

The modern SVC era has been the most intense period of innovation, member engagement, event management, and technology focus in the SVC's sixty-nine year history. The SVC is completely focused on our stakeholders, developing an inclusive culture of listening, adopting, refining, and improving approaches that enhance the unique networking and problem solving culture that sets the SVC apart from all other professional organizations. In the spirit of this culture, we are proud to announce, "Colloquium at the TechCon"; a series of focused, technical conversations that address critical industrial needs. This meeting format was first introduced at the 2022 TechCon in Long Beach and based on the extremely positive feedback, we are bringing it back yet again in 2026!

Each topical workshop will be anchored by a technical presentation or series of presentations that will frame a follow-on roundtable discussion. Subject matter experts will be acting as moderators to facilitate discussions and promote interaction and networking between the attendees. As part tutorial, part problem solving, and part networking, the "Colloquium at the TechCon" represents the vanguard of the SVC's efforts to enhance and redefine the technical conference experience. These workshops will be open to all of our conference attendees and exhibitors.

The time and location of all **Colloquium @ TechCon** will be posted in the Final Program; stay tuned!



**Monday April 27, 2026** | Sponsored by the SVC's Large Area Coatings Technical Advisory Committee

## Giving New Life to Old Coaters: Modernization of Coaters for New Demands

**Moderator: Aneliia Wäckerlin** (Deputy Head R&D, Glas Trösch)

**Event Description:** Retrofitting existing coaters is an attractive approach to upgrade process capabilities to modern standards while avoiding the significant capital expenditure of replacing an entire coater platform. Retrofit projects, however, require careful planning and expertise in order to deliver the expected results.



Aneliia Wäckerlin

This interactive event offers a perfect opportunity to learn, discuss and hear perspectives on your specific question. We will start with three concise presentations where our panelists will share their individual perspectives on the following critical topics:

- End user experience on upgrading equipment and considerations for adapting a new coating process
- Running more complex products with higher throughput and uptime on aging coater equipment
- ROI of upgrading hardware based on uptime and throughput

We will then open the discussion to questions and perspectives from the audience. Bring your challenging questions with you, and we will do our best to find the answers together!

### Panelists:

— **Kyle Schuberg**  
Coating Process Engineering Manager  
Gentex Corporation



Kyle Schuberg

— **Wilmert De Bosscher**  
Chief Technology Officer  
Soleras Advanced Coatings BV



Wilmert De Bosscher

— **Ken Nauman**  
Director of Global Business Development  
Sputtering Components



Ken Nauman

## The Challenge of Transitioning to Sustainable Surface Engineering Practices

**Moderator: Jochen M. Schneider** (Professor of Materials Chemistry, RWTH Aachen University)

research focuses on the quantum-guided design of thin film materials, including sustainability-relevant aspects. He has held academic appointments in Germany, the UK, the USA, and Sweden, and has received numerous awards and fellowships. Throughout his career, he has served in several international advisory roles and supervised more than 40 Ph.D. students.



Jochen M. Schneider

**Event Description:** The Sustainable Surface Engineering Colloquium, held as part of TechCon 2026 of the Society of Vacuum Coaters (SVC), will serve as a dedicated forum for researchers, engineers, technologists, and industry leaders to examine and advance the state of the art in environmentally responsible surface technologies. This event aims to highlight not only emerging technical innovations but also the broader systems-level thinking required to make surface engineering processes more resource-efficient, resilient, and aligned with global sustainability goals.

The session will open with an impulse talk by Prof. Christoph Herrmann of Fraunhofer IST, Braunschweig, Germany, whose research focuses on life-cycle engineering and sustainable manufacturing. His presentation will provide a conceptual and analytical foundation for understanding how sustainability metrics, process modeling, and circular-economy principles can be applied within the field of vacuum coating and surface modification.

Following this keynote impulse, four concise pitch presentations will be delivered by distinguished panel members, each representing a different segment of the international surface engineering community:

- **André Anders** (Plasma Engineering LLC, USA)
- **Klaus Böbel** (Oerlikon, Liechtenstein)
- **Tetsuya Takahashi** (Kobelco, Japan)
- **Christoph Schiffrers** (CemeCon AG, Germany)

These short pitches will introduce diverse perspectives—from plasma process innovation and industrial coating solutions to equipment design and sustainable production strategies—thereby establishing a multidisciplinary springboard for further discussion.

The subsequent interactive dialogue between the audience and the panel, moderated by Jochen Schneider of RWTH Aachen University, will delve deeply into the opportunities and challenges associated with transitioning toward more sustainable surface engineering practices. Topics will include actionable pathways for reducing energy consumption, strengthening sustainability education across stakeholder groups, integrating circular-economy concepts, and improving the environmental footprint of coating technologies across their full life cycle. Through this collective exchange, the colloquium aims to underline the crucial role of continuous research, cross-sector collaboration, and forward-looking innovation in shaping a more sustainable future for the global surface engineering community.

### Panelists:

— **Christoph Herrmann** *Fraunhofer Institute for Surface Engineering and Thin Films (IST):*

is Director of the Fraunhofer Institute for Surface Engineering and Thin Films (IST) in Braunschweig and a full professor for Sustainable Production & Life Cycle Engineering at the Technische Universität Braunschweig. He leads work on sustainable manufacturing, life-cycle and surface technologies, integrating ecological, economic, and production-engineering perspectives.



Christoph Herrmann

— **André Anders** *Plasma Engineering LLC:*

investigates plasmas and has developed plasma-based coating processes for many years. He worked in Berlin (Germany), Berkeley (California), was an Institute Director and Professor of Applied Physics in Leipzig (Germany), and he is now again in California as the Founder/CEO of Plasma Engineering LLC. André was elected as one of the Directors of AVS for the 2026/27 period.



André Anders

Colloquium 2026

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— **Klaus Böbel** *Oerlikon:*

is an R&D Portfolio Manager at Oerlikon, where he drives innovation in surface, plasma, and coating technologies. Prior to joining Oerlikon, he spent more than two decades advancing plasma and PVD/DLC coating solutions in senior R&D roles at Bosch Manufacturing Solutions. His current work integrates sustainability considerations into technology development, contributing to Oerlikon's efforts toward more energy- and resource-efficient surface solutions.



Klaus Böbel

— **Tetsuya Takahashi** *Kobe Steel, Ltd. (KOBELCO):*

is a senior engineer at Kobe Steel, Ltd. (KOBELCO), Japan, specializing in plasma-based coating technologies and advanced materials. He earned his doctorate in engineering from RWTH Aachen University in Germany. While his main expertise is in hard coatings, he is currently exploring novel applications of vacuum deposition technologies as part of new business creation initiatives.



Tetsuya Takahashi

— **Christoph Schiffers** *CemeCon AG:*

has been with CemeCon AG, the pioneer of HiPIMS coatings for cutting tools, for more than 15 years. HiPIMS has become the new standard in the cutting tool world because of the dense coating structure, the super smooth surface, and the enormous flexibility. The tremendous HiPIMS success story in the cutting tools industry suggests that HiPIMS will replace traditional techniques for high value products within a few years. Christoph holds a Dr.-Ing. in mechanical engineering from RWTH Aachen University.



Christoph Schiffers



# Colloquium 2.4

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## The Innovation Spiral of HIPIMS Towards Industrialization

**Moderator: Ton Hurkmans** (Chief Technology Officer (CTO), IHI Ionbond Group)

**Event Description:** High Power Impulse Magnetron Sputtering (HIPIMS) has emerged as a transformative technology in the field of thin film deposition, driving a dynamic industrial innovation spiral starting from advanced manufacturing tools and expanding into architectural glass, semiconductor and spreading into antimicrobial and sensor applications as more companies and research groups engage with the technology each year. The industrialization of HIPIMS is characterized by iterative advancements in plasma physics, power supply engineering, process control, and design of thin film and coating materials which enabled the realization of dense, adherent coatings with tailored properties, surpassing the limitations of conventional sputtering techniques.



Ton Hurkmans

A panel of experts with long track record in plasma science, industrial production and applied research will engage with the audience in an active discourse on current topics ranging from latest academic advances in plasma, process and materials science, and deployment in process development to latest industrial trends and hot topics. We are currently filling the panel seats with renowned experts from academia, applied research, and industry.

### Panelists:

- **Ralf Bandorf**  
Head of Group, Optical and Electrical Systems  
*Fraunhofer IST*
- **Arutiun Ehasarian**  
Head of National HIPIMS Technology Center  
*Sheffield Hallam University*
- **Uwe Heydenreich**  
Key Account Manager  
*TRUMPF Hüttinger GmbH + Co.*
- **Daniel Loch**  
Application Engineer  
*TRUMPF Hüttinger GmbH + Co.*
- **Dermot P. Monaghan**  
Managing Director  
*Genco Ltd*
- **Tetsuhide Shimizu**  
Associate Professor  
*Tokyo Metropolitan University*



Ralf Bandorf



Uwe Heydenreich



Dermot P. Monaghan



Arutiun Ehasarian



Daniel Loch



Tetsuhide Shimizu



## A Manufacturer's Guide to Coatings for High Power Lasers

**Moderators:** **Jay Anzellotti** (IDEX, Inc.); **Colin Harthcock** (Lawrence Livermore National Laboratory (LLNL)); **David Sanchez** (Materion Electronic Material)

**Event Description:** Markets for high LIDT (Laser-Induced Damage Threshold) coatings are expanding rapidly, driven by critical applications in medical lasers, industrial lasers, laser fusion R&D, semiconductor fabrication and metrology, and high-energy defense systems. As these technologies scale, coatings inevitably face damage and require replacement, creating an urgent need for manufacturers to develop methods that extend coating lifetime while managing costs.

Key factory processes will be at the center of our dialogue, including substrate cleaning, cleanroom design and protocol, chamber design and maintenance, deposition dynamics, and post-coating handling and packaging. Each of these steps plays a vital role in achieving coatings that withstand high-energy environments and deliver consistent performance over time.

We invite you to join us and share your challenges in meeting technical specifications and scaling production. This colloquium will bring together experts, innovators, and manufacturers to discuss these challenges in an open forum. The event will consist of several short presentations by a team of experts, followed by a facilitated round-table discussion.

### Moderators:

- **Jay Anzellotti** spent his early career as a hands-on engineer depositing optical coatings for high power lasers. He then held coating development roles in various areas including industrial lighting, optical communications, fluorescence instrumentation, and semiconductor inspection tools. Jay is currently the Director of Filter Design and Coating Engineering in the Optical Filters business at IDEX, Inc. Jay has a BS from the University of Rochester.
- **Colin Harthcock** is currently a group lead at Lawrence Livermore National Laboratory (LLNL). He previously served as a staff scientist and before that a postdoctoral fellow. Colin's work has focused on understanding defect causes in coatings and optical materials for the NIF program, which is pushing the boundaries of laser power to achieve nuclear fusion. Colin has a PhD in chemical physics at Oregon State University.
- **David Sanchez** has been Chemical Engineer and Materials Scientist for 29 years. He was motivated by firsthand use of advanced thin film optics and technologies in the US Marine Corps. He completed his dual BS degree in California and went to work at OCLI/Flex in 1996 as a Process Engineer. He was classically trained in thin film technology from the best in the emerging field. David has leveraged his experience and built a wide range of skills as a materials and applications scientist and engineer. For more than 28 years he has led many efforts to develop key materials and now supports the complete line of specialty inorganic materials, precious metals, and rare metals for Materion Electronic Material's PVD, energy and semiconductor customers.



Jay Anzellotti



Colin Harthcock



David Sanchez

# Colloquium 2.4

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## Decorative PVD Coatings - Trends and Challenges

**Moderator: Dr.-Ing. Martin Engels** (Global Process Engineer Deco & Sports, IHI Ionbond Group)

**Event Description:** Decorative Physical Vapor Deposition (PVD) coatings have been a growing market for decades and the number of applications, as well as the request for new colors, are still growing. The markets which are being addressed range from sanitary parts to automotive interior/exterior or luxury articles like watches or golf clubs, and of course numerous other articles which can be coated.



Martin Engels

The application of a decorative PVD coating not only gives parts a special appearance but also improves the wear resistance and therefore durability significantly. In the past, interest and availability were mainly focused on grey scale colors ranging from light silver to deep black or bright colors in the range of light gold to copper or brass. Nowadays, additional to the classic features of decorative PVD coatings, the interest of customers is expanding to more special colors like blue, green, dark brown, etc. Other than that, there is a significantly rising demand for additional properties like corrosion protection as well as easy-to-clean or anti-fingerprint behavior. However, new colors and coating properties are also arising with new challenges for the production of a decorative PVD coating. These might range from the need for novel process technology like HiPIMS to additional process steps.

In order to give the TechCon participants a deeper insight into the unique world of decorative coatings and their trends and challenges as well as ideas to address them, we have gathered a team of experts, who will cover a range from coating machine manufacturers, process simulation, and job coaters. Our panelists will start with a brief introduction of themselves and their companies. This will be followed by insights on the history of decorative PVD, the present state of the art and their vision about the future of decorative coatings. The audience is highly welcome to interactively discuss questions and to share experiences with our panelists and will have the unique opportunity to connect with the experts for further cooperations and knowledge exchange.

### Panelists:

— **M.Sc. Bryce Anton** (Director of Technology) *Vapor Technologies, Inc.*  
26 years of experience in PVD thin film development, primarily in decorative coatings for various consumer product industries (home products, automotive, sporting goods, etc.). Currently holds 11 patents in this field.

— **Dr. Ton Hurkmans** (Chief Technology Officer - CTO) *IHI Ionbond Group*  
Key person in the use of PVD coatings for decorative applications since mid-90's. From pioneering to first applications and the full integration of new PVD production lines at in-house coating facilities. Currently responsible for all coating innovations across all business segments.

— **Brian T. Nevill** (President & Owner) *West Coast PVD, Inc.*  
40 years experience in the vacuum coating industry including IVD and PVD technology for decorative & functional applications. Owner and operator of PVD coating centers for 25 years.

— **Adam Obrusnik, PhD** (CEO, head of consulting, co-founder) *PlasmaSolve s.r.o.*  
More than 10 years of experience in plasma-based processes, especially PVD, as well as plasma simulation and diagnostics. Worked as independent consultant before co-founding PlasmaSolve company, which amongst others focusses on simulation of decorative PVD processes.

— **M.Sc. Chinmay Trivedi** (Process Technology Manager) *IHI Hauzer Techno Coating B.V.*  
Over a decade of experience in decorative applications with a strong understanding of the essential steps for successful technology integration, including conventional sputtering, Arc, PACV and HiPIMS processes.



Bryce Anton



Ton Hurkmans



Brian T. Nevill



Adam Obrusnik



Chinmay Trivedi

# Colloquium 24

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## Rigidly Flexible - Exploring the Middle Ground in R2R Substrate Applications

**Moderator: Liz Josephson** (VP of Commercial Operations, INTELLIVATION LLC)



Liz Josephson

**Event Description:** Roll-to-Roll (R2R) coating promises “economy of scale” for a myriad of high-volume applications, whether it is barrier layers for food packaging or flexible electronics. In many cases, the end use does not actually require “flexibility” – think of displays – nor a start-to-finish roll-to-roll process – think of sheet-based chip attached for hybrid electronics – to still make R2R a convincing manufacturing approach. However, experience and detailed knowledge is required to avoid costly failures and reap the full benefits of this powerful yet sometimes “mysterious” manufacturing methodology.

This Colloquium will examine the opportunities and challenges of R2R manufacturing processes, and will touch on substrate considerations, coating material options (vacuum- or wet-coating), issues like multi-pass, lamination and singulation operations and other critical topics that are crucial to successful production.

The interactive nature of this moderated panel discussion welcomes questions from the audience that may be addressed by a panel of subject matter experts, or in discussion with other practitioners in the audience.

We invite you to bring your questions, challenges or success stories that help take the “mystery” out of this powerful high-volume manufacturing methodology!

### Panelists:

- **Andy Jack**  
Sales Director  
Emerson & Renwick Ltd
- **Joe Papalia**  
President  
DTI Films
- **Mike Simmons**  
President & CEO  
INTELLIVATION LLC
- **Chris Stoessel**  
Innovation Consultant and Partner  
StoesselConsulting/SputterTek LLC



Andy Jack



Joe Papalia



Mike Simmons



Chris Stoessel



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