



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

Executive Council Meeting 114

Ron Reid, iuvsta.secretary.general@ronreid.me.uk

ECM 114 saw a return to the Hotel Tatra in Bratislava in the Slovak Republic, by invitation of the Slovak Vacuum Society. I say return because ECM 80 in 1998 had been held there and was remembered by some members of the Executive Council. Although the hotel has been renovated since that earlier visit, much of its previous charm still remains. As always, the weekend was a busy one and juggling the time for the various meetings of Committees whilst retaining some time for socialising was as tricky as ever. Nonetheless a successful series of meetings was achieved and our thanks go to the host society, its President Robert Redhammer and the principle meeting organisers, Andrej Vincze and Marian Vesely who helped enormously in making the weekend run smoothly and enjoyably.



As far as business was concerned, the Triennium is moving towards its end, so the final series of three Workshops and two Technical Training Courses was approved, exhausting the budget for Schools and Workshops (see a list below). Progress is being made by the Education Committee in finally making some of our teaching material available for publication on the website. That should be the culmination of a long story. Preparations are beginning for the events accompanying IVC 19 in Paris in September next year – items for the agenda for the Triennial General Meeting, our main business meeting, were agreed; the arrangements for the calls for nominations for our Prizes and bids for IVC 21 in 2019 were finalised and these have been issued. A major new working group under the chairmanship of Prof Ulf Karlsson has been set up to consider Future Directions of Science and Technology and how these might influence the work of our Union.



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On the Monday following the ECM, a very interesting series of lectures on the areas of science and technology of interest to our Divisions was presented at the Triennial Highlights Seminar to an audience made up of members of the Executive Council and scientists working in Slovakia.

We look forward to meeting in Poland in April of next year, ECM 115. It will be held during 5-7 April, in the City Hotel, Krakow, Poland. The organization is led by Prof. Jacek SZUBER, President of the Polish Vacuum Society [Jacek.Szuber@polsl.pl].

Meetings approved at ECM114

- "Vacuum and Progressive Materials" Hotel Patria, Strbske Pleso, Slovakia, November 8 - 11, 2012. e Slovak Vacuum Society, Approved as Technical Training Courses (TTC)#14
- "Workshop on Ultra High Vacuum Techniques for Large Volume Devices", Institute for Plasma Research, Bhat, Ganghinagar, Gurjat State, India, Jan. 28-31, 2013. Indian Vacuum Society via VSTD. Approved as: TTC#15.
- "International Workshop for Surface Analysis and Standardization 2013 (iSAS-13)", Okinawa-Jichikaikan, Okinawa, Japan, January 15(Tue) - 19 (Sat), 2013. Submitted by ASSD. Approved as Workshop #70
- "Electron Transport in Nanostructures: Theory and Practical Applications", Herrnstein Castle Austria 24th - 28th June 2013. Submitted by ASSD. Approved as Workshop #71
- "Plasma-assisted vapour deposition of oxide based thin films and coatings", Schloss Seggau, Austria, 12 - 16 May 2014. Submitted by SED, in conjunction with TFD and PSTD. Approved as Workshop #72

Approved reports of workshops and schools

WS #65: "Measuring Molecular Adsorption at the Solid Liquid Interface", Peckforton Castle, Cheshire, UK, May 14 - 18 2012.

http://iuvsta-us.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA65.pdf

WS #66: "Friction Under Controlled Environments", Avila Spain, 09-12 July, 2012.

http://www.iuvsta-us.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA66.pdf

WS #67, "High Temperature amorphous and nanostructured ceramic coatings: challenges and opportunities", held at STFC Daresbury, UK September 23 - 27 2012.

http://iuvsta-us.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA67.pdf

School #11: SLIMS-International School on Lasers in Material Science – Tailoring Film Structure and Properties, July 08 - 15, 2012, San Servolo Island, Venice, Italy

http://www.iuvsta.org/iuvsta2/assets/docs/pdf/Final_Report_IUVSTA_SC11.pdf

Workshops just completed:

WS#69 "Multifunctional Surface Engineering for Advanced Energy Applications"

City University of Hong Kong, Hong Kong, PRC, December 09 - 13 2012

<http://www.cityu.edu.hk/cosdaf/MSEAEA2012/Index.html>

WS#69 "Oxidation of Organic Materials by Excited Radicals Created in Non- Equilibrium Gaseous Plasma"

Hotel Raj Krvavec, Cerklje na Gorenjskem, Slovenia, December 09 - 13 2012

Web: <http://plazma.ijs.si/IUVSTA2012/IUVSTA69.html>



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Call for nominations: IUVSTA Prizes 2013

**To Presidents of Member Societies of IUVSTA
and to Persons interested in nominating candidates for IUVSTA Prizes**

Dear Sir/Madam,

I am writing to announce the international competition for the

IUVSTA Prize for Science

and the

IUVSTA Prize for Technology,

to be awarded in September 2013 at the International Vacuum Congress IVC-19 in Paris, France. The details of the competition are provided in the attached IUVSTA Prize information 2013.

The purpose of IUVSTA Prizes is to recognize and encourage outstanding internationally-acclaimed research and achievements in technology and instrumentation in the fields of interest to the International Union for Vacuum Science, Technique and Applications (IUVSTA).

The prizes have been established by the IUVSTA Executive Council, with generous support from the vacuum industry world-wide. We request that you publicize the IUVSTA Prize competition in your nation, and encourage the nomination of suitable candidates. The nominee must have accomplished outstanding experimental and/or theoretical research in vacuum science, technique or applications within the ten years preceding the year in which the award is made. Special consideration will be given to nominees currently engaged in an active career of research.

Note that all nominating material must be sent by e-mail as attached digital files (pdf format) and received in my office by **January 25, 2013**. In addition to e-mailing the copies, the complete package of paper documents (in one copy) with original signatures must be also mailed to my office address. (paper copies can be post deadline if an e-mail submission is made). For further information, please contact me, or see the IUVSTA web site <http://www.iuvsta.org/iuvsta2/index.php?id=653>.

Sincerely,



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Call for Bids: IVC 21 2019

Dear National Vacuum Societies of IUVSTA,

it is time to start the procedure for selecting the host of the IVC21 congress to be held in 2019.

Therefore, as Chair of the Congress Planning Committee I am delighted to ask you to prepare your bids to the most important event of IUVSTA, the Triennial Congress IVC. Your bids are due January 31, 2013. You should send your bids by email to the Chair of Congress Planning and to the IUVSTA secretary general.

Mark the mails "Bids for Hosting IVC21" and send to e-mails:
Lars Montelius <lars.montelius@ff.lth.se>
Ron Reid <iuvsta.secretary.general@ronreid.me.uk>

The procedure in short is the following:

1. Bids are due by January 31 2013.
2. Pre-screening of bids will be done before ECM 115 in Krakow in April 2013.
3. Serious screening of best bids will be done during ECM 115.
4. Final selection of bids will be done at ECM 116 (just before IVC 19 in Paris September 2013).

In the attached file "Guidelines...." you find more detailed information as well as suggestions how your bids are to be organized and which questions should be answered in your bid.

If you like further information about the procedure, you can find that in the procedures manual (IUVSTA website, private section (member services, meantime section, procedures manual (2005)), pages 55 to 64.).

Attached: Guidelines for Making a Proposal to Host the IUVSTA Triennial Congress

Yours Sincerely

Prof Lars Montelius
Chair of Congress Planning Committee



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Paris, France September 9-13, 2013

www.ivc19.com
www.icnt2013.com
contact@ivc19.com



- 19th International Vacuum Congress (IVC-19)
- International Conference on Nanoscience and Technology (ICN+T 2013)
- 15th International Conference on Solid Surfaces (ICSS-15)
- Innovations in Thin Film Processing and Characterisation (ITFPC 2013)
- Magnetron, Ion processing & Arc Technologies European Conference (MIATEC 2013)
- 19th International Colloquium on Plasma Processes (CIP 2013)
- 12th International Conference on Reactive Sputter Deposition (RSD 2013)

CALL FOR PAPERS

Deadline for abstract submission: 15 January 2013

Web submission only. Fax or email submission will not be accepted

Over **100 invited speakers** will headline the conference technical sessions. **Poster sessions, a large free technical exhibition** and a competitively priced **short course programme** rounds out this major opportunity in the global scientific calendar for 2013.

Submit your abstract on the conference website: www.ivc19.com

Conference topics:

- T01 Applied Surface Science
- T02 Astronomical Frontiers for Surface Science
- T03 BioInterphases
- T04 Cultural Heritage
- T05 Electronic Materials and Processes
- T06 Energy and sustainable development
- T07 Frontiers in Photoelectron Full-field Imaging and Spectromicroscopy
- T08 Functional Molecules and Molecular Machines
- T09 Ionic liquids surfaces and interfaces
- T10 Nanoscience and Technology
- T11 Plasma Science and Technology
- T12 Surface Engineering
- T13 Surface Science
- T14 Thin Films
- T15 Vacuum Science and Technology

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VASSCAA-6, event report

Dr. Javid Ahsan Bhatti, Secretary, VASSCAA-6

The 6th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-6), was held at Pak-China Friendship Centre, from 9-13 October 2013 in the beautiful city Islamabad, the capital of Pakistan. The five day event was formally inaugurated on 9th of October 2012 by the Federal Minister for Science and Technology, Govt. of Pakistan, Mir Changaiz Khan Jamali, in an impressive ceremony. The President of IUVSTA, Prof. Dr. J. J. Pireaux, Co Chaired the ceremony. In their speeches the Prof. Dr. J. J. Pireaux, President IUVSTA, prof. Dr. Peter Varga, Head IUVSTA-SS Div., Prof. Dr. Tatsuo Okano President ISC, VASSCAA and Prof. Dr. Mariano Anderli, President Elect. of IUVSTA appreciated the efforts of Pakistan Vacuum Society in organizing VASSCAA-6. They remarked that PVS is one of the most active society of IUVSTA and the arrangements of the conference are excellent and as per international standard.



Top scientists and prominent dignitaries from China, Japan, Australia, South Korea, Taiwan, UK, Austria, Italy, Belgium, Portugal, Poland, Slovenia, Algeria, Nepal, Hungary, Saudi Arabia and New Zealand took part in the conference. The local participation was over a thousand that include: researchers, engineers, Professors, plant operators, system designers, vendors, company heads, industrialists, businessmen and students from various scientific and research organizations, technical institutions, universities, industries and companies. The conference focused on the emerging areas of research like: Surface science and engineering, electronic materials and processing, nanometer structures, thin film, vacuum science and technology, plasma science and technique, bio interfaces and renewable energy technologies. About eighty oral presentations were delivered by foreign and local speakers in these areas.

A poster session was also organized in which over seventy researchers and students displayed their work. The three best posters, evaluated by an international committee, were awarded prizes. In parallel to the main conference sessions, four technical short courses were also held. The leading experts from relevant areas delivered presentations in these short courses.



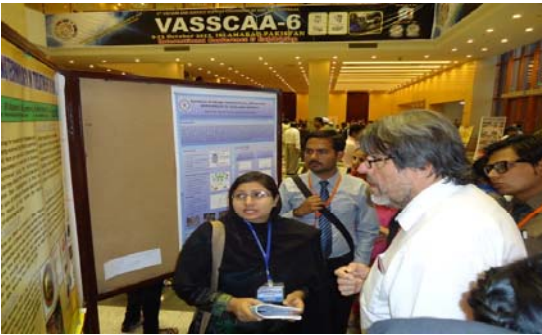
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VASSCAA-6, continued

Another significant part of this event was an international exhibition of science, technology, energy and industry. A large number of international as well as local industrialists and vendors set up their stalls and displayed their company products. Over 5000 people daily visited these stalls and showed a great interest in the displayed products. This exhibition provided a platform for direct interaction of producers, vendors and users of the technical equipments. A cultural program was also a part of this event which was enjoyed by every participant.

The conference ended with a closing ceremony on 13th October 2012, in the beautiful auditorium of the Pak China Friendship Centre, Islamabad. This ceremony was chaired by the Chairman, Senate of Pakistan, Syed Nayyar Hussain Bukhari alongwith Dr. Peter Varga, Head SS Div, Prof. Dr. Christoph Sittner, Prof. Dr. SS Hong and Prof. Dr. Zenchao Dong lauded the successful conclusion of VASSCAA-6 and congratulated PVS in this regard. They rated one of the best conference in respect of presentations, organization and other arrangements. The VASSCAA-6 was very helpful in enhancing the collaborative research and international interaction. A number of MOUs were signed on this occasion between participating institutions and industries.

The conference proceedings will be published in the Institute of Physics (IOP) journal, Journal of Physics: Conference Series.





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NINVEST, National Institute of Vacuum Science & Technology Islamabad, Pakistan

C. Eisenmenger-Sittner, IUVSTA scientific secretary

On Wednesday Oct. 10th, 2012, the foreign participants in the 6th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-6) - many of them also IUVSTA representatives- were invited by the Pakistan Vacuum Society (PVS) to visit the recently inaugurated National Institute of Vacuum Science & Technology (Fig. 1). NINVEST is located at the campus of the Quaid-i-Azam University, close to the National Centre for Physics, at the city limits of Islamabad (Fig. 2). It provides an excellent environment for studies related to all fields of vacuum science and techniques, thus fitting perfectly into the scope of scientific and technical topics practiced by IUVSTA.

The mission statement taken from NINVEST's web site reads *"To strive for the excellence in the field of vacuum science and technology for socio-economic uplift of the society by contributing towards industrial and research sectors of Pakistan."* From this, it can be derived that the tasks of NINVEST are manifold.



Fig. 1.: The logo at the entrance gate to NINVEST



Fig. 2.: The campus region of the Quaid-i-Azam University

One main objective is to strengthen the competences of Pakistani technicians and scientists in fields related to vacuum in general and into the many topics connected to vacuum science; this includes calibration of pumps and gauges, thin film deposition techniques and surface science in general. NINVEST is also willing to invite scientists and technicians from other countries, thus providing a rich environment of international academic and technological exchange. The equipment platform shown to the visiting delegates is 'state of the art' and well maintained (Fig. 3) and the persons presenting the experiments are well trained and competent.

A second important field of activity for NINVEST is the information and education, regarding vacuum related issues, of the non-academic public as well as of persons from other scientific and technological fields (chemistry, biology, energy ...). The means to achieve this goal are manifold at NINVEST, ranging from well equipped seminar rooms to hands-on devices for practical training. One very special feature is a well designed and well organized standing exhibition on several fundamental vacuum experiments (Fig. 4)



NINVAŠT, continued



Fig. 3.: Volume expansion system for calibration purposes



Fig. 4.: One experiment at the interactive exhibition: initially deflated balloons expand when the surrounding pressure is reduced

The experiments are of interactive type and give a very nice overview on some of the sometimes surprising effects (even for vacuum scientists) of reduced pressure. The exhibition is therefore an excellent tool of knowledge transfer to all groups of society, teachers, including students and pupils. Regarding education in Pakistan as a whole, this demonstration exhibit is an extremely important effort to further the interdisciplinary exchange of knowledge across scientific, social, and age borders.

It is in the best interest of both, the national Pakistani government and institutions like universities and facilities of higher education, to support initiatives like NINVAŠT since they profit immensely from highly educated scientists and technicians. PhD students and post docs from Pakistan are today joining many well regarded universities and research institutes and may owe the basis of their experience to schools and institutes of their home country.

Of course, the last item of the NINVAŠT's mission statement also addresses the close partnership with national industries. This collaboration perfectly blends with the two objectives mentioned before because it is also in the interest of the industrial sector to have access to highly skilled and trained personnel.

After the tour through the laboratories and the exhibition, Dr. H.M. Akram, President of NINVAŠT, invited the guests to drink tea; in this informal frame, many interesting subjects ranging from scientific issues to the specific situation in Pakistan were discussed. For example, the education system is eagerly looking for foreign universities and laboratories to host and educate more Pakistani students (PhD schools, post-doc positions); in general, academic contacts across borders should be strengthened and, in a very pragmatic way, vacuum-related materials could be donated.

After about two hours of visit and discussion, the guests left the university campus and returned to the conference full of positive impressions.

For more information about NINVAŠT, connect to <http://www.ninvast.edu.pk/index.php>