Monday (May 19, 2025)

Technical Forum Breakfasts

TFB: Manufacturing in Space
Nick Fraiser (Kurt J. Lesker Company) / Bart Lacin (Andwise Space Co.)
Chestwood A

TFB: Protective, Reflective, and Decorative Coatings
Martin Engelke (Heraeus) / Anna Shulman (Andwise)
Chestwood B

TFB: Transparent Conductive Materials (TCM)
Clark Bright (Bright Thin Film Solutions, LLC) / Patricia Morse (Arizona Thin Film Research LLC)
Chestwood C

TFB: Atmospheric Plasma Technology
Hana Barankova (Uppsala University) / Ladislav Bardos (Uppsala University)
Chestwood D

TFB: Post-Processing of Vacuum-Coated Roll-to-Roll Products
Andy Jach (Enhanced Vacuum) / Ken Bennett (DonnerCrosslinking)
Chestwood E

TFB: Surface Engineering for the Hydrogen Economy
Ralf Bandorf (Fraunhofer IST) / Herbert Gatzen(PVT Plasma and Vacuum Technik GmbH)
Chestwood F

TFB: Supply chains, manufacturing processes and availability for materials enabling PVD processes
David Sanchez (Melectech) / Christos Pernagelis (Pavotec)
Belmont A

TFB: Durability Evaluation of Thin Film Coatings: Testing Methods and Practical Implications
Brent Boyce (Guardian) / Anette Wilcherth (Elite Tribch)
Belmont B

10 minute passing break

Compact Business Meeting (30 minutes)
Tennessee C

10 minute passing break

Director of Program Welcome and Conference Introduction

Keynote
Paul H. Mayrhofer - TU Wien
Materials Science-Based Guidelines to Develop Robust Hard Coatings
(Tennessee C)

20 minute refreshment break

Optical Coatings (OTime)
Optical Coatings and Photonics for Quantum Computing Hardware
(Ulrike Schulz - Fraunhofer IOF)

Optical Coatings (OT)
Titanium Dioxide Thin Films from a Low-Frequency Dual Magnetron Sputtering Process
(Philipp Dornhofer - Advanced Energy Industries)

Optical Coatings (OT)
Comparison of ECD Thin Film Coating Deposition Equipment Capabilities
(Rajiv Pathre - Vitro Chemicals)

Optical Coatings (OT)
Clark Bright + 5 min Ron Willey Tribute

Optical Coatings (OT)
Practical Designs for the Next Generation of Eyeglass Coatings
(Ronald Willey - Willey Optical Consultants)

Optical Coatings (OT)
Calibrating Reflectance Measurements
(Ronald Willey - Willey Optical Consultants)

Optical Coatings (OT)
An Alternative to Bayer Coatings
(Ronald Willey - Willey Optical Consultants)

Protective, Tribological and Decorative Coatings (TT)
The Importance of Precise Substrate Strength and Bending of DLC Films Deposited on Chalcogenide Glasses - SPONSORED STUDENT PRESENTATION
(Rodger Gordon - Clemson University)

Protective, Tribological and Decorative Coatings (TT)
High Durability Coated Grills for Consumer Outdoor Electric Cooking Appliances
(Angelo Bertone - Proteo Surface Technology)

Protective, Tribological and Decorative Coatings (TTime)
CVD-Diamond Coatings for High Performing Tools and Components
(Christian Stein - Fraunhofer IST)

Protective, Tribological and Decorative Coatings (TT)
Thermal Coatings for CMP Polishing Pads: Advancing Tech for Industry
(Jeffrey Barbee - Canadian Ink)

Protective, Tribological and Decorative Coatings (TT)
Precision Cleaning for the Coating Industry
(Mercedes PVD Coatings - Market Trends
(Martin Engelke - Sentech Rethermatik R.T.)

Protective, Tribological and Decorative Coatings (TT)
Surface Engineering of Cast Iron for Stamping Dies: a Plasma Surface Alloying and Nitriding Approach with Computational Insights
(Todd Pagano - Technal University of Santa Catarina (UFSC))

Protective, Tribological and Decorative Coatings (TT)
Study of Aluminum-Silicon Carbide (Al/SiC) PVD Coatings
(Zhenghao Meng - Tianjin Vacuteq)

Digital Information (DT)
Simulation of Plasma Processes Using the PALAORA Code
(Ralf Peter Brinkmann - Ruhr-Universität Bochum)

Digital Information (DT)
Open-Source Simulation Software for Thin Film Processes with PICsim: Step-by-Step Verification and Application Examples
(Paul Moseleine - Ballistim - numerical plasma dynamics GmbH)

Digital Information (DT)
AI-Powered Analysis: Predicting Process Success with Deep Learning
(Elias Bayle - Vacuum Lab)

Digital Information (DT)
Practical Use Cases for Digital Twin Models: Automated Recipe Design, Troubleshooting Prediction Challenges
(Fabien Ghesquiere - Thermodyne S.a.r.l)

Digital Information (DTime)
Physics-Informed Deep Learning for Process Monitoring Technologies
(Satoshi Hamaguchi - Osaka University)

Digital Information (DT)
Coping with Limited Data Amounts When Applying Artificial Intelligence in Industrial Process Control
(Thomas Schickes - PLASSIS GmbH)

Digital Information (DT)
Geometry-Dependent Thin Film Growth Modeling and Sputtering with Rotary Cathodes: A COMSOL Multiphysics Modeling Study
(Patricia Morse - Arizona Thin Film Research)

Electron Beam Processes (EBProc)
Innovative Approach to Low Temperature Deposition of Functional Coatings, Using Electron Beam Evaporation Technology
(Andreas Neuwirth - Kurosaki University of Technology)

Electron Beam Processes (EB)
Novel Thermal Barrier Coating Microstructures Produced via Electron Beam Physical Vapor Deposition
(Andre Shneidman - Coatings Consulting)

Electron Beam Processes (EB)
Rare Earth Zirconates for Thermal Barrier Coatings: Improving Manufacturability and Jointing Performance
(Lilia Sidelnikova - Fraunhofer IWS)

Electron Beam Processes (EB)
Shaping the Future: Advanced Manufacturing Technology for a Dense Range of Applications
(Stefan Gnaiger - Fraunhofer IWS)

Electron Beam Processes (EB)
Electron Beam Technology: Thin Film Coatings, High-Speed Fine Texturing, Additive Manufacturing and Material Processing
(Christopher Stalnaker - Pivotal Vacuum Technologies)

Electron Beam Processes (EB)
Supporting the Electrochemical Energy Production, Industry and Transport Sectors with Electron Beam Physical Vapor Deposition
(Chris Forsythe - Cambridge Vacuum Engineering)

10 minute passing break

Don Mattox Tutorial
Kenneth Sande - Redwire
Crystals Generated in a Microgravity Environment
(Tennessee C)

10 minute passing break

Optical Coatings (OTime)
Effect of Copper Doping on the Optical and Electrical Properties of Aluminum Chlorophthalocyanine (AlCPc): Thin Films for Photovoltaic Applications
(Bassel Abdel Samad - Université de Mansoura)

Optical Coatings (OT)
Influence of Different Substrates on Optical Performance of Coatings
(Benjamin Kaiser - Sentech)

Optical Coatings (OT)
Precision Sputtering System OPTA X
(Maintenance Schlenkerla - VON ARDENNE GmbH)

Thin Film Sensors (SEnse)
Development of Highly Sensitive Thin Film Lightweight Infrared Avalanche Photodetectors
(Zenghui Lee - University of Texas At Arlington)

Protective, Tribological and Decorative Coatings
Colloquium
"A large success factor of vacuum coating: the right cleaning!"

Coatings for Energy Conversion and Related Processes (EN)
Broad Beam Plasma Source Enhanced Thin Film Growth at Low Temperatures
(Q Fan - Michigan State University)

Coatings for Energy Conversion and Related Processes (EN)
Thin Film Thermoelectric Generator Based on Transparent Solar Cell
(Jeeseong Hwa - Korea Institute of Materials Science (KIMS))

Coatings for Energy Conversion and Related Processes (EN)
Effect of Different Composition Ratio of Quaternary Alloy Targets Prepared by DC Magnetron Sputtering for CIGS Solar Cells
(Cheng-Kuei Chu - National University of Tainan)

Coatings for Energy Conversion and Related Processes (EN)
One-Step Solid-State Synthesis of Ternary Cu-Sn-Se Thermoelectric Alloys
(Rachid Zaibak - University Mohammed VI Polytechnic)

WebTech Roll-to-Roll Technologies and Innovation (WTechnologies)
Market Insights into Roll-to-Roll Vacuum Coating in Roll-to-Roll Production of Flexible Devices
(Heike Lalk - BCC Research)

WebTech Roll-to-Roll Technologies and Innovation (WT)
Roll-to-Roll Vacuum Deposition of Transparent Conductive Oxide Films on Flexible Substrates Using Low Cost Ion-Assisted Electron Beam Evaporation Approach
(Michael Mirachev - Bühler Alzenau GmbH)

WebTech Roll-to-Roll Technologies and Innovation (WT)
Deposition of Magnetic Materials in Thin Films in an R2R Vacuum Coater
(Robert Mahey - InnoRouter LLC)

20 minute refreshment break

Protective, Tribological and Decorative Coatings (TTime)
PVD Coatings for Cutting Tools: Trends and Views
(Christoph Schiffman - CemeCon AG)

Protective, Tribological and Decorative Coatings (TT)
Mega Leap for Commercially Viable PVD-Functional Coatings for Anti-Corrosion and Industrial Components
(Chinmay Trivedi - Sil Impact Techno Coating Ab)

Protective, Tribological and Decorative Coatings (TT)
Influence of Substrate Roughness on Tribological Performance of Cr/CrN Coatings Deposited on Carbon Steel Substrates
(Mohamed Lahna - Université of Technologie Compiègne)

Coatings for Energy Conversion and Related Processes (EN)
Construction of a Linear PVD Evaporator for the Deposition of CdS/CuInS2 Electron Contact Layers in a SACI-Hybrid System
(Gunter Lindemann - Leybold GmbH)

Coatings for Energy Conversion and Related Processes (EN)
Construction of a Linear PVD Evaporator for the Deposition of CdS/CuInS2 Electron Contact Layers in a SACI-Hybrid System
(Gunter Lindemann - Leybold GmbH)

Coatings for Energy Conversion and Related Processes (EN)
Design of Vacuum Evaporation Coating Process for Composite Copper Carbon Nanotube Thin Film Heat Spreaders
(Kai Liu - Northeastern University, Shenyang, China)

2hr Dinner Break
5:50 - 8 PM

Casino Night Fundraiser
8:00 - 10:00 PM
(Magnolia Ballroom)

Tuesday (May 20, 2025)

Technical Forum Breakfasts

TFB: Industrial Challenges: Uptime, Yield, & Consistency
Nick Fraiser (Kurt J. Lesker Company) / Jenny Hedgecock
Chestwood A

TFB: Leak Detection - Issues and Practices
Mike Ritenour (Leybold USA) / Ken Pierce-Inficon (Bills Bakwell)
Chestwood B

TFB: Coatings and Surface Engineering for Medical Applications
Jeff Nettinger (Rowan University) / Matthew Taylor (Lawrence Livermore National Laboratory)
Chestwood C

TFB: Magnetron Sputtering
Wilmont De Bouscher (Solmex Advanced Coatings) / Patrick Morse (Arizona Thin Film Research LLC)
Chestwood D

TFB: Energy Conversion and Storage
Volker Bellinger (Fraunhofer IST) / Christian Stein (Fraunhofer IST)
Chestwood E

TFB: Electron Beam Processes
Mark Pellerano (Pellerano Technology, Inc.) / Stefan Seager (Fraunhofer IEDP)
Chestwood F

TFB: Process Monitoring, & Control
Mariyana Aydonova (Nova Venture, LLC) / Ken Hazen (Lyn Ottaway Institute of Materials Science)
Chestwood G

TFB: High Power Impulse Magnetron Sputtering (HiPIMS)
Arnulf F. Ehlauser (Sheffield Hallam University) / Ralf Bandorf (Fraunhofer IST)
Belmont A

TFB: Tribological and Diamond-Like Coatings
George Lanza (IHI Ionbond) / Ralf Bandorf (Fraunhofer IST)
Belmont B

10 minute passing break

Awards Ceremony (Tennessee C)
8:45-9:20 AM

10 minute passing break

Protective, Tribological and Decorative Coatings (TT)
Process Monitoring and Control of Tribological Properties of Coatings
(Pedro Avila - Polytechnique Montreal)

Protective, Tribological and Decorative Coatings (TT)
Mechanical Properties and Tribological Behavior of Cr-Based Coatings and Nanolayers for CRAS Collectors - SPONSORED STUDENT PRESENTATION
(Mathieu Bruneau - Polytechnique Montréal)

Protective, Tribological and Decorative Coatings (TT)
Influence of Multi-Functional Antifouling and Hard Layers on the Analysis and Properties of In-Situ Wear Tests Performed in Seawater Using Pin-on-Disc Tribometer - SPONSORED STUDENT PRESENTATION
(Lukas Chow - Monash University)

Emerging and Translated Tech and Applications (ETTime)
Civil Lunar Excavating: A Novel Approach to Surface Engineering Challenges
(Joerg Kindhardt - Fraunhofer IOF)

Emerging and Translated Tech and Applications (ET)
AI and HiPIMS Technologies for Advanced PLD Manufacturing: A Focus on High-Quality Thin Film Coatings for Optics
(Ville Siro - TRUMPF Huttinger Sweden Cross Ab)

Emerging and Translated Tech and Applications (ET)
Selective Atomic Scale Processes
Area Selective Deposition and Selective Etch for Nanoelectronics
(Antony Nort - Sentech Limited)

Emerging and Translated Tech and Applications (ET)
Sustainability: What Can We Do?
(Sara Mahdavi - Nova Venture, LLC)

Emerging and Translated Tech and Applications (ET)
Amorphous Carbon Interlayers: Surface Engineering toward Oxide Next Generation Electronics
(Nina Kaiser - Fraunhofer CNT)

Emerging and Translated Tech and Applications (ET)
Leveraging "Internet Innovation" to Spur Diversity the Innovation Pipeline in Functional Coatings and Surface Engineering
(Chris Stalnaker - Pivotal Consulting)

Emerging and Translated Tech and Applications (ET)
Multi-Scale Simulations for Advanced Thin Film Barrier Coatings for OLED and PV Applications
(Gregory Taylor - Lawrence Livermore National Laboratory)

Process Monitoring, Control, and Automation (PC)
Research on Autonomous In-Situ Calibration Method for Wide-Range Vacuum Gauges
(Kai Qu - Northeastern University)

Process Monitoring, Control, and Automation (PC)
PlasmaSolve™ - Advanced Plasma Simulation Software for Process Mining and Digital Twins in Thin Film Production
(Ruben Obrando - Plasmasolve s.r.o.)

Process Monitoring, Control, and Automation (PC)
AI and In-situ Diagnostics Enabled Autonomous PLD System for Fast Thin Film Material Fabrication
(Sumner North - Oak Ridge National Laboratory)

Process Monitoring, Control, and Automation (PC)
Cutting-Edge Plasma Monitoring Techniques for Process Development, Production Control, and Fault Detection
(Thomas Schickes - PLASSIS GmbH)

Process Monitoring, Control, and Automation (PC)
DMF Technical Primer: Process Control Strategies and Cycle Management of Precision Metal Sputtering Targets
(Ed Wagner - DMF Technical Products)

Process Monitoring, Control, and Automation (PC)
IEDF Solutions for Process and Product Development
(Wolfgang Dasbach - Surfx - Leybar Company)

Process Monitoring, Control, and Automation (PC)
Contract R&D and Production Services with a Vertical Inline Coater
(Frank Papa - GP Plastics)

Process Monitoring, Control, and Automation (PC)
Non-Precious Metal Catalyst Development for Electrochemically Deposited Thin Films by Daily Current Sensor Metrology
(Marcus Klein - SURFACEO GmbH)

Process Monitoring, Control, and Automation (PC)
Pyrometry Solutions for Vacuum Chamber Temperature Monitoring
(Tim Dudde - Industrial Energy Industries)

Process Monitoring, Control, and Automation (PC)
Deposition Control Systems for the Ion Beam Process
(Don Hoen Lee - Korea Institute of Materials Science (KIMS))

Process Monitoring, Control, and Automation (PC)
Transforming Scale-Up Coating Processes for Complex Parts with Remote Plasma Optical Emission Spectroscopy
(Marcus Lee - Gencoa Ltd)

Exhibitor Innovator Showcase (EIS)
Solvent Cleaning in High Tech Coating Processes
(Ralf Thiede - HERAEUS)

Exhibitor Innovator Showcase (EIS)
Cycle Management of Precision Metal Sputtering Targets
(Ed Wagner - DMF Technical Products)

Exhibitor Innovator Showcase (EIS)
Cycle Management of Precision Metal Sputtering Targets
(Ed Wagner - DMF Technical Products)

Exhibitor Innovator Showcase (EIS)
Contract R&D and Production Services with a Vertical Inline Coater
(Frank Papa - GP Plastics)

Exhibitor Innovator Showcase (EIS)
(Ben Johnson - MSI materials)

Two Dimensional Materials and Heterostructures (2D)
Accelerated Thin Film Optimization via Laser Oxidation and Crystallization
(Chris Muratore - University of Dayton)

Two-Dimensional Materials and Heterostructures (2DHm)
2D Materials Synthesis and Characterization
(Deep Jariwala - University of Pennsylvania)

10 AM Exhibitor B2B Coffee Hour

11 AM Exhibit Hall Opens

(Ryman Hall B1-B3)

POSTERS (PS): Evaluation of the Microhole Profile Drilling Process and Characteristics on the Basis of the Electron Beam Radiation (Nyung Wook Park - Ulsan National Institute of Science and Technology)

POSTERS (PS): Thin, Free-Standing Metal Films for Accelerator-Based Physics Experiments (John Greene - Argonne National Laboratory)

POSTERS (PS): Enhancing Ultraviolet Layer Quality: Copper-Doped Silver via Thermal Evaporation PVD (Kenneth Jeanfers - 3M Svenska AB)

POSTERS (PS): Sinusoidal and Bipolar Pulsed Power Delivery for Dual Magnetron Sputtering Processes (Zeynel Kiser - Advanced Energy Industries)

POSTERS (PS): The Fabrication of Co-Added Cu Thin Films Using a Magnetron Cosputtering Process Having an Enhanced Conductivity and Electromigration Reliability for Interconnect Metallization (Shin-Shun Chen - Feng Chia University)

POSTERS (PS): Anodic Arc Evaporation of Graphite for Deposition of sp C Diamond-Like Films (Bert Scheffel - Fraunhofer FEP)

POSTERS (PT): IT-Guided Design and Epaltering Deposition of BiCSE Thin Films: Optimizing Photocatalytic Activity for Solar Water Splitting (Mohammed Makha - University Mohammed VI Polytechnic)

POSTERS (PB): Optical Properties of Reactively Sputtered Antimony Doped Tin Oxide Thin Films (Khalid Chaplay - Manchester Metropolitan University)

POSTERS (PB)

POSTERS (PSB)

Exhibit Hall Closes: 6:00 PM

Welcome Reception
5:00-6:00 PM
(Exhibit Hall, Ryman Hall B1-B3)

Wednesday (May 21, 2025)

TAC Breakfast Meetings

(1) Digital Transformation through Artificial Intelligence, Machine Learning, Simulation, and Data Science in the Thin Film Industry, and (2) Process Monitoring, Control, and Automation
Chestwood A

Atomic Layer Processing (ALP)
Chestwood B

(1) High Power Impulse Magnetron Sputtering, and (2) Thin Film Contributions for the Hydrogen Economy
Chestwood C

(1) Coatings and Processes for Biomedical Applications, and (2) Organic and Perovskite Electronics
Chestwood D

Optical Coatings
Chestwood E

Coatings for Energy Conversion and Related Processes
Chestwood F

Protective, Tribological and Decorative Coatings
Chestwood G

Large Area Coatings
Chestwood H

(1) Quantum Computing, and (2) Organic and Perovskite Electronics
Belmont A

Plasma Processing and Diagnostics
Belmont B

(1) Thin Film Sensors, (2) Emerging and Translational Technologies and Applications, and (3) WebTech Roll-to-Roll Technologies and Innovation
Belle Meade C/D

(1) Electron Beam Processes, (2) Two-Dimensional (2D) Materials and Heterostructures - Applications, Large Scale Growth and Advanced Characterization, and (3) Selective Atomic Scale Processes
Magnolia Boardroom B

10 minute passing break

Keynote
André Anders - Leibniz Institute of Surface Engineering (IOM)
Equilibrium versus Non-Équilibrium Heating to Control the Microstructure of Coatings and Thin Films
(Tennessee C)

10 minute passing break

Organic and Perovskite Electronics (OElec)
Vacuum Coating of Metal-Halide Perovskite Thin Films for Photovoltaic Applications: Challenges and Opportunities
(Xiaoming Kang - University of Toronto)

Organic and Perovskite Electronics (OE)
Thermally Evaporated Metal-Halide Perovskite Semiconductors for Triple-Junction Photovoltaics
(Jay Patel - King's College London)

Thin Film Contributions for the Hydrogen Economy (HT)
Catalysts on Ceo2 Nanocrystals Synthesized by Reactive Magnetron Sputtering and Ion Cosputtering
(Ilya Pasti - Kingy's College London)

Process Monitoring, Control, and Automation (PCAna)
Critical Subsystem Suppliers Leading Technologies for the Next Generation of Advanced Vacuum Pumping Equipment
(John Bear - Tom Kemp)

Process Monitoring, Control, and Automation (PC)
Intelligr™ GEI: Advancing Tools 24-FOM to SPC65 NGA, CIEL, Flexna Diagnostics, Inficon, Pfeiffer Vacuum, Thermocouples
(Hemiyan Aydonova - Nova Fabrika Ltd.)

Exhibitor Innovator Showcase (EIS)
Vacuum Process Monitoring, Control and Automation Using Remote Plasma Optical Emission Spectroscopy
(Erik Cox - Gencoa Ltd)

Exhibitor Innovator Showcase (EIS)
DEMINO: Efficient Solutions for Thin Film Equipment
(Bruce Zelenski - INFICON)

Exhibitor Innovator Showcase (EIS)
INFICON Zenitron™ INFCOD: Precision Control for Maximum Repeatability and Process Stability
(Stephen Mitchell - INFICON)

20 minute refreshment break

Organic and Perovskite Electronics (OE)
Organic Photovoltaics - What's Next?
(Martin Drake - University of Surrey)

Organic and Perovskite Electronics (OE)
Low Cost, Flexible and Fully R2R Processed Perovskite Solar Modules
(Trevor McArdle - Power Roll Ltd)

Organic and Perovskite Electronics (OElec)
Engineering Organic and Metal Halide Perovskite Thin Films and Devices Via Vacuum Deposition
(Russell Holmes - University of Minnesota)

Quantum Computing (QCim)
High Quality Superconducting Resonators from a Magnetically Contaminated Sputter System
(Nicola Chiarelli - Cornell University)

Quantum (QCim)
Understanding and Engineering Microwave Loss Mechanisms in Superconducting Qubits
(Adam Schwartzman - Lawrence Berkeley National Laboratory)

Exhibitor Innovator Showcase (EIS)
Reactive Magnetron Sputtering Feedback Control, "Stability for Success"
(Gerard Monaghan - Gencoa Ltd)

Exhibitor Innovator Showcase (EIS)
Unlocking Innovation: Solving Complex Challenges Through Collaborative Partnerships
(Jimmy Wright - Swincom Equipment, Inc.)

Exhibitor Innovator Showcase (EIS)
AEI-Sarah Williams (reserved)

Exhibitor Innovator Showcase (EIS)

Exhibitor Innovator Showcase (EIS)

9:00 AM Exhibitor Meeting

10:00 AM Exhibit Hall Opens

(Ryman Hall B1-B3)

2:00 PM Beer Blast

3:00 PM Announce: 5 K Run Winner & Best Poster

Exhibit Hall Closes at 4:00 PM

Free Time
4:00-5:30 PM

TAC Program Meeting
5:30-7:30 PM
(Tennessee Lobby/Tennessee C)

Thursday (May 22, 2025)

Technical Forum Breakfasts

TFB: Digital Transformation of Industrial Deposition Processes
Holger Sanden (Fraunhofer IOF) / Thomas Schulze (Plasus GmbH)
Chestwood A

TFB: Aligning Deposition Process Requirements with Vacuum System Layout and Design
Wolfgang Decker (Kurt J. Lesker Company) / Jenny Hedgecock (Sentech)
Chestwood B

TFB: Optical Thin Films Design and Fabrication
Ulrike Schulz (Fraunhofer IOF) / Rajiv Pathre (Vitro)
Chestwood C

TFB: Advanced Deposition Coating Hardware
Frank Papa (GP Plasma, LLC) / Ralf Bandorf (Fraunhofer IST)
Chestwood D

TFB: Coatings for Thin Film Photovoltaics
Volker Bellinger (Fraunhofer IST) / Ralf Bandorf (Fraunhofer IEP)
Chestwood E

TFB: CVD and ALD Processing
Mark Weimer (Forgeflow) / Kazuki Borkowski (Kanekka Sciences)
Chestwood F

TFB: Thin Film Sensors
Jason Hodnik (Kurt J. Lesker Company) / Binder Wang (University of Oklahoma)
Belmont A

TFB: Ultra-thin Flexible Glass - the next big thing?
Chris Stewart (DonnerConsulting) / Jörg Neidhardt (Fraunhofer IEP)
Belmont B

10 minute passing break

Keynote
Angel Yanguas-Gil - Argonne National Laboratory
Machine Learning for Atomic Layer Deposition: Accelerating Optimization and Predicting Scale Up of Thin Film Growth Processes
(Tennessee C)

10 minute passing break

Large Area (LArea)
Trends in Large Area Glass Coating
(Paul Mengesser - Saint Gobain Glass France)

Large Area (LA)
Simulation of Rotary Magnetron Sputtering Cathode Performance Using Computational Fluid Dynamics
(Ilias Bilionis - Purdue University)

Large Area (LA)
Ion Source Pretreatment for Large Area Glass Substrates
(Alexey Ankiyanov - Bühler Alzenau GmbH)

Large Area (LA)
Impact of AC Waveforms on Plasma Uniformity and Film Growth – Sine Wave vs Square Wave
(Adam Obrzerski - Advanced Energy)

Large Area (LA)
High Rate - High Quality Thin Films Made Possible with a Game Changing Plasma Source
(David Zimmerman - Ampegra, Inc.)

Large Area (LA)
Large Area Coating Innovation for Low-E Glass for Energy Applications
(Jerry Wu - Guangdong Huicheng Vacuum Technology Co., Ltd)

Large Area (LA)
Bringing Novel Application to Large Area with Advanced Sputtering Solutions
(Kenny Vanrousse - Solmax Advanced Coatings)

HiPIMS (HP)
Enhancing Uniformity and Stability through SDD-Based Feedback Control in an Industrial Roll-to-Roll HiPIMS Coater
(Jo Gong Sim - Hong Chic University)

HiPIMS (HP)
Novel Reactive Process Control in Industrial HiPIMS
(Rafael Sanchez Rodriguez - Ionautics)

HiPIMS (HP)
Influence of Pulse Duration on Plasma Dynamics and Film Film Growth of Plasmonic Titanium Nitride Deposited by Reactive High Power Impulse Magnetron Sputtering (HiPIMS)
(Ilhan Ozen - Middle East Technical University)

HiPIMS (HP)
HiPIMS TiSiC Coating onto 100m Carbon Fibers to Enhance Aluminum Capacitor Foil Cutting Quality
(Sai Cheng Chen - Feng Chia University)

HiPIMS (HP)
Experiments and Modelling of Reactive Pulsed Magnetron Sputtering Discharges with Metallic Target
(Jan Tomas Gudmundsson - University of Iceland)

HiPIMS (HP)
Black Metal Film Prepared by Gas Flow Sputtering for Capacitor Electrode Purpose
(Ping-Yen Hsieh - Feng Chia University)

HiPIMS (HP)
Reactive Sputtering of High Quality Nitride, Carbide, and Oxide Thin Films by HiPIMS Offers Many Benefits
(Jyh-Wei Lee - Ming Chi University of Technology)

Plasma Processing and Diagnostics (PP)
Simulating the Impact of Loading Density onto Coating Uniformity in Batch Coaters
(Christian Scheideler - Plasmatrix Ltd)

Plasma Processing and Diagnostics (PP)
Plasma Enhancement of Sputtering Yield for Dielectric Materials
(Yuriy Mankelevich - Lomonosov Moscow State University)

Plasma Processing and Diagnostics (PP)
Plasma Process Fault Detection Using High-Speed Signal Analysis
(Nicolas Gaumentaz - Metrologic Group)

Plasma Processing and Diagnostics (PP)
Fast Kinetic Modelling of the Plasma Evaluation, Etch Rate and Deposition Profile in Semiconductor Manufacturing
(David Mace - Tech-X Corporation)

Plasma Processing and Diagnostics (PP)
Diagnostic Techniques for Real-Time Monitoring and Optimization of Plasma-Assisted Deposition and Etching Processes
(Angus McCarter - Impedans Ltd)

Plasma Processing and Diagnostics (PP)
Plasma Assistance in Production of ZnO Layers
(Scott Walter - U.S. Naval Research Laboratory)

Coatings and Processes for Biomedical Applications (BT)
Functional Coatings on Kapton – First Results of a Feasibility Study
(Christian Leinenkühler - Technical University Braunschweig)

Coatings and Processes for Biomedical Applications (BT)
Identification of New Silicon Nitride Formulations Using Combinatorial Approaches
(Jeffrey Hedberg - Swiss University)

Coatings and Processes for Biomedical Applications (BT)
Use of Elevated Temperature Ti-Alloy Diffusion for Investigating Biomedical Coatings
(Theodore Scolnowski - Thermo Calc Ltd)

Coatings and Processes for Biomedical Applications (BT)
Electrochemical and Microstructural Studies of Neural Electrodes Electrodes Coated with Antibacterial Metal-Oxide Thin Films
(Kira Fromme - Fraunhofer IWS)

Coatings and Processes for Biomedical Applications (BTime)
Electrical Surface Restructuring: The Technology of the Future for Sustainable, High Performing and Cost-Effective Medical Implant Coating Electrodes and Microelectrode Arrays
(Shahram Amini - Pulse Technologies Inc.)

Lunch break

HiPIMS Panel Discussion and Workshop
(2 hrs)

"Success Stories and Positive Adaption of HiPIMS"

Plasma Processing and Diagnostics (PPime)
Data-Integrated Modeling for Nanometer-Scale Etching
(Jun Tancharoen - Kioxi University)

Plasma Processing and Diagnostics (PP)
A Specialized QMS System for High Sensitivity Measurements in Corrosive Partial Pressure Data for ITER
(Chris Marcus - U. T. - Battelle for DOE)

Atomic Layer Processing (AL)
Advanced Materials and Processes for Climate Technology Solutions: An Industry Perspective
(Alexander Cruz - Kolon Hughes)

Atomic Layer Processing (AL)
Challenges and Advances in Atomic Layer Deposition Of Rare Earth Oxide Films - SPONSORED STUDENT PRESENTATION
(Jacob Fredet - Brigham Young University)

Atomic Layer Processing (AL)

20 minute refreshment break

HiPIMS (HP)
Optimizing HiPIMS Processes in Industry: Pulse-Resolved Spectroscopy and Electrical Monitoring for Process Control
(Jan-Peter Urbach - PLASSIS GmbH)

HiPIMS (HP)
HiPIMS Deposited Cerenkovite Alloy Films for Scintillable Thin-Film Strain Gauge
(Yu-Wen Chen - Feng Chia University)

HiPIMS (HPim)
Optimization of Value Stream and Digitalization
(Klaus Boeder - Oerlikon Surface Solutions)

HiPIMS (HP)
HiPIMS TiGZ As Electron Transport Layer for Tin Halide Perovskite Solar Cells Applications
(Pei-Ju Sung - Feng Chia University)

HiPIMS (HP)
In-Line Coating System With Hollow Cathode Inverted Cylindrical Magnetron for Thin Film Applications – Sputter Deposition of Functional Layers
(Ivan Wolchakow - Sheffler Industries LLC)

Atomic Layer Processing (AL)
Advanced Materials and Processes for Climate Technology Solutions: An Industry Perspective
(Alexander Cruz - Kolon Hughes)

Atomic Layer Processing (AL)
Challenges and Advances in Atomic Layer Deposition Of Rare Earth Oxide Films - SPONSORED STUDENT PRESENTATION
(Jacob Fredet - Brigham Young University)

Atomic Layer Processing (AL)

Atomic Layer Processing (AL)
Thermal Atomic Layer Deposition of Low Resistivity Metallic Films for High Aspect Ratio Vias
(Dave Lindefeld - Forge Nano)

Young Mentors/Farewell Party
6:00-7:30 PM
(Waters Edge)