



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

Dear IUVSTA Colleagues,

This Issue includes reports on the Union's activity in 2015, as well as information on Member Societies conferences. The contents is as follows:

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Full reports on IUVSTA workshops and schools are posted on the IUVSTA web-site: www.iuvsta.org. Organizers of IUVSTA forums, IUVSTA committees and divisions chairs are encouraged to submit reports on events of interest to the whole Union.

Regards

Ivan Petrov, petrov@illinois.edu
IUVSTA Publications Committee Chair



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Executive Council Meeting 120, Hotel Das Weitzer, Graz, Austria

Christoph Eisenmenger-Sittner, christoph.eisenmenger@ifp.tuwien.ac.at

ECM 120 was held on Sunday, April 19 at Hotel Das Weitzer, in Graz, Austria. In his report, the President of the Union, Mariano Anderle gave an overview on his Actions concerning the Union and he also announced that, starting September 2015, he will act as the Scientific Attaché for the Italian Government at the Italian Embassy in Hanoi, Vietnam. He stressed that this two years Appointment would in no way interfere with the top priority he promised to give to IUVSTA matters during his presidential period giving more opportunities for enlarging the international relation of the Union. The Secretary General, Christoph Eisenmenger-Sittner expressed his thanks to the Croatian Vacuum Society for organizing an excellent ECM 119 and also for hosting a memorable ICTF 16 in Dubrovnik. Thanks were also expressed to the Austrian Vacuum Society for providing the excellent facilities in which ECM 120 was held as well as for the flawless organization.

The Secretary General reminded the members of the Union to frequently use the web-site of IUVSTA where the "Members" section is used to distribute agendas, working papers and general information. Relevant up-to date information between ECM's can be found in the "Meantime" section.

Following this, the Secretary General reported on the status of negotiations with tentative new member societies. Currently, Bulgaria, Turkey, Romania and Greece are candidates for membership. Negotiations with Bulgaria have advanced so far that during this meeting a vote on provisional membership of Bulgaria will be taken. Finally, the Secretary General expressed his thanks to all members of the Union to which he had frequent contact and emphasized the fast and efficient way in which required information was given.

Moving on in the agenda, from the five proposals for workshops and schools received, two workshops and one school were recommended for funding by the STD. All of these proposals were approved for funding by ECM 120. Workshop number 78 was proposed by SED, NSD, TFD, PST and is entitled "New Horizons in Oxynitride Thin Films from Synthesis to Applications". It will be held from October 4-9, 2015, in Braga, Portugal. Workshop number 79 entitled "3D Chemical Imaging from Fundamentals to Advancing Applications", proposed by ASSD and BID, will be held in May 2017 in Sardinia, Italy. School number 14 entitled "Nano-Optics, from Principles to Basic Research and Applications" was proposed by NSD, BID, SSD. It will be held from April 11-15, 2016 in Braga, Portugal. Technical Training Course number 117 on "Vacuum Technologies" was approved for funding will held in Strbske Pleso, Slovakia, October 8-11, 2015, as well as a Short Course on "Plasma Assisted Surface Modification Treatments" to be held in Vitoria, Esporito Santo, Brazil, September 5-6, 2015. This shows that all event types supported by the Union (Workshops, Schools, Technical Training Courses and Short Courses) are actively pursued. Concerning Short Courses, a definition of this type of events was developed by the Education Committee and Statutes Committee. It was approved by ECM, and will be put to a vote for approval at the next General Meeting, GM 19 in Busan, Korea.

As in the next ECMs several other exciting proposals can be anticipated, a major point of discussion was to give the Scientific Director more financial flexibility for funding events within the triennial financial framework. In ECM 120 and AGM 03 which immediately followed, the President proposed a motion to allow the Treasurer to modify annual budgets by transfer of sums of money between budget lines, which was carried unanimously by a show of hands in both meetings.



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On next point on the agenda, the President announced that the application for Membership from **the Union of Physicists in Bulgaria** was in good order adding that they had applied for one share. He proposed granting them Provisional Membership so that they could attend the Union's meeting but without voting rights until the General Meeting in Busan where their application would be considered. This proposal received unanimous approval.

Finally, the Venue and date of ECM 122 was decided. There were two bids for ECM 122, one from Portugal and one from Argentina. The venue was decided by a secret vote, which turned out to be quite close (20 votes for Portugal, 16 for Argentina). According to this result, ECM 122 will take place in Braga, Portugal, from Friday, April 15 to Sunday, April 17, 2016. Because of the close vote it was also recommended to approach the Argentinean member Society to re-submit their bid during the next triennium, favourably for a meeting around October or November.



Photos by Geun Young Yeom



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Executive Council Meeting 121 and IUVSTA Highlight Seminar 2015

David N. Ruzic, druzic@illinois.edu

IUVSTA Highlight Seminar

The International Union of Vacuum Science, Technique and Applications (IUVSTA) is a Union of national member societies from 31 countries whose role is to stimulate international collaboration in the fields of vacuum science, techniques and applications and related multi-disciplinary topics including solid-vacuum and other interfaces. It has 9 divisions paralleling the division structure of the AVS. Once every three years, a Highlight Seminar is held where a representative of each division presents an overview of the scientific and technological advances in area of interest of the division. This year the Highlight Seminar will be an integral part of the AVS program occurring on Friday morning. Registration for the AVS is not needed to attend this IUVSTA session. The nine talks should be of particular interest to AVS attendees since they will bolster the international nature of the AVS symposium and highlight the great diversity and complementarity of topics and advances across the discipline all in one session.

Friday Morning, October 23rd.

Moderator: Prof. David N. Ruzic, Scientific Director of IUVSTA, University of Illinois at Urbana-Champaign, USA

8:00 Dr. Bonnie Tyler, National Physics Laboratory, United Kingdom

“Recent Advances in Applied Surface Science”

8:30 Dr. Giacomo Ceccone, European Commission Unit Nanobiosciences, Italy

and Dr. Anouk Galtayries, Chimie ParisTech, France

“Needs and Challenges of Vacuum Techniques in Biointerfaces Analysis”

9:00 Dr. Reinhard Horst Schwarz, University of Lisbon, Portugal

“Electronic Materials for Energy Harvesting and Energy Storage”

9:30 Dr. Christian Teichert, Montanuniversität Leoben, Austria

“Nanometer Sized Structures are still Up-to-Date”

10:00 Prof. Timo Gans, University of York, United Kingdom

“Recent Highlights and Trends in Plasma Science and Technology”

10:45 Prof. Ivan Petrov, University of Illinois at Urbana-Champaign, USA

“Advances in Surface Engineering”

11:15 Prof. Maria C. Asensio, Synchrotron SOLEIL, University Paris-Saclay, France

“Building Surfaces without Bulk: Last Highlights from Surface Science Division Beyond Graphene”

11:45 Prof. Christoph Eisenmenger-Sittner, Vienna University of Technology, Austria

“Highlights and Challenges in Thin Film Deposition”

12:15 Dr. Jay Hendricks, National Institute of Standards and Technology, USA

““Highlights of Next Generation Vacuum Science and Technology”

ECM-121 will be held at the Holiday Inn Express in Morgan Hills October 23-25, 2015

For more information and to register visit <http://cpmi.illinois.edu/ecm-121-registration/venue/>



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13th IUVSTA School on Vacuum Gas Dynamics: Theory, Experiments and Applications

Felix Sharipov sharipov@fisica.ufpr.br, **Oleg Malyshev**, **Dimitris Valougeorgis**

The 13th IUVSTA School Vacuum Gas Dynamics has been organized in the framework of the IUVSTA educational program on 17-21 May 2015 in Thessaloniki, Greece. The School was designed for scientists, engineers and post-graduate students who are not experts in rarefied gas dynamics but need to apply this field in their every-day work. The aim of the School was to train the participants in applying vacuum gas dynamics and also to fill the gap between complicated theory and practical needs. The event has been co-chaired by Prof. Felix Sharipov (Brazil), Dr. Oleg Malyshev (UK) and Prof. D. Valougeorgis (Greece), who was also the Local Organizer. The lectures and practical sessions were given by the co-chairmen, as well as by Dr. Karl Jousten (Germany), Dr. Roberto Kersevan (Switzerland) and Dr. S. Naris (Greece). Forty students attended the School coming mostly from various European countries and few from USA, Canada and China. They represent research centers, universities and industries. The majority of them are Ph.D. students, young scientists and engineers, while some are senior engineers or/and group leaders. Thus, the audience was very heterogeneous in terms of the level of knowledge in vacuum gas dynamics and in terms of professional needs. This diversity of the students made the lectures quite challenging in order to meet all requirements of the participants and to answer their questions during sessions and coffee breaks.



Lecturers: F. Sharipov, O. Malyshev, D. Valugeorgis, R. Keresevan, K. Jousten, S. Naris

In total, 10 lectures and 6 practical sessions were given covering many topics in the field of Vacuum Gas Dynamics. The theoretical and computational parts were focused on kinetic theory,-kinetic models, diffusion models, gas-surface interaction, test particles and direct simulation Monte Carlo methods, while the experimental part was dedicated to methods of measurements and standards in vacuum systems and vacuum metrology. The part related to applications was about gas flows through pipes, pumps, gauges, in small and large vacuum systems using Molflow software, diffusion model, numerical codes based on Monte Carlo and discrete velocity methods. During the practical sessions, the students were requested to resolve specific exercises related to the material of the lectures. These sessions were running in two parallel groups supervised by 2-3 lecturers at the same time in order to help the students more effectively and to increase the interaction between students and lecturers. Most of the students were happily engaged in this process trying hard to get the correct answers delivered to them for comparison purposes. All material related to the lectures and practical sessions has been uploaded to the School website about two weeks before its start and all registered participants had an access to it in order to better prepare themselves in all sessions.

According to the questionnaires filled by the students at the end of the event, the scientific level of the lectures was comprehensive and interesting and the practical sessions were well connected to the lectures. Some students expressed



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a difficulty to follow the practical sessions and proposed to give more time to tackle the exercises in such a school organized in the future. Overall, it is considered as a very successful school fulfilling all its objectives. The program and pictures of the School can be seen at the web-site: <http://iuvsta-school2015.mie.uth.gr/>.



Participants in the School



Lecture session



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The 31st European Conference on Surface Science will be held at the International Convention Center of Barcelona (www.ccib.es) from August 31th to September 4th, 2015. ECOSS is a well-established meeting with a longstanding tradition that started back in 1978 in Amsterdam and is organized jointly by the Surface Science Division of IUVSTA and the Surface and Interface Section of the European Physical Society. It provides a comprehensive overview of the state-of-the-art surface physics and chemistry, discusses recent advances and current problems, and points out the prospective development of the field. Experimental as well as theoretical aspects are addressed, covering mainly basic but including also applied research.

Five plenary lectures will be imparted and thirty invited and three hundred contributed oral presentations will be distributed in five parallel sessions. In addition, three poster sessions will be organized in the exhibition zone, with more than 20 confirmed sponsors.

Topics covered

- Adsorption and desorption
- Band structure of surfaces
- Catalysis under ideal and real conditions
- Colloids and interfaces
- Corrosion at the atomic scale
- Electrochemistry at surfaces
- Electronic properties of surfaces
- Graphene and carbon-based nanomaterials
- Liquid/solid and liquid/liquid interfaces
- Materials for energy
- Metal, alloy and quasicrystal surfaces
- Molecules at surfaces
- Novel and advancement of experimental and computational methods
- Oxide surfaces and thin/ultra-thin oxide films
- Optoelectronic excitations at surfaces
- Piezo and ferroelectricity at surfaces
- Polymer surfaces and interfaces
- Real-time processes at surfaces
- Self-assembly at surfaces
- Semiconductor surfaces
- Superconductivity in 2D materials
- Surface chemical reactions, kinetics and heterogeneous catalysis
- Surface diffusion and growth
- Surface dynamics
- Surface magnetism
- Surface phases and phase transitions
- Surface structure
- Strong correlations at surfaces
- Topological insulators
- Tribology and mechanical properties at the atomic scale

Grants and Prizes

Financial support for PhD students will be available through the IUVSTA-Elsevier Students Awards. In addition, two prizes are reserved for young PhD students and postdocs: the ECOSS Prize to the best oral presentation, sponsored by SPECS Surface Nano Analysis GmbH (1.500 EUR) and the best poster prize (500 EUR). PhD students are encouraged to apply.

The Conference dinner will be served at the Barcelona Royal Shipyard, a 13th century historical building, close to the world famous Columbus monument.

The deadline for registration is August, 22nd 2015. For additional details, visit <http://www.ecoss2015.org/>

Dr. Jordi Fraxedas

Chairman of ECOSS31



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78th IUVSTA Workshop on “New horizons in oxynitride thin films: from synthesis to applications”

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On behalf of the International Union for Vacuum Science, Technique and Applications, IUVSTA, the Centre of Physics of the University of Minho in Portugal, CFUM, and the International Iberian Nanotechnology Laboratory, INL, it is my pleasure to invite you to the 78th IUVSTA Workshop on “New horizons in oxynitride thin films: from synthesis to applications”, which will be held in the INL premises, from October 5 to 9, 2015 in Braga – Portugal.

Oxynitrides represent a group of materials of increasing technological importance, with typical responses ranging from those of the correspondent binary nitrides and oxides. The continuous substitution of nitrogen by oxygen leads to a progressive change between less negative valence band levels and hence higher band gaps than in conventional nitrides, opening a wide range of possible applications.

In fact, oxynitrides are being extensively investigated over the past few years, mainly because of their remarkable properties in several different domains, which include surface protection, such as wear, diffusion and corrosion-resistant ones, but also less expected ones such as a photocatalyst in water splitting as well as optical and electrical-related applications.

All these interesting topics will be in the focus of the present workshop. Invited talks given by renowned speakers from leading international groups, as well as numerous contributed posters will present latest trends and results. With the topics chosen and the expected participants from different areas of oxynitride research and neighboring fields, the 78th IUVSTA Workshop on “New horizons in oxynitride thin films: from synthesis to applications” will be an important forum for inspiring international and interdisciplinary exchange between the participants. In is my strong conviction that this workshop will provide breeding grounds and act as a catalyst for novel approaches beyond traditional disciplines and cooperation between research groups and industrial end-users.

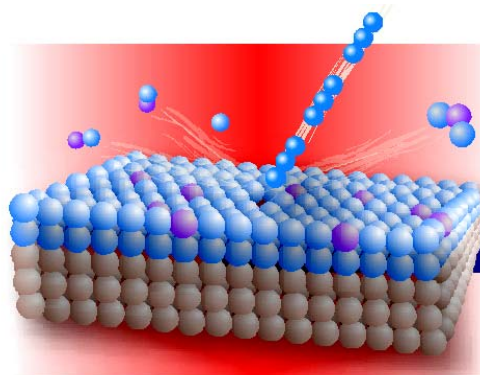
For more information:

<http://www.multifunctioncoatings.com/home/index.php/78thiuvstaworkshop>



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An AVS conference SIMS XX



SIMS XX

SEPTEMBER 13-18, 2015 • SEATTLE, WA

20th International Conference on
Secondary Ion Mass Spectrometry

The 2015 International Conference on Secondary Ion Mass Spectrometry (SIMS XX) will provide a forum for colleagues from both academia and industries throughout the world to exchange results and new ideas on Secondary Ion Mass Spectrometry and related techniques. The conference will cover advancements of scientific knowledge from fundamentals to applications. Discussion on present possibilities and future developments of the technique, in view of the future requirements coming from technology and basic research, will be particularly solicited. The conference will also have dedicated discussion sessions.

SIMS XX will be held at the Westin Seattle—an AAA Four Diamond award-winning, downtown Seattle hotel situated in downtown Seattle. The Westin Seattle offers the best of the city at your doorstep.

Topics

- 3D Imaging of Complex Samples (3D):
- Adhesion (AD):
- Archeology/Environment/Forensics (AE):
- Atom Probe (AP):
- Biological Imaging/Drug Localization (BI):
- Cluster Ions (CI):
- Complementary Techniques and Multi-Technique Approaches (XPS, AFM, GD-MS, LEIS, MEIS, Ambient Mass Spec, etc.) (CT):
- Depth Profiling/Inorganics (DI):
- Depth Profiling/Organics (DO):
- Data Processing/Interpretation/Quantitation/Chemometrics (DP):
- Fundamentals (FN):
- FIB-SIMS (FS):
- Geology, Geo- and Cosmochemistry (GC):
- Industrial Applications (IA):
- Image and Data Fusion (ID):
- Instrument Development (IN):
- Ionization Processes (IP):
- In-Situ Liquid SIMS (IS):
- Life Science and Biotechnology (LS):
- Medical Applications (MA):
- Microelectronics (MI):
- MeV-SIMS (MS):
- Nanomaterials/Nanotechnology (NN):
- Polymers and Molecular Surfaces/Films/Interfaces (PM):
- Renewable Energy and Energy Storage (RE):
- Sample Prep & Analysis of Biological Samples (SP):
- Ultra High Spatial Resolution SIMS (SR):
- Tribology/Corrosion (TC):

Website & Contacts

For additional details, please visit www.simsxx.org or contact:

Chair: Dave Castner, University of Washington, castner@uw.edu

Event Manager: Della Miller, AVS, 530-896-0477, della@avs.org.



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The AVS 62nd International Symposium and Exhibition



The AVS 62nd International Symposium and Exhibition will be held October 18-23, 2015, at the San Jose Convention Center in San Jose, California. Highlights include an extensive collection of technical sessions, exhibitor technology spotlights, short courses, tutorials, and a free to attend equipment exhibition.

AVS 62 addresses cutting-edge issues associated with materials, processing, and interfaces in both the research and manufacturing communities. The weeklong Symposium fosters a multidisciplinary environment that cuts across traditional boundaries between disciplines, featuring papers from AVS technical divisions, technology groups, focus topics on emerging technologies, and more.

AVS 62 will host the IUVSTA Highlights Seminar on Friday Morning; symposium registration will not be required to attend the IUVSTA seminar

Division/Group Programs

- Advanced Surface Engineering
- Applied Surface Science
- Biomaterial Interfaces & Biomaterials Plenary
- Electronic Materials & Processing
- Magnetic Interfaces & Nanostructures
- Manufacturing Science & Technology
- MEMS and NEMS
- Nanometer-scale Science & Technology
- Plasma Science & Technology
- Surface Science
- Thin Films
- Vacuum Technology
- Actinides & Rare Earths
- Additive Manufacturing/3D Printing
- Atom Probe Tomography
- Energy Frontiers
- Exhibitor Technology Spotlight
- Helium Ion Microscopy
- In-Situ Spectroscopy & Microscopy
- IPF on Mesoscale Science and Technology of Materials and Metamaterials
- Materials Characterization in the Semiconductor Industry
- Novel Trends in Synchrotron & FEL-Based Analysis
- Scanning Probe Microscopy
- Selective Deposition as an Enabler of Self-Alignment
- Spectroscopic Ellipsometry
- Surface Modification of Materials by Plasmas for Medical Purposes
- Tribology

Focus Topics/Other Sessions

- 2D Materials
- Accelerating Materials Discovery for
- Global Competitiveness

Website & Contacts

For additional details, please visit www.avs.org/symposium.



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MIATEC 2015
Reactive Sputter Deposition
www.vide.org/miatec-rsd2015
4th Magnetron, Ion processing & Arc Technologies European Conference
14th International Symposium on Reactive Sputter Deposition
• 8-11 December 2015
CNAM, Paris, France
CALL FOR PAPERS

The 2015 joint MIATEC and RSD Conference aims to highlight the advances in fundamental research and understanding of all types of PVD processes including thin film deposition and surface treatment based on techniques, such as sputtering and cathodic arc evaporation in noble and reactive gases, as well as ion beam methods.

Dedicated sessions of new designs and achievements in the fields of plasma diagnostics, modeling, reactive PVD, thin film deposition, characterization and applications will provide an opportunity to meet fellow experts and get together with leading international scientists, engineers and students in an relaxed atmosphere. A special focus on industrial R&D achievements is planned during the 'Hot Topics' session.

SCIENTIFIC TOPICS

1. New Design and achievements in magnetron, arc and ion processing
2. Plasmas Diagnostics
3. Modelling and Numerical Simulation
4. Reactive PVD
5. Applications and Functional Properties
6. Industrial Hot Topics research
7. Thin film growth

Tutorial lectures

Tutorial lectures are organized at SFV headquarters, the day prior to the event (Tue. 8 Dec.), discussing the fundamental issues related to the conference topics. They will enable students to discover and go deeper in this fascinating field of PVD. For the senior scientists, whatever their field is, these lectures will blow away the dust. In this way, every attendee can enjoy each session and discuss about the results shown in an active way.

Exhibition

Manufacturing and service companies will find opportunities to present their products, equipment and/or services, during the industrial exhibition that will be organized jointly with the conference

<http://www.vide.org/miatec-rsd2015>

Tiberiu MINEA

Chairman



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Partners:





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The French Vacuum Society (SFV) The oldest Vacuum Society in the world turns 70 in 2015

Anouk Galtayries, anouk.galtayries@chimie-paristech.fr, M-G. Barthés-Labrousse, Daniel Vernière



In the late 30s, a small group of specialists in vacuum applications proposes to settle a national organization gathering technicians and engineers to promote, teach and disseminate vacuum science and technology. World political events delayed the project, but the first Constitutive meeting of a Society called the French Society of Engineers and Technicians in Vacuum (SFITV) was held on March 10, 1945. This Society was recognized as of public utility in 1957 and became, in 1973, the French Vacuum Society (SFV).

SFITV soon developed relationships with equivalent groups appearing in other countries and help to the constitution of

other national vacuum societies, which appeared in the 50s in the United States, Japan and several European countries. Similarly, it supported the creation in 1962 of the federal structure IUVSTA (International Union for Vacuum Science, Technique and Applications), which brings together national vacuum societies, and is a founding member of the Union. SFITV took an active part in the life of the Union: through the decades, several members SFITV/SFV have been part of the board of officers of the IUVSTA, including as president (Jean Debiesse (1965-1968) and M-G. Barthés-Labrousse (2001-2004)). The current representatives at the IUVSTA's Executive Councils are Anouk Galtayries and Daniel Vernière. SFV is also a member of two national federations, the French Federation of Materials (FFM since 2002) and the French Federation of Scientific Societies (F2S since 2012).

From the beginning, the main activities of SFV are:

• Publication

In December 1945, the first issue of a technical review called *Le Vide* (The Vacuum) was published. This journal, later renamed *Le Vide, les Couches Minces* then *Vide: Sciences, Techniques et Applications* also served as editing support for most conferences proceedings organized by SFV. SFV also publishes scientific and technical books, an excellent example being the textbook *Notions de base en technique du vide* (Fundamentals in Vacuum Technique) written by G. Rommel and revised in 2015 by G. Rommel and N. Rouvière.

• Organization of scientific conferences and workshops

From 1946 to 1954, SFV has organized several technical workshops, always meeting a great success (100 to 120 people attending each issue). In 1954, SFV organized in Paris its first international congress "Oxide Coated Cathodes", quickly followed in 1956 by "Ultra High Frequency Tubes" in which more than 178 papers were presented. Almost sixty years later, more than 250 conferences and congresses were organized by the SFV, both at the national or international scale. In 2010, the SFV has organized for the first time two of its congresses abroad: ELSPEC-4 in Fez (Morocco) and IBAF 2010 in Namur (Belgium). SFV has organized the International Vacuum Congress (IVC), the triennial Congress of IUVSTA on two occasions: in 1980, in Cannes, for its 8th edition (IVC-8) and in 2013 in Paris for its 19th edition (IVC-19). IVC-19, chaired by Marie-Geneviève Barthés-Labrousse, former SFV (1999-2000) and IUVSTA (2001-2004) president, was co-



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organized for the first time ever by a European consortium of nine countries, gathering over 2,500 participants around a program of 1,500 scientific papers and a technical exhibition of more than 110 booths.

• Education

The first technical training with demonstrations took place in 1968, through a partnership with the Institute of Technology (IUT) of the Orsay University, close to Paris. Today, nearly 30 courses gather each year nearly 250 trainees, with the desire to teach rigorously albeit in a convivial way technical and topical programs dealing with vacuum production, measurement of low pressures, leak detection, thin films elaboration, plasma processes, and surface characterizations of materials... A "Hall of Vacuum Techniques" developed in agreement with IUT Orsay, serves as the principal place of demonstration. Additional equipment, located in the Parisian laboratories, is also used. Some courses are also held in related thematic sessions at conferences organized by SFV (CIP, ELSPEC, JADH, ITFPC, MIATEC). Moreover, in 2013, trainings given in English, as part of the IVC-19 conference, by worldwide famous instructors, were attended by nearly 150 participants. Finally, a significant proportion of the training takes place at customers (industry and universities) places. Note that in 2014, a course on the techniques using the synchrotron radiation, in partnership with the SOLEIL institution (coordinated by Maria-Carmen Asensio), was opened for the first time.

Several additions to these three historical activities were recently made

- The creation of the Manufacturers and Service Providers Committee (CEPS) in 1996, under the leadership of Michel Tiget. Strong collaboration between the industrial and academic worlds is a genuine originality of SFV in the landscape of the French scientific associations. The CEPS committee was set up following a prestigious exhibition animated in collaboration with the Palais de la Découverte in Paris (a museum dedicated to science) in 1995, on the occasion of the fiftieth anniversary of the SFV. For a month and a half, over 150 000 visitors discovered an overview of applications of vacuum in everyday life, promoting exchanges between experts and general public. This successful initiative has been perpetuated by the organization of a Vacuum Exhibition in 1998 (Grenoble). With a biennial, later annual frequency, this exhibition, which was originally organized alternately in Grenoble and Paris, became itinerant in France in 2007. Since 2009, it has evolved into the Vacuum and Materials Processing Exhibition (SVTM) and is organized in partnership with A3TS (Association for Heat and Surface Treatments). In June 2015, SVTM was held in Saint-Etienne and brings together 120 exhibiting companies.
- Expertise
SFV benefits from a network of experts to assist in research or developments in the fields of vacuum production and processes.
- Scientific and industrial information communication

The *Gazette du Vide* is the successor of the journal *Le Vide* (stopped in 2003) and appears regularly with one or two issues a year. In 1999, the website of the SFV has been put online and is regularly upgraded. Finally in 2015, the first email Newsletter will be proposed to members and partners.

Being the oldest national vacuum society in the world, SFV celebrates 70 years of history in 2015. Its regular contributions, in France and abroad, in various activities related to the production and applications of vacuum, are and will remain very strong. All this work is ensured by the constant supply of its members, its administrators and its permanent secretariat, today consisting in a team of four persons headed by Gweltaz Hirel, and comprising Sabra Mahdaoui, Hervé Lemoine and Christine Lemoine.

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