



TECHCON CHICAGO 2011 CALL FOR PAPERS

Technical Program • Exhibit • Tutorial Courses • Networking

April 16–21, 2011 • Hyatt Regency Chicago on the River Walk, Chicago, IL

INTRODUCING TWO SYMPOSIA FOR CHICAGO 2011

» *Manufacturing and Technology for Thin Film Photovoltaics* «

» *Coating Advances and its Impact on the Future of the Vacuum Coating Industry* «

Join us as we explore the Symposia topics as integral parts of our traditional Technical Program, two-day Exhibit and Education Program. We are also soliciting manuscripts for the following sessions:

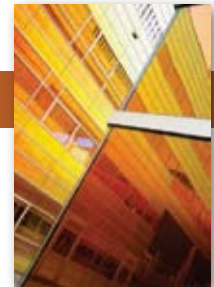
- Vacuum Web Coating
- Coatings for Cleantech Energy Conversion, Storage and Related Processes
- Tribological and Decorative Coating
- Emerging Technologies
- High Power Impulse Magnetron Sputtering
- Vacuum Processes and Coatings for Health Care Applications
- Optical Coating
- Large Area Coating
- Plasma Processing
- Heuréka! Post-Deadline Recent Developments
- Business Topics Session
- Vendor Innovators Showcase
- Technical Poster Presentations

DEADLINE FOR ABSTRACTS: OCTOBER 1, 2010

INNOVATION. TECHNOLOGY. EDUCATION.

SVC TECHCON | CHICAGO 2011

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TECHCON CHICAGO 2011 EXHIBIT PROSPECTUS

NEW FOR THE 2011 TECHCON! EASY ON-LINE BOOTH REGISTRATION SYSTEM

Our new Interactive Exhibit Registration System and real-time Exhibit Hall floor plan allows exhibitors to complete their booth registration on-line. Exhibitor benefits include:

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Register for your Booth Today! *Booth Assignments Begin November 1, 2010*

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AN INVITATION FROM THE PROGRAM CHAIRS

A New Approach to the Technical Program and Exhibit Highlights Today's Hottest Topics and Looks to the Future

The months following the 2010 TechCon in Orlando, Florida have been filled with a renewed sense of optimism for the future of our technology – and the Society. Vacuum coaters find themselves as major players in the global race for clean energy, and advanced coatings for high-tech applications used throughout several growing industries.

New Symposia Format Highlights Areas Experiencing Rapid Growth

In addition to the key traditional technical sessions at the 2011 TechCon, SVC has a new and exciting Symposia format which addresses two major developing areas of vacuum coating technology. The Symposia are part of our strategic plan to highlight new areas of technology and to supply our attendees with fresh, in-depth knowledge in that technology. Both Symposia topics and Traditional Sessions will be combined with the Poster Session to allow for further contributions and discussion.

The “Symposium on Manufacturing and Technology for Thin Film Photovoltaics”

will look at future photovoltaic markets and their growth, and government programs developing green renewable technology and providing funding for manufacturing plants. This Symposium will also cover the various thin film photovoltaic technologies, including amorphous and microcrystalline silicon, copper indium gallium selenide (CIGS), cadmium telluride, organic compounds and other advanced technologies. Manufacturing processes and equipment will also fall under the Symposium umbrella.

The “Symposium on Coating Advances and its Impact on the Future of the Vacuum Coating Industry”

will take an introspective view of the vacuum coating industry and will look at all the deposition technologies; comparing them with each other and other non-vacuum options. We will investigate where the major growth areas are for vacuum coating technology and potential applications for manufacturing and equipment development. Areas of interest include: solid state lighting, flexible electronics, displays, and photovoltaics, as well as optics, biotech-



Donald M. Mattox Tutorial Speaker

(Tuesday Afternoon, April 19, 2011)

Oriented Nanostructures for Energy Conversion and Storage

Presented by: Jun Liu

Pacific Northwest National Laboratory, Richland, WA

nology and aerospace. This Symposium will look at technologies including atmospheric plasma, High Power Impulse Magnetron Sputtering (HIPIMS), Plasma Enhanced Chemical Vapor Deposition (PECVD) and Atomic Layer Deposition (ALD) as future production processes. In addition, we will look at competitive/synergistic technologies to vacuum based techniques such as sol gel processing, inkjet coatings and spray technologies.

Recent developments and reviews of coating technologies and processes will be presented throughout the Technical Program in Chicago and in the expanded Education Program of Tutorial courses. Topics included in this year's Technical Sessions are: *Tribological and Decorative Coating, Plasma Processing, High Power Impulse Magnetron Sputtering, Vacuum Processes and Coatings for Health Care Applications, Large Area Coating, Clean-tech Energy, Vacuum Web Coating, Optical Coating and Emerging Technologies.* Each session is planning a strong program, with vibrant Invited Speakers and opportunities for participants to share their latest discoveries and insights. The ever-popular “*Hueréka!*” *Evening Session* is available to those who wish to present their late-breaking recent developments with the SVC community.

Technology and Business Intersect in the Exhibit Hall

Due to the importance of business in the vacuum coating field, SVC has imple-

mented a stronger Exhibit Hall Program, designed to provide guidance and additional opportunities to our exhibitors and entrepreneurs. In addition to the prominent *Vendor Innovators Showcase Session* on Wednesday in the Exhibit Hall, we will move the *Business Topics Session* into the Exhibit Hall on Wednesday. Together with the *Poster Presentations*, various networking events and electronic access to Exhibitors before and during the event, there are more reasons than ever to visit the Exhibit Hall.

Networking for Everyone

Take advantage of all the scheduled networking events throughout the TechCon Program, including the *Technology Forum Breakfasts*, “*Meet the Experts*” *Corner*, *Donald M. Mattox Tutorial Program presentation*, *Young Members Group Meeting* (for attendees, students and SVC newcomers age 30 and younger), and a fabulous evening cruise of Lake Michigan. Each event is organized to provide an enriching one-on-one networking experience.

We look forward to seeing you in Chicago next April!

Wolfgang Decker, VAST FILMS Ltd. (724/827-8827; w.decker@vastfilm.com) is the Program Chair. Scott Walton, U.S. Naval Research Laboratory (202/767-7531; scott.walton@nrl.navy.mil) is the Assistant Program Chair. Ladislav Bárδος, Uppsala University, Sweden (46/18-4713034; Ladislav.Bardos@angstrom.uu.se) is the Past Program Chair.

CALL FOR PAPERS 2011

SVC TECHCON CHICAGO

Symposium on Manufacturing and Technology for Thin Film Photovoltaics

This symposium focuses on the business and technological aspects of thin film photovoltaics (TFPV). Within the U.S. there is a strong push by the U.S. Government to support photovoltaic (PV) development and manufacturing, with available funds and incentives in excess of \$100 million. Within the U.S., 29 states have legislated renewable energy portfolios, including Illinois, for example, adopting a 25% renewable energy goal by 2025. With the lasting effects of the massive oil spill in the Gulf of Mexico, this seems to be even more reason to favor PV technology. Over the last decade, photovoltaic production had an average growth rate of 44% per year. In 2009 the worldwide production of solar cells grew to 7.5 G Watts, lessening the need for fossil fuel. A 2.5x increase in current production capacity is predicted by 2014. The annual revenue of the solar PV industry is expected to approach \$100 billion by 2014 (SolarBuzz, 2010, <http://www.solarbuzz.com/Marketbuzz2010-intro.htm>). The total TFPV portion of this world capacity is estimated to be about 30% by 2015, which is double current production. TFPV is expected to have the most growth in Japan, U.S. and Europe. For example, FirstSolar beat the world's record for production in 2009 by producing in excess of 1GW CdTe based TFPV devices. Organic thin film devices continue to develop with higher efficiency and longer lifetimes. TFPV has a great need for advanced glass, flexible substrates and new transparent conductors. Our organizing committee welcomes papers in the following areas:

Market and Business

- International and U.S. movements in the PV Market, future perspectives on the market and where the opportunities are
- Identification of key TFPV technology and research subjects, companies to watch, Key R&D Lab developments, challenges for TFPV research teams. What are the most important issues? What processes and equipment need to be developed?
- Comparison of TFPV with wafer based silicon
- Government programs and future outlook of PV in Germany and other countries in the EU, Japan, Korea, China, and Taiwan
- U.S. Manufacturing and PV America Initiatives, manufacturing conversion opportunities

Materials Technology

- New materials opportunities, research and development toward higher efficiency and lower cost
- CIS/CIGS, CdTe, a-Si, organic technologies
- Future high performance third generation TFPV including quantum processes
- Comparison of properties and limitations of wafer based silicon to TFPV
- Optical, electrical and device structure design and optimization
- Optical performance, integrated concentrator design



Keynote Speaker (Monday Morning, April 18, 2011)

Thin Films in Photovoltaics: Contribution to a Future Mainstream Electricity Provider

Presented by: Winfried Hoffmann

Vice President EPIA (European Photovoltaic Industry Association), Brussels, Belgium

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On-line Conference and Hotel Registration will Open in mid-December

The SVC Group room rate will be \$199.00 (single & double). Be sure to book at the Hyatt Regency Chicago as soon as Registration opens so the SVC room rate can be locked in before the hotel is sold out.

See page 7 for additional information and watch your E-mail for an announcement that Conference and Hotel Registration is open.



- High performance antireflection and functional coatings
- Sealing materials for moisture, oxygen and mechanical damage for both inorganic and organic devices
- TCOs-transparent oxides and metal conductor systems
- Health concerning processes and materials and recycling issues, the “greening” of solar fabrication processes
- Materials cost and future availability, impact of other industry needs

Fabrication Processes

- Sputtering and other PVD, CVD
- Large area deposition, quality and yield improvements, BIPV glazing, transparent electronics
- Substrate requirements and engineered glass and plastic for high performance
- Flexible deposition, quality and web handling, flexible electronics
- New high speed and high yield processes
- Allied processes (atmospheric plasma, ink jet deposition)

Manufacturing and Equipment

- Experiences from industry on TFPV manufacturing
- Experiences on moving R&D processes to manufacturing
- Transition from pilot to full manufacturing design, plant operation and yields, operational issues
- Handling and process design, especially for thinner or flexible substrates
- Targets, materials and deposition resources for TFPV
- QC equipment and process control
- Disposal and recycling

Symposium Organizers: Carl Lampert, Star Science (707/794-0333; cmlstar@sonic.net); Frank Zimone, Angstrom Sciences, Inc. (856/938-9653; fzimone@angstromsciences.com); Michael Andreasen, AGC Flat Glass North America (707/455-7321; michael.andreasen@na.agc-flatglass.com)

Symposium Contributors: Clark Bright, 3M Company (520/746-7061; cibright@mmm.com); Wolfgang Diehl, Fraunhofer Institute for Surface Engineering and Thin Films (IST), Germany (49/531 2155 515; wolfgang.diehl@ist.fraunhofer.de); Mariadriana Creatore, Eindhoven University of Technology, The Netherlands, (31/402 474 223; m.creatore@tue.nl); and David Sanchez, Williams Advanced Materials, (954/261-2120; david_sanchez@beminc.com)

Invited Speakers scheduled for the Symposium on Manufacturing and Technology for Thin Film Photovoltaics Session:

- **Dean Levi**, National Renewable Energy Laboratory, Golden, CO
- **Ayodhya Tiwari**, EMPA - Swiss Federal Laboratories for Material Testing and Research, Dübendorf, Switzerland
- **Karsten Otte**, Solarion AG, Leipzig, Germany
- **Jody Plinkton**, AGC Flat Glass North America, Vacaville, CA

Symposium on Coating Advances and its Impact on the Future of the Vacuum Coating Industry

This symposium takes a critical look at the future of vacuum coatings for industry. The goal of this symposium topic is to give guidance to our industry and scientific members as to what the future may hold from the viewpoint of needs of certain applications and market growth. It will identify market leaders, both from a corporate and research view and will explore new markets which are poised for growth and markets seeing decline. Overall, our industry appears to have a promising future with a projected growth of thin film technology in the fields of flexible electronics, solid state lighting, displays, photovoltaics, batteries, new fuels and storage, optics, biomedical and aerospace. Furthermore, the sessions will identify emerging vacuum processes, such as HIPIMS and compare with existing PVD processes. This featured topic investigates non-vacuum coating technologies, such as atmospheric plasma deposition, spray technologies and inkjet and how they compete with vacuum based technologies. The outcome of these sessions will give direction for our industry and our Society as a whole. The organizers solicit papers on the following subjects:

Business, Market and Workforce

- The health of the vacuum coatings industry (2011-2020), current markets and market share: the projected future markets and market share by 2020 for vehicles, marine, aerospace, buildings, electronic, energy, health, industrial and consumer applications
- Where is venture and corporate capital moving?
- Geographical manufacturing: Who does the coating and where will the future coating plants be located?
- How will the U.S. coatings industry be affected by environmental legislation? Case studies from Europe and Asia
- Where will the jobs be and how do we educate for the future?
- Vision of the equipment manufacturers, coating facilities and end users

Changing Core Markets and its Effect on Traditional Vacuum Coating

- How will the future change the mix and needs of vacuum coating?
- What are the general future needs of industry, equipment, vacuum environment, analysis, speed, coating area, quality, cost, process



- temperature and process control?
- Vacuum evaporation including arcs
- Sputtering (all types)
- PECVD
- Ion Beam Deposition (all types)

Characteristics of Emerging Markets

Where are the emerging markets, the role of coatings and who are the market leaders? What coating research problems need solutions for the following subjects:

- New energy sources and fuels
- Energy storage
- Environmental
- Lighting
- Flexible electronics
- Health and the aging society

Role of New PVD Processes

- Developing PVD technology compared to existing technologies: advantages and disadvantages
- What is the current status and maturity?
- Adoption by manufacturers – how far out into the future?
- Are any of these new technologies potential game changers? What are the future needs of this technology?
- Who are the Corporate, University and Government Institute leaders for new coating processes?
 - HIPIMS
 - ALD
 - other new PVD

Non-Vacuum Processes Competition and Synergy with Vacuum Deposition

There are several deposition technologies that challenge vacuum based processes. In actual manufacturing there are a variety of processes, both vacuum and non-vacuum, that are used to manufacture complete products. In this topical group we look at non-vacuum processes such as atmospheric plasma, inkjet, printing, CVD, sol gel and plating technologies. For each technology we want to determine its role and market potential in overall coating technology. As we move towards new product concepts such as polymer electronics, thin film batteries and organic solar cells we wish to know which



Keynote Speaker (Monday Afternoon, April 18, 2011)
Magnetron Sputtering and its Applications - Milestones and Future Challenges
 Presented by: **Günter Bräuer**
 Fraunhofer Institute for Surface Engineering and Thin Films
 IST, Braunschweig, Germany

deposition technologies are favored.

- How do non-vacuum coatings compete or complement vacuum coatings and their future outlook?
- Are any of these non-vacuum technologies disruptive technologies to vacuum based techniques?
- Adoption of new deposition processes by manufacturers by what time and rate of adoption?
 - Atmospheric plasma
 - Inkjet printing
 - Printing
 - CVD
 - Sol gel
 - Electroplating and electroless plating

The rapidly advancing field of Atmospheric Plasma Technologies is an impor-

tant subtopic in this Symposium. Besides the favorable economic aspects, the main advantage of these coating technologies is removal of space limitations given by vacuum chambers, which allows treatments of virtually unlimited substrate areas. Although the focus is mainly in non-thermal plasmas suitable for treatment of webs and temperature sensitive substrates including human skin, there are numerous innovations made recently also in thermal plasma technologies. Another important option is utilization of atmospheric microplasmas in treatment of local surfaces and the production of nano-scaled surface objects and structures. We therefore expect exciting contributions in the sub-session on “Atmospheric Plasma Technologies”.



Invited Speakers scheduled for the Symposium on Coating Advances and its Impact on the Future of the Vacuum Coating Industry:

- **Thomas Müller**, Rübige GmbH & Co. KG Engineering, Wels, Austria, will speak on “PACVD - The Sleeping Giant of Coating Technology: Actual Status of Industrial PACVD Furnaces and New Coating for Low Temperature Processes”
- **Thomas Webster**, School of Engineering and Department of Orthopaedics, Brown University, Providence, RI, will speak on “Creating Nanosurfaces and their Implications for the Medical Device Industry”
- **Nicolas Gherardi**, Université Paul Sabatier, Toulouse, France, will speak on “Study of a PECVD Process Using Homogeneous Dielectric Barrier Discharges at Atmospheric Pressure”

Symposium Organizers: Clark Bright, 3M Company (520/746-7061; cibrigh@mmm.com); Carl Lampert, Star Science (707/794-0333; cmlstar@sonic.net)

Symposium Contributors: Frank Zimone, Angstrom Sciences, Inc. (856/938-9653; fzimone@angstromsciences.com); Ludvik Martinu, École Polytechnique de Montréal, Canada (514/340-4099; ludvik.martinu@polymtl.ca); David Glocker, Isoflux Incorporated (585/349-0640; dglocker@isofluxinc.com); Geoff Ringer, 3M Corporate Process Research Laboratory (520/746-7066; gringer@mmm.com); and Chris Stoessel, Southwall Technologies (707/525-8874; stoessel@attglobal.net). Atmospheric Plasma Process Organizers: Ladislav Bárdos, Uppsala University, Sweden (46/18-4713034; ladislav.bardos@angstrom.uu.se) and Hana Baránková, Uppsala University, Sweden (46/18-4713118; hana.barankova@angstrom.uu.se).



Heuréka! Post-Deadline Recent Developments

The Heuréka! Session is an opportunity for everyone willing to introduce the newest knowledge and results, latest experiences, inspiring ideas, hottest developments, inventions and stimulating achievements in the field of vacuum coating and related technologies. Over the years the Heuréka! Session has proven to be an important forum for post-deadline presentations of the “hot-off-the-press” achievements delayed, e.g., due to patenting procedures, specific strategy or business reasons. The Heuréka! Session is run without any parallel TechCon sessions, always in a relaxing evening atmosphere with refreshments generously supported by our sponsors. There are no invited papers since all presentations about new ideas, products, developments and future trends in coating technology are welcomed on equal basis. However, the total number of presentations in this prestigious session is limited. The topics in the program are usually quite diverse, which always stimulates inspirations in the audience and a very interesting discussion. All these attributes of the Heuréka! Session fit very well with the program structure planned for the TechCon in Chicago 2011.

Chicago is an outstanding venue, which lies in the most important business and technology crossroads, not only in the U.S., but also for the global market. We are therefore expecting very exciting contributions. Abstracts to the Heuréka! Session can be submitted after an official TechCon abstract deadline, but not later than March 1, 2011.

Heuréka! Session Organizers: Ladislav Bárdos, Uppsala University, Sweden, (46/18-4713034; Ladislav.Bardos@angstrom.uu.se) and Hana Baránková, Uppsala University, Sweden, (46/18-4713118; Hana.Barankova@angstrom.uu.se)

Vacuum Web Coating

Vacuum web coated materials are a part of everyday life, used in products such as snack packaging, paper currency, solar control film and touch screens. Emerging uses for this technology include solar cells, batteries, lighting and flexible displays. The Web sessions are globally recognized for presentations focused on the above areas as well as on a wide variety of topics connected to vacuum coating on flexible substrates (paper, plastic film, foil, fabric, etc).

We are seeking contributions for the 2011 TechCon in the following areas: vacuum web coated related products and applications, coating equipment, substrates, web handling, thermal load control, processes, tie-layers, source materials, process monitoring, defect/debris understanding and control, manufacturing challenges, quality control, material handling, and post processing. Presentations may be from a development, marketing, manufacturing, vendor or user perspective. We welcome papers that investigate the underlying physical and chemical understanding of coatings and substrate materials and why they behave the way they do. We also look for presenters who can give a historical perspective and current overview of a particular area, or a visionary look into the future as it relates to web coating, as there has traditionally been strong interest in these types of papers.

Invited Speakers scheduled for the Vacuum Web Coating Session:

- **Samuel Graham**, Georgia Institute of Technology, Atlanta, GA
- **Ray Ma**, Universal Display Corporation, Ewing, NJ, will speak on “**Technical Gap Analysis of Vacuum Coated Materials for Flexible OLED Display and Lighting Applications**”

Some additional specific markets where there have been an expressed interest for presentations are listed below, but there are many more fields of web coating that we would like to hear more about.

- *Advances in packaging films*
- *Developments in barrier and ultra-barrier coatings and in measurement methods*
- *Other energy related products involving coatings on flexible substrates (fuel cells, insulation, heaters, etc.)*
- *Environmental concerns – waste reduction*
- *Transparent conductive coatings*
- *Security coatings and devices*
- *Coatings used in medical and biomedical applications*
- *Flexible electronics*
- *EMI shielding films*
- *Roll to roll patterning of thin films*
- *Source material availability and pricing trends*
- *Disruptive threats to vacuum web coated technologies and products*
- *Web coating markets in Asia*

If you have suggestions for topics, new ideas for the web coating sessions at the Technical Conference, would like more information on presenting, or are interested in volunteering to join the Web TAC and help organize the TechCon, please contact one of the session organizers.

Vacuum Web TAC Co-Chairs: Geoff Ringer, 3M Corporate Process Research Laboratory (520/746-7066; gringer@mmm.com); James McShane, Joy Mining Machinery (219/629-3437; mcshanjh@hotmail.com); Mark Roehrig, 3M Company (651/737-3590; maroehrig@mmm.com)



Coatings for Cleantech Energy Conversion, Storage and Related Processes

We are excited to be holding our Cleantech Session in Chicago, IL; one of our largest heartland cities with a strong sensitivity to green architecture and conversion to green manufacturing processes.

Cleantech is a category of technologies that reduce humankind's impact on the environment, which is of major social and commercial importance. The environmental cost of fossil-based fuel is becoming critical in the U.S. with the pollution of our Gulf Coast as proof to this issue. Within the scope of limited non-renewable energy sources and the limited capacity of the ecosystem for greenhouse gases and nuclear waste, sustainability is an important target in the future. The lack of available clean water and air has made parts of the world a very difficult place in which to live. This has created a strong environment for commercial investment in Cleantech. The 2009 Q3 investment level was \$1.59 billion with 67% distributed in North America, 29% in Europe and Israel, and 3% in China. Cleantech is the number one recipient of venture funding in the world (Source: L'Atelier, BNP Paribas Group). Solid state lighting alone is projected to increase in market size by 30.9% annual growth to \$1.3 billion by 2013.

Cleantech includes any technology or manufacturing process that reduces the environmental impact compared to existing technologies. Our Cleantech Session will address subjects including renewable energy, smart materials, energy storage, fuels and storage - as related to materials and coatings, air and water purification, energy efficient coatings, and easily recyclable products. Also, Cleantech refers to cleaner industrial processes by way of new coatings. For Chicago 2011, we will accept papers on photovoltaics in our Symposium on Manufacturing and Technology for Thin Film Photovoltaics.

The Cleantech Session is soliciting original work that covers topics on coating technology and films for Cleantech applications. Also, we solicit critical reviews of the field. Some papers will be considered for oral session and others will go into our poster session with enhanced discussion time.

Specifically, the categories of interest of this session include:

- *Smart Glazing and Energy Efficient Coatings*
- *Solar Thermal Coatings and Materials*
- *Large-Area Coating Technology for Cleantech*
- *Solid State Lighting and Daylighting Materials*
- *New Battery Materials*
- *Nanotechnology Applied to Clean Processes*
- *Water Purification and UV Catalysis*
- *Air Cleaning and Surface Cleaning*

Cleantech Reception Sponsors

Our reception last year was very well received and gave the speakers and industry representatives a chance for social networking. This reception is sponsored by private contributions and we are actively looking for Company Sponsors to help fund this reception. In exchange for your contribution, your company will receive notoriety as a sponsor in our program and at the reception. If your company is interested please contact Vivienne Mattox, SVC Executive Director, (505/856-7188; viviennemattox@svc.org).

Cleantech TAC Chair: Carl M. Lampert, Star Science, (707/794-0333; cmlstar@sonic.net). Assistant TAC Chairs: Claes G. Granqvist, Uppsala University, Sweden, (46/18-4713067; claes-goran.granqvist@angstrom.uu.se); Michael Andreasen, AGC Flatglass North America, (707/455-7321; michael.andreasen@na.agc-flatglass.com); Ric Shimshock, MLD Technologies, LLC, (650/938-3705; ricshimshock4mld@aol.com); David Sanchez, Williams Advanced Materials, (954/261-2120; david_sanchez@beminc.com); and Bernd Szyszka, Fraunhofer Institute for Surface Engineering and Thin Films IST, (49/531-2155641; bernd.szyszka@ist.fraunhofer.de)

Book Your Rooms Early at the Hyatt Regency Chicago on the River Walk



Don't miss a minute of the TechCon! Stay on-site at the Hyatt Regency Chicago on the River Walk for only \$199.00 per night

There is added anticipation for the 2011 TechCon, since it will be hosted by the Hyatt Regency Chicago on the River Walk, one of the most desirable venues for so many of our potential attendees, exhibitors and visitors.

- Registration for the TechCon and the Hotel Reservation System will open in mid-December 2010
- The SVC Group room rate will be \$199.00 (single & double)
- Book Early at the Hyatt Regency Chicago as soon as Registration opens so that the SVC room rate can be locked in before the hotel is SOLD OUT.

- The cancellation policy will be 14 days instead of 30 days in 2011. If you book a room and need to cancel send an E-mail to svcinfo@svc.org. No doubt SVC will have a list of individuals waiting for a cancellation as happened in 2008, and names can be changed if done at the same time as a cancellation is made.



Tribological and Decorative Coating

Tribological coatings are playing an important role in wear protection of components. This applies to all kinds of devices with moving systems; ranging from automobiles, aircraft and aero-engines, to power generation systems.

Within this session there will be special room for soliciting presentations around the Symposium on Coating Advances and Its Impact on the Future of the Vacuum Coating Industry. In context with this theme, there has been much emphasis on the future of coatings playing the major role in reduction of CO₂ emissions. Examples of applications are coatings on γ -TiAl blades for aero-engines and coatings on all kinds of automotive components. The combined effect of lubricants and coatings is a theme that is widely investigated and is of special interest to the world of tribological experts.

Stricter rules will enforce ever-reducing amounts of energy consumption, leading to reductions in CO₂ emissions. Governmental regulations, especially in the European Union, imply that excess premiums will have to be paid in the coming years, which will lead to enforced actions of the car manufacturers serving the EU market. Also, legislation in India has been made more severe.

Other consequences of this development trend are that new lightweight alloys, like Al with high Si content and austenitic ductile steel, will be needed to machine cutting and forming tools. Possible solutions are found in coating these tools to enable them to reach a certain lifetime while processing these novel materials.

Decorative coatings are increasingly used today for their metallic look and shiny appearance, combining this with high wear resistance against corrosion and mechanical wear (mainly scratches in this case).

We are soliciting papers that are related to the research as well as the techniques leading to coating solutions for wear problems. This includes machine technology and plasma techniques as well as peripheral technologies for cleaning and quality control, but also IP issues, which are of major importance in steering the developments. We are welcoming presentations that address the wear problems in practical applications, especially including the approach to find solutions. It should be pointed out, that in this respect, it will not be necessary to address only the latest applications, but that the audience will also be interested in historical descriptions and the background of how coating solutions were developed in the past.

Networking Events in Chicago

The SVC TechCon is known for providing many opportunities for attendees to meet and interact with each other, including:

Technology Forum Breakfasts

Facilitator-led round-table discussions provide an opportunity for informal discussion and interaction on specific topics.

“Meet the Experts” Corner

The popular “Meet the Experts” Corner will once again provide an informal setting for conference registrants to obtain answers to their vacuum coating problems from a team of experts.

Sixth Annual SVC Foundation 5K Fun Run and Walk

Run or walk with friends and colleagues on Tuesday morning as the sun comes up over Lake Michigan. Proceeds benefit the SVC Foundation Scholarship program.

Golf Tournament

Set aside Sunday, April 17, 2011 for the SVC Foundation Golf Tournament. Details will be available in the Preliminary Program and on the Web Site.

Lake Cruise Networking Event

Featuring a buffet dinner and entertainment on a Luxury Cruise Ship.

Invited Speakers scheduled for the Tribological and Decorative Session:

- **Gary Doll**, *The Timkin Company, Canton, OH*, will speak on **“Applications and Performance Characteristics of Rolling Element Bearings with Vacuum Coatings”**
- **Tim Hosenfeldt**, *Schaeffler KG, Herzogenaurach, Germany*, will speak on **“Hard Coatings as a Design Element for Highly Stressed Engine Components”**

We are soliciting papers in the following areas:

- *Surface treatment for components before and after coating*
- *Developments of low friction coatings*
- *Developments of coatings with extreme high hardness*
- *Nanostructured coatings systems for components and tools*
- *High volume coating applications for automotive valve train and/or power train components*
- *Machine technology and their applications, eventually including pre-treatment and post-treatment technologies*
- *New plasma sources and their (potential) applications*
- *Heavy-duty vehicle applications*
- *Coatings for decorative applications on small consumer electronic parts*
- *Coatings on plastics and metals for decorative applications*
- *Applications of coatings in aerospace engines*
- *Coatings for cutting difficult work-piece materials*
- *Coatings for moulding and forming tools*
- *Metrology*

Tribological and Decorative Coating TAC Chair: Roel Tietema, Hauer Techno Coating BV, The Netherlands, (31/77-3559741; rtietema@hauzer.nl)
 Assistant TAC Chairs: Jolanta Klemberg-Sapieha, École Polytechnique de Montréal, Canada, (514/340-5747; jsapieha@polymtl.ca); Michael Drory, Timken Technology Center, (330/471-2683; michael.drory@timken.com)



Emerging Technologies

The Emerging Technologies session is the forum for groundbreaking new trends in the thin film coating industry. Such trends may be either the application of established coating technologies in innovative ways to expand into new applications, or creative new developments in coating technologies that overcome long-standing roadblocks in the industry. Technologies that successfully cross over from early-stage feasibility studies into commercially viable industry solutions are a primary focus of this session.

The emergence of Atomic Layer Deposition (ALD) processes for high-volume capability through fast-sequence processing that enables roll-to-roll production promises a dramatic improvement of the commercial viability of ALD for many new applications, and is a specific focus area for 2011. **Steven George, University of Colorado, Boulder**, will present an invited talk on this topic, and we encourage researchers in this field to share their insights and accomplishments.

Other examples for topics of strategic interest for the Emerging Technologies session are:

- *New thin film applications in alternative energy generation and storage, as well as energy conservation*
- *Economically viable alternatives to classic transparent conducting oxides (TCOs) for example using nanotubes and nanowires*
- *New transparent oxide electronics applications: TFTs and new p-type material junction devices*
- *High-performance electronics on flexible transparent substrates and roll-to-roll processing.*

We are soliciting contributed talks and posters for these areas, and always welcome new and innovative topics that advance the use of thin film processing in modern technology applications. We are particularly interested in technologies which support the two conference Symposia: *Manufacturing and Technology for Thin Film Photovoltaics* and *Coating Advances and its Impact on the Future of the Vacuum Coating Industry*.

Emerging Technologies TAC Co-Chairs: Clark Bright, 3M Company (520/746-7061; cibrigh@mmm.com); Chris Stoessel, Southwall Technologies (650/798-1242; stoessel@attglobal.net); Carlo Misiano, Romana Film Sottili S.r.l, Italy (39/064 423 0163; carlo.misiano@libero.it)

High Power Impulse Magnetron Sputtering (HIPIMS)

High Power Impulse Magnetron Sputtering (HIPIMS) is coming of age as scientific understanding ripens and industrial applications emerge rapidly. Having attracted a number of abstracts during its first year as an independent Technical Advisory Committee and following a four year run as a Hot Topic, HIPIMS is inviting new SVC TechCon contributions.

HIPIMS is ionized magnetron sputtering, which utilizes power densities in the range of kilowatts per cm² to generate high-density plasma in order to ionize the sputtered metal and activate reactive gas atmospheres.

The technology has been evolving rapidly and is improving the performance of coatings in several fields such as semiconductor devices, photovoltaics, sensor devices, optical coatings, and new applications for hard coatings resistant to wear, high temperature oxidation, and corrosion. The demands placed by these applications are driving innovations in

power supply design, process control and dedicated plasma diagnostics equipment. At the same time, new science is emerging to predict both plasma behavior and coating synthesis.

New technologies and plasma sources based on the ideas behind HIPIMS are also starting to emerge.

The session aims to provide a forum to discuss all aspects of the technology, including, but not limited to:

- *HIPIMS plasma and discharge science and diagnostics – experimental and modeling approaches*
- *New plasma sources based on high impulse power*
- *New plasma sources to produce highly ionized metal plasma and gas activation*
- *Hardware development – power supplies, pulse trains and magnetron configurations*
- *Process development and stability*
- *Substrate pre-treatment prior to coating deposition*
- *Coating deposition in reactive and non-reactive atmosphere*
- *Performance of coatings in different*



Invited Speakers scheduled for the HIPIMS Session:

- **Michael Vergöhl, Fraunhofer Institute for Surface Engineering and Thin Films IST, Braunschweig, Germany, will speak on “New Developments of Reactive HIPIMS Processes for Optical Functional Coatings”.**

applications

- *Wear protection: tooling, tribological, and biomedical*
- *Environmental protection: oxidation and corrosion*
- *Optical properties*
- *Electrical properties*

High Power Impulse Magnetron Sputtering (HIPIMS) TAC Chair: Arutiun P. Ehiasarian, Sheffield Hallam University, UK (44/114-225-3646; a.ehiasarian@shu.ac.uk). Assistant TAC Chairs: Ralf Bandorf, Fraunhofer Institute for Surface Engineering and Thin Films IST, Braunschweig, Germany (49/ 531-2155-602; ralf.bandorf@ist.fraunhofer.de) and Jolanta Klemberg-Sapieha, École Polytechnique de Montréal, Canada (514/340-5747; jsapieha@polymtl.ca)



CALL FOR PAPERS » TRADITIONAL SESSIONS

Vacuum Processes and Coatings for Health Care Applications

From arterial stents to X-ray phosphors, the health care industry relies on vacuum technology in countless applications. The value of coatings and surface treatments in the health care field is expected to reach \$5 billion in 2010 and an increasing number rely on physical and chemical vapor deposition and plasma processes. In addition to improving the quality of life for millions of people, vacuum technology is key to developing revolutionary products such as diagnostic “pills” and MEMS devices that deliver drugs. We will explore the tremendous opportunities and significant challenges in creating new, life-changing materials and devices.

We are soliciting contributed papers in relevant areas including, but not limited to:

- *Surface treatment for enhanced biocompatibility*
- *Surface cleaning with plasmas*
- *Sterilization with plasmas*
- *Hard and protective coatings for medical implants and medical devices*
- *Tribological phenomena in a biological environment*
- *Corrosion resistance and accelerated screening tests*
- *Optical coatings for biomedical devices and instrumentation*
- *New processes for biomedical and pharmaceutical applications*
- *Surface and interface analysis of biomedical products*
- *Systems for drug delivery and sensing*
- *Porous and micro/nanostructured films*
- *Bio-MEMS*
- *Photocatalytic effects in medical devices*
- *Packaging of biomedical and pharmaceutical products*
- *New organic and inorganic thin film materials for biomedical applications*
- *Compatibility with FDA standards*
- *Equipment scale up and process economics*

Vacuum Processes and Coatings for Health Care Applications TAC Chair: David Glocker, Isoflux Incorporated (585/349-0640; dglocker@isofluxinc.com). Assistant TAC Chairs: Hana Baránková, Uppsala University, Sweden, (46/18-4713118; hana.barankova@angstrom.uu.se); Ludvik Martinu, École Polytechnique de Montréal, Canada, (514/340-4099; ludvik.martinu@polymtl.ca); Diego Mantovani, Laval University, Canada (418/656-2131; diego.manotvani@gmn.ulaval.ca)

Optical Coatings

The Optical Coatings session serves as a focal point for global technical interchange in the field of optical interference coatings. Topics featured will include coating design, development of practical manufacturing techniques, characterization methods, and a wide range of applications.

Invited speakers are selected to survey advancements in the Optical Coatings community. We are very pleased to start the 2011 Optical Coatings session with an invited talk from **Professor Detlev Ristau from the University of Göttingen, Laserzentrum Hannover, Germany**, who will discuss optical coatings for high power lasers. There will be a special emphasis in the area of “Optical Coatings for Space Applications.” **Dr. Karen M. McNamara from NASA** will present an invited talk on contamination and degradation in performance of optics in the space environment.

As part of the Symposium on Manufacturing and Technology for Thin Film Photovoltaics, **Dr. Dean Levi from NREL**, an expert in characterization of photovoltaic systems, will present an overview of the photovoltaics industry. In addition, we wish to solicit papers, which focus on the thin film design and manufacture of the PV systems including PV efficiency and optimal optical performance.

As in previous years, the Optical Coatings sessions will cover all recent trends in the optical coatings community. To build a well-rounded Optical Coatings session, abstracts are solicited for the following areas:

- *Novel optical interference design software and design techniques*
- *Energetic processes (ion and plasma sources, densification and stress control)*
- *Multifunctional coatings, especially in the ophthalmic field (scratch resistance, wettability)*
- *Deposition, characterization, and applications of sculpted and textured films, including nano-dots/nano-particles/micro- and nano-structured growth*
- *New deposition processes for optical coatings; including HIPIMS, ALD, new IBS processes and combination processing tools (e.g. sputtering + evaporation)*
- *New low cost processes for optical coatings*
- *Application of real-time process monitoring and control toward optical coating processes*
- *Novel coating materials*
- *Coatings on polymers and special substrate materials*
- *Metrology of optical films (new instrumentation, in-line approaches and software developments to make characterization feasible)*
- *Optical film characterization for long-lifetimes and self-cleaning issues*
- *Applications in non-traditional wavelengths, from EUV to IR especially in the area of X-Ray wavelengths*
- *Complex 3-D optical devices*
- *Optical coatings for energy control and solar power*
- *Optical coatings for laser applications, including femto-second laser*
- *Optical coatings for display, aerospace and integrated photonic device applications*
- *Production issues common to the industry - including lessons learned or serendipitous discoveries that came from problems or disasters*

Optical Coating TAC Co-Chairs: Ulrike Schulz, Fraunhofer Institut für Angewandte Optik und Feinmechanik IOF, Germany (49/3641 807 344; ulrike.schulz@iof.fraunhofer.de); Bryant Hichwa, Sonoma State University (retired) (707/785-1922); bhichwa@earthlink.net); James N. Hilfiker, J.A. Woollam Co., Inc. (402/477-7501; jhifiker@jwoollam.com)



Large Area Coating

The Large Area Coating Technical Advisory Committee, in conjunction with the Program Committee, is seeking papers for the 2011 Society of Vacuum Coaters TechCon in Chicago, IL.

This year, Large Area Coating is participating in two topical Symposia in the technical program. Papers submitted in the solar power/alternate energy area, where the focus is on alternate energy generation, storage and conversion, will be slotted into a Large Area Topical group within the Thin Film PV Symposium. Papers that deal with developing markets will go into the Future of PVD Symposium. Papers in the traditional products and processes for large area applications will be grouped into the traditional Large Area Session.

Please submit all abstracts that deal with large area coating to the Large Area Session and the papers will be grouped according to topic within the Symposia and Large Area Session. Areas of focus are expected to be:

- *Advances in thin film photovoltaic, second-surface and first-surface reflectors and absorption coatings and associated technologies for green/alternative energy applications*
- *Advances in coatings and coating technology for battery and energy storage applications*
- *Advances in electrochromic and other active-window coating technologies*
- *Advances in coatings for touch screen, cell phone and other display applications*
- *Advances and improvements to functional coatings in areas such as transparent conducting oxides, temperable and bendable coatings, easy-clean and bio-active coatings and surface-modification coatings by large area processes, including but not limited to hydrophobic, hydrophilic, reduced-friction, wear-resistant and chemically-resistant coatings, thermal control, anti-reflection, mirror and barrier coatings*
- *Innovations in critical coating equipment including coaters, magnetrons, power supplies, pumps, on-line monitoring and defect analysis*
- *Innovations in sputter targets and other critical coating elements*
- *Advances in modeling, simulation and reverse-engineering of large area coatings, processes and equipment*
- *Focused information that will teach us how to extend the reach of large area coating operations into markets and products of significant opportunity*

Large Area Coating TAC Chair: Michael Andreasen, AGC Flat Glass North America (707/365-7433; michael.andreasen@na.agc-flatglass.com). Assistant TAC Chair: Johannes Strümpfel, VON ARDENNE, Germany (49/351-2637350; struempfel.johannes@vonardenne.biz)

Plasma Processing

The Plasma Processing Chairs invite the heterogeneous and active plasma community already familiar with the SVC TechCon, as well as first-time SVC visitors, to contribute to the 2011 Plasma Processing program.

Plasma processing has the unique capability of delivering a diverse but selective reactivity to a surface by modifying the surface chemistry. This capability, however, is based on the complexity of the plasma environment, defined by specific plasma physics and chemistry, material science and plasma-surface interactions. Thus, the potential of plasma processing can only be upscaled to an industrial level when material studies are accompanied by the understanding of plasma physics, plasma chemistry and mechanisms of plasma-surface interactions, developed through modeling and experimental efforts.

Traditionally, the Chairs welcome all papers aimed to arise interest from the scientific and industrial communities visiting the SVC conference from the fields of thin film plasma deposition/modification, novel and emerging plasma processing tools and applications, and plasma sources compatible with large area processing.

Additionally, the 2011 Plasma Processing program will explore the fundamentals of plasma science by soliciting contributions, particularly in two research areas:

1. **Plasma Polymerization/Polymer Modification:**
 - *Novel applications and fundamentals of thin film growth*
 - *Plasma deposition mechanisms and plasma-surface interaction*
2. **Plasma Diagnostic Tools:**
 - *Ion probes, optical and non-optical diagnostics for radical and molecule detection*
 - *Investigation in harsh plasma (deposition/etching) environments*

We look forward to your contribution to an exciting conference in Chicago!

Plasma Processing TAC Chair: Mariadriana Creatore, Eindhoven University of Technology, The Netherlands, (31/402 474 223; m.creatore@tue.nl). Assistant TAC Chairs: James Bradley, University of Liverpool, United Kingdom, (44/151 794 4545; j.w.bradley@liverpool.ac.uk) and Scott Walton, U.S. Naval Research Laboratory (202/767-7531; scott.walton@nrl.navy.mil)

Invited Speakers scheduled for the Plasma Processing Session:

- **Jan Benedikt**, Ruhr University, Bochum, Germany, will speak on **“Diagnostics of Low and Atmospheric Pressure Plasmas by Means of Mass Spectrometry”**
- **Dirk Hegemann**, EMPA, Swiss Federal Laboratories for Materials Science and Technology, St. Gallen, Switzerland, will speak on **“Deposition of Functional Plasma Polymers by Control of Film Growth Conditions”**



The 2011 SVC Exhibit – The Intersection of Technology and Business

The SVC Exhibit in Chicago will be enhanced in 2011 to incorporate new business-friendly events, crafted to provide learning, networking and business opportunities for all TechCon participants throughout the entire two-day Exhibit.

At the Ready and On-Line

Now everyone will be able to preview the SVC TechCon Exhibiting companies and their equipment and services before and during the SVC Exhibit. A new electronic Exhibitor interface will provide an in-depth Exhibiting company and product search feature, plus a real-time exhibit layout, allowing visitors the convenience of making the most of their time in the Exhibit Hall. Access the SVC Exhibit via the Internet on your computer or smart phone. The full features of the new software will be available after booth assignments are made in November 2010.

Special Presentations in the Exhibit Hall

The Exhibit Hall will now host three presentation sessions over the two-day event, which grants attendees, visitors and Exhibitors the ability to attend meaningful discussions focused on the future of business in our industry, with guidance on how to navigate the waters during these exciting economic times.

Business Topics Session

Symposium on Manufacturing and Technology for Thin Film Photovoltaics

In today's complex environment of commercial globalization, competing technologies, nation-specific energy policies, and large-scale capital requirements, the "business" of participating in the thin film photovoltaics market has never been more exciting. It has also never been riskier and the stakes have never been higher!

A key component of the SVC Strategic plan is to present a forum to address the unique commercial challenges that face our constituents and also provide forward-looking analysis that will both guide and educate the membership. The SVC is soliciting presentations and posters that address these issues in the following areas:

- *Emerging trends and markets with a focus on financial opportunities and risk management*
- *Pressures on thin film technology as cost and implementation potentially offset durability, aesthetics, and performance advantages*
- *Technical developments required to support larger scale implementation of thin film photovoltaics and manufacturing cost efficiencies*
- *Strategic materials issues, and supply chain management*
- *"Best Practice" implementation, industrial collaboration, benchmarking, and strategies*
- *Government/Private funding initiatives for technology development, start-up "seed" monies, and workforce education/training*
- *Intellectual property development, maintenance, and protection.*

Business Topics Session Organizers: Frank Zimone, Angstrom Sciences Inc. (412/469-8466; fzimone@angstrom-sciences.com) and David Sanchez, Williams Advanced Materials. (954/261-2120; david_sanchez@beminc.com)

Vendor Innovators Showcase

Exhibitors! Introduce your company's newest products and services to the vacuum coating community during the Vendor Innovators Showcase in the Exhibit Hall. This is an ideal way to share your company's message and encourage booth traffic at the show. Submit an abstract for a 10-minute oral presentation during this session before October 1, 2010 and have your presentation title included in the Preliminary Program. Abstracts will continue to be accepted for this session until March 1, 2011.

Vendor Innovators Showcase Organizers: Frank Zimone, Angstrom Sciences Inc. (412/469-8466; fzimone@angstromsciences.com) and Marcel Anaya, DHF Technical Products, (505/217-4931; marcel@dhfco.com)

Technical Poster Presentations

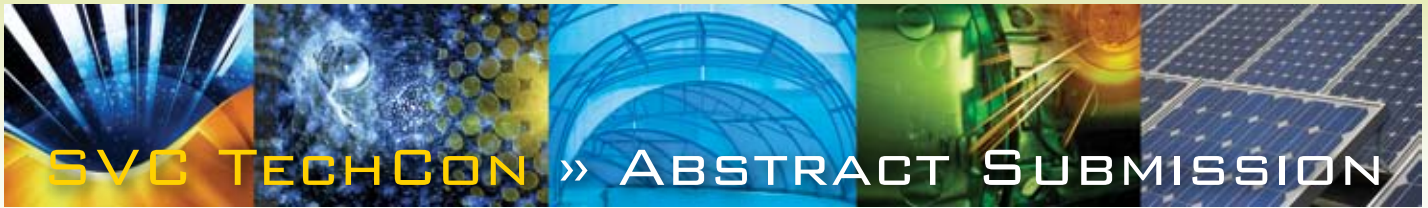
A special emphasis on Poster Presentations is highlighted in SVC's 2011 Technical Program. SVC envisions this to serve as an extension of the Technical Program and permits more presentations for each technology. The Program Committee encourages poster presentations from every TAC, including those with topics related to the two Symposia themes.

A \$200 cash award for the Best Poster will be offered. In order to be eligible, an accompanying manuscript must be submitted to SVC before the TechCon begins. Submit an abstract for your presentation in the Poster Session before October 1, 2010 and have your presentation title included in the Preliminary Program. Abstracts will continue to be accepted for this session until March 1, 2011.

Networking Events

There is no better way to make connections within our technology and industry than by face-to-face interaction with decision makers. SVC will provide valuable networking opportunities inside the Exhibit Hall to allow more interaction between those who have a need for our technology and those who can provide solutions. Networking attractions during the two-day Exhibit include:

- *Exhibit Hall Reception for Conference Registrants and Exhibitors – Tuesday Afternoon, April 19*
- *Lunch in the Exhibit Hall for Conference Registrants and Exhibitors – Wednesday Afternoon, April 20*
- *Specialty Breaks throughout the Exhibit Open Hours*
- *The Ever-Popular Beer Blast – Wednesday Afternoon, April 20*



Use the On-line Abstract Submission Page!

200-Word Abstract Deadline: October 1, 2010

Go to: <http://www.svc.org/ConferencesExhibits/2011-TechCon-Conference/Abstract-Submission-Guidelines.cfm>

The On-line Abstract Submission page allows you to submit your required information and upload your abstract text as a MS Word Document (.doc or .docx) in one easy step! Have the following information and documents ready before starting:

- The names, affiliations, and contact information for all co-authors
- Your preference for session placement (see pages 3-11)
- The title of your presentation
- Your abstract text, saved in MS Word (.doc or .docx) format

The On-line Abstract Submission page must be completed in full with the MS Word document attached to ensure a successful upload.

Remember, by submitting your abstract, you agree to prepare a manuscript for your oral presentation in the Technical Program or Poster presentation. (Manuscripts are not required for Vendor Innovators Showcase presentations). A signed copyright release for publication of the manuscript in the Conference Proceedings and the CD-ROM is also required. The manuscript submission deadline is March 1, 2011.

SVC will send an automatic e-mail acknowledgement after a successful abstract submission. Within 10 days of your abstract

submission, you will also receive notification from the SVC Administrative Offices that your abstract has been forwarded to the Program Committee for review. If your abstract is accepted, you will receive a session and time slot assignment in November.

If you have any problems submitting your abstract on-line, contact SVC at 505/856-7188 or publications@svc.org.

Abstract Content Guidelines:

Abstracts are to be one paragraph, objective and technical, and should describe the novelty of the contribution. No trade names, trademarks, product names or a commercial tone will be allowed in the abstract. (Does not apply to presentations for the Vendor Innovators Showcase). Do not use reference numbers and refrain from using special symbols in the abstract text.

Extended Abstract Submission Deadline March 1, 2011:

for Poster Presentations, Heureka! and Vendor Innovators Showcase presentations.

Presentation Times:

- 20 minutes for oral technical presentations
- 10 minutes for Vendor Innovators Showcase presentations



Meeting Attendees and Exhibitors: Plan Ahead and Start the Visa Application Process Immediately!

Reference Web Sites:

U.S. DEPT. OF STATE, TRAVEL INFORMATION
For foreign citizens traveling to the United States, visit
<http://www.travel.state.gov>

U.S. DEPARTMENT OF STATE, VISA INFORMATION

Do you need a visa? If so, visit this Web Site:
http://www.travel.state.gov/visa/visa_1750.html

Request a Letter of Invitation and apply for your visa as soon as you submit your abstract! Important steps to remember:

1. Review your visa status, and find out if you need a U.S. visa or a renewal. Depending on your country of origin, you may qualify for the Visa Waiver Program (see http://travel.state.gov/visa/temp/without/without_1990.html)
2. Review the visa wait times information for interview appointments and visa processing at each embassy and consular section worldwide available at http://travel.state.gov/visa/temp/wait/wait_4638.html. Visit the embassy or consular section web site where you will apply for your visa to find out how to schedule an interview appointment, pay fees and any other instructions.
3. Plan on an interview at the embassy or consulate, which is required for most visa applicants. As part of the visa interview, a quick fingerprint scan should be expected. Applicants who need additional screening are informed during the application process.
4. As soon as you submit your abstract, send your request for the Letter of Invitation immediately to SVC at publications@svc.org. You will need this Letter of Invitation to accompany your application for a visa, which you must take with you to the interview with the embassy in your country. The whole process can take at least four months depending upon your country of residence.
5. See the appropriate links at www.travel.state.gov for more information about visas required for temporary visitors to the U.S.

SVC has an International Freight Forwarder to assist exhibitors to get their equipment into the United States.



NEW FOR 2011 EXHIBITORS!

EASY ON-LINE BOOTH REGISTRATION SYSTEM

Our new *Interactive Exhibit Registration System* and *real-time Exhibit Hall floor plan* allows exhibitors to complete their booth registration on-line. When booth assignments have been made (after November 1, 2010), your exhibit booth location and contact information will be added to an interactive floor plan that will be accessible to potential attendees. You will then be able to add your *Exhibitor Profile*, select your product categories, and take advantage of upgrades.

This new system provides added value for exhibiting companies, including:

- *Company Name*
- *Booth Number*
- *Appointment Manager - Allows attendees to set appointments with exhibitors*
- *Exhibitor Profile*
- *Contact Information*
- *Product Categories - Choose from the comprehensive list of technology specific sub-categories that apply to your business and help exhibit visitors find your company*
- *Personalized Exhibitor Representative Login*

Exhibitors can also choose upgrades that enhance pre-conference marketing activity, including:

- *VISIT US NOW company logo and link*
- *Banner Ads on the Exhibit Floor Plan page with URL link of your choice*
- *Press Releases that can highlight news, products and show specials. Companies participating in the TechCon Sponsorship Program will be entitled to upload unlimited press releases as part of the sponsor benefits.*

Benefits for Exhibit Visitors

Exhibit visitors can use this searchable floor plan to create a list of exhibits to visit and develop a personalized color-coded floor plan by taking advantage of the following features:

- **Multiple Search Criteria** - *Exhibitor Name, Keyword or Product Category*
- **Real-time Alphabetical Listing** of Exhibitors
- **Interactive Floor Plan**
- **Integrated Messaging System** - *Request appointments with exhibitors*
- **Map It** - *Ability to highlight a booth on the floor plan and use color coding to plan time in the Exhibit*
- **Access the SVC Exhibit via the Internet** on your computer or smart phone.
- **Personalized Visitor Login**

Professional Development Opportunities, Networking Events and Features that Merge Technology and Business

The SVC Exhibit in Chicago will be enhanced in 2011 to incorporate new business-friendly events, crafted to provide learning, networking and business opportunities for all TechCon participants throughout the entire two-day Exhibit.

- **A special TechCon Sponsorship Program** offers significant marketing opportunities.
- **Free Wireless Internet** throughout the Exhibit Hall.
- **Special Presentations in the Exhibit Hall** (see page 12 for details)
- *Business Topics Session*
- *Vendor Innovators Showcase*
- *Technical Poster Presentations*
- **Cyber Café** for attendees and exhibitors to use in the Exhibit Hall
- **Reception, lunch, and specialty breaks provided in the Exhibit Hall.**
- **Beer Blast** to create a grand finale to the Exhibit on Wednesday.
- **Lake Cruise Networking Event** on Wednesday evening.

Getting Down to Business

The following changes have been made to the SVC policies for exhibiting in 2011:

- **Booth Assignments will be made after November 1, 2010**—from contracts received with payment on or before this date. After this date, booths will be assigned strictly according to the date that the paid registration is received (see SVC Exhibit Policy on page 18).
- **Set-up** is Monday (8:00 a.m. – 8:00 p.m.) and Tuesday morning (7:00 a.m. – 11:00 a.m.) for the Tuesday and Wednesday Exhibit.



Sponsorship and Promotional Opportunities at the TechCon

Recognized as THE premier event by engineers, manufacturers, technologists, scientists, and business professionals working in the vacuum coating industry internationally, the SVC TechCon and Exhibit is a wise investment of your conference and marketing dollars.

- **Select one of the TechCon Sponsorships** - see page 17. Sponsors will be widely recognized in all SVC publications and on signage at the TechCon. Non-exhibiting companies are also encouraged to participate in these sponsorships.
- **SVC publishes a 50-word profile for each exhibiting company in the Tech-Con Exhibit Guide (TEG),** which will be mailed to prospective TechCon and Exhibit attendees in early March 2011. **Reserve ad space in the 2011 TEG** as part of your SVC marketing program.
- **Upgrade your on-line profile on the Interactive Exhibit Floor Plan system** by adding a logo and link to your web site, press releases to your company profile page, and a banner ad to the Exhibit Floor Plan page.
- **Participate in the Vendor Innovators Showcase.** These 10-minute presentations are perfect for introducing new products, new equipment, or a new process. Presenters in the Vendor Innovators Showcase do not pay a TechCon presenter registration fee. Go to www.svc.org and submit your abstract using the On-line Abstract Submission page (see page 13).

Questions?

SVC Exhibit Administrator:

Jacque Matanis: 505/897-7743 (direct)
505/401-8043 (cell)

SVC Administrative Office:

505/856-7188; Fax 505/856-6716

E-mail: svcinfo@svc.org

SVC Exhibit Committee Chair:

Cathi Baker: 970/407-6498 (direct)

E-mail: cathi.baker@aei.com

Reserve Your Exhibit Space Today!

Use the Easy On-line Reservation System featuring a new electronic Exhibitor interface that provides an in-depth Exhibitor profile and product search feature, plus a real-time exhibit layout.

2011 SVC Exhibit

Hyatt Regency Chicago on the River Walk, Chicago, Illinois

Tuesday, April 19 • 12:00 p.m. to 6:00 p.m.

Wednesday, April 20 • 10:00 a.m. to 5:00 p.m.

Nearly 170 manufacturers and suppliers exhibited at TechCon 2010!

4Wave, Inc.	HVA, LLC.	Sigma Technologies International, Inc.
A&N Corporation	Indium Corporation	Soleras Ltd.
AAPS-Advanced Applied Physics Solutions	INFICON	Solvix SA
Advanced Energy Industries, Inc.	Inland Vacuum Industries, Inc.	Sprimag
Advanced Technology & Materials Co., Ltd.	InstruTech, Inc.	Sputtering Components, Inc.
ALCA Technologoy S.r.l.	Intellevation Ltd	Sumitomo (SHI) Cryogenics of America, Inc.
Alcatel Vacuum Products, Inc.	Intlvac	Super Conductor Materials, Inc.
Alicat Scientific, Inc.	InVacuo, Inc.	Superior Technical Ceramics Corp.
Allied Advanced Materials	IonBond LLC	Surface Modification Systems, Inc.
American Institute of Physics (AIP)	J.A. Woollam Co., Inc.	SVC Foundation
Ametek, Inc.	Kashiyama USA, Inc.	Sycon Instruments, Inc.
Angstrom Sciences, Inc.	Kaufman & Robinson, Inc.	Synergy Vacuum, Inc.
Applied Materials	KDF	System Control Technologies (SCT)
ARI Industries, Inc.	Korea Vac-Tec Co., Ltd.	Tecport Optics, Inc.
Arnold Magnetic Technologies	Kurdex Corporation	Tecsun Vacuum Technology Engineering Co., Ltd.
Atlas Technologies	Kurt J. Lesker Company	Telemark
Austin Scientific, an Oxford Instruments Company	Leybold Optics USA, Inc.	Temescal
AVT Services Pty Ltd	Lucas/Signatone Corporation	Thermal Conductive Bonding, Inc.
Bekaert Advanced Coatings N.V.	Materials Science, Inc.	Thermionics Vacuum Products
BellowsTech, LLC	MC Power Systems	Thin Film Research Laboratory
Beneq Oy	McVac Manufacturing Co., Inc.	Torr International, Inc.
Bronkhorst USA	MDC Vacuum Products, LLC	TRIBOtechnic
Brooks Automation, Inc.	MEWASA North America, Inc.	Trinos Vacuum Systems, Inc.
Brooks Instrument	Midwest Tungsten Service, Inc.	Tuthill Vacuum & Blower Systems
CeramTec North America	MKS Instruments, Inc.	UC Components, Inc.
Chengdu Ultra Pure Applied Materials Co., Ltd.	Mustang Vacuum Systems, LLC	Ulvac Technologies, Inc.
Coastal Instruments, Inc.	Niles Electronics, Inc.	Umicore Thin Film Products
Coating Materials, A Division of Tico Titanium, Inc.	Nor-Cal Products, Inc.	Vacuum Engineering & Materials Co., Inc.
COMVAT AG	Nu-Tech Precision Metals, Inc.	Vacuum Plus Manufacturing, Inc.
CSM Instruments, Inc.	Odyssey Technical Solutions	Vacuum Process Technology, Inc.
Dark Field Technologies, Inc.	Oerlikon Leybold Vacuum USA Inc.	Vacuum Research Corporation
Darly Custom Technology, Inc.	OmegaVac	Vapor Technologies, Inc.
Denton Vacuum, LLC	OptiLayer, Ltd.	Varian, Inc., Vacuum Technologies
DHF Technical Products	Osaka Vacuum USA, INC.	VAT, Inc.
DON CO.	Pfeiffer Vacuum	Veeco Instruments, Inc.
DynaVac	Physics Today	Vergason Technology, Inc.
EB Sources	PHPK Technologies	VG Scienta, Inc.
EBARA Technologies, Inc.	Phytron, Inc.	VON ARDENNE, Germany
Edwards	Pi Scientific, LLC	W. Theiss Hard-and Software
Evatec	Plasma Process Group	Williams Advanced Materials
Exotech, Inc.	Plasmaterials, Inc.	Yeagle Technology, Inc.
Fil-Tech, Inc.	Plasmionique, Inc.	Zpulser LLC
Filmetrics, Inc.	Polytechnik AS	
FMS USA, Inc.	Precision Plus Vacuum Parts Inc.	
Fraunhofer USA CCL	Process Materials, Inc.	
Gencoqa Ltd.	ProTech Materials	
General Plasma, Inc.	PTB Sales, Inc.	
GENERAL Vacuum Equipment Ltd.	R.D. Mathis Company	
GfE Materials Technology, Inc.	Red Spot Paint & Varnish	
H.C. Starck	Reldan Metals, Co.	
Hauzer Techno Coating BV	Rigaku Vacuum Products	
Heraeus Materials Technology LLC	Rocky Brook Associates, Inc.	
HHV Ltd.	SAGE industrial sales, inc.	
Hine Automation LLC	SCI Engineered Materials, Inc.	
HORIBA Scientific	Semicoore Equipment, Inc.	
Huettinger Electronic, Inc.	Seren IPS Inc.	
	Shimadzu Precision Instruments	
	Sidrabe, Inc.	
	Sierra Applied Sciences, Inc.	

The following companies were unable to exhibit at the 2010 TechCon in Orlando due to the volcanic eruption in Iceland on April 15, 2010.

Applied Multilayers Ltd.
Fraunhofer FEP
Genefinity S.r.l
Hartec Innovative Surface Technology
Impedans Ltd.
IPT GmbH
Kolzer
NAGY Instruments
PVT Plasma and Vacuum Technologies LLC
SYSTEC SVS Vacuum Coatings GmbH
Wieland Dental & Technik GmbH & Co. KG

SVC Exhibit Application and Contract

Please type or print clearly.

April 19-20, 2011 - Hyatt Regency Chicago on the River Walk, Chicago, IL

IMPORTANT: Even if you have taken advantage of the Advance Booth Reservation and/or prepaid for your booth, you MUST complete the Interactive On-line Exhibit Application Form at <http://tiny.cc/zvv4y> or submit the form below.

Submit Your Application Using the Interactive On-line Exhibit Reservation System with a live floor plan: <http://tiny.cc/zvv4y>

Exhibiting Company Name (Provide as upper and lower case) _____

Exhibit Contact Name _____

Exhibit Contact Mailing Information

Company Name _____

(Complete above & below, if different from Exhibiting company)

MS/Building/Street _____

City _____ State _____

Zip _____ Country _____

Phone _____ Fax _____

Cell or Alternate Phone _____

E-mail _____

Exhibit Company Mailing Information

Web Address _____

(Web address to be printed in the TechCon Exhibit Guide & Web Site)

MS/Building/Street _____

City _____ State _____

Zip _____ Country _____

Phone _____ Fax _____

Cell or Alternate Phone _____

E-mail _____

Complete Items 1-6 in full

1. **Booth Fee:** 10-foot wide booth space (10-foot deep) fee (\$1,750). Number of booths _____ x booth fee (\$1,750) \$ _____

2. **Advertise in the SVC TechCon Exhibit Guide.**

Deadline for advertising materials is February 15, 2011.

The TechCon Exhibit Guide, which includes the 50-word profiles will be mailed in March to an extensive mailing list to promote the TechCon and Exhibit.

<input type="checkbox"/> Covers Full page - circle one: IFC OIFC OBC	Black/White	4 Color	\$ _____
<input type="checkbox"/> Full page - circle one: IBC OIBC	not available	\$2,695	\$ _____
<input type="checkbox"/> Full page	not available	\$2,495	\$ _____
<input type="checkbox"/> Half page	\$1,945	\$2,250	\$ _____
<input type="checkbox"/> Quarter Page	\$1,415	\$1,850	\$ _____
	\$895	\$1,295	\$ _____

3. **Add-ons for the Interactive On-line Exhibit Reservation System and Live Floor Plan** (check boxes below)

EP-1 Banner Ad on the Exhibit Floor Plan page with URL Link of your choice (\$750) \$ _____

Banner will display from September 2010 through July 2011

EP-2 VISIT US NOW - Link and company Logo with URL Link of your choice (\$475) \$ _____

Will you provide a reciprocal link from your Web Site to the SVC Web Site? Yes No If yes, we will send an SVC logo and linking information

EP-3 Press Releases (Product Pages or Show Specials) on Exhibitor's Profile page (Up to 3 Press Releases for \$75) \$ _____

All TechCon Sponsors will receive unlimited Press Release postings as part of their Sponsorship Benefits

4. **Promotional Partner with SVC:** Are you willing to distribute electronically designed files created by SVC to your customer database? Yes No

5. **Will you be one of our Sponsors?** Yes No See opportunities listed on page 17.

If Yes, indicate your choice(s) below and enter the total at the right \$ _____

Bronze \$800 Silver \$1,400 Gold \$3,000 Tote Bags \$2,200 Badge Lanyards \$2,200 USB Flash Drive \$3,700

Hotel Reservation Web Splash Page \$675 On-line Registration Web Splash Page \$2,200 Logo Bottled Water \$2,200

Specialty Coffee Station \$2,000 Lake Cruise Networking Event \$1,200 Relaxation Station \$750

E-mail your company logo (high resolution vector file preferred; TIF, EPS or JPEG format) to svcinfo@svc.org Total Fee Enclosed \$ _____

Payment method: Check VISA MasterCard Discover American Express • Card # _____

Exp. Date _____ 3-digit Security Code _____ Signature _____ Zip Code _____

6. Companies you do NOT wish to be near: (see #4 under Assignment of Booths - page 18) _____

Exhibit Space Location

Booth choices are indicated below. (If purchasing two or three booth spaces, you must choose adjoining spaces—see Exhibit Hall layout)

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____

The undersigned hereby authorizes SVC to reserve exhibit space for use by this company during the 54th SVC Annual Technical Conference and Exhibit and acknowledges receipt of and agrees to abide by the SVC Exhibit Policy and Rules as stated on page 18.

Signature _____ Date _____

Send registration form and payment to: Society of Vacuum Coaters, 71 Pinon Hill Place NE, Albuquerque, NM 87122-1914 USA • Fax 505/856-6716 • E-mail svcinfo@svc.org



Sponsorship Opportunities at the 2011 TechCon in Chicago

Become a TechCon Sponsor! Choose from one of our Level Sponsorships or a special program sponsorship to raise company awareness, promote new products and services and enhance exhibit participation. Official sponsors are recognized during their sponsored event, and also with prominent on-site signage, on the SVC Web Site, in the SVC *Bulletin*, the Preliminary and Final Technical Programs, and TechCon Exhibit Guide.

Choose the Sponsorship That Fits Your Budget...

Gold Sponsor - \$3,000

- Acknowledgement on the SVC Web Site Sponsor page and Logo Link
- Complimentary VISIT US NOW Link and Company Logo (valued at \$475)
- Acknowledgement in the SVC Bulletin, the Preliminary and Final Technical Programs, and TechCon Exhibit Guide
- Acknowledgement on special signage in high traffic areas
- Sponsor of the Wireless Internet – Including the Cyber Café during the Exhibit Open Hours on Tuesday and Wednesday
- Exhibit Reception Sponsor: This Tuesday Afternoon event sponsorship includes special recognition on signage
- Unlimited Press Release Postings on the Exhibitor's Profile page

For an additional \$500 your company can sponsor the Lake Cruise Networking Event - (Includes two (2) complimentary tickets to the event. See Lake Cruise Networking Event for details)

Silver Sponsor - \$1,400

- Acknowledgement on the SVC Web Site
- Acknowledgement in the SVC Bulletin, the Preliminary and Final Technical Programs, and TechCon Exhibit Guide
- Acknowledgement on SVC TechCon signage
- Break Sponsor for all refreshment breaks
- Refreshments during the Beer Blast – Wednesday afternoon in the Exhibit Hall
- Technology Forum Breakfast Sponsor (Monday and Tuesday morning)
- Heureka! Session Refreshments Sponsor
- Unlimited Press Release Postings on the Exhibitor's Profile page

For an additional \$500 your company can sponsor the Lake Cruise Networking Event - (Includes two (2) complimentary tickets to the event. See Lake Cruise Networking Event for details)

Bronze Sponsor - \$800

- Acknowledgement on the SVC Web Site
- Acknowledgement in the SVC Bulletin, the Preliminary and Final Technical Programs, and TechCon Exhibit Guide
- Acknowledgement on SVC TechCon signage
- Unlimited Press Release Postings on the Exhibitor's Profile page

For an additional \$500 your company can sponsor the Lake Cruise Networking Event - (Includes two (2) complimentary tickets to the event. See Lake Cruise Networking Event for details)

Unless otherwise indicated, all TechCon Sponsors listed below receive the following Sponsor Benefits:

- Unlimited Press Release Postings on the Exhibitor's Profile page
- Acknowledgement on the SVC Web Site Sponsor page and Logo Link
- Acknowledgement in the SVC Bulletin, the Preliminary and Final Technical Programs, and TechCon Exhibit Guide
- Acknowledgement on special SVC TechCon Sponsor signage

Specialty Coffee Station – \$2,000

Sponsor a specialty coffee station during the Technical Sessions or in the Exhibit Hall. Includes coffee sleeves imprinted with your company logo.

Lake Cruise Networking Event – \$1,200

Sponsor the Wednesday Evening Networking Event featuring a buffet dinner and entertainment on a Luxury Cruise Ship. (Includes two (2) complimentary tickets to the event)

Relaxation Station – \$750

Sponsor a Massage Chair in the Exhibit Hall on Tuesday and Wednesday.

USB Flash Drive – \$3,700

(1 Sponsor) Sponsor the USB Flash Drives that contain the Final Program Abstracts and are given to all Full Conference Registrants.

Registration Tote Bags – \$2,200

(4 Sponsors) Tote bags with four (4) company logos on the front and the SVC logo on the reverse will be distributed to all attendees.

Badge Lanyards – \$2,200

(1 Sponsor) Badge lanyards containing your logo and the SVC logo will be distributed to all attendees.

Hotel Reservation Web Splash Page – \$675

(1 Sponsor) Put your company in front of every attendee who makes their hotel reservation using our On-line Registration system. (December 2010 – April 2011)

On-line Registration Web Splash Page – \$2,200

(1 Sponsor) Put your company in front of every attendee who registers for the TechCon using our On-line Registration system. (December 2010 – April 2011)

Logo Bottled Water – \$2,200

(1 Sponsor) Bottled water with your logo will be supplied at all breaks during the TechCon.

SVC EXHIBITOR RULES AND EXHIBIT POLICY

The Basics

1. The words "Exhibit Management" as used herein refers to the Society of Vacuum Coaters (SVC) and its management contractors. Exhibit space shall be assigned by Exhibit Management in the best interests of the Exhibit as a whole.
2. Exhibitors may not change the booth drape arrangement nor extend their exhibit past the booth side arms into the aisles. Exhibits may not exceed 12 feet in height, and portions above 3 feet in height may not extend more than 4 feet out from the back line of the booth space. Bridges will be allowed in certain locations where they will not obstruct the views of other exhibitors. Please notify SVC if your booth has a Bridge prior to booth assignment. (SVC will review each request prior to booth assignment.)
 - Any portion of the exhibit facing or bordering another exhibitor's booth must have the back portion finished and cannot display identification signs, logos or other materials that would detract from the neighboring exhibitor's booth.
 - Island booths must have adequate line of sight so that the surrounding area can be viewed through the booth and neighboring booths are not obstructed. Booth blocking (walls or drapes that may contribute to obstructed views of neighboring exhibitors) is prohibited.
 - Exhibits may be 12 feet high – depending upon location.
 - Exhibitors who violate these rules will be required to modify their booth on site.
3. The purpose of each exhibit is scientific and educational. Sales during the Exhibit are prohibited.
4. Exhibitors who cancel their booth space on or before December 28, 2010, forfeit 10% of the rental fee. There is no refund for cancellations after December 28, 2010. (If an exhibiting company sends a written request to SVC to cancel their booth registration after December 28, 2010, and if the SVC Exhibit sells out, the exhibiting company will receive a refund of 75% of its booth fee.)
5. An exhibiting company shall not assign, sublet, or apportion the whole or any part of the contracted booth space.
6. Exhibitors may not dismantle the booth before the Exhibit closes without incurring a penalty.
7. Every individual from an exhibiting company must register using the On-line Registration system that will open in mid December, 2010.
 - Personnel who wish to attend all the presentations in the technical sessions and functions that are part of the TechCon program, or who are presenters in the technical sessions, must register for the TechCon as a conference registrant or presenter respectively.
 - Individual exhibit booth persons must register using the same registration system, and may request a Final Program and complimentary daily Exhibitor Pass on-site to attend papers in the technical sessions. AVOID having to stand in line to obtain your Exhibitor badge at On-Site Registration by registering in advance! There is no charge to do this and saves you time and frustration – especially if we have long lines of Exhibit Visitors who also did not register in advance!
8. Only bona fide exhibit personnel are allowed in the Exhibit Hall during set-up.
9. 2011 SVC Exhibitors and Corporate Sponsors may request the mailing list of the TechCon registrants after the TechCon at no charge after they sign the SVC Exhibitor List Rental Agreement.
10. No alcohol may be served in booths by exhibiting companies. Hospitality hosted by individual exhibiting companies for attendees cannot be held in parallel with SVC programs without prior approval.

SVC Exhibit Point System

The SVC Point System provides exhibiting companies and Corporate Sponsors with a preference in selecting booth locations. Points are accrued based on the number of years each company has exhibited and/or been a Corporate Sponsor, and if exhibit personnel stay in the SVC Headquarters hotel. Points are accumulated as follows:

1. Companies receive one point for each booth rented for each year they have exhibited since 1989. Corporate Sponsors receive one point for each year that they have been a sponsor.
2. If Company A has 'x' points and is purchased by Company B, which has 'y' points, then Company B will have either 'x' or 'y' points, whichever is the greater amount. SVC must be notified in writing of the purchase prior to November 1 of the year before the TechCon.

3. Exhibiting companies who reserve sleeping rooms for all of their personnel in the Hyatt Regency on the River Walk, Chicago, prior to February 16, 2011 will receive THREE additional points towards future booth location preference. Exhibiting companies who have the majority of their personnel registered in the Hyatt Regency, but have not done so on or before February 16, 2011 will receive ONE additional point. There are great advantages to exhibitors who stay in this property from a networking perspective. In addition, your support for SVC's commitment to the hotel is very important to the success of the annual TechCon and Exhibit.

Assignment of Booths

1. Booth assignments will begin after **November 1, 2010** from contracts received with payment by that time. Each company will be asked to provide eight (8) choices for their booth location. Based on the points a company has accumulated, each company will be given their booth choice, as available.
2. Companies requesting Islands – four (4) contiguous booths – will be assigned FIRST. The point system will still apply to all companies within this group.
3. In the case of two companies having the same number of points, the earliest paid booth registration date will be given preference.
4. After November 1, 2010 booths will be assigned strictly according to the date that the paid registration is received (payment by credit card is acceptable). If a company's booth choices have already been assigned, the next best booth location will be given to the company.
5. Exhibiting companies that do NOT wish to be located near probable exhibitors, must provide a COMPLETE list with their Exhibit Application and Contract. If a later request is received, Exhibit Management will make every effort to accommodate the request, but this cannot be guaranteed.
6. Companies that are legally related entities can request to be located next to each other. The request must be made in writing. Exhibit Management will make every effort to accommodate the request.
7. Exhibit space shall be assigned by Exhibit Management in the best interests of the Exhibit as a whole. Exhibitors must agree to accept relocation if it becomes necessary or advisable in the sole judgment of Exhibit Management.
8. Exhibit Management reserves the right to change the published floor plan – i.e., "end" booths are not guaranteed. After final assignment, space location may not be changed.

Additional Rules

1. Exhibitor agrees to indemnify and hold harmless SVC, the hotel or other facility housing the Exhibit, and their respective agents, servants, and employees from any loss, damage, liability, costs, attorney's fees, or other of whatsoever nature arising from exhibitor's participation in the event, including but not limited to claims due to the injury, damage or loss to exhibitor's displays, equipment and other property brought upon the premises of the exhibit facility, except for claims solely resulting from the gross negligence of Exhibit Management and/or the hotel/exhibit facility. The exhibitor understands that neither SVC nor the hotel/exhibit facility maintains insurance covering the exhibitor's property, and it is the sole responsibility of the exhibitor to obtain such insurance.
2. Exhibitor agrees to obtain Commercial General Liability and Property insurance to be in effect during the dates of the event, including move-in and move-out days, and will furnish a certificate of insurance to SVC. Said limits of insurance will be in an amount not less than \$1 million per occurrence and \$2 million in the aggregate. Exhibitor's insurance will list SVC Exhibit Management and the Hyatt Regency on the River Walk, Chicago, as additional co-insureds for the period of the Exhibit, including move-in and move-out periods. Exhibitor agrees to waive the right of subrogation by their insurance carriers to recover loss sustained under the respective insurance contracts for real and personal property.
3. Exhibitor agrees to abide by all SVC's rules and regulations, including but not limited to, its Code of Ethics and to conduct itself and its business with fairness and honesty, loyalty to its associates, employees, clients, customers and employees, and fidelity to the needs of the public. SVC reserves the right to deny participation in its programs and activities to individuals and organizations that violate its rules or whose participation, in SVC's sole discretion, is deemed detrimental to the interests and purposes of SVC.



2011 SVC TechCon Education Program

April 16-21, 2011 • Hyatt Regency Chicago on the River Walk, Chicago, IL

Preliminary Course Roster

Saturday, April 16

Vacuum Systems, Materials and Operation (O'Hanlon) V-204
An Introduction to Physical Vapor Deposition (PVD) Processes (Shah) C-103
Practical Aspects of Optical Coatings (Morton) C-302
Thin Film Growth and Microstructure Evolution (Greene) C-311

Sunday, April 17

Sputter Deposition (Greene) - Day 1 of 2-Day Tutorial C-203 (Sunday and Monday)
Optical Coating Design and Monitoring (Willey) C-301
Plasma Modification of Polymer Materials and Plasma Web Treatment (Grace) C-314
High Power Impulse Magnetron Sputtering (Ehassarian & Anders) C-323
New! Introduction to Photovoltaic Materials and Photovoltaics (Martin) C-327

Monday, April 18

Sputter Deposition onto Flexible Substrates (McClure) C-211
Numerical Methods for Optical Coatings (Dobrowolski) C-303
Characterization of Thin Films (Christensen) C-322

Tuesday, April 19

Practical Aspects of Vacuum Technology: Operation and Maintenance of
Production Vacuum Systems (Langley) V-207
Introduction to Plasma Processing Technology (Baránková & Bárdos) C-210 (Half Day PM)
Reactive Sputter Deposition (Greene) C-315
Properties and Applications of Tribological Coatings (Matthews) C-328 (Half Day AM)

Wednesday, April 20

Sputter Deposition in Manufacturing (Glocker) C-208
Troubleshooting for Thin Film Deposition Processes (Ash) C-212
ITO and Other Transparent Conductive Coatings: Fundamentals, Deposition,
Properties, and Applications (Bright) C-304
New! Nanostructures: Strategies for Self-Organized Growth (Greene) C-318 (Half Day AM)
New! Industrial Ion Sources (Zhurin) C-329 (Half Day PM)

Thursday, April 21

Diamond Like Carbon Coatings – from Basics to Industrial Realization (Schuelke,
Van de Kolk, and Bewilogua) C-320 (Half Day AM)
Alternative Transparent Conductive Oxides (TCOs) to ITO (Bright) C-321 (Half Day AM)
Atmospheric Plasma Technologies (Baránková & Bárdos) C-324 (Half Day AM)
Manufacture of Precision Evaporative Coatings (Oliver) C-326 (Half Day AM)

Register for Tutorials at the 2011 TechCon in Chicago when you register for the conference.

On-line registration opens in mid-December 2010.

You do not have to register for the TechCon or be a member of SVC to attend the Tutorial Courses. Visit the SVC Web Site for Tutorial Course descriptions, topical outline, detailed syllabus and biographical sketch of each instructor.

Students: Take advantage of our discounted fees for full-time students. You must have a valid student identification to qualify for these special rates.

International Outreach Program

SVC Offers Tutorial Courses in Germany and China in 2010

As part of the SVC Strategic Plan that includes ongoing development and expansion of an International Outreach Program, the Society is offering Tutorial Courses in Germany and China.

SVC C-317

The Practice of Reactive Sputtering
Instructor: Allan Matthews, University of Sheffield, UK

This Tutorial Course will be offered on September 16, 2010 at PSE 2010 - Twelfth International Conference on Plasma Surface Engineering Conference and Exhibition September 13–17, 2010
Kongresshaus, Garmisch-Partenkirchen (Germany)

For more information, visit <http://www.svc.org/Education/PSE-2010-Germany-September-2010.cfm>



SVC V-204

Vacuum Systems, Materials and Operation

Instructor: John F. O'Hanlon, Professor Emeritus of Electrical and Computer Engineering, University of Arizona

This Tutorial Course will be offered on October 18 and 19, 2010 and hosted for international attendees by the Flex Company Limited, located in Beijing, China.

For more information on this Tutorial Course, visit <http://www.svc.org/Education/Beijing-China-October-2010.cfm>

TECHCON 2011 » EXHIBIT HALL LAYOUT

Submit Your Application Using the Interactive On-line Exhibit Reservation System with a live floor plan: <http://tiny.cc/zvv4y>

2011 SVC Exhibit

Hyatt Regency Chicago on the River Walk, Chicago, Illinois

Tuesday, April 19 • 12:00 p.m. to 6:00 p.m.

Wednesday, April 20 • 10:00 a.m. to 5:00 p.m.

Booth Set-up Hours

Monday, April 18 8:00 a.m. – 8:00 p.m.

Tuesday, April 19 7:00 a.m. – 11:00 a.m.

Booth Tear-Down Hours

Wednesday, April 20 5:00 p.m. to 8:00 p.m.

Thursday, April 21 7:00 a.m. to 11:00 a.m.

Important Notes:

- Booth Assignments will be made after November 1, 2010—from contracts received with payment on or before this date; contracts received after November 1 will be assigned in the order they were received
- Exhibit Hall has attractive new carpet for 2011
- Booth size is 10-foot wide and 10-foot deep



LOWER E. SOUTH WATER STREET