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Report on ECM 130, Hotel MALMÖ LIVE, Malmö, Sweden

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ECM 30 was held on Sunday, July 30th, 2019 at the Hotel Malmö Live, Malmö, Sweden. In his opening statement the President Lars Montelius gave a brief resume of the past Triennium of the Union, which will end with the 20th General Meeting, GM 20, on July 3rd, 2019 during IVC 21. He highlighted the tasks accomplished, like the newly designed website which is now a much more attractive link of the Union to the outside world, as well as the many outstanding meetings and events during the Triennium, which were also related to the IUVSTA 50th anniversary.

The Secretary General, Christoph Eisenmenger-Sittner first expressed his thanks to the German Vacuum Society, represented by their Councillor, Ute Bergner, first for having organized an impressive special tour through her company VACOM and then for an excellent ECM 129 in Regensburg, as well as for the special Vacuum related sessions during the meeting of the German Physical Society which started right after ECM 129. He then also thanked the Swedish Vacuum Society for taking the effort to organize ECM 130 here in Malmö, at the site of IVC 21, where the delegates could get a flavour of the excellent meeting facilities for the International Vacuum Congress, and also had the opportunity to visit the impressive construction site of the European Spallation Source, ESS.

In his report, the Secretary General reminded the delegates on the 20th General Meeting of the Union (GM-20) which would happen on Wednesday, July 3rd, during IVC. He reported that all member Societies except India were represented and that all technicalities of the meeting were fulfilled, so that it could be held safely.

Following the Secretary General's report, the treasurer, Francois Reniers, presented the finance reports covering 2018 and 2019, as well as the framework budget for the next triennium. In his report he also showed the changes made in the framework budget after intense discussion in the finance committee. All financial items of the Union were found to be in good order by the members of the executive council.



The participants in ECM 130

A definite highlight of ECM 130 was the final decision on the venue of IVC 23, due 2025. First, the four bidders Australia, Great Britain, Poland and Portugal gave their very brief, but still excellent presentation, which were then judged by the



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delegates in a secret vote. There was a clear result for the Australian Bid, so IVC 23 will be held from Sept. 15th – 19th, 2025 in Sydney Australia. It must be noted that all four bids were of excellent quality, which shows the high importance which is attributed to the International Vacuum Congress by the members of the Union.



The IUVSTA Officers for the 2016-2019 triennium: David Ruzic, Christoph Eisenmenger, François Reniers, Anouk Galtayries, Andrej Vincze (standing) and Lars Montelius and Mariano Anderle

After this important item the meeting continued with the STD report, where votes were taken on two workshop proposals. The workshop proposal entitled "Tuning properties of advanced energy materials using modern theoretical and experimental methods", proposed by the Surface Science Division was approved as IUVSTA Workshop number 90 with a funding of EUR 6000.- - given a sharpening of the topical focus and an indication of the body bearing financial responsibility for the Workshop. The workshop proposal entitled "Surface Chemistry of Catalytic Systems", proposed by the Nanometre Science Division was approved as IUVSTA Workshop number 91 with a funding of EUR 6000, given a restructuring of the programme.

Continuing in the agenda, the next item was the selection of the venue of ECM 133, due fall 2020.

From three excellent proposals by Brazil, China and Mexico, the Chinese bid won the greatest support. ECM 133 will therefore be held from October 9th – 11th, 2020 in Suzhou, China, in connection with VASSCAA 10 which will take place from October 12th – 15th, 2020 in Shanghai, China.

After determining the venue of ECM 133, the Secretary General announced, that he had received requests from the Cuban Physical Society and from the Serbian Vacuum Society for granting provisional membership. All supplied documents were found to be in order and ECM 130 unanimously granted provisional membership for both new member societies. It was also decided to include both requests also in the Agenda of GM 20 as requests for full membership. As the Head of the Delegation of the Cuban Physical Society Joe Greene agreed to serve, and Janez Kovac agreed to represent the Serbian Vacuum Society at GM 20.



The beautiful historic Malmö



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In conjunction with these membership requests the Secretary General once again reminded the delegates that the 20th General Meeting of the Union (GM-20) would be held on Wednesday, July 3rd at the conference venue of IVC 21 in Malmö and that there will be further communication to confirm attendance and member society representation.

After the presentation of all other committee reports, the Swedish Vacuum Society, represented by the Councillor of Sweden and Conference Chair of IVC 21, Pär Omling, had the opportunity to present its activities. Besides the description of the fields in which the society is active, also a brief preview on IVC 21 was given.

After the closing message of the President, Lars Montelius and after the successful completion of the Sunday morning meetings the participants were invited to have lunch and to continue discussions before departing to their respective destinations or, as it was the case for most of the delegates, to stay for IVC 21.

Report on GM 20, MALMÖ LIVE Conference Centre in Malmö, Sweden

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The 20th Ordinary General Meeting (GM 20) and the Extraordinary General Meeting of 2019 took place on Wednesday, July 3rd at the MALMÖ LIVE Conference Centre in Malmö, Sweden. After a brief welcome to the delegates, the President, Lars Montelius, asked the representatives of the member societies present in the room to briefly introduce themselves. The Secretary General, C. Eisenmenger-Sittner, confirmed that all member societies were represented except the Indian Vacuum Society, so both meetings, GM 20 and the Extraordinary General Meeting of 2019 were quorate.

After his brief opening statement, the President remembered Peter Varga who passed away in the last Triennium. As a long-term chair of the Surface Science Division he significantly contributed to the scientific profile of the Union. He actively took part in the organization of basically all Surface Science related events and meetings as member of either organizing or program committees, and the large success of Surface Science in the meetings of the Union could be attributed to a great part to his efforts. The President asked all representatives to stand up for a minute of silence to remember him.

After this minute of silence, the Secretary General announced the good news that during the last triennium two new member societies, the Cuban Physical Society and the Serbian Vacuum Society were granted provisional membership at the 130th Executive Council Meeting, right before this General Meeting. Therefore, after a unanimous agreement of the delegates to vote on full membership of both member societies the General Meeting took a vote on the full membership of these societies. Both societies submitted all relevant documents and are willing to contribute one annual share to the Union if full membership was granted. A secret vote was taken, and both societies were granted full membership.

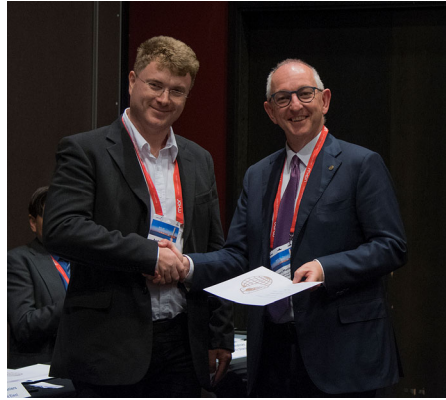
IUVSTA president Montelius presented certificates to outgoing IUVSTA officers, committee chairs and outgoing councilors, including: Mariano Anderle - Past President, David Ruzic - Scientific Director, Andrej Vincze - Scientific Secretary, Deborah O'Connell - Recording Secretary, Division Chairs: Miguel Manso, Francesco Fracassi, and Jay Hendricks and councilors and alternative councilors: Anton P. Stampfl, Jamie Quinton, Rogerio P. Mota, Slobodan Milosevic, Vladimír Matolín, Antti Korhonen, Daniel Vernière, László Kövér, Morteza Zargar Shoushtari, Seyed Mohammad Rozati, Shachar Richter, Paolo Manini, Sander Otte, Magdaleno R. Vasquez Jr, Marek Godlewski, Jozef Novák, and Francisco Tabarés.



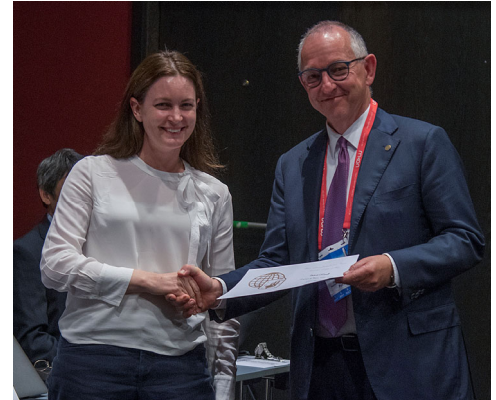
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Past President Mariano Anderle



Scientific Secretary Andrej Vincze



Recording Secretary Deborah O'Connell

Moving on in the Agenda, the minutes of GM 19 were approved as a true record and the Treasurer, Francois Reniers asked the General meeting for the approval of the Accounts for the Financial Year 2018 and of the Budget for Financial Year 2019. After some discussion on a possible increase of the fraction of funds spent on Workshops and schools, both items were approved by a majority of the delegates.

After this the Presidency was transferred from Lars Montelius to Anouk Galtayries. Lars Montelius will act as Past President. As the new President Elect, Francois Reniers was proposed by the former Executive Council to the General Meeting. The new officers proposed by Anouk Galtayries are: Scientific Director Jay Hendricks, Scientific Secretary Katsuyuki Fukutani, Secretary General Christoph Eisenmenger-Sittner and Treasurer Arnaud Delcorte. These persons were ratified in their respective positions unanimously by the General Meeting. Also the position of the Recording Secretary

was transferred from Deborah O'Connell to Ana Gomes Silva. The president and the Secretary General took the opportunity to thank Deborah O'Connell for her work as Recording Secretary during the past Triennium.



Lars Montelius passed the gavel to Anouk Galtayries

With the new Officers ratified, the meeting proceeded with the presentation of the framework budget for the Triennium 2019 – 2022 by the outgoing Treasurer. After considerations the line item of the Workshops and Schools was increased from €80,000 to €120,000 with the intent to increase the amount of funding per workshop/school from €6,000 to €9,000; the value of the share was kept at €150, and the amount of both the IUVSTA Science and Technology Awards was increased from €3,000 to €5,000 each. The past Treasurer Francois Reniers presented an updated budget with the respective increases. The President asked the room to ratify the modified budget. Each society had one vote. This was unanimously approved by a show of hands.

It has to be emphasized that this modified budget significantly deviates from proposed one as more financial means are



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allocated to support scientific, educational and prize-related activities at essentially constant income from membership shares. Although the value of the General Fund technically has increased, this is mostly due to stock market effects which cannot be considered as liquid assets, so that in the future this increase in expenses may lead to an increase of the share value, which is the only legal way to balance a budget in the Statutes of IUVSTA.

After the ratification of the framework budget also the new members of the Executive Council, i. e. the new Councilors and Alternates were unanimously ratified by the General Meeting. Finally, to conclude GM 20 all persons who finished their activities in the Union received a Certificate of Recognition by the Past President, Lars Montelius.

As there was no other competent business, GM 20 was adjourned by the President, Anouk Galtayries, and the Extraordinary General Meeting of 2019 was seamlessly started. As no delegation left the room, also this Extraordinary General Meeting was safely quorate and could instantly be constituted. The meeting was devoted to the Report of the Past President to the General Meeting and to the Reports of the previous Executive Council (Secretary General, Committees, Scientific and Technical Director, Divisions, as well as the Treasurer and the Finance Committee). These reports are available in the Book of Reports at

http://iuvsta.org/iuvsta2/assets/docs/GM20/GM20_Book_of_Reports_V_3_0.pdf.

Finally, the incoming President, Anouk Galtayries, ended the meeting by delivering her inaugural statement, available at <http://iuvsta.org/message-from-the-president/>, in which she stressed the new challenges and opportunities which the Union will have to face in the coming three year, especially related to the dissemination of knowledge and scientific information to persons with extremely diverse backgrounds, which can only be faced by a strong collaboration and dedication of the members of the Union.

Report on ECM 131, MALMÖ LIVE Congress Centre Malmö, Sweden, July 3rd, 2019

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ECM 131 was held on Wednesday afternoon, July 3rd, 2019 at the MALMÖ LIVE Convention Centre in Malmö Sweden. It was the first constituting meeting of the IUVSTA executive council of the Triennium 2019 – 2022.

In her opening statement (available at <http://iuvsta.org/message-from-the-president/>) the new president, Anouk Galtayries, emphasized the new challenges and opportunities which the Union will face in the coming years, especially considering the challenges of disseminating knowledge and scientific information to persons with extremely diverse scientific and technological backgrounds. Significant financial means will be dedicated to improve the means of transmitting information to the outside world apart from the classic features of the Union like Workshops, Schools, and Courses, like e.g. web-based formats such as webinars or social media.

The new treasurer Arnaud Delcorte was introduced by the President and gave a brief overview on the financial framework of the years to come.

After that, the new Scientific Director, Jay Hendricks, presented his forward view of the next three years. First, he expressed his gratitude to President Anouk Galtayries that she put him in charge of the Scientific and Technical Directorate of the Union. He expressed his enthusiasm and motivation by taking that responsibility.

The Scientific Director suggested several topics of importance to be considered during the triennium 2019-2022:



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- Education
- Quantum Science
- Nanophotonics
- Roles of sensors and the sensor science
- Next generation energy
- The society as meeting point for ideas.
- Society impact.

Finally, the Chairs, Vice-chairs and Secretaries, elected for the triennium 2019-2022 by the respective division members of each IUVSTA Scientific Divisions, were announced.

After the Scientific Directors forward view, the meeting went on with the constitution of the new standing committees of the Union. The focus of several committees was slightly changed, which is e. g. reflected in the name change of the "Emerging Societies" Committee to "Integrating New Societies" Committee. Also, a new Committee, named "Industry Meets Society", was incepted, which shall foster the relations between the Union and Industrial partners. The participants were asked to sign up for the now 9 standing committees. It was communicated that the committees are open for joining also for persons not present at this meeting. The new members of the ECM were asked to take this message home, and the Secretary General announced that an email requesting persons associated to the Union to sign up for specific committees would be sent out in due time. As the committees are the entities of the Union in which significant input for future developments is generated, once again this call for joining the committees shall be repeated.

In a short presentation, the new chair of the Education Committee, Alberto Tagliaferro, gave a quick overview of his plans for this Committee, which, apart from the classical educational formats of the Union, Schools, Technical Training Courses and Short Courses, will focus on the organization of IUVSTA Webinars as a timely means of knowledge dissemination.

After this presentation and the constitution of the committees, the President, Anouk Galtayries gave a brief overview on the main events of the Triennium to come, with a special emphasis on the ECM's which would be associated to the IUVSTA Highlights Seminar, the decision on the Venue of IVC 26 and on the selection of the candidate for President Elect.

The Secretary General Christoph Eisenmenger-Sittner reminded the participants that the next ECM 132 will be held in Annecy France, 20-22 March 2020. He also announced that ECM123 will be held 9 - 11 October 2020 in Suzhou, China.

Finally, after the closing remarks of the President, the meeting was adjourned and the Triennium 2019 – 2022 was officially started, with all bodies of the Union, the Executive Council, the Scientific and Technical Directorate, the Scientific Divisions and the Standing Committees being operative. The next Executive Council Meeting, ECM 132, will take place in Annecy France, 20 - 22 March 2020.



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IUVSTA Awards presentations at IVC-21

Martin Wüest, Chair Awards and Scholarship Committee, Martin.Wuest@inficon.com

One of the highlights in the IUVSTA calendar is the International Vacuum Congress with its awards presentations.

The triannual prestigious **IUVSTA Prize for Science** was presented to David Phillip Woodruff for outstanding contributions to deepening our understanding of the structure of surface through the development and application of broadly applicable tools now widely available to the surface science community.



Professor D. Phil Woodruff receiving his prize from Lars Montelius and Martin Wüest

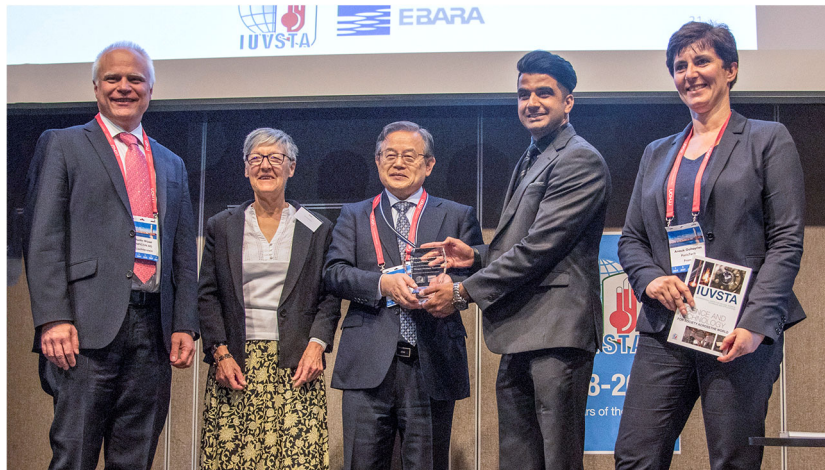
The **IUVSTA Prize for Technology** was given to Reshef Tenne for the discovery, synthesis, and characterization, of novel closed inorganic nanostructures, and enabling their implementation in tribological and mechanical technologies.



Professor Reshef Tenne receiving his prize from Martin Wüest



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Dr. Manabu Tsujimura, Fellow of EBARA, presents the new IUVSTA EBARA award to Dr. Waqas Hassan Tanveer. Also present from left to right: Martin Wüest, Sylvie Bourgeois, Chair of the IUVSTA Ebara Committee, Anouk Galtayries, IUVSTA President



Prof. Knut Deppert (IVC-21 Conference Secretary) and Dr. Carina Arasa Cid (Publisher at Elsevier) presented the IUVSTA Elsevier Student Travel Awards to 10 students from all over the world: Ana Barragán (Spain), Andi Rabia (Italy), Jiayi Zhang (China), Anastasiia Fadeeva (Russia), Alexandros Tsimpoukis (Greece), Kathrina Lois Taaca (Philippines), Nikos Vasileiadis (Greece), Mmapula Baloi (South Africa), Pornsawan Sikam (Thailand), Reza Kazemi (Iran).



The recipient of the renewed **IUVSTA Medard W. Welch International Scholarship** was announced at the ECM 130. It is Dr. Clio Azina of Linköping University, Sweden. She holds a double Ph.D. from the University of Bordeaux (France) and the University of Nebraska-Lincoln (USA)

Dr. Clio Azina will spend time at the RWTH Aachen in Germany at the Materials Chemistry lab of Prof. Jochen Schneider. She proposes to deposit diffusion barriers between V_2AlC MAX phase coatings and Zr substrates and evaluate the thermal and chemical stability of all interfaces. Her goal is to provide material solutions for avoiding or delaying diffusion processes at the atomistic scale.



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89th IUVSTA Workshop, Zakopane, Poland, on 19-24 May 2019

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A highly successful 89th IUVSTA workshop on the biological sample preparation for the high-resolution imaging by high vacuum techniques, took place in Zakopane, Poland, on 19-24 May 2019. The workshop was chaired by Dr Paulina Rakowska from the National Physical Laboratory, UK and brought together leading international researchers and analysts for a scientific debate.

The workshop was co-organised by National Physical Laboratory (UK), National Institute for Biological Standard and Control (UK), Justus-Liebig University Giessen (Germany), European Commission and ETH Zurich (Switzerland)..

The workshop had a total of 58 participants of which 12 were invited speakers. The participants represented academia, national laboratories and industry from 4 continents and 17 countries. The program comprised 40 talks: 12 invited and 48 contributed and 7 poster contributions. These were organized in 8 themed half-a-day sessions, each followed by a lively discussion of minimum 1 hour chaired by appointed, usually 2 discussion leaders. The importance of the workshop subject was also recognized by industry and generous financial contribution from five industry sponsors (see below) which matched the funding of IUVSTA.

This meeting brought together leaders in the areas of **secondary ion mass spectrometry, electron microscopy, atom probe tomography and spectroscopies at large light beam facilities**. The meeting was unique in bringing these diverse communities together with many people meeting for the first time. It created an inclusive forum for researchers, experimentalists and innovators in methodology and instrumentation. The main focus of the meeting was the extended discussion periods after each session, which were very candid and open, with the aim of working together as a community to advance the field. The scientific programme and quality of debate were excellent and identified the important metrological priorities in the areas of biological sample preparation, correlative analysis and technological developments.





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The workshop received an excellent feedback and here are some of the comments:

"I had a fantastic time and connected with a lot of people, which will be very useful for my research. The event was very well organized, and I wish that more conferences would use the same format!"

"...it was by far one of the best conferences I have been to recently, having the discussion sessions and such a clear focus for the conference really meant I got a lot out of it. Great location as well ... organisers are to be congratulated..."

"It was really great to go to a different conference, particularly one that celebrates multi-disciplinary science!"

"It has been a wonderful and very useful week. Learned a lot and met a lot of new people. Definitely hoping to set up some new collaborations..."

Gold sponsor



Silver sponsors



MICROSYSTEMS

Bronze sponsor

