
Update: teleconference

### **Vacuum Sci. And Tech Division report for the ECM 136**

The Vacuum Science and Technology Division (VSTD) during the last period since ECM 135 was focus to incentive more interaction among members and possible opportunities of interaction through workshops.

The most active members (and correlated institutions) relay on the IUVESTA environment to find common perspectives and create interaction covering specific project, grants applications and special research not cover by IUVESTA activities.

The main activities were connected to IVC Sapporo organization, the new gauge called "ISO Gauge" and the bid/vote for the next EVC17 (winner bid British Vacuum Counsel). It was also in place the effort on 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