



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

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## An Inaugural Statement from IUVSTA President Mariano Anderle



I am deeply honored to be allowed to serve as President of the International Union for Vacuum Science Technique and Application (IUVSTA) for the triennium 2013-2016. Let me thank all of you for entrusting me with this great responsibility. My first contact with the IUVSTA organization was, as Councilor for Italy, at the ECM 83 Meeting in Saillon les Bains (CH), February 20-22, 1999. In all these years I saw enthusiasm, cooperation, a continuous flourishing of initiatives and major advances in the positive strength of the Union. Today I want to assure you that I will do my best to give continuity to this process and to bring IUVSTA to its full potential.

I intend to work and operate to realize the IUVSTA mission using the experience I have acquired in these fifteen years as Councilor for Italy (1998-2004), Vice-chair of the Applied Surface Science Division (2001-2004), Alternate Councilor (2004-2007), Chair of the Congress Planning Committee (2006-2007), Chair of the Biomaterials Interface Steering Committee (2008-2010), Technical and Scientific Director (2007-2010) and, as President Elect, Chair of the Long Range Planning Committee. I will focus my efforts on different aspects of scientific and organizing issues. In particular I will:

1. Give visibility and structure to new and emerging scientific topics and communities. Noteworthy among them are those at the edge of a division or several divisions e.g. biotech, energy, bio/nanophotonics, etc, or those dealing with large infrastructures such as synchrotrons, FEL, Fusion, NSS, etc. The key will be to properly select the tools (working group, interdivisional group or new division) and the rules to give the opportunity for these initiatives to grow within our Union. We have just ended the triennium with two important results: the establishment of the ninth IUVSTA Division, The Biointerfaces Division, and the set-up by the ECM of a Working Group on "Future Directions on Science and Technology". I will closely work with the LRPC Chair and the Scientific and Technical Director and support them in enlarging IUVSTA representation in new scientific fields.
2. Continue in the direction of focusing needs and offering solutions to Non Member and Lesser Developed Countries through strong action in establishing contacts and organizing events (workshops, schools, TTCs, etc.). I will carefully consider, together with the Emerging Societies Committee chair, new forms of interaction and agreement to facilitate the relationship with non-member or lesser developed countries. The path we began and the experience we will gain in the International Vacuum Institute initiative with the Pakistan Vacuum Society can be a good reference point! Let me say I am considering very promising and strategic the fact we have a new member, Argentina, among us. I hope and I am sure we will be able in the next triennium, to add other member societies!
3. Improve our scientific and educational offering by investing more money and encouraging better quality. Workshops and schools on one hand and training courses on the other are of vital importance for every national vacuum society! The Scientific and Technical Directorate and the Education Committee will be the right bodies in



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which to discuss, exchange experiences and promote good scientific, technical and education events and meetings.

4. Dedicate still more effort to our website, finally transforming it in a portal with proper tools for enlarging our visibility and relationships (connection to social networks such as Facebook, Twitter, LinkedIn; opened to multimedia standard web 2, etc.). In this last triennium a great improvement has already been made in this direction. I will strongly support the Publication Committee and its chair to complete this path.

5. Promote actions for awards and scholarship policy. The IUVSTA Prizes, both in Science and in Technology, are well recognized awards, milestones at every International Vacuum Conference. The Welch Scholarship is a tradition in promoting education by the Union and the World Transfer Program is a new promising education initiative launched in this last triennium. To maintain them and possibly to establish new others we need to find new donors. I will work in close cooperation with the ASC and its chair to fulfill this commitment.

All these “intentions” and the consequent actions have to face financial considerations. The difficulties of the world economy and the stock market limit our trajectory to a conservative budget. Nevertheless the Finance Committee and the Treasurer will try to give sufficient flexibility to the annual budget to satisfy possible new opportunities.

Let me take the opportunity to thank Prof. Jean Jacques Pireaux, my predecessor, for his dedication to the IUSTA aim and for his untiring activity for making IUVSTA more interactive and effective. Thanks to all the officers, councilors, divisions and committee chairs. Thanks to Ron Reid who today, after nine years, passed the testimony of Secretary General to Christoph Eisenmenger-Sittner. I have very much benefited from his experience! All I know about IUVSTA rules, procedures and organization, I learned from him. I would like also to express my deep thankfulness to Bill Rogers, IUVSTA Past President. He asked me to substitute for Massimo Sancrotti as chair of the Congress Planning Committee when Massimo had to step back because of his illness and he appointed me Scientific and Technical Director. Thanks for offering to me all these fascinating opportunities. And now we have to focus attention on the work for the new triennium. As a music conductor needs the coordinated contribution of each performer, I am kindly asking all of you to actively join me in this challenging adventure. On my side I can promise that IUVSTA will be, for the next three years, my top priority! Thank you!



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## Invitation to Executive Council Meeting 118 and call for ECM119 and ECM120 Bids



**Hotel Villa Madruzzo, Trento, Italy**

<http://www.villamadruzzo.com/>



The Web-site for ECM-118 in Trento, Italy, 28-30 March, 2014 is now open for registration and payment

Please go to the IUVSTA web site (<http://iuvsta-us.org/>). On the left column (Meetings and Conferences) click on ECM118. Then, to proceed for registration and payment, use the following password: ecm118\_iuvsta .

Please, note that there is a call for bids for future ECM's. The next ECM's are ECM 119 which is due approximately September/October 2014 and ECM 120 which is due approximately March/April 2015. Your bid should contain information about the venue, its accessibility and the costs of the meeting. A connection of the ECM to a scientific meeting is desirable but not mandatory. Please communicate your bids at your earliest convenience, but no later than March 14th to the Secretary General Christoph Eisenmenger-Sittner, [christoph.eisenmenger@ifp.tuwien.ac.at](mailto:christoph.eisenmenger@ifp.tuwien.ac.at).



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## A Message from IUVSTA Scientific Director

David Ruzic, druzic@illinois.edu



Dear IUVSTA Division Chairs,

Welcome Ladies and Gentlemen. We have a full slate of division chairs for the 2013- 2016 triennium. This article should outline everything you need to do, and every one you need to know. Here is your basic mission:

1. You (or your vice chair or secretary) should **attend each ECM meeting**. If you cannot go, talk to your fellow division officers and see if one of them can. If no one can, be sure to tell me in advance.
2. Your division should come up with a brief **set of goals** you want to accomplish the next three years between now and the next meeting. This is not extensive, and I have supplied an example.
3. In advance of each ECM meeting, you need to **submit a brief report** (1 page) of activities over the last time period.
4. Now and then **email or meet with** the members of your division. More or less, each country has appointed a representative to each division.

First, introductions:

### Officers of IUVSTA:

President: Mariano Anderle

President Elect: Lars Montelius

Past-President: Jean-Jacques Pireaux

Scientific Director: David Ruzic

Scientific Secretary: Andrej Vincze

General Secretary: Christoph Eisenmenger-Sittner

Treasurer: Francois Reniers

[Mariano.Anderle@provincia.tn.it](mailto:Mariano.Anderle@provincia.tn.it)

[lars.montelius@ftf.lth.se](mailto:lars.montelius@ftf.lth.se)

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[freniers@ulb.ac.be](mailto:freniers@ulb.ac.be)

### Division Chairs and Officers:

#### **ASSD**

Great Britain

Bonnie J. Tyler

[bonnie.tyler@npl.co.uk](mailto:bonnie.tyler@npl.co.uk)

Chair

USA

John T. Grant

[j.grant@ieee.org](mailto:j.grant@ieee.org)

Vice Chair

Poland

Leszek Markowski

[lmark@ifd.uni.wroc.pl](mailto:lmark@ifd.uni.wroc.pl)

Secretary

#### **BI**



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Italy	Giacomo Ceccone	<a href="mailto:giacomo.ceccone@jrc.it">giacomo.ceccone@jrc.it</a>	Chair
France	Anouk Galtayries	<a href="mailto:anouk-galtayries@chimie-paristech.fr">anouk-galtayries@chimie-paristech.fr</a>	Vice Chair
Spain	Miguel Manso	<a href="mailto:miguel.manso@uam.es">miguel.manso@uam.es</a>	Secretary
<b>EMPD</b>			
Croatia	Ivana Capan	<a href="mailto:capan@irb.hr">capan@irb.hr</a>	Chair
Poland	Jacek Szuber	<a href="mailto:Jacek.Szuber@polsl.pl">Jacek.Szuber@polsl.pl</a>	Vice Chair
Portugal	Reinhard Schwarz	<a href="mailto:rschwarz@fisica.ist.utl.pt">rschwarz@fisica.ist.utl.pt</a>	Secretary
<b>NSD</b>			
Austria	Christian Teichert	<a href="mailto:christian.teichert@unileoben.ac.at">christian.teichert@unileoben.ac.at</a>	Chair
Israel	Sidney Cohen	<a href="mailto:Sidney.Cohen@weizmann.ac.il">Sidney.Cohen@weizmann.ac.il</a>	Vice Chair
Portugal	Ana Gomes Silva	<a href="mailto:acs@fct.unl.pt">acs@fct.unl.pt</a>	Secretary
<b>PSTD</b>			
Great Britain	Timo Gans	<a href="mailto:timo.gans@york.ac.uk">timo.gans@york.ac.uk</a>	Chair
Italy	Francesco Fracassi	<a href="mailto:francesco.fracassi@uniba.it">francesco.fracassi@uniba.it</a>	Vice Chair
Slovenia	Uros Cvelbar	<a href="mailto:uros.cvelbar@ijs.si">uros.cvelbar@ijs.si</a>	Secretary
<b>SED</b>			
USA	Ivan G. Petrov	<a href="mailto:petrov@illinois.edu">petrov@illinois.edu</a>	Chair
Germany	Peter Schaaf	<a href="mailto:peter.schaaf@tu-ilmenau.de">peter.schaaf@tu-ilmenau.de</a>	Vice Chair
Slovenia	Monika Jenko	<a href="mailto:monika.jenko@imt.si">monika.jenko@imt.si</a>	Secretary
<b>SSD</b>			
Austria	Peter Varga	<a href="mailto:varga@iap.tuwien.ac.at">varga@iap.tuwien.ac.at</a>	Chair
France	Maria Carmen Asensio	<a href="mailto:asensio@synchrotron-soleil.fr">asensio@synchrotron-soleil.fr</a>	Vice Chair
Italy	Mario Rocca	<a href="mailto:rocca@fisica.unige.it">rocca@fisica.unige.it</a>	Secretary
<b>TFD</b>			
Italy	Alberto Tagliaferro	<a href="mailto:alberto.tagliaferro@polito.it">alberto.tagliaferro@polito.it</a>	Chair
Great Britain	Papken Hovsepian	<a href="mailto:P.Hovsepian@shu.ac.uk">P.Hovsepian@shu.ac.uk</a>	Vice Chair
Belgium	Diederik Depla	<a href="mailto:diederik.depla@ugent.be">diederik.depla@ugent.be</a>	Secretary
<b>VSTD</b>			
USA	Jay Hendricks	<a href="mailto:jay.hendricks@nist.gov">jay.hendricks@nist.gov</a>	Chair
Austria	Manfred Leisch	<a href="mailto:m.leisch@TUGraz.at">m.leisch@TUGraz.at</a>	Vice Chair
Great Britain	Joe Herbert	<a href="mailto:joe.herbert@stfc.ac.uk">joe.herbert@stfc.ac.uk</a>	Secretary

## Meetings:

The Executive Committee Meetings (ECM) are roughly every 6 months. You are welcome to attend all parts of it,



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but should particularly be in attendance for the “STD”. That is the Scientific/Technical Directorate Meeting, normally held on Saturday. At that meeting you present proposals for workshops and schools and we all vote on them. You have a vote in these meeting. On Sunday is the actual “ECM”. At that meeting the STD requests are formally approved. You do not get a vote in the ECM, but will be asked to give a report. The next ECM meeting (ECM-118) is in Trento Italy, March 28 – 30, 2014. Details will be able to be found at the IUVSTA website. <http://www.iuvsta.org> Look in “Member Services” and log in.

#### Sponsoring a Workshop or School:

On the website, check out “Scientific Activities” and then “Workshops” or “Schools”. The guidelines are there as well as a form that needs to be filled out. In addition to that form I want two more things: a draft budget and a power-point or .pdf telling about the event. As an example, I have included two files from a past workshop that was successful. In this case both the application and the powerpoint included the budget. The amount available for each workshop or school is 6000 Euro. We have funding for 10 of these over the next three years.

#### Deadlines:

The by-laws specify a certain time in advance that the information mentioned above has to be received. Since everything is electronic form, typically ONE MONTH in advance of the meeting is OK. Therefore, any schools or workshops to be proposed at ECM-118 must be in my hands **by the end of February 2014. Earlier is better.** In addition to sending me the information, please send it to Christoph Eisenmenger-Sittner and Anrej Vincze as well.

#### Reports:

You need to turn in a report on your Divisions’ activities at each ECM meeting, even though you may not be in attendance. These can be short, but should tell what you have done in the past 6 months. At the ECM meeting on Sunday, you will be asked to give your report. You will tell about how you emailed everyone and maybe met at some meetings and solicited input etc. Typical activities of a division are conducted by email. The members of the division, and in particularly the executive committee should be informed about workshops and school proposals and polled to get their opinions. Try to get them involved. Each of you should have a list of all your division and executive committee members. Please be in touch with them often.

#### Questions?

Feel free to ask me or the other officers. See you in Italy!



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## Executive Council Meeting 116

ECM 116 was held at the Pullman Hotel, Versailles, France between 6th and 8th September, 2013 at the invitation of the French Vacuum Society. This was an important meeting with a number of major decisions to be made as we begin to look towards the end of the triennium and the General Meeting September 11, the main one being the selection of the host for IVC20. There were four bids [India, Italy (Genoa, 15-18 September), Pakistan (Islamabad, 15-19 October) and Sweden (Malmo, 3-8 July)] which were discussed at length the previous day and that the Congress Planning Committee had reached a decision on its preferred bid. Ivan Petrov explained that the bidders would give a short, five minute, presentation followed by questions before the decision of the committee was revealed. The order of presentation had been selected at random and was Sweden, Italy, Pakistan and India.

The bid from Sweden with a venue in Malmo was presented by representatives from Congress Convention Bureau; the bid from Italy with a venue would be the historic city of Genoa was presented by Mario Rocca; Dr Javaid Bhatti presented the bid from Pakistan with a venue the Jinnah Convention Centre, Islamabad the venue would be the Jinnah Convention Centre, Islamabad; Lars Montelius presented the bid from India with a venue in Mumbai. After extensive discussion, on the first round of voting Sweden won a clear majority.

Daniel Verniere reported that the French Vacuum Society had been founded over sixty years ago, and was a founder member of the Union. The President of SFV was currently Michael Remy but he would shortly be succeeded by Anouk Galtayries. The President, Prof Jean-Jacques Pireaux, informed the meeting of the death of Prof Akio Yoshimori, Councillor for Japan, 2001-2004, and former chair of the Surface Science Division; the meeting stood in silence as a mark of respect.

We also need to express our thanks to the French Vacuum Society, especially to Daniel Verniere for making the arrangements and for hosting an excellent dinner and an exciting evening with the light show and music at the gardens of Versailles.





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## The 2013 General Assembly of the IUVSTA

Secretary General Christoph Eisenmenger-Sittner, [christoph.eisenmenger@ifp.tuwien.ac.at](mailto:christoph.eisenmenger@ifp.tuwien.ac.at)



The 2013 General Assembly of the IUVSTA which, according to the new set of statutes, consists of the 18<sup>th</sup> General Meeting of the union as well as of the Extraordinary General Meeting of 2013, was opened on Wednesday, September 11<sup>th</sup>, 2013 at 13:00 in the Palais de Congres in Paris. The meeting was extremely well attended as delegates from nearly all member societies were present at IVC 19. After the Secretary General, Ron Reid, checked the attendance and constituted the Meeting, the President, Jean-Jacques Pireaux, welcomed the Participants. After his welcome message he called for a brief moment of silence to remember the late Professor Akio Yoshimori who passed away in February, 2013.

The first important point of the meeting was a vote on the alteration of membership shares of the Chinese, the Korean and the Australian Vacuum Society. The Chinese and the Korean Vacuum Societies have gained tremendously both in size and activity, which is reflected by an increase in the number of shares from 3 to 10 (Chinese Vacuum Society) and from 5 to 7 (Korean Vacuum Society). The Australian Vacuum Society only felt able to contribute one share instead of two in the future. The delegates approved each of these changes in a secret vote.



ARGENTINA IS THE NEWEST MEMBER OF IUVSTA

The second highlight of the meeting was the vote on the admission of the Argentinean Vacuum Society to membership. As all formal requirements were found to be in order, the delegates unanimously agreed to welcome Argentina as a new member to the Union, which strengthens the position of IUVSTA in the important emerging region of South America.

Two following important points concerned divisional issues. First, in a secret vote the delegates unanimously agreed to a simplification of the divisional structure by a removal of the divisional college. Modern electronic communication renders the establishment of a divisional college superfluous since the interaction between the divisional officers and the whole body of division members is much speedier and easier nowadays so that decisions can be made by involving all division members.

By a show of hands the formation of the new Bointerfaces Division was unanimously approved by the delegates. The Steering Group established in the triennium 2010-2013 proved to work extremely efficient and fulfilled all requirements of a division in an excellent manner so that there were no obstacles to be seen concerning the formation of this 9<sup>th</sup> IUVSTA division.





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JEAN-JACQUES PIREAUX PASSES THE PRESIDENT'S GAVEL TO MARIANO ANDERLE

After the approval of the accounts for the financial year 2012 and of the budget for the financial year 2013 by the delegates the former President Jean Jacques Pireaux formally transferred the Presidency of the Union to Mariano Anderle by handing over the gavel as a symbolic gesture. After the transfer of the presidency the new president, Mariano Anderle, presented the Executive Council's nomination for President Elect, Lars

Montelius. The Secretary General announced that he had received no other nominations. The General Meeting approved unanimously the Executive Committee's nomination by a show of hands. Lars Montelius was invited to take the seat of the President Elect. The President, Mariano Anderle then proposed the appointment of David Ruzic as Scientific Director, Andrej Vince as Scientific Secretary, Christoph Eisenmenger-Sittner as Secretary General and François Reniers as Treasurer There were no objections to the appointments. David Sykes generously agreed to serve as the recording secretary for one more Triennium. Then the new Secretary General presented a list of the Councillors and Alternate Councillors, based on the list given in the book of reports. This list was approved by the General Meeting. Before the closure of the General Meeting the framework Budget and the subscription rates were ratified and finally the retiring officers and ECM members were handed a certificate in which the Union expresses its thanks for their service. Special thanks went to the former Secretary General, Ron Reid, who held this office from 2004 to 2013. He fulfilled his tasks in an exceptional manner left his position in impeccable order. There was a long round of applause in appreciation of Ron's service



Standing ovation for Professor Bill Rogers (USA) for his 9-year service as IUVSTA Officer, including IUVSTA president 2007-2010



A long round of applause in appreciation of Ron Reid 's service as IUVSTA Secretary General from 2004 to 2013



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After closing GM 18 the session was continued with the 2013 Extraordinary General Meeting in which the Past President and the Previous Executive Council gave brief reports on their work. The meeting was finished by the inaugural statement of the new President, Mariano Anderle, which can be found at <http://www.iuvsta.org/iuvsta2/index.php?id=2038>



**Awards Committee Chair Frank Richter, Dr. Jan Willem Wijnen from Elsevier B.V. and IUVSTA President Mariano Anderle signed an extension IUVSTA-Elsevier Student Awards agreement up to 10,500 € in the triennium. The new agreement gives conference organisers more flexibility to make best use of the funds**



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## Executive Council Meeting 117

After the closing ceremony of IVC 19 the first ECM of the new triennium, ECM 117, was held. The meeting was very well attended. First, The President, Mariano Anderle, welcomed the delegates, then the present delegates, observers and officers briefly introduced themselves. The Scientific Director, David Ruzic, reported that the electoral process for the Scientific Divisions was complete; each Division had a chair, vice chair and secretary. He looked forward to a vibrant triennium ahead and reminded the Divisional members it was up to them to put forward ideas for new scientific activities.

Following the Scientific Director's forward view the President announced the names of the chairmen of the various committees of the Union; the Secretary General circulated sheets on which the Councillors and Alternates could sign up to join the committees they wished to participate in.

Concerning the next ECM, which would be number 118, the Secretary General informed the ECM that he had received one bid, and that was from Italy; he invited the President to present the bid. The President reminded the ECM that it was the tradition that an ECM should be held in the home country of the President during his term in office. ECM118 would be held 28-30 March 2014 in Trento, Italy at the Hotel Villa Madruzzo. More information on ECM 118 can be found at [http://www.iuvsta.org/iuvsta2/assets/docs/pdf/Invitation\\_ECM118.pdf](http://www.iuvsta.org/iuvsta2/assets/docs/pdf/Invitation_ECM118.pdf).

Bids for Executive Council Meetings following ECM 118 will be solicited and will be discussed at ECM 118. Orlando Teodoro commented that the next EVC Conference was to be held in Porto, Portugal and that would be a good venue for ECM119.

Anouk Galtayries, chair of the Congress Planning Committee, invited M-G Barthes as Chair of IVC19 to give a status update. It was reported that 1800 abstracts from 73 countries had been received; they covered 15 topics and 134 sub-topics; there had been 5 plenary talks, 10 keynote and 97 invited presentations. There had been a total of 2500 attendees (1750 conference delegates, 400 exhibitors and 300 visitors to the exhibition). The five short courses offered had been well attended attracting over 110 participants.

After the meeting was closed, the sign-up sheets for the committees of the Union were collected. Information on the members of the various committees can be found at <http://www.iuvsta.org/iuvsta2/index.php?id=2059>. As it can be seen there, each committee contains a high number of excellent members, so that it can be assumed that the union can make considerable progress during the coming triennium 2013-2016.



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## The 19th International Vacuum Congress: a Great Success



**The 19th International Vacuum Congress (IVC-19)** was held in Paris (France), September 9-13, 2013. The congress and associated conferences were organized on behalf of IUVSTA by a consortium of European Vacuum Societies (Belgium, Croatia, Czech Republic, France, Hungary, Portugal, Slovakia, Slovenia, and UK). The congress began with two morning sessions dedicated to 5 plenary lectures: Dan Shechtman (Nobel Prize in Chemistry 2011) and André Borschberg (Solar Impulse aircraft project) on day one, and Shoucheng Zhang (Europhysics prize 2010), Lars Samuelson (IUVSTA prize for Science 2013) and John Grant

(IUVSTA prize for Technology 2013). The Scientific Committee had organized the 1471 papers in 15 topic areas, divided into 110 sessions of 979 oral presentations and 3 sessions of 482 poster presentations. The 15 topic areas matched, on the one hand, the IUVSTA scientific divisions and, on the other, specific themes selected by the program committee: Biointerphases, Cultural Heritage, Energy and Sustainable Development, Functional Molecules and Molecular Machines, Frontiers in Photoelectron Full-Field Imaging and Spectromicroscopy, Ionic Liquid Surfaces and Interfaces, and Astronomical Frontiers for Surface Science.

The IVC19 International exhibition brought together more than 110 exhibiting companies, who presented their products and services to delegates and over 400 exhibition visitors (the exhibition was open for free)

The overall numbers are impressive: a detailed IVC19 report was published in the French Vacuum Society's Gazette du Vide (in French): [http://www.vide.org/uploads/lad\\_Gazette\\_26.pdf](http://www.vide.org/uploads/lad_Gazette_26.pdf)

### 2 555 Times Thank-You from the Conference Chairs

Dear colleagues,

You were more than 2 555 attendees at the IVC-19 and associated conferences and exhibition in Paris. Thanks to you and to your scientific contribution, the conference was a huge success. The organisers want hereby to express you their gratitude. This success was your success.

We wish to see you in Korea in 2016.

François Reniers                      M.G. Barthes-Labrousse  
Program Chair .....General Chair





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## Future Events

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### 72nd IUVSTA Workshop

The 72<sup>nd</sup> IUVSTA workshop on “Plasma-assisted vapour deposition of oxide-based thin films and coatings” will be held in the wine region of southern Styria in Austria (Schloss Seggau near Graz) from 6 – 11 April 2014.

The aim of this workshop is to tackle issues encountered in the synthesis of oxide based thin films and coatings that are used in various application areas such as optical and hard coatings, transparent conductive oxides, thermochromic and electrochromic thin films, decorative coatings, photocatalytic films and others. New developments make also use of nanostructured oxides such as oxide-nanocomposites, oxide nanoparticles and oxides with nano or fractal roughness with applications as super hydrophobic and super hydrophilic surfaces applicable to easy-to-clean applications, water-splitting and oxide interfaces to biological tissue.

Typical methods employed for synthesising these materials include sputtering techniques, e.g. magnetron sputtering, pulsed and rf sputtering as well as high power impulse magnetron sputtering (HiPIMS) but also cathodic arc evaporation and plasma-enhanced chemical vapour deposition. It is planned to cover the topics of characterisation of oxygen containing plasmas, nucleation and growth of the oxide thin films and to discuss challenges in obtaining the desired film properties with respect to the intended application. In all topics experimental and theoretical aspects should be presented.

Abstract submission deadline: 15 November 2013  
(Submissions of late-breaking abstracts can still be considered.)

Registration deadline: 28 February 2014

Website: [iuvsta72.unileoben.ac.at](http://iuvsta72.unileoben.ac.at)

Email: [iuvsta72@unileoben.ac.at](mailto:iuvsta72@unileoben.ac.at)

Organised by: Robert Franz (Montanuniversität Leoben, Austria)  
Christian Mitterer (Montanuniversität Leoben, Austria)  
André Anders (Lawrence Berkeley National Laboratory, USA)  
Jochen Schneider (RWTH Aachen, Germany)



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## 16<sup>th</sup> International Conference on Thin Films



The 16<sup>th</sup> International Conference on Thin Films (ICTF-16) to be held 13-16 October 2014 in Dubrovnik, Croatia, has just distributed the 2<sup>nd</sup> Announcement & Call for Papers.

Three distinguished plenary speakers - Masakazu Aono, Joseph E. Greene and Lars Hultman - confirmed their participation with talks on frontier-research thin films topics. We are looking forward to the confirmation of participation by Sir Andre Geim, as well.

Fourteen excellent invited speakers are already announced on the Conference website, and there is a small room for more - thus, a scientific program will be of very high quality indeed. In addition, three short courses are offered for the interested participants. This program is hopefully attractive enough to bring many members of the IUVSTA Thin Films and Surface Engineering communities to Dubrovnik in October. Of course, their oral and poster contributions will be a mainstay of the conference. The online registration has been opened on January 25, alongside with the online Abstract submission.

The arrangements have been made with the Elsevier for Proceedings publication in Thin Solid Films, as well as for the IUVSTA-Elsevier Student Awards. An exhibition of scientific equipment will be held in conjunction with the conference.

The extended information on the ICTF-16 is available at <http://www.ictf16.com>. The organizers cordially invite you to the 16th International Conference on Thin Films (ICTF-16) - the oldest among the IUVSTA-endorsed topical conferences, and the first one jointly organized by Croatian, Hungarian, and Slovenian national Vacuum Societies.

Dr. Nikola Radić, ICTF16 Chair  
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## 13<sup>th</sup> European Vacuum Conference & 7<sup>th</sup> European Topical Conference on Hard Coatings



It is my pleasure to announce the **13<sup>th</sup> European Vacuum Conference & 7<sup>th</sup> European Topical Conference on Hard Coatings**, to be held from **8 to 12 September 2014** at Aveiro, Portugal.

This conference will include a **Special Symposium** on "*Ultra thin oxide films and oxide coatings applications*" chaired by Geoff Thornton.

More information can be found in the event website (<http://www.evc13.com/>), as well as the list of outstanding **Plenary and Invited Speakers** who have already confirmed their presence (<http://www.evc13.com/index.php/scientific-programme/invited-speakers>).

Important dates to remember:

Abstract Submission Deadline - until **31st of March 2014** (submitted papers will be published after peer review in a SCI indexed journal)

Early Registration - until **31st of May 2014**

Further information will be sent progressively. I invite you right now to make an appointment in your calendar and start planning your coming to Aveiro.

The Conference Chairman,

Orlando Teodoro  
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## IUVSTA - International Vacuum Institute

It has been a long cherished goal of the Pakistan Vacuum Society founders and members to establish an institute exclusively devoted to education and training in the field of vacuum science, technology and its applied areas. Keeping this objective in sight, a proposal entitled “Establishment of **National Institute of Vacuum Science and Technology (NINVAST)**” in Islamabad was submitted to the Higher Education Commission (HEC), Govt. of Pakistan by Dr. Javaid Ahsan Bhatti. After passing through various phases of appraisals, the establishment of NINVAST was finally approved by the Government of Pakistan in 2004, with an initial grant of Pak Rupee 195 Million. It took almost two years in acquiring land, preparation of building plans, construction of buildings, provision of basic utilities and recruitment of essential staff. Further two years lapsed in the procurement of equipment and setting up of various laboratories.

Initially various training courses were started for students and industry technicians along with the provision of calibration and repair / maintenance services of vacuum technology equipment and plants.

In the next phase, programs of studies, courses and curriculum of BS & MS in vacuum physics and vacuum engineering have been prepared. Courses for three-year diploma and one-year PGD finalized and are in the process of launching. Keeping in line with IUVSTA objectives and programs, research studies in the applied areas such as plasma science and technology, electronic materials & processing, nanometer structures, thin films, surface science, bio-interfaces, plasma science & technique, applied surface science and renewable energy technologies will be launched in the final phase.

The establishment of International Vacuum Institute (IVI) has extensively been discussed and debated in the IUVSTA ECMs in the Long Range Planning Committee meetings headed by Prof. Dr. Mariano Anderle under the President ship of Prof. Dr. JJ Pireaux. Almost all members of IUVSTA took keen interest in this venture. Prof. Martin Wuest of Switzerland prepared and submitted a detailed feasibility report of possibility of





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establishing IVI in the ECMs, mainly supporting the idea.

It was the historic occasion of the concluding ceremony of the VASSCAA-6 in Islamabad in the year 2010, when head, IUVSTA Surface Science Division, Prof. Dr. Peter Varga, proudly announced, on behalf of President of IUVSTA, the IUVSTA decision of upraising NINVAST to IUVSTA International Vacuum Institute (IVI).

A formal MoU between PVS and IUVSTA was signed at the IVC-19, in Paris, France in 2013 for upraising NINVAST to IUVSTA International Vacuum Institute (IVI). All this credit goes to the IUVSTA visionary and bold leadership of Prof. Dr. Mariano Anderle and Prof. Dr. JJ Pireaux, for taking vacuum science, techniques and applications to new heights in the world.

The whole hearted technical support of IUVSTA and its members shall make IVI as a center of excellence in the world of vacuum science, technique and applications.



**Professor Dr. Jean-Jacques Pireaux and Dr. Javaid Ahsan Bhatti, signed a memorandum of understanding to establish at Islamabad-Pakistan, the International Vacuum Institute (IVI), as a collaborative initiative of both IUVSTA and Pakistan Vacuum Society.**