

Minutes of the IUVESTA STD meeting
ECM 130
Clarion Hotel Malmoe Live 1, Malmoe, Sweden
Saturday June 29, 2019

1. Opening

The STD Director David Ruzic opened the meeting at 14:50. According to the Agenda, a short welcome was followed by the attendance below. Note: vote are present by the STD Director, Scientific Secretary, Education Chair - Miran Mozetic and the 9 division chairs, from which 6 are present in the room, so 9 votes are possible.

2. Attendance

Members: David Ruzic – STD Director, Andrej Vincze – Sci. Secretary, Leszek Markowski – ASSD chair, Miguel Manso – BID chair, Deborah O`Connell – PSTD chair, Ivan Petrov – SED chair, Maria Carmen Asensio – SSD chair, Jay Hendricks – VSTD chair, and Miran Mozetic – Education Committee chair.

Observers: Anton Stampfl, Mariano Anderle, Katsuyuki Fukutami, Ute Bergner, Lars Montelius, Christoph Eisenmenger-Sittner (Sec. General), Francois Reniers, Fumio Komori, Jorg Patschenider, Sylvie Bourgeois, Marcelo E. Ferreira, Joe Greene, Sidney Cohen, Emanuel Haro Poniatowski, Manfred Leisch, Martin Wuest, Stanislav Novak, Carlos Tavares, Anouk Galtayries, Hsiang-Chien Wang, Ray-Hua Horng, Pedro Nascente, Timo Gans, Haiming Guo, Zhengchao Dong, Par Omling, Yongmin Kim, Janez Kovac, Gao-Yu Hsiung, Yasunori Tanimoto.

3. Agenda

The agenda was adopted as proposed.

4. Approval of minutes

The Minutes from the meeting of the STD meeting held in Regensburg, Germany during the ECM 129 were posted to the IUVESTA web, no remarks or comments have been received. The minutes are confirmed and the members voted in favour.

5. Divisional reports

ASSD, Leszek Markowski - *Division Chair*

The ASSD support the SIMS-22 conference (<http://siss-sims.com/sims22/>), it will be held in Kyoto, Japan (20-25 October 2019). This conference is organized by Japan Society of Vacuum and Surface Science. During the SIMS-22 the IUVESTA-sponsored (2 000 €) Short Course will also take place.

The ASSD co-support the 8th International Conference on Hard X-ray Photoemission Spectroscopy (HAXPES 2019) organized by SOLEIL Synchrotron, which will take place in Paris, 2-7 June 2019. Further details are at the website: <https://www.synchrotron-soleil.fr/en/events/haxpes-2019>.

The ASSD co-support the International conference on Applied Surface Science (ICASS 3) which will take place in Pisa, Italy, between 17-20 June 2019. This conference (<https://www.elsevier.com/events/conferences/international-conference-on-applied-surface-science>) is organised by Elsevier Publishing.

The 9th International Workshop on Surface Physics - Nanostructured surfaces, IWSP-2019 (24-28 June, 2019) (<http://www.iwsp2019.ifd.uni.wroc.pl/>) (87th IUVESTA Workshop) is organised by Institute of Experimental Physics (Wroclaw, Poland) with a strong support of the ASSD and IUVESTA financial support of 6 000 €. This Workshop is also a satellite conference to the IVC-21 (which will be held just next week after) and one of the 60th anniversary of IUVESTA celebration event.

The ASSD co-support the 89th IUVSTA Workshop: Biological and soft matter sample preparation for high resolution imaging by high vacuum techniques (Flyer: http://iuvsta.org/main/wp-content/uploads/2019/01/89th-IUVSTA-workshop-flyer_2019-01-11.pdf) which was held between 19 – 24 May, 2019 in Zakopane, Poland.

Other events:

1. On the occasion of the IUVSTA 60th anniversary a poster of ASSD has been prepared (authors: L. Markowski, Olivier Renault, John T. Grant), and it has already been presented on the European Vacuum Conference EVC-15 in Geneva and during the 9th Vacuum and Surface Science Conference of Asia and Australia (Sydney, Australia).
2. During the ECM-129 the bid proposal for the IVC-23 was presented by the chair of the ASSD (local organiser - Institute of Experimental Physics, University of Wroclaw and the Polish Vacuum Society).

Elections of the ASSD officers for the triennium 2019-2022

The number of National Representatives in the Applied Surface Science Division for the triennium 2019-2022 counts 29 scientist from 29 countries – members of IUVSTA. The ballot was conducted within the members of the new ASSD Electoral College through E-mails. The result of the election is as follows: Chair: Leszek Markowski, Vice Chair: John T. Grant, Secretary: vacant.

Proposed goals for the Applied Surface Science Division for the next 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).

BID, Miguel Manso - *Division chair*

1) Scientific activities in the field of biological sample preparation. After submission to IUVSTA ECM, BID has co-organized the 89th IUVSTA Workshop on “Biological and soft matter sample preparation for high resolution imaging by high vacuum techniques” chaired by Paulina Rakowska(NPL, UK) that took place in Zakopane (Poland), 19-24th May 2019.

- Brought together 58international researchers and analysts for scientific debate (13 invited + oral and poster contributions).
- Financial contribution from five sponsors (CAMECA, Ionoptika, IONTOF, Leica and Tescan).
- Diverse communities gathered to discuss interdisciplinary collaborationstowardsinnovations in methodology and instrumentation.

2) BID has submitted during the triennium three COST proposals incorporating most of EU and COST associated countries within BID. The proposals tried to emphasize the leading role that vacuum techniques play in the development of therapeutic and diagnostic techniques. Further applications will follow.

3) During the triennium the BID has participated in different ways in conference organization and follow-up. This includes collaboration with IVC 21 in organization of Bio related symposia (for which the higher-than-average interest from the invited speakers had been noted by the organizers), organization of Biointerfaces session at RIVA-X (Joint Portuguese-Spanish conference), follow up of Biointerfaces activities at EVC-Geneva, invited topical presentation at VASCAA and scientific committee activities at IBERTRIVA XI.

Additionally, we have expressed our opinion on convenience or not of endorsement to proposed workshops and conferences sent by IUVSTA secretaries.

4) BID has proposed a topical article on projections of vacuum science and technology to Biointerface science. The list of authors has been completed and writing launched. The article will appear during NEXT triennium.

5) BID has actively participated in IUVSTA 60th anniversary activities during EVC-15 and VASCAA-9 conferences with preparation of dedicated poster and topical presentation, respectively.

EMPD, *on behalf of Ivana Capan, from the sent report Andrej Vincze*

- Regular email correspondence among EMP division members established.
- Main activity was regarding the IVC-21; The plenary and invited lecturers has been nominated. Once the abstract submission was closed, all EM abstracts were sent to the Division members for grading, and the average score has been uploaded.
- Elections for the new triennium by e-voting: Ivana Capan (Chair), Monika Kwoka (Vice Chair) and Reinhard Schwarz (Secretary).

NSD, Sidney Cohen - *Division secretary*

IUVSTA - NSD Workshops

- Proposal for a workshop joined organized by the IUVSTA Surface Science division (SSD, Maria Carmen Asensio) and Nanometer Structures division (NSD, Ana G Silva) on “Tuning properties of advanced energy materials using modern theoretical and experimental methods” to take place in Valencia (Spain) between 24th -28th May 2020. The workshop is supported by the Spanish Vacuum Society. Requesting 6000 Euros
- Proposal for a workshop joined organized by members of the Spanish Vacuum Society (J. L. de Segovia) and IUVSTA Nanometer Structures division (NSD, Ana G Silva) on “Metal-oxide ultrathin films and nanostructures” to take place in Salamanca (Spain) between 6th and 10th July 2020. The workshop is supported by the Spanish Vacuum Society and sponsored by the IUVSTA Surface Science division (SSD) and Applied Surface Science division (ASSD). Requesting 6000 Euros

NSD Sponsor and Support IUVSTA workshop

NSD division sponsors and supports the proposal for a workshop on “Surface Chemistry of Catalytic System” to be held between 07-11 June 2020, at Weizmann Institute of Science, Rehovot, Israel.

NSD Elections of the Officers for the triennium 2019-2022

The officers of NSD division for the triennium 2016-2019, Ana G Silva, Christian Teichert and Sidney Cohen, promoted the election of the NSD officers for the next triennium 2019-2022. The Chair, Vice-Chair and Secretary were elected by the nominated NSD members for the triennium 2019-2022, with no objections.

Chair: Ana G Silva, member of NSD division, national representative of Portuguese vacuum society.

Vice-Chair: Shuji Hasegawa, member of NSD division, national representative of Japanese vacuum society.

Secretary: Carla Bittencourt, member of NSD division, national representative of the Belgium vacuum society.

NSD Divisional Meeting at IVC 21

An NSD divisional meeting at IVC 21, to be held on Thursday, 4th July in Malmö, at 12h00 is under preparation. All members of IUVSTA NSD division for the triennium 2016-2019 and for the triennium 2019-2022 were invited.

CONFERENCES

IVC-21, July 1st-5th, 2019 - 21st International Vacuum Congress, Malmö, Sweden

The chair of NSD, Ana G Silva, support the abstracts selection submitted within ICN+T conference, until the extended deadline 31st May 2019.

PSTD, Deborah O`Connell - *Division chair*

A short course on ‘Recent advance in plasma techniques for tailoring surfaces and thin films’ was held in Slovenia during May 2019 organised by Miran Mozetič, attached to the Central European Symposium on Plasma Chemistry.

The 2nd International Conference on Plasma Driven Data Science was held in Marseille, France in May this year. This is a new international initiative on integrating the plasma data science community across all plasma science from high to low-temperature plasmas.

An EU COST Action on Plasma Therapy is been prepared across many country representatives.

The Division elected its representatives for the next Triennium:

Division Chair: Satoshi Hamaguchi

Division vice-Chair: Miran Mozetič

Division Secretary: Deborah O’Connell

An important part of activity has also been the preparation of the divisional programme for the IVC-21 in Sweden. Details of the final programme are available at <https://mkon.nu/IVC21>.

SED, Ivan Petrov - *Division Chair*

The Division participated in the preparation of the scientific program of IVC21

The traditional IUUVSTA SE and TF division programs are put together in a cluster with two new sections Organic Materials and Materials for Energy Storage; the latter two are led by Swedish Chairs.

- Hard coatings
- Advanced coating technologies
- Advanced sputtering techniques
- Mechanical Properties of thin films
- Advanced Thin Film Technology
- Structural and electronical properties of thin films
- Oxide thin films

The SED presentation for the highlight seminar was prepared and delivered in Sydney, Australia.

The SED contributed a section in the IUUVSTA review article entitled “Recent developments in surface science and engineering, thin films, nanoscience, biomaterials, plasma science, and vacuum technology” Thin Solid Films 660 (2018) 120–160.

SSD, Maria Carmen Asensio - *Division Chair*

The Topics of the SSD have been discussed and redefined taking into account highly prosper new scientific research areas as surface states in topological material, nano-structured surfaces and surfaces in quantum materials. A formal document has been prepared and sent to the IUUVSTA STD officers with the main Topics of the Division in order to be discussed together with similar documents produced by the other IUUVSTA Divisions.

A poster dedicated to describe the main activities of the SSD has been transmitted to the IUUVSTA officers and STD in order to divulgate and to increase the visibility of the Division, advertising its involvements.

The SSD has actively contributed since the beginning to the discussions related to the scientific programs of the following general conferences: VASSCAA, ECOSS, EVC and IVC held during the past Triennium.

Main goals developed by the Surface Science Division during the triennium 2016-2019:

Promotion of IUVSTA Schools in non-member countries (preferably with intention to be a member country)

Organization and sponsoring of Workshops on fundamental problems and applications related to Surface Science related knowledge.

Provide the latest and more valuable Surface Science related information to the IUVSTA community throughout diverse contributions to its website, giving a precious advise for specialized strategic meetings.

Elections of the SSD officers for the triennium 2019-2022

The SSD officers, have participated and supervised the Chair, vice-chair and secretary electoral process of the SSD division for the next triennium. A particular effort has been realized in order to contact and provide the necessary guide to all new members of the Electoral College.

The ballot was conducted within the members of the new SSD Electoral College through E- mail. The results indicate that the SSD officers for the next Triennium (2019-2022) are

Chair: Prof. Maria C. Asensio

Vice-chair: Prof. Mario Rocca

Secretary: Prof. Fumio Komor

TFD, *Andrej Vincze on behalf of D. Depla*

The election procedure was initiated with a call to the country representatives to submit their candidacy. Prior to this call, P. Hovesepian (GB) and D. Depla (Belgium) expressed their interest to continue their position of co-chair, and secretary respectively. The call was repeated three times. Only 5 (out of 30) representatives didn't respond (N. Haberkon, R. P. Mota, A.GhalamborDezfouli, T. Hasegawa, F. Servando Aguirre-Tostado). Three possible candidacies for chair were received. After a short discussion amongst the candidates Joe Greene preferred younger people to step in, and he withdrew his candidacy. Mile Ivanda (Croatia) and Francisco Yubero (Spain) submitted a short CV, and the election procedure was started. After three calls to vote, the secretary (D. Depla), the former TFD chair (F. Frascassi), and the scientific secretary (A. Vincze) received the votes of 23 representatives. A vote in favor of one candidate was counted as 3 points. One point to each candidate was given when the representative didn't had a preference. Mile Ivanda received 37 points, while Francisco Yubero received 28 points. The result of the election was announced on June 8th 2019.

VSTD, Jay Hendricks - *Division chair*

This report covers the activities of VSTD that have occurred since ECM129, in Regensburg, Germany March 29th, 2018.

The primary activities of Vacuum Science and Technology Division in the past 2.5 months has been:

- 1) The formal announcement of the winning bid to host the next (EVC-16)European Vacuum Conference.
- 2) Abstract scoring and final program planning for the VST abstracts for the International Vacuum Congress (IVC-21)
- 3) The Election of officers for VST Chair, VST Vice-Chair, and Secretary.

EVC-16 Winning Bid Announced:

The winning bid for the EVC-16 to be held in 2021 was announced with an IUVSTA news flash! With a strong voter turn out (70%) the French Vacuum Society Bid was declared the winner at the ECM-129 in Regensburg. The main strength of the proposal is the partnership with ITER which will support the local planning committee. The meeting will be Marseille in south of France and combined with one of the most complex international scientific and engineering projects (ITER) makes for an ideal location for the next EVC! Additionally, rolling forward EVC will be held every three years with EVC-17 occurring in 2024, and EVC-18 occurring in 2027. Bids for 2024 will be solicited in January/February of 2022 so that selection can be made so that the organizers will have a full 2 years to plan the event. The advantage of moving the EVC to a 3-year schedule is that it will now be in synchronized with the IVC such that it

will not occur in together in the same year and has the added benefit of not having too many meetings scheduled in the same year.

The French Vacuum Society Bid Wins!

EVC-16 (2021) Announcement

The Vacuum Science and Technology Division of IUVESTA is pleased to announce the winning bid to host EVC-16 to be held in 2021.

With strong voter turnout (70% of eligible voters) the French Vacuum Society Bid was declared the winner at the ECM-129 in Regensburg.

The main strengths of the proposal is the location, Marseille in the south of France with large scientific and industrial community, and also the partnership with ITER Organization one of the largest and most complex international scientific project ever built.

In addition to the usual EVC topics, this edition will focus on *energy, hot plasma and materials*.

The event will combine with EVC, a parallel conference on *Surface Treatments and a large exhibition on vacuum technologies and materials*.

We are confident that this program will attract valuable scientists, engineers and students to make this conference a success.

Look for updated information from the programming committee and please remember to save the dates shown on the flyer announcement below. Looking forward to seeing you in Marseille in 2021!

SFV

EVC16@ITER: support from ITER

Best Regards
 Jean Louis BERSIER
 Vacuum Engineer
 IUVESTA VST division

Jay Hendricks
 VSTD Chair 2016-2019





Winning Bid Highlights:
 Location: MARSEILLE, France
 Dates: 30 May - 4 June 2021
 Venue: Marseille Chantot Convention Center
 Registration: 600 €
 Local point of interest: Being held in conjunction with ITER

Program Finalized for IVC21



The KEY DATES

VST is located within the “Technology” Division with Jay Hendricks (USA), Deborah O’Connell (UK) and Ivan Maximov (Sweden) serving.

IVC-21 VSTD Extended International Program Committee

Hendricks, Jay H., USA, Chair
 Chong-Do Park, Korea
 Fedchak, James A., USA
 Jean Louis Bersier, France
 Joe Herbert, United Kingdom
 Manfred Leisch, Austria

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The ABSTRACT call was successful with IVC getting ~ 600 abstracts and VST getting 104 abstracts. For VST, 50% of these are going to oral presentations and 50% going to posters. At last count there were 54 oral presentations and 12 invited speakers are scheduled over 12 sessions, 3 of which are women in science. We received and scored 9 additional abstracts as late-breaking abstracts bringing the total abstract count for VST to 113. We anticipate an additional 3 or 4 speaker slots will be awarded based on late-breaking abstracts that turn out with the remainder going to posters.

Abstract voting was done by the listed IVC-21 VSTD Extended International Program Committee (see above) with each member being assigned about 20 to 30 abstracts to score by the Chair (Jay Hendricks). The Chair set up a spreadsheet and logged all reported scores. A 5-point scoring system was used. 1-exceptional (oral, invited speaker possible), 2-very good (oral definitely recommended), 3-good (oral if space available), 4-poster, 5-reject or move to another division. The chair then calculated the average score and used a web-site link to upload the final scores. I thank the committee above for their work in performing the scoring. I thank Marcelo for attending the abstract sorting and program planning meeting that was held in Sweden where final selections of invited speakers was made.

Confirmed PLENARY SPEAKER FOR VST: The committee has input on the selection of a high-profile key note speaker, Dr. Carl Brockmeyer. Unfortunately, Carl was unable to attend, but an excellent substitute will speak on the hyperloop-Tom Kammermeier. This represents a high profile industry talk and adds to program diversity.



Tom Kammermeier leads the Global Application Development Team for Industrial Vacuum within the Leybold GmbH, a member of the Swedish Atlas Copco group.

Confirmed Invited Speakers

- ◇ Michael Krystek, PTB Braunschweig - Fundamental Basis and Philosophy of the Revised SI
- ◇ Karl Jousten, PTB – Towards Standards for Ion Gauges
- ◇ Julia Scherschligt, NIST Gaithersburg - Quantum Based Cold-Atom Vacuum Standard+
- ◇ Felix Sharipov, U Parana, Ab initio modelling of rarefied gas flows
- ◇ Shinjae You, Chungnam Nat. U. Cutoff Probe Modeling for Precise electron density Diagnostics*
- ◇ Katharina Battes, KIT, Systematic study of the outgassing behavior of different ceramics+
- ◇ Eshraq Al-Dmour, MAX IV, The vacuum system of MAXIV 3 GeV storage ring+
- ◇ Michael Elsen, U. Bremen, UHV System for the MAIUS-2/3 Sounding Rocket
- ◇ Koichi Takaki, Iwate U, Pulsed-Power Applications for Farming and Food Processing*
- ◇ Marcelo Juni Ferreira, ESS, Updates on European Spallation Source TARGET monolith Vacuum
- ◇ Lars Westerberg, Uppsala U Teaching vacuum science and the Professor Vacuum Show

+Women

*in conjunction with plasma physics

Comment for future IVC planning: It was noted that it was difficult to have VST combined in a “technology track” along with plasma sciences. While the number of VST abstracts was strong, it may have suppressed the abstract count for other areas (plasma science). Also, since VST was put into two parallel track “technology sessions” there are times when VST talks compete directly with one another, and then other times where there are no VST talks scheduled at all. The up-side is that there is a better mixing of scientists, from different fields, so I’m hoping that this has a positive impact, by creating new collisions with people that would have otherwise not occurred. Finally, since we put out the abstract call with only 3 invited speakers, it was difficult for the external committee to get excited about soliciting abstracts. Luckily this was changed, and we eventually got the 12 invited speakers that is more typical for VST (10 if you don’t count the 2 that are shared with Plasma Science Division). For future IVC planning, it is suggested that 60% to 70% of the anticipated slots be awarded up-front based on past performance, and that classical descriptors be used in the abstract call.

VST Workshops, Schools and Technical Training

VST continues to call for and accept applications for workshops, schools, and technical training. For the current six-month period, no new applications were received. These workshops and schools offer a terrific opportunity for member nations to engage with IUVESTA and applications will continue to be sought.

VSTD has agreed to co-sponsor with Surface Science Division a workshop application entitled ***“Surface Chemistry of Catalytic Systems”***. The workshop will be held in Israel at the Weizmann Institute between **June 7-11, 2020**.

ISOTC112 Liaisons Activities: Since IUVESTA can give Liaison status to IUVESTA members an ISO TC112 subcommittee has been organized by VSTD. Karl Jousten has been able to provide access to documents that have come before the committee.

VSTD ISO TC 112 sub-committee

- Karl Jousten, Germany
- Martin Wüest, Switzerland
- Janez Šetina, Slovenia
- Marcelo Juni Ferreira, Brazil
- Jay Hendricks, USA

Our VST group continues to be active in ISO and national standards. Jay Hendricks continues to serve AVS recommended practices committee for AVS. This give an opportunity to work across the ISO, ASTM and National Metrology Institute (NMI) standards.

Review Article: Recommended practice for calibrating vacuum gauges of the ionization type

James A. Fedchak, Patrick J. Abbott, Jay H. Hendricks, Paul C. Arnold, and Neil T. Peacock

Citation: *Journal of Vacuum Science & Technology A* **36**, 030802 (2018); doi: 10.1116/1.5025060

View online: <https://doi.org/10.1116/1.5025060>

View Table of Contents: <http://avs.scitation.org/toc/jva/36/3>

Published by the *American Vacuum Society*

Recent activity now published: “Recommended Practice for Calibration of Gauges of Ionization Type”, JVST A 36 030802 (2018); doi: 10.1116/1.5025060 has been published in JVST.

<https://avs.scitation.org/doi/pdf/10.1116/1.5025060>

VSTD is pleased to announce the following officers for the 2019-2022

Chair VSTD: (x) Marcelo Ferreira Elected 100% OF THE VOTE (unopposed)

Vice-Chair VSTD: (x) Martin Wuest Elected 94% OF THE VOTE
Secretary VSTD: (x) Joe Herbert Elected 100% OF THE VOTE (unopposed)

Voter turnout: 53% of the eligible voters

An email ballot was circulated to the IUVSTA Vacuum Science and Technology Division Member for the upcoming triennium 2019-2022.

6. Proposals of Workshops

The STD director D. Ruzic shortly introduced the current situation (already decided) of the WS and Schools, as they appear in the IUVSTA web.

Attendance, according to the rules 6 division representatives are present by person, except those the STD director, the Education com chair and the Sci. Sec. has the right to vote, so in total 9 votes are possible.

The point of new proposals, 3 proposals came to STD. They will be presented in chronological order.

The **WS1** proposal with title “**Tuning properties of advanced energy materials using modern theoretical and experimental methods**” was presented by M. C. Asensio. The proposed date is May 24-28, 2020 with location Valencia, Spain. After the presentation some questions were raised regarding the budget. In particular the statement regarding underwriting losses should be modified to our standard language. The scope of the WS, and regarding the connection between the most likely invited speakers should also be clarified. The Scientific Director will communicate these issues to the organizers.

The **WS2** proposal is holding a title “**Surface Chemistry of Catalytic System**” and was presented by the Scientific Secretary on behalf of Baran Eren the organizer. The proposed date is June 7-11, 2020 and location Rehovot, Israel. After the presentation a short discussion was formed about the WS format. It appears that too many students are involved and looked like a School instead of a Workshop. Also it was suggested that the plenary talk be rephrased as introductory one so as not to appear like a conference. Also it was recommended to give more space for discussions and interaction of the community. The Scientific Director will communicate these issues to the organizers.

The **WS3** proposal with the title “**Metal oxide ultrathin films and nanostructures**”, to be held in Salamanca Spain, in July 6-10, 2020 was presented by Miguel Manso. A series of question was come about the registration fee, about the similarities between the previous ones held in Avila, Spain, WS 86 with title Nanoscale Oxides systems in Physics and Chemistry and a previous previous one held in Avila, Spain WS 76 with title Structure of ultra thin films of oxides on metal surfaces granted by the IUSVTA. IUVSTA usually does not support a series of events. Also turned out, that the WS86 report was not delivered yet in a form, which meets the requirements.

The voting was held by secret ballots, 9 votes are the maximum, with **conditional recommendation** as was fulfilling the above mentioned items.

The results were counted by the STD director and the Sci Sec and are the following:

WS1, 8 Yes, 1 Abstain and 0 No vote
WS2, 7 Yes, 1 Abstain and 1 No vote

WS3, 3 Yes, 1 Abstain and 5 No votes

According to this result will the STD recommend for the ECM 130 to vote about the proposals WS 1 to be as the 90th IUVSTA WS (Tuning properties of advanced energy materials using modern theoretical and experimental methods, to be held in Valencia, Spain, in May 24-28, 2020) and WS 2 to be as the 91st IUVSTA WS (Surface Chemistry of Catalytic System, to be held in Rehovot, Israel in June 7-11, 2020) to support them by the required amount of 6000 EUR/each.

8. Reports on the WS and Schools held before the ECM129, There are two WS was held, one in May and one finished a day before the ECM 130 started, so they will be reported on the ECM 132 during the STD meeting.

10. Any other business:

The STD director addressed his forward view to the next STD after the GM 20. After closing this point the STD was adjourned at 17.45 by D. Ruzic.

In Malmoe, June 29, 2019 by A. Vincze