

# ICMCTF 2023 Program Key

- A** Coatings for Use at High Temperatures
- B** Hard Coatings and Vapor Deposition Technologies
- C** Functional Thin Films and Surfaces
- D** Coatings for Biomedical and Healthcare Applications
- E** Tribology and Mechanical Behavior of Coatings and Engineered Surfaces
- EX** Exhibitors Keynote Lecture
- F** New Horizons in Coatings and Thin Films
- FTS** Focused Topic Session
- G** Surface Engineering - Applied Research and Industrial Applications
- H** Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes
- HL** Awards Ceremony and Honorary Lecture
- PL** Plenary Lecture
- SIT** Special Interest Talks
- TS** Topical Symposia
  - TS1** Coatings for Energy Storage and Conversion - Batteries and Hydrogen Applications
  - TS2** Sustainable Surface Solutions, Materials, Processes and Applications
  - TS3** Processes of Materials for Printed and Flexible Film Technologies

**PROGRAM NUMBERS:** They are listed with the Symposium letter first, the session number second, the Day of the Week, Morning (M) or Afternoon (A) and the presentation slot (e.g., B1-1-MoM6).

# ICMCTF 2023 Program Overview

Room /Time	Golden State Ballroom	Pacific D	Pacific E	Pacific F-G	Town & Country A	Town & Country B	Town & Country C	Town & Country D
MoPL					PL-MoM: Plenary Lecture			
MoM		H1-1-MoM: Spatially-resolved and In-Situ Char of TF & Eng Surf I	A1-1-MoM: Coatings to Resist High-temp Oxid, Corr, & Fouling I	D1-1-MoM: Surf Coatings & Surface Mods in Bio Environ I	TS1-1-MoM: Coat for Ener Stor & Conv - Batt & Hydrg Apps I	F5-MoM: Machine Learning & Proc Mod for Coat Des & Production		B4-1-MoM: Props & Char of Hard Coatings and Surfaces I
MoSIT					SIT1-MoSIT: Special Interest Session I			
MoA		H1-2-MoA: Spatially-resolved and In-Situ Char of TF & Eng Surf II	A1-2-MoA: Coatings to Resist High-temp Oxid, Corr, & Fouling II	D1-2-MoA: Surf Coatings & Surf Mods in Biological Environments II	TS1-2-MoA: Coat for Ener Stor & Conv – Batt & Hyd Applications II	B6-MoA: Computationally-aided Materials Design	B2-MoA: CVD Coatings and Technologies	B4-2-MoA: Properties and Characterization of Hard Coatings
TuM		H2-1-TuM: Adv Mech Testing of Surf, TF, Coat & Small Volumes I	A1-3-TuM: Coat to Resist High-temp Oxid, Corr, and Fouling III	D2-TuM: Medical Devices: Bio-Tribo-Corrosion, Diag, 3D Printing	TS1-3-TuM: Coat for Ener Stor and Conv – Batt & Hyd Applications III	E3-1-TuM: Tribology of Coatings & Surf for Indust Apps I		B4-3-TuM: Prop & Char of Hard Coatings and Surfaces III
TuEx					EX-TuM: Exhibition Keynote Lecture			
TuA	<b>EXHIBITION</b>	D3-TuA: Bio: Coat to Prom Cell Adhes while Inhib Microbial Growth	A2-1-TuA: Thermal and Environmental Barrier Coatings I	TS2-TuA: Sustainable Surf Sol, Matls, Proc and Applications	H3-1-TuA: Char of Coatings & Small Vol in Ext and Cyclic Conditions I	E1-1-TuA: Friction, Wear, Lubrication Effects, and Modeling I	F3-TuA: 2D Matls: Synthesis, Characterization, and Applications	B4-4-TuA: Prop & Char of Hard Coatings and Surfaces IV
TuSIT					SIT2-TuSIT: Special Interest Session II			
WeM		H2-2-WeM: Adv Mech Testing of Surfaces, TF, Coatings and Small Volumes II	A2-2-WeM: Thermal and Environmental Barrier Coatings II	C1-1-WeM G2-1-WeM	H3-2-WeM B3-WeM	E1-2-WeM: Friction, Wear, Lubrication Effects, and Modeling II	G1-WeM G4-WeM	G3-WeM: Innov Surf Eng for Adv Cutting and Forming Tool Applications
WeSIT					SIT3-WeSIT: Special Interest Session III			
WeA		G2-2-WeA: Surf Mod of Comp in Auto, Aero & Mfg Applications II	F4-1-WeA: Boron-Containing Coatings I	C1-2-WeA E3-2-WeA		TS3-WeA: Proc of Materials for Printed and Flexible Film Technologies		B8-1-WeA: HiPIMS, Pulsed Plasmas and Energetic Deposition I
WeHL					HL-WeHL: Bunshah Award Honorary Lecture			
ThM			C3-1-ThM: Thin Films and Novel Surfaces for Energy I	F4-2-ThM: Boron-Containing Coatings II	B5-ThM: Hard and Multifunctional Nanostructured Coatings		E2-1-ThM: Mechanical Properties and Adhesion I	B1-1-ThM: PVD Coatings and Technologies I
ThL							FTS-ThL: Focused Topic Session	
ThA		B7-ThA: Plas Surf Interactions, Diags and Growth Processes	F2-ThA: High Entropy & Other Multi-princ- element Matls	C2-1-ThA: Thin Films for Electronic Devices I		E2-2-ThA: Mechanical Properties and Adhesion II	B1-2-ThA: PVD Coatings and Technologies II	
ThP	<b>POSTER SESSIONS</b>							
FrM			F1-FrM: Nanoterial-based Coatings and Structures	C2-2-FrM: Thin Films for Electronic Devices II		C3-2-FrM: Thin Films and Novel Surfaces for Energy II	B1-3-FrM: PVD Coatings and Technologies III	

# Monday Morning, May 22, 2023

**Plenary Lecture**  
**Room Town & Country A - Session PL-MoM**  
**Plenary Lecture**  
**Moderator:**  
**Jyh-Wei Lee**, Ming Chi University of Technology, Taiwan

8:00am **INVITED: PL-MoM-1** Plenary Lecture: Recent Trends in Artificial Photosynthesis: Atomistic/Surface Design and Probing of Nano-Photocatalysts, *Li-Chyong Chen*, National Taiwan University, Taiwan

8:20am

# Monday Morning, May 22, 2023

	<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Pacific D - Session H1-1-MoM</b>  <b>Spatially-resolved and In-Situ Characterization of Thin Films and Engineered Surfaces I</b>  <b>Moderators:</b>  <b>Damien Faurie</b>, Université Sorbonne Paris Nord, France,  <b>Michael Tkadletz</b>, Montanuniversität Leoben, Austria</p>	<p><b>Coatings for Biomedical and Healthcare Applications</b>  <b>Room Pacific F-G - Session D1-1-MoM</b>  <b>Surface Coatings and Surface Modifications in Biological Environments I</b>  <b>Moderators: Mathew T. Mathew</b>, University of Illinois College of Medicine at Rockford and Rush University Medical Center,  <b>Kerstin Thorwarth</b>, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland</p>
10:00am	<p><b>INVITED: H1-1-MoM-1</b> In-situ Imaging of Au Bicrystals and Hydrogen Charged Iron, <b>Wendy Gu</b>, Stanford University, USA; <b>M. Kiani</b>, Cornell University, USA; <b>A. Lee</b>, <b>A. Parakh</b>, Stanford University, USA</p>	<p><b>D1-1-MoM-1</b> Ion Release Study of Ag-Cu and Ag-Cu-Mg Coatings Deposited by Magnetron Sputtering, <b>Serdar Sonay Ozbay</b>, Deakin University, Coventry University, Australia; <b>G. Taghavi Pourian Azar</b>, Coventry University, UK; <b>J. Sharp</b>, <b>G. Rajmohan</b>, Deakin University, Australia; <b>A. Cobley</b>, Coventry University, UK</p>
10:20am		<p><b>D1-1-MoM-2</b> Effect of Pulsed DC Mode on the Surface Properties of Pure Magnesium Substrates Treated with PEO, <b>Cristian Esneider Peñuela Cruz</b>, <b>E. Hernández Rodríguez</b>, Universidad de Guanajuato, Mexico; <b>A. Herrera</b>, Universidad de Guanajuato, Campus DICIVA, Mexico</p>
10:40am	<p><b>H1-1-MoM-3</b> High-Throughput Surface Analysis for Accelerated Thin Film Materials Development, <b>S. Zhuk</b>, <b>A. Wiczorek</b>, <b>K. Thorwarth</b>, <b>J. Patidar</b>, <b>Sebastian Siol</b>, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland</p>	<p><b>D1-1-MoM-3</b> Non-Stick Thin-Film Metallic Glasse (Tfmg) Coating for Reducing Trauma, <b>Helmi Son Haji</b>, <b>J. P. Chu</b>, National Taiwan University of Science and Technology, Taiwan; <b>P. Yiu</b>, Ming Chi University of Technology, Taiwan</p>
11:00am	<p><b>H1-1-MoM-4</b> Advanced Experimental Techniques Quantifying Thin Film Delamination at the Nano-Scale, <b>Alice Lassnig</b>, <b>C. Gammer</b>, <b>S. Zak</b>, <b>M. Cordill</b>, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria</p>	<p><b>D1-1-MoM-4</b> Synthesis of Antimicrobial Surfaces by Glancing Angle Deposition with Natural Seeds, <b>Chuang Qu</b>, <b>J. Rozsa</b>, <b>M. Running</b>, <b>S. McNamara</b>, <b>K. Walsh</b>, University of Louisville, USA</p>
11:20am	<p><b>H1-1-MoM-5</b> New Generation In Situ Process Control of Chemical Composition of Compound Materials and Superalloys During PVD Process, <b>George Atanasoff</b>, AccuStrata, Inc., USA</p>	<p><b>INVITED: D1-1-MoM-5</b> FDA Regulatory Considerations for Performance Evaluation of Coatings in Medical Devices, <b>Nandini Duraiswamy</b>, U.S. Food and Drug Administration, USA</p>
11:40am	<p><b>H1-1-MoM-6</b> Influence of Al Incorporation and N Stoichiometry on the Thermal Stability of (Ti,V,Zr,Nb,Hf,Ta)N Thin Films, <b>Deborah Neuß</b>, <b>M. Hans</b>, <b>G. Fidanboy</b>, <b>H. Lasfargues</b>, <b>C. Azina</b>, <b>S. Mráz</b>, RWTH Aachen University, Germany; <b>S. Kolozsvári</b>, <b>P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>D. Primetzhofner</b>, Uppsala University, Angstrom Laboratory, Sweden; <b>J. Schneider</b>, RWTH Aachen University, Germany</p>	
12:00pm		<p><b>D1-1-MoM-7</b> Post-Anodization and Additives Role Towards the Effective Control of Bio-Degradation of Mg Alloys, <b>Z. Rehman</b>, <b>B. Koo</b>, Changwon National University, Republic of Korea</p>

# Monday Morning, May 22, 2023

	<p><b>Coatings for Use at High Temperatures</b>  <b>Room Pacific E - Session A1-1-MoM</b>  <b>Coatings to Resist High-temperature Oxidation, Corrosion, and Fouling I</b>  <b>Moderators: Sebastien Dryepondt</b>, Oak Ridge National Laboratory, USA,  <b>Gustavo García-Martín</b>, REP-Energy Solutions, Spain</p>	<p><b>Hard Coatings and Vapor Deposition Technologies</b>  <b>Room Town &amp; Country D - Session B4-1-MoM</b>  <b>Properties and Characterization of Hard Coatings and Surfaces I</b>  <b>Moderators: Naureen Ghafoor</b>, Linköping University, Sweden,  <b>Marcus Günther</b>, Robert Bosch GmbH, Germany,  <b>Fan-Yi Ouyang</b>, National Tsing Hua University, Taiwan</p>
10:00am	<p><b>INVITED: A1-1-MoM-1</b> Bill Sproul Award and Honorary ICMCTF Lecture: Strategies for the Development of Robust and Stable, but also Functional Ceramic Coatings, <b>Paul Mayrhofer</b><sup>1</sup>, TU Wien, Institute of Materials Science and Technology, Austria</p>	<p><b>B4-1-MoM-1</b> Effects of Al and Nd additions and Annealing on Microstructures and Mechanical Properties of CoCrNi Medium Entropy Alloy Films, <b>YI-LING WU</b>, C. Hsueh, National Taiwan University, Taiwan</p>
10:20am		<p><b>B4-1-MoM-2</b> Microstructures and Mechanical Properties of (CoCrNi)<sub>100-x-y</sub>Si<sub>x</sub>Nd<sub>y</sub> Medium Entropy Alloy Films, <b>Hui-Wen Peng</b>, C. Hsueh, National Taiwan University, Taiwan</p>
10:40am	<p><b>A1-1-MoM-3</b> Ti<sub>5</sub>Si<sub>3</sub>/TiAl<sub>3</sub> Multilayer Coatings as Oxidation Protection for γ-TiAl, <b>Peter-Philipp Bauer</b>, German Aerospace Center and Brandenburg University of Technology Cottbus, Germany; <b>R. Swadzba</b>, Łukasiewicz Research Network - Institute for Ferrous Metallurgy, Poland; <b>L. Klamann</b>, German Aerospace Center, Germany</p>	<p><b>INVITED: B4-1-MoM-3</b> Recent Developments Towards Reliable X-Ray Photoelectron Spectroscopy Analyses of Thin Films, <b>Grzegorz (Greg) Graczyński</b>, <b>L. Hultman</b>, Linköping Univ., IFM, Thin Film Physics Div., Sweden</p>
11:00am	<p><b>A1-1-MoM-4</b> Max-Phase Based PVD Coatings as Protection for Lightweight Materials in High Temperature Environments, <b>Nadine Laska</b>, <b>R. Anton</b>, German Aerospace Center, Germany; <b>R. Swadzba</b>, Łukasiewicz Research Network - Institute for Ferrous Metallurgy, Poland; <b>P. Nellessen</b>, German Aerospace Center, Germany</p>	
11:20am	<p><b>A1-1-MoM-5</b> Oxidation behaviors of (AlCrSiTi)N coatings on AISI 304 steel: A Combinatorial Study, <b>Sheng-Yu Hsu</b>, <b>S. Chang</b>, <b>J. Duh</b>, National Tsing Hua University, Taiwan</p>	<p><b>B4-1-MoM-5</b> Effect of Nitrogen Flow Rate on the Microstructure and Mechanical Properties of (V,Mo)N Thin Films, <b>Yiqun Feng</b>, National Tsing Hua University, Taiwan; <b>T. Chung</b>, National Yang Ming Chiao Tung University, Taiwan; <b>J. Huang</b>, National Tsing Hua University, Taiwan</p>
11:40am	<p><b>A1-1-MoM-6</b> Enhanced Pitting Resistance of Cathodic Arc Evaporated AlCrXN Coatings, <b>O. Hudak</b>, <b>F. Bohrn</b>, <b>P. Kutrowatz</b>, <b>T. Wojcik</b>, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; <b>E. Ntemou</b>, Ion Physics Group, Department of Physics and Astronomy, Uppsala University, Sweden; <b>D. Primetzhofer</b>, Ion Physics Group, Department of Physics and Astronomy, Uppsala University, Austria; <b>L. Shang</b>, <b>O. Hunold</b>, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <b>P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>Helmut Riedl</b>, Institute of Materials Science and Technology, TU Wien, Austria</p>	<p><b>B4-1-MoM-6</b> <i>In Situ</i> Stress Evolution in Ti/Pt Multilayers During Magnetron Sputter Deposition, <b>Naureen Ghafoor</b>, <b>M. Lorentzon</b>, <b>S. Bairagi</b>, <b>P. Sandstrom</b>, <b>J. Birch</b>, Linköping Univ., IFM, Thin Film Physics Div., Sweden</p>
12:00pm	<p><b>A1-1-MoM-7</b> Novel Approaches for the PVD Synthesis of Advanced Aluminide Thin Films: The Example of Ruthenium-Aluminide, <b>Vincent Ott</b>, Karlsruhe Institute of Technology (KIT), Institute for Applied Materials (IAM), Germany; <b>T. Wojcik</b>, TU Wien, Austria; <b>S. Ulrich</b>, Karlsruhe Institute of Technology (KIT), Institute for Applied Materials (IAM), Germany; <b>S. Kolozsvári</b>, <b>P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>P. Mayrhofer</b>, <b>H. Riedl</b>, TU Wien, Austria; <b>M. Stueber</b>, Karlsruhe Institute of Technology (KIT), Institute for Applied Materials (IAM), Germany</p>	

<sup>1</sup> Bill Sproul Awardee

# Monday Morning, May 22, 2023

	<p><b>New Horizons in Coatings and Thin Films</b>  <b>Room Town &amp; Country B - Session F5-MoM</b>  <b>Machine Learning and Process Modeling for Coating Design and Production</b>  <b>Moderators: Adam Obrusnik</b>, PlasmaSolve s.r.o., Czechia,  <b>Ferenc Tasnadi</b>, Linköping University, Sweden,  <b>Petr Zikán</b>, PlasmaSolve s.r.o., Czechia</p>	<p><b>Topical Symposia</b>  <b>Room Town &amp; Country A - Session TS1-1-MoM</b>  <b>Coatings for Energy Storage and Conversion - Batteries and Hydrogen Applications I</b>  <b>Moderators: Nazlim Bagcivan</b>, Schaeffler Technologies GmbH &amp; Co. KG, Germany,  <b>Klaus Böbel</b>, Bosch Manufacturing Solutions, Germany</p>
10:00am	<p><b>INVITED: F5-MoM-1</b> Thin Film Process Modeling at Different Scales - from Kinetic Simulation to Digital Twin, <b>Andreas Pflug</b>, Fraunhofer Institute for Surface Engineering and Thin Films IST, Germany</p>	<p><b>TS1-1-MoM-1</b> The Effect of Microstructure on the Hydrogen Storage Capacity of <math>Ti_xZr_{1-x}</math> Thin Films, <b>Ido Zukerman</b>, <b>M. Buzaglo</b>, Division of Chemistry, NRCN, Israel; <b>S. Hayun</b>, Department of Materials Engineering, Ben Gurion University of the Negev, Israel</p>
10:20am		<p><b>TS1-1-MoM-2</b> Transition Metal – Doped Ni/YSZ Anode Functional Layers for Solid Oxide Fuel Cells Produced via Magnetron Sputtering, <b>K. Steier</b>, Manchester Metropolitan University, UK; <b>I. Jang</b>, <b>A. Hankin</b>, Imperial College London, UK; <b>P. Kelly</b>, <b>Justyna Kulczyk-Malecka</b>, Manchester Metropolitan University, UK</p>
10:40am	<p><b>F5-MoM-3</b> Coater-Scale Model of DC Magnetron Sputtering, <b>Andrej Roštek</b>, Masaryk University / PlasmaSolve s.r.o., Czechia; <b>P. Zikán</b>, PlasmaSolve s.r.o., Czechia; <b>J. Tungli</b>, Masaryk University, Czechia; <b>A. Obrusnik</b>, PlasmaSolve s.r.o., Czechia</p>	<p><b>TS1-1-MoM-3</b> Surface Modification of Graphite Felt Electrode for Vanadium Redox Flow Batteries by High Entropy Alloy Oxide Thin Films: Effect of Oxygen Gas Flow Ratios, <b>Krishnakant Tiwari</b>, <b>C. Wang</b>, National Taiwan University of Science and Technology, Taiwan; <b>B. Lou</b>, Chang Gung University of Technology, Taiwan; <b>J. Lee</b>, Ming Chi University of Technology, Taiwan</p>
11:00am	<p><b>F5-MoM-4</b> High-Throughput Simulations to Predict History Dependence of Feedback Control During Reactive Magnetron Sputtering, <b>Josja Van Bever</b>, <b>K. Strijckmans</b>, <b>D. Depla</b>, Ghent University, Belgium</p>	<p><b>TS1-1-MoM-4</b> Temperature Dependency of Specific Electrical Conductivity of DLC Coatings, <b>S. Danninger</b>, University of Applied Sciences Upper Austria; <b>Francisco A. Delfin</b>, University of Applied Sciences Upper Austria, Argentina; <b>C. Forsich</b>, <b>D. Heim</b>, <b>M. Schachinger</b>, University of Applied Sciences Upper Austria; <b>B. Rübiger</b>, <b>C. Dipolt</b>, <b>T. Müller</b>, Rubig GmbH &amp; Co KG, Austria</p>
11:20am	<p><b>F5-MoM-5</b> Evatec Fabric – a Thin-Film Process and -Metrology Data Tracking System for Large-Scale, Automated Data Analysis in R&amp;D Labs, <b>Clemens Nyffeler</b>, <b>O. Rattunde</b>, <b>D. Jaeger</b>, <b>H. Zangerle</b>, <b>R. Gmuender</b>, Evatec AG, Switzerland</p>	<p><b>INVITED: TS1-1-MoM-5</b> High Efficiency of Metal Oxide Catalysts for Vanadium Redox Flow Battery, <b>Chen-Hao Wang</b>, National Taiwan University of Science and Technology, Taiwan</p>
11:40am	<p><b>F5-MoM-6</b> Predicting Reactive PVD Processes Using Global Process Modeling – a Physics-Based Alternative to Machine Learning, <b>Petr Zikán</b>, <b>A. Obrusnik</b>, PlasmaSolve s.r.o., Czechia</p>	
12:00pm	<p><b>F5-MoM-7</b> Structure and Crystallographic Properties of Multi-Material Coatings Deposited in a Combinatorial Sputter Plant Compared to Simulations from the Machine Level to Microstructure, <b>David Böhm</b>, TU Wien, Austria; <b>T. Schrefl</b>, Danube University Krems, Austria; <b>A. Eder</b>, MIBA High Tech Coatings GmbH, Austria; <b>C. Eisenmenger-Sittner</b>, TU Wien, Austria</p>	<p><b>TS1-1-MoM-7</b> Effect of Mg Doping on Characterization and Cycling Performance of <math>LiCoO_2</math> Thin Film Cathode for Lithium-Ion Batteries, <b>Tai-Yan Liu</b>, <b>J. Huang</b>, <b>C. Liu</b>, National Cheng Kung University (NCKU), Taiwan</p>

# Monday Afternoon, May 22, 2023

## Special Interest Talks

Room Town & Country A - Session SIT1-MoSIT

### Special Interest Session I

Moderator:

**Jyh-Wei Lee**, Ming Chi University of Technology, Taiwan

1:00pm **INVITED: SIT1-MoSIT-1** Residual Stress Measurement on Hard Coatings and the Evaluation of Energy Relief Efficiency of Architected Coatings, *Jia-Hong Huang*, National Tsing Hua University, Taiwan

1:20pm

# Monday Afternoon, May 22, 2023

	<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Pacific D - Session H1-2-MoA</b>  <b>Spatially-resolved and In-Situ Characterization of Thin Films and Engineered Surfaces II</b>  <b>Moderators:</b>  <b>Damien Faurie</b>, Université Sorbonne Paris Nord, France,  <b>Michael Tkadletz</b>, Montanuniversität Leoben, Austria</p>	<p><b>Coatings for Biomedical and Healthcare Applications</b>  <b>Room Pacific F-G - Session D1-2-MoA</b>  <b>Surface Coatings and Surface Modifications in Biological Environments II</b>  <b>Moderators: Mathew T. Mathew</b>, University of Illinois College of Medicine at Rockford and Rush University Medical Center,  <b>Kerstin Thorwarth</b>, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland</p>
1:40pm	<p><b>INVITED: H1-2-MoA-1</b> Multimodal and <i>in Situ</i> Electron Microscopy to Understand Local Deformation Mechanics, <b>Josh Kacher</b>, Georgia Institute of Technology, USA</p>	<p><b>D1-2-MoA-1</b> Antibacterial Performance of DLC and Ag-doped DLC coatings with a Long Term Perspective, <b>Maneesha Rupakula</b>, Platit AG, Switzerland; <b>K. Sharma</b>, EPFL, Switzerland; <b>H. Bolvardi</b>, <b>B. Paul</b>, <b>G. Wahli</b>, Platit AG, Switzerland</p>
2:00pm		<p><b>D1-2-MoA-2</b> TiN/NbN Superlattice Coatings Deposited by High Power Impulse Magnetron Sputtering Potential Candidate to Protect Medical Grade CoCrMo Alloys, <b>Papken Hovsepian</b>, Sheffield Hallam University, UK; <b>A. Ehasarian</b>, <b>A. Sugumaran</b>, Sheffield Hallam University, United Kingdom; <b>I. Khan</b>, Zimmer- Biomet UK</p>
2:20pm	<p><b>H1-2-MoA-3</b> Nanomechanical Characterization and Residual Stress Analysis in Thin ALD Coatings on 3D Printed Nano-Ceramics, <b>Marco Sebastiani</b>, Università degli studi Roma Tre, Rome, Italy</p>	<p><b>INVITED: D1-2-MoA-3</b> 3D Printed Ceramics Reinforced Ti6Al4V: Structural and Nano-Mechanical Characterization, <b>Peter Apata Olubambi</b>, <b>T. Tshphepe</b>, University of Johannesburg, South Africa</p>
2:40pm	<p><b>H1-2-MoA-4</b> <i>In-Situ</i> Monitoring of Stress Evolution in Hipims-Deposited Ti-Al-N Films: Effect of Substrate Bias and Temperature, <b>Pedro Renato Tavares Avila</b>, <b>O. Zabeida</b>, <b>L. Varela Jiménez</b>, <b>J. Klemberg-Sapieha</b>, <b>L. Martinu</b>, Polytechnique Montréal, Canada</p>	
3:00pm	<p><b>H1-2-MoA-5</b> High Strength and Deformability in 3D Interface Cu/Nb Nanolaminates Under Multiple Loading Orientations, <b>Justin Y. Cheng</b>, University of Minnesota, USA; <b>S. Xu</b>, University of Oklahoma, USA; <b>J. Baldwin</b>, Los Alamos National Laboratory, USA; <b>M. De Leo</b>, University of Minnesota, USA; <b>I. Beyerlein</b>, University of California Santa Barbara, USA; <b>N. Mara</b>, University of Minnesota, USA</p>	<p><b>D1-2-MoA-5</b> A Remote Atmospheric Pressure Plasma-Assisted Textile Functionalization Process on Polymeric Scaffolds for Bone Tissue Engineering, <b>Wei-Yu Chen</b>, <b>J. Lee</b>, <b>T. An</b>, Taiwan Textile Research Institute, Taiwan; <b>A. Matthews</b>, University of Manchester, UK</p>
3:20pm	<p><b>H1-2-MoA-6</b> Multi-axial Stress-Strain Transfer Across Indenter-Sample Interface During <i>in Situ</i> Indentation of Nanocrystalline Thin Films, <b>Michael Meindlhuber</b>, <b>J. Todt</b>, Montanuniversität Leoben, Leoben, Austria; <b>A. Medjahed</b>, ESRF, The European Synchrotron, Grenoble, France; <b>M. Burghammer</b>, ESRF, The European Synchrotron, France; <b>M. Zitek</b>, <b>R. Daniel</b>, Montanuniversität Leoben, Leoben, Austria; <b>D. Steinmüller-Nethl</b>, CarbonCompetence GmbH, Wattens, Austria; <b>J. Keckes</b>, Montanuniversität Leoben, Leoben, Austria</p>	<p><b>D1-2-MoA-6</b> Development of Modified Hydroxyapatite Composite Coating Prepared by the Thermal Spray, <b>Jo-Han Yu</b>, National Taipei University of Technology, Taipei Tech, Taiwan; <b>K. Feng</b>, Ming Chi University of Technology, Taiwan; <b>Y. Yang</b>, National Taipei University of Technology, Taipei Tech, Taiwan</p>
3:40pm	<p><b>H1-2-MoA-7</b> Film Thickness Effect on Stress Sign Transition in ITO Thin Films, <b>Jianhui Liang</b>, <b>J. Zhang</b>, <b>K. Rubin</b>, <b>W. Johnson</b>, KLA Corporation, USA; <b>R. Schelwald</b>, KLA Corporation, Germany; <b>O. Amster</b>, KLA Corporation, USA; <b>B. Cuénod</b>, <b>R. Juttin</b>, EPFL, Switzerland</p>	<p><b>D1-2-MoA-7</b> New Generation of Thin Films for Protection of Stainless Steel Against Corrosion and Bacterial Contamination, <b>Akram ALHUSSEIN</b>, <b>A. BELGROUNE</b>, <b>E. KAADY</b>, University of Technology of Troyes, France; <b>L. AISSANI</b>, University of Khenchela, Algeria; <b>R. HABCHI</b>, Lebanese University, Lebanon; <b>S. Rtimi</b>, Federal Polytechnic School of Lausanne, Switzerland</p>
4:00pm	<p><b>H1-2-MoA-8</b> Reactions of Metal-Tmhd Compounds in the Gas-Phase: Insights from Microreactor Studies Using Synchrotron Radiation, <b>Sebastian Grimm</b>, Institute for Combustion and Gas Dynamics, University of Duisburg-Essen, Germany; <b>P. Hemberger</b>, Paul Scherrer Institute, Switzerland; <b>B. Atakan</b>, Institute for Combustion and Gas Dynamics and CENIDE, University of Duisburg-Essen, Germany</p>	<p><b>D1-2-MoA-8</b> Effects of Silver Acetate Additives on Antimicrobial and Corrosion Behaviors of Plasma Electrolytic Oxidation Coatings on AZ31B Magnesium Alloy, <b>Yu-Tse Sung</b>, Department of Materials Engineering, Ming Chi University of Technology, Taiwan; <b>C. Tseng</b>, Department of Materials Engineering &amp; Center for Plasma and Thin Film Technologies, Ming Chi University of Technology, Taiwan</p>
4:20pm	<p><b>H1-2-MoA-9</b> How to Simultaneously Determine Absolute Thickness, Chemistry, and Other Properties of Crystalline Layers Using XRD, <b>Thomas Degen</b>, <b>M. Sadki</b>, <b>N. Norberg</b>, Malvern Panalytical, Netherlands; <b>N. Shin</b>, Deep Solution Inc., Korea (Democratic People's Republic of)</p>	<p><b>D1-2-MoA-9</b> Tribocorrosion and Biological Analysis of Surface Coated by Polypyrrole Film and Zinc on Titanium Surfaces Treated by Plasma Electrolytic Oxidation, <b>M. Borges</b>, University of Campinas, Brazil, University of Illinois College of Medicine Rockford, USA; <b>H. Kanniyappan</b>, University of Illinois College of Medicine Rockford, USA; <b>V. Barão</b>, University of Campinas, Brazil; <b>M. Mathew</b>, University of Chicago College of Medicine Rockford, USA</p>
4:40pm		



# Monday Afternoon, May 22, 2023

	<b>Coatings for Use at High Temperatures</b> <b>Room Pacific E - Session A1-2-MoA</b> <b>Coatings to Resist High-temperature Oxidation, Corrosion, and Fouling II</b> <b>Moderators:</b> <b>Gustavo García-Martín</b> , REP-Energy Solutions, Spain, <b>Justyna Kulczyk-Malecka</b> , Manchester Metropolitan Univ., UK	<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country C - Session B2-MoA</b> <b>CVD Coatings and Technologies</b> <b>Moderators:</b> <b>Raphaël Boichot</b> , Grenoble-INP/CNRS, France, <b>Hiroki Kondo</b> , Nagoya University, Japan
1:40pm	<b>A1-2-MoA-1</b> Microstructural Changes of Yttria-Containing MMC-Coatings and Their Influence on Hot Corrosion, Wear and Mechanical Behavior, <b>Christoph Grimme</b> , <b>C. Oskay</b> , <b>M. Galetz</b> , DECHEMA-Forschungsinstitut, Germany	<b>INVITED: B2-MoA-1</b> Si and SiC-based CVD Coatings for High Temperature Structural Applications, <b>A. Le Doze</b> , <b>P. Drieux</b> , Laboratoire des Composites Thermostructuraux - CNRS, France; <b>S. Jacques</b> , Laboratoire de Composites Thermostructuraux - CNRS, France; <b>G. Couégnat</b> , <b>Georges Chollon</b> , Laboratoire des Composites Thermostructuraux - CNRS, France
2:00pm	<b>A1-2-MoA-2</b> Surface Refinement by Aluminide Diffusion Coatings and Its Effect on the Oxidation Behavior and Creep Strength of Additively Manufactured Fe- and Ni-Based Alloys, <b>Ceyhan Oskay</b> , <b>L. Mengis</b> , DECHEMA-Forschungsinstitut, Germany; <b>A. Kulig</b> , <b>H. Daoud</b> , Neue Materialien Bayreuth GmbH, Germany; <b>M. Galetz</b> , DECHEMA-Forschungsinstitut, Germany; <b>U. Glatzel</b> , University of Bayreuth, Germany and Neue Materialien Bayreuth GmbH, Germany	
2:20pm	<b>INVITED: A1-2-MoA-3</b> Influence of High Temperatures on the Friction and Wear of Highly Stressed Exhaust Systems, <b>Martin Dienwiebel</b> , Institute for Applied Materials IAM - Karlsruhe Institute of Technology, Germany; <b>T. König</b> , Fraunhofer Institute for Mechanics of Materials IWM, Germany; <b>T. Kimpel</b> , Institute for Applied Materials IAM, Karlsruhe Institute of Technology, Germany; <b>D. Kuerten</b> , <b>A. Kailer</b> , Fraunhofer Institute for Mechanics of Materials IWM, Germany	<b>B2-MoA-3</b> Influence of Bilayer Periodicity on Microstructure, Residual Stress and Mechanical Properties of CVD TiN/TiB <sub>2</sub> Multilayer Coatings, <b>Michael Tkadletz</b> , Montanuniversität Leoben, Austria; <b>A. Lechner</b> , <b>B. Sartory</b> , Materials Center Leoben Forschung GmbH, Austria; <b>C. Czetti</b> , CERATIZIT Austria GmbH, Austria; <b>N. Schalk</b> , Montanuniversität Leoben, Austria
2:40pm		<b>B2-MoA-4</b> Effect of the Substrate Treatment on the Microstructure of CVD Ti(C,N)/Al <sub>2</sub> O <sub>3</sub> Hard Coatings, <b>Christiane Wächtler</b> , <b>C. Wüstefeld</b> , TU Bergakademie Freiberg, Germany; <b>M. Šima</b> , <b>J. Pikner</b> , Dormer Pramet, Czechia; <b>D. Rafaja</b> , TU Bergakademie Freiberg, Germany
3:00pm	<b>A1-2-MoA-5</b> Surface Refinement of Additively Manufactured Components: Microstructure and Mechanical Properties, <b>Agata Kulig</b> , Neue Materialien Bayreuth GmbH, Germany; <b>C. Oskay</b> , <b>L. Mengis</b> , DECHEMA-Forschungsinstitut, Germany; <b>H. Daoud</b> , Neue Materialien Bayreuth GmbH, Germany; <b>M. Galetz</b> , DECHEMA-Forschungsinstitut, Germany; <b>U. Glatzel</b> , University of Bayreuth, Neue Materialien Bayreuth GmbH, Germany	<b>B2-MoA-5</b> Novel ZrB <sub>2</sub> and HfB <sub>2</sub> Metaldiboride Coatings by LPCVD, <b>Mandy Höhn</b> , <b>M. Krug</b> , <b>B. Matthey</b> , Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany
3:20pm	<b>A1-2-MoA-6</b> Oxidation Behavior of Novel Cr-Si Diffusion Coatings Applied by the Slurry Technique, <b>Michael Kerbstadt</b> , DECHEMA, Germany; <b>E. White</b> , DECHEMA, USA; <b>M. Galetz</b> , DECHEMA, Germany	<b>B2-MoA-6</b> Diamond Coatings on Cutting Tools Applied to Super-Hard Workpiece Materials, <b>Michael Woda</b> , CemeCon AG, Germany; <b>J. Fuentes</b> , Hufschmied Zerspanungssysteme GmbH, Germany; <b>W. Puetz</b> , <b>M. Wegh</b> , <b>C. Schiffers</b> , <b>S. Bolz</b> , <b>O. Lemmer</b> , CemeCon AG, Germany
3:40pm	<b>A1-2-MoA-7</b> Use of Machine Learning Algorithms to Optimize and Customize Aluminide Diffusion Coatings, <b>Vladislav Kolarik</b> , <b>M. Juez Lorenzo</b> , Fraunhofer Institute for Chemical Technology ICT, Germany; <b>P. Praks</b> , IT4Innovations National Computing Center, VSB - Technical University of Ostrava, Czechia	<b>INVITED: B2-MoA-7</b> Study on Small-Volume and Flow-Type Hard DLC Film Process Using Substrate-Surrounding Microwave Plasma, <b>Hiroyuki Kousaka</b> , Gifu University, Japan
4:00pm	<b>A1-2-MoA-8</b> Self-Healing Aluminide Coatings, <b>Fernando Pedraza</b> , <b>R. Troncy</b> , <b>L. Boccaccini</b> , <b>G. Bonnet</b> , La Rochelle University, France; <b>X. Montero</b> , MTU, Germany; <b>M. Galetz</b> , DECHEMA-Forschungsinstitut, Germany	
4:20pm	<b>A1-2-MoA-9</b> Continuous Al-supply to Cr <sub>2</sub> AlC MAX Phase Coatings During Oxidation at High Temperature, <b>Clio Azina</b> , <b>M. Hans</b> , Materials Chemistry, RWTH Aachen University, Germany; <b>J. Gonzalez-Julian</b> , Chair of Ceramics, RWTH Aachen University, Germany; <b>P. Eklund</b> , Linköping University, IFM, Sweden; <b>J. Schneider</b> , Materials Chemistry, RWTH Aachen University, Germany	

# Monday Afternoon, May 22, 2023

<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country D - Session B4-2-MoA</b> <b>Properties and Characterization of Hard Coatings and Surfaces II</b> <b>Moderators: Naureen Ghafoor, Linköping University, Sweden,</b> <b>Marcus Günther, Robert Bosch GmbH, Germany,</b> <b>Fan-Yi Ouyang, National Tsing Hua University, Taiwan</b>		<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country B - Session B6-MoA</b> <b>Computationally-aided Materials Design</b> <b>Moderators:</b> <b>Davide G. Sangiovanni, Linköping University, Sweden,</b> <b>Wan-Yu Wu, National United University, Taiwan</b>	
1:40pm	<b>INVITED: B4-2-MoA-1</b> Amorphous Carbon Coatings for Tribological Applications in Hydrogen and Natural Gas Environments, <b>Thomas Gradt</b> , Bundesanstalt für Materialforschung und -prüfung (BAM), Germany	<b>INVITED: B6-MoA-1</b> Selection of Photosensitive Materials on Metal Oxide Surface by Using Machine Learning, <b>Yen-Hsun Su</b> , National Cheng Kung University, Taiwan	
2:00pm			
2:20pm	<b>B4-2-MoA-3</b> Effect of Bio-Lubricants on Wear and Friction of Borided Ti <sub>6</sub> Al <sub>4</sub> V Alloy, <b>A. Nieto-Sosa, G. Rodríguez-Castro, J. Escobar-Hernández, A. Meneses-Amador, José Arciniega-Martínez, H. Martínez-Gutierrez</b> , National Polytechnic Institute, Mexico	<b>B6-MoA-3</b> On the Modeling of Particle Growth in Film Deposition, <b>Rahul Basu</b> , JNTU, India	
2:40pm	<b>B4-2-MoA-4</b> Experimental and Numerical Evaluation of Multi-Pass Scratch on Borided Armco Iron, <b>Jesús Vidal-Torres</b> , SEPI ESIME Instituto Politécnico Nacional, Mexico; <b>A. Ocampo-Ramírez</b> , Universidad Veracruzana, Mexico; <b>G. Rodríguez-Castro, I. Campos-Silva, A. Meneses-Amador</b> , SEPI ESIME Instituto Politécnico Nacional, Mexico	<b>B6-MoA-4</b> First-Principles Investigations of the Physical Properties of Experimentally Feasible Novel Aluminum Nitride Polytypes, <b>Mowafaq Mohammad Al-Sardia</b> , Jejun University, Republic of Korea	
3:00pm	<b>B4-2-MoA-5</b> Microstructure and Tribological Characteristics of Binary Refractory Metal Nitride Coatings, <b>Yu-Hsien Liao, S. Hsu, F. Wu</b> , Dept. of Materials Science and Engineering, National United University, Taiwan	<b>INVITED: B6-MoA-5</b> Computational Supports to Identify Structural and Elastic Relationship of Metastable Crystalline And Amorphous Thin Films Alloys: Mo <sub>1-x</sub> Ni <sub>x</sub> and Mo <sub>1-x</sub> Si <sub>x</sub> Case Studies, <b>C. Li</b> , 1State Key Laboratory of Superlattices and Microstructures, Institute of Semiconductors, China; <b>G. Abadias</b> , Institut Pprime - CNRS - ENSMA - Université de Poitiers, France; <b>Philippe Djemia</b> , LSPM UPR 3407, France	
3:20pm	<b>B4-2-MoA-6</b> Hyper-Doping of Boron Carbide Ablators for Laser Fusion, <b>Gregory Taylor</b> , Lawrence Livermore National Lab, USA		
3:40pm	<b>B4-2-MoA-7</b> Influence of Si Content on the Mechanical Properties, Microstructure and Tribological Behaviors of (AlCrNbSiTi)N Coatings, <b>Yun-Chen Chan, S. Hsu, P. Chen, J. Duh</b> , National Tsing Hua University, Taiwan	<b>B6-MoA-7</b> On the Quantification of Lattice Distortions and Their Correlation with Kinetics in High Entropy Sublattice Nitrides, <b>Ganesh Kumar Nayak</b> , Montanuniversität Leoben, Austria; <b>A. Kretschmer</b> , TU Wien, Austria; <b>J. Sälker</b> , RWTH Aachen University, Germany; <b>P. Mayrhofer</b> , TU Wien, Austria; <b>M. Hans, J. Schneider</b> , RWTH Aachen University, Germany; <b>D. Holec</b> , Montanuniversität Leoben, Austria	
4:00pm	<b>B4-2-MoA-8</b> Effect of CrMoN Addition on the Thermal Stability and Tribological Property of TiVN Coatings, <b>Y. Chang, He-Qian Feng</b> , National Formosa University, Taiwan	<b>B6-MoA-8</b> Machine-Learning Guided Ab-Initio Exploration of Thermal/Mechanical Properties in Transition Metal Nitrides, <b>Andreas Kretschmer</b> , TU Wien, Institute of Materials Science and Technology, Austria; <b>M. Fedrigo</b> , Oerlikon Digital Hub, Germany; <b>L. Lezuo</b> , TU Wien, Institute of Materials Science and Technology, Austria; <b>K. Yalamanchili, H. Rudigier</b> , Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <b>P. Mayrhofer</b> , TU Wien, Institute of Materials Science and Technology, Austria	
4:20pm		<b>B6-MoA-9</b> Descriptors Development for Stability Prediction of N-Doped High Entropy Alloy Coatings: A DFT Study, <b>Chih-Heng Lee</b> , National Tsing Hua University, Taiwan; <b>J. Lee</b> , Ming Chi University of Technology, Taiwan; <b>H. Chen</b> , National Tsing Hua University, Taiwan	
4:40pm		<b>B6-MoA-10</b> Structural Configuration of Simple Functional Groups on (100) Si Surfaces, <b>Benjamin Whitfield, R. Fleming</b> , Arkansas State University, USA	
5:00pm		<b>B6-MoA-11</b> Bayesian Optimization-Assisted Sputter Deposition of Molybdenum Thin Films with Desired Stress and Resistivity, <b>Ankit Shrivastava, M. Kalaswad, D. Adams, H. Najm</b> , Sandia National Laboratories, USA	

# Monday Afternoon, May 22, 2023

<p><b>Topical Symposia</b>  <b>Room Town &amp; Country A - Session TS1-2-MoA</b>  <b>Coatings for Energy Storage and Conversion - Batteries and Hydrogen Applications II</b>  <b>Moderators: Nazlim Bagcivan</b>, Schaeffler Technologies GmbH &amp; Co. KG, Germany,  <b>Klaus Böbel</b>, Bosch Manufacturing Solutions, Germany</p>		
1:40pm		
2:00pm		
2:20pm	<p><b>TS1-2-MoA-3</b> Influence of Oxygen Content During the Deposition of Scandium Stabilized Zirconia Thin Films by Reactive High Power Impulse Magnetron Sputtering (R-HiPIMS), <b>Isabel Fernandez Romero</b>, Corporate Sector Research and Advance Engineering- Robert Bosch, Germany; <b>S. Klein</b>, <b>C. Engel</b>, Corporate Sector Research and Advance Engineering - Robert Bosch, Germany; <b>J. Fleig</b>, Technical University of Vienna, Austria</p>	
2:40pm	<p><b>TS1-2-MoA-4</b> Comparison of the Impacts of High Entropy Oxide/Alloy Coatings for Lithium-Sulfur Battery Separators, <b>Ming-Roe Wann</b>, <b>Y. Lin</b>, <b>S. Chung</b>, <b>J. Ting</b>, National Cheng Kung University (NCKU), Taiwan</p>	
3:00pm	<p><b>TS1-2-MoA-5</b> BaCeZrYO<sub>3-δ</sub> Coatings Deposited by Solution Precursor Plasma Spray (SPPS) for Sustainable Energy Application, <b>Yen-Yu Chen</b>, <b>W. Zeng</b>, <b>C. Liu</b>, <b>G. Yao</b>, Chinese Culture University, Taiwan</p>	
3:20pm	<p><b>TS1-2-MoA-6</b> Aluminum-Doped Non-Stoichiometric Titanium Oxide (Al-TiO<sub>x</sub>) for Anode in Lithium-Ion Batteries, <b>Guan-Bo Liao</b>, National Cheng Kung University (NCKU), Taiwan; <b>Y. Shen</b>, Hierarchical Green-Energy Materials (Hi-GEM) Research Center, Taiwan; <b>J. Huang</b>, National Cheng Kung University (NCKU), Taiwan</p>	
3:40pm	<p><b>TS1-2-MoA-7</b> Unveiling Capacitive and Diffusion-Limited Li-Ion Storage in Semiconducting 2d-MoS<sub>2</sub> Compositing with Aluminium Nitride Nanoflowers for Flexible Electrodes of Supercapacitors, <b>D. Kaur</b>, <b>Gagan Kumar Sharma</b>, Indian Institute of Technology Roorkee, India</p>	
4:00pm	<p><b>TS1-2-MoA-8</b> Lithium Passive Diffusion and Surface Oxidation on Battery Materials at Room Temperature, <b>Jozef Ociepa</b>, OCI Vacuum Microengineering Inc., Canada</p>	
4:20pm	<p><b>TS1-2-MoA-9</b> Development of Carbon-based PVD Coatings for Stainless Steel PEMFC's Bipolar Plates, <b>Michaël Ougier</b>, <b>M. Leroy</b>, IREIS/HEF group, France; <b>A. Chavanne</b>, HEF group, France; <b>H. Christophe</b>, IREIS/HEF Group, France</p>	

# Tuesday Morning, May 23, 2023

	<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Pacific D - Session H2-1-TuM</b>  <b>Advanced Mechanical Testing of Surfaces, Thin Films, Coatings and Small Volumes I</b>  <b>Moderator:</b>  <b>Olivier Pierron, Georgia Institute of Technology, USA</b></p>	<p><b>Coatings for Biomedical and Healthcare Applications</b>  <b>Room Pacific F-G - Session D2-TuM</b>  <b>Medical Devices: Bio-Tribo-Corrosion, Diagnostics, 3D Printing</b>  <b>Moderators: Hamdy Ibrahim, University of Tennessee at Chattanooga, USA,</b>  <b>Margaret Stack, University of Strathclyde, UK</b></p>
8:00am		<p><b>INVITED: D2-TuM-1</b> Empowering PVD-Coatings to Control the Time Dependent Chemical and Microstructural Coating Properties in Aqueous Electrolytes, <b>Holger Hoche</b>, Center for Structural Materials, TU-Darmstadt, Germany; <b>T. Ullrich</b>, Center for Structural Materials, TU Darmstadt, Germany; <b>P. Polcik</b>, Plansee Composite Materials, Germany; <b>M. Oechsner</b>, Center for Structural Materials, TU-Darmstadt, Germany</p>
8:20am		
8:40am	<p><b>INVITED: H2-1-TuM-3</b> Multifunctional Characterization of Nanomultilayers, <b>Andrea Maria Hodge</b>, University of Southern California, USA</p>	<p><b>D2-TuM-3</b> Early Detection of Fretting-Corrosion at the Hip Modular Junction Interface by Acoustic Emission Non-Invasive Technique, <b>Bill Keaty</b>, <b>Y. Sun</b>, University of Illinois at Chicago, USA; <b>M. Mathew</b>, University of Illinois - Chicago, USA; <b>D. Ozevin</b>, <b>J. Eapen</b>, <b>T. Zhang</b>, University of Illinois at Chicago, USA</p>
9:00am		<p><b>D2-TuM-4</b> Corrosion Evaluation of Plasma Electrolytic Oxidation Coatings on Titanium Alloys For Biomedical Implant Application, <b>E. Sondgeroth</b>, <b>K. Cheng</b>, <b>Y. Sun</b>, UIC School of Medicine at Rockford, USA; <b>C. Takoudies</b>, UIC School of Medicine, USA; <b>E. Vries</b>, Faculty of Engineering Technology, University of Twente, The Netherlands, USA; <b>D. Matthews</b>, <b>N. Bolink</b>, Faculty of Engineering Technology, University of Twente, The Netherlands; <b>A. Yerokhin</b>, Department of Materials, University of Manchester, United Kingdom; <b>Mathew Mathew</b>, UIC school of medicine at Rockford, USA</p>
9:20am	<p><b>H2-1-TuM-5</b> Effects of Radiation Damage on the Critical Resolved Shear Stresses in Zirconium Alloys for Nuclear Applications, <b>James Gibson</b>, <b>C. Grovenor</b>, <b>A. Wilkinson</b>, Oxford University, UK</p>	<p><b>D2-TuM-5</b> Large-Scale Metallic Nanotubes Array (MeNTA) with Plasmonic Nanoparticles for SERS Application, <b>Alfreda Krisna Altama</b>, <b>J. Chu</b>, National Taiwan University of Science and Technology, Taiwan; <b>P. Yiu</b>, Ming Chi University of Technology, Taiwan; <b>W. Chiang</b>, National Taiwan University of Science and Technology, Taiwan</p>
9:40am	<p><b>H2-1-TuM-6</b> Link between Cracking Mechanisms of Trilayer Films on Flexible Substrates and Electro-Mechanical Reliability Under Biaxial Loading, <b>Shuhel Altaf Husain</b>, Institut Pprime - CNRS - ENSMA - Université de Poitiers, France; <b>P. Kreiml</b>, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria; <b>P. Renault</b>, Institut Pprime - CNRS - ENSMA - Université de Poitiers, France; <b>C. Mitterer</b>, Montanuniversität Leoben, Leoben, Austria; <b>M. Cordill</b>, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria; <b>D. Faurie</b>, CNRS, France</p>	<p><b>D2-TuM-6</b> Carbide-derived Carbon (CDC) for Implant Application: Tribocorrosion Kinetics and Mechanisms, <b>Kyle Kinnerk</b>, Department of Biomedical Engineering, University of Illinois at Chicago, USA; <b>Y. Sun</b>, <b>M. Daly</b>, Department of Civil, materials, and Environmental Engineering, University of Illinois at Chicago, USA; <b>M. Wimmer</b>, Department of Orthopedic Surgery, Rush University Medical Center, USA; <b>M. McNallan</b>, Department of Civil, materials, and Environmental Engineering, University of Illinois at Chicago, USA; <b>M. Mathew</b>, Department of Biomedical Sciences, UIC College of Medicine at Rockford, USA</p>
10:00am	<p><b>H2-1-TuM-7</b> Effect of Nanometric Stacking on the Magneto-Mechanical Properties of Thin Films on Flexible Substrate, <b>H. Ben Mahmoud</b>, <b>Damien Faurie</b>, CNRS-LSPM, France; <b>P. Renault</b>, CNRS-Pprime, France; <b>F. Zighem</b>, CNRS-LSPM, France</p>	<p><b>D2-TuM-7</b> PEKK as Biomaterials Under Fretting Corrosion Solicitations: May This Biopolymer Be Considered as New Hip Implant Component?, <b>Jean Geringer</b>, <b>J. Monnatte</b>, Mines Saint-Etienne, France; <b>G. Planche</b>, EPIC sarl, France; <b>J. Porteus</b>, Oxford Polymers, USA</p>
10:20am	<p><b>H2-1-TuM-8</b> Influence of the Aspect Ratio of the Micro-Cantilever on the Determined Young's Modulus Using the Euler-Bernoulli Equation, <b>F. Konstantiniuk</b>, Montanuniversität Leoben, Austria; <b>M. Krobath</b>, <b>W. Ecker</b>, Materials Center Leoben Forschungs GmbH, Austria; <b>C. Czettl</b>, CERATIZIT Austria GmbH, Austria; <b>Nina Schalk</b>, Montanuniversität Leoben, Austria; <b>M. Tkadletz</b>, Montanuniversität Leoben, Austria</p>	<p><b>D2-TuM-8</b> Fretting-corrosion (&lt;5µm) Performance of Carbide-derived Carbon (CDC) Surface Modification for Hip Implants, <b>Yani Sun</b>, <b>M. Daly</b>, <b>M. McNallan</b>, Department of Civil, Materials and Environmental Engineering, University of Illinois at Chicago, USA; <b>M. Mathew</b>, Department of Biomedical Sciences, UIC College of Medicine at Rockford, USA</p>
10:40am	<p><b>H2-1-TuM-9</b> Engineering Metal-MAX Phase Multilayered Nanolaminates for Tunable Strength and Toughness, <b>Skye Supakul</b>, <b>S. Pathak</b>, Iowa State University, USA; <b>K. Yaddanapudi</b>, University of California at Davis, USA</p>	

# Tuesday Morning, May 23, 2023

<b>Coatings for Use at High Temperatures</b> <b>Room Pacific E - Session A1-3-TuM</b> <b>Coatings to Resist High-temperature Oxidation, Corrosion, and Fouling III</b> <b>Moderators:</b> <b>Gustavo García-Martín</b> , REP-Energy Solutions, Spain, <b>Justyna Kulczyk-Malecka</b> , Manchester Metropolitan University,		<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country D - Session B4-3-TuM</b> <b>Properties and Characterization of Hard Coatings and Surfaces III</b> <b>Moderators: Naureen Ghafoor</b> , Linköping University, Sweden, <b>Marcus Günther</b> , Robert Bosch GmbH, Germany, <b>Fan-Yi Ouyang</b> , National Tsing Hua University, Taiwan	
8:00am	<b>A1-3-TuM-1</b> Excellent Tribological, Mechanical, and Anti-Corrosion Performance of Agro-Waste as Corrosion Inhibitor for Carbon Steel in an Acidic Environment, <i>Omatayo Sanni, J. Ren, T. Jen</i> , Department of Mechanical Engineering Science, University of Johannesburg, South Africa		
8:20am	<b>A1-3-TuM-2</b> Study of Materials and Coatings for Use in High Temperature CO <sub>2</sub> Environments, <i>Jianliang Lin</i> , Southwest Research Institute, USA	<b>B4-3-TuM-2</b> Is It Meaningful to Quantify Vacancy Concentrations of (Ti,Al)N Thin Films Based on Laser-Assisted Atom Probe Tomography Data?, <i>Marcus Hans</i> , Materials Chemistry, RWTH Aachen University, Germany; <i>M. Tkadletz</i> , Department of Materials Science, Montanuniversität Leoben, Austria; <i>D. Primetzhofer</i> , Department of Physics and Astronomy, Uppsala University, Sweden; <i>H. Waldl</i> , Christian Doppler Laboratory for Advanced Coated Cutting Tools, Montanuniversität Leoben, Austria; <i>M. Schiester</i> , Materials Center Leoben Forschung GmbH, Austria; <i>M. Bartosik</i> , Department of Materials Science, Montanuniversität Leoben, Austria; <i>C. Czettel</i> , CERATIZIT Austria GmbH, Austria; <i>N. Schalk</i> , Christian Doppler Laboratory for Advanced Coated Cutting Tools, Montanuniversität Leoben, Austria; <i>C. Mitterer</i> , Department of Materials Science, Montanuniversität Leoben, Austria; <i>J. Schneider</i> , Materials Chemistry, RWTH Aachen University, Germany	
8:40am	<b>A1-3-TuM-3</b> Liquid Aluminum-Induced Wear of Ni-Based Superalloy at Elevated Temperatures, <i>Hongfei Liu</i> , Institute of Materials Research and Engineering (IMRE), A*STAR (Agency for Science, Technology and Research), Singapore; <i>N. Gong</i> , Institute of Materials Research and Engineering (IMRE), Singapore; <i>R. Karyappa, T. Meng</i> , Institute of Materials Science and Engineering (IMRE), Singapore	<b>B4-3-TuM-3</b> The Oxidation Behavior of VMoN Thin Films Deposited by High Power Pulsed Magnetron Sputtering, <i>Nan-Cheng Lai, J. Huang</i> , National Tsing Hua University, Taiwan	
9:00am	<b>A1-3-TuM-4</b> Characteristics and Resistance of CVD Hafnium Carbide Coating in Extreme Environments, <i>Hyeon-Geun Lee, J. Lee, D. Kim, B. Jun, W. Kim, J. Park</i> , Korea Atomic Energy Research Institute, Republic of Korea	<b>B4-3-TuM-4</b> Correlation Between Microstructure and Mechanical Properties of BaC Thin Films Deposited by Pulsed Laser Deposition, <i>Falko Jahn, S. Weißmantel</i> , Laserinstitut Hochschule Mittweida, Germany	
9:20am	<b>A1-3-TuM-5</b> High Temperature Corrosion Protection of Zirconium Fuel Rods in Nuclear Reactors by Nanocrystalline Diamond (Ncd) Layers, <i>Frantisek Fendrych</i> , Institute of Physics Academy of Sciences of the Czech Republic	<b>B4-3-TuM-5</b> Evaluation of Fracture Toughness of Borided Materials by Cross-Sectional Scratch Testing, <i>F. Alfonso-Reyes, André Ballesteros-Arguello, J. Martínez-Trinidad</i> , SEPI ESIME Instituto Politécnico Nacional, Mexico; <i>A. Ocampo-Ramírez</i> , Universidad Veracruzana, Mexico; <i>G. Rodríguez-Castro</i> , SEPI ESIME Zacatenco, Mexico; <i>A. Meneses-Amador</i> , SEPI ESIME Instituto Politécnico Nacional, Mexico	
9:40am	<b>A1-3-TuM-6</b> Effect of Vacuum Annealing on the Residual Stress of ZrN Thin Film deposited on Ni-based Superalloy Haynes 282, <i>Kuan-Che Lan, C. Li</i> , National Tsing Hua University, Taiwan; <i>H. Tung</i> , Institute of Nuclear Energy Research, Taiwan	<b>B4-3-TuM-6</b> Stress Evolution in Binary Metal Alloy Systems, <i>Tong Su</i> , Brown University, USA; <i>J. Robinson, G. Thompson</i> , The University of Alabama, USA; <i>E. Chason</i> , Brown University, USA	
10:00am	<b>A1-3-TuM-7</b> Study at Pilot Plant Scale on Biomass Corrosion Resistance of FeCr and CoCrMo Coatings Applied by HVOF, <i>M. de Miguel Gamo, G. García Martín, M. Lasanta Carrasco, M. Lambrecht</i> , Universidad Complutense de Madrid, Spain; <i>F. Gonçalves</i> , Teandm - tecnologia engenharia e materiais s.a, Portugal; <i>M. Sousa</i> , teandm - tecnologia engenharia e materiais s.a, Portugal; <i>A. Bahillo, M. Benito</i> , Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Spain; <i>Francisco Javier Pérez Trujillo</i> , Universidad Complutense de Madrid, Spain	<b>INVITED: B4-3-TuM-7</b> Molecular Engineering of Inorganic Thin Film Interfaces for Accessing Multiple Novel Properties for Diverse Applications, <i>Ganpati Ramanath</i> , Rensselaer Polytechnic Institute, USA	
10:20am	<b>A1-3-TuM-8</b> Sol-Gel Coating to Protect Materials Exposed Under Carbonates Used as a Thermal Energy Storage System in Central Tower Power Plants, <i>Gustavo García Martín, M. de Miguel Gamo, M. Lasanta Carrasco, M. Lambrecht, F. Pérez Trujillo</i> , Universidad Complutense de Madrid, Spain		
10:40am			

# Tuesday Morning, May 23, 2023

<p><b>Topical Symposia</b>  <b>Room Town &amp; Country A - Session TS1-3-TuM</b>  <b>Coatings for Energy Storage and Conversion - Batteries and Hydrogen Applications III</b>  <b>Moderators:</b>  <b>Nazlim Bagcivan</b>, Schaeffler Technologies GmbH &amp; Co. KG, Germany,  <b>Klaus Böbel</b>, Bosch Manufacturing Solutions, Germany</p>		<p><b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b>  <b>Room Town &amp; Country B - Session E3-1-TuM</b>  <b>Tribology of Coatings and Surfaces for Industrial Applications I</b>  <b>Moderators: Nazlim Bagcivan</b>, Schaeffler Technologies GmbH &amp; Co. KG, Germany, <b>Rainer Cremer</b>, KCS Europe GmbH, Germany, <b>Philipp Grützmaier</b>, Institute of Engineering Design and Product Development, Austria</p>
8:00am		<p><b>INVITED: E3-1-TuM-1</b> Carbon Based Coatings Deposited Over Aisi 4140 to Improve Wear Resistance in Machine Components, <i>F. Delfin</i>, UTN, Argentina; <i>D. Heim</i>, Upper University of Applied Sciences, Wels Campus, Austria; <i>Sonia Brühl</i>, UTN, Argentina</p>
8:20am	<p><b>TS1-3-TuM-2</b> High-Performance Rechargeable Zinc Ion Batteries: From Surface Modification of Zn Anode and Structural Engineered Cathode to Deep Eutectic Solvent (DES)-Based Electrolytes, <i>Yu-Lun Chueh</i>, National Tsing Hua University, Taiwan</p>	
8:40am	<p><b>TS1-3-TuM-3</b> Electrochemical Performances of LiNi<sub>0.8</sub>Co<sub>0.1</sub>Mn<sub>0.1</sub>O<sub>2</sub> Synthesized by Hydroxide Coprecipitation Method, <i>Chia-Hsin Lo, J. Huang</i>, National Cheng Kung University (NCKU), Taiwan; <i>C. Chang</i>, National University of Tainan, Taiwan</p>	<p><b>E3-1-TuM-3</b> Tribological Behaviour of Diamond Coated Reaction-Bonded Silicon Carbide Under Dry and Seawater Environment, <i>R. Kannan, N. C.</i>, Indian Institute of Technology Madras, India; <i>R. Ganguly, S. Mandal, S. Rao</i>, Carborundum Universal Limited, Industrial Ceramic Division, India; <b>M.S Ramachandra Rao</b>, Indian Institute of Technology Madras, India</p>
9:00am	<p><b>TS1-3-TuM-4</b> Pb-Free Halide Perovskite/TiO<sub>2</sub> Heterostructure for Enhanced Solar-Driven PFC, <i>Yong Yu, J. Ting</i>, National Cheng Kung University (NCKU), Taiwan</p>	<p><b>E3-1-TuM-4</b> Friend or Foe? The Role of Oxygen in the Tribological Performance of Solid Lubricant MoS<sub>2</sub>, <i>Andrey Bondarev</i>, Czech Technical University in Prague, School of Engineering, Bernal Institute, University of Limerick; <i>I. Ponomarev, T. Polcar</i>, Czech Technical University in Prague, Czechia</p>
9:20am	<p><b>TS1-3-TuM-5</b> Inline PVD Coating of Bipolar Plates for Electrochemical Energy Converters, <i>K. Böbel, M. Mueller</i>, Bosch Manufacturing Solutions, Germany; <i>D. Beisenherz, S. Huebner</i>, Singulus Technologies AG, Germany; <i>J. Jiao, S. Wetzel, Rafael Gryga</i>, Bosch Automotive Products (Suzhou) Co., Ltd., Germany</p>	<p><b>E3-1-TuM-5</b> Tribological Properties MoS<sub>2</sub>-WC Duplex Coatings in Low Viscosity Hydrocarbons, <i>Euan Cairns</i>, University of North Texas, USA; <i>S. Dixit</i>, Plasma Technology Inc., USA; <i>D. Berman, S. Aouadi, A. Voevodin</i>, University of North Texas, USA</p>
9:40am	<p><b>TS1-3-TuM-6</b> Studies on the TiO<sub>2</sub> Thin Film on the Silicon Nanowire Arrays using Taguchi - Grey Method for Heterojunction Solar Cell, <i>A. Chiou, H. Liao, Jun-Luo Wei</i>, National Formosa University, Taiwan</p>	<p><b>INVITED: E3-1-TuM-6</b> Modification of Diamond Like Carbon (DLC) to Improve Specific Tribological Characteristics for Automotive Applications, <i>Denis Romagnoli, F. Lavalle</i>, STS srl, Italy</p>
10:00am	<p><b>TS1-3-TuM-7</b> Impacts of Mutual Phase Interactions on Crystal Polarity and Photocatalytic Hydrogen Evolution Reactions, <i>Jrjeng Ruan</i>, National Cheng Kung University (NCKU), Taiwan</p>	
10:20am	<p><b>TS1-3-TuM-8</b> Systematic Investigation of the Piezocatalysis-Adsorption Duality of Polymorphic MoS<sub>2</sub> Nanoflowers, <i>Hsun Yen Lin</i>, National Tsing Hua University, Taiwan</p>	<p><b>E3-1-TuM-8</b> Fabrication and Tribological Behaviors of DLC Coatings Embedded with Graphene Nanoplatelets, <i>Guizhi Wu, R. Brittain, A. Marina</i>, University of Leeds, UK; <i>E. Broitman</i>, SKF Research &amp; Technology Development Center, Netherlands; <i>L. Yang</i>, University of Leeds, UK</p>
10:40am	<p><b>TS1-3-TuM-9</b> Improving Urea Oxidation Reaction Performance by Enhancing Gas Releasing, <i>Ming Feng Tsai, J. Ting</i>, National Cheng Kung University (NCKU), Taiwan</p>	

# Tuesday Morning, May 23, 2023

**Exhibitors Keynote Lecture**  
**Room Town & Country A - Session EX-TuM**  
**Exhibition Keynote Lecture**  
**Moderator: Samir Aouadi**, University of North Texas, USA

11:00am **INVITED: EX-TuM-1** Future Requirements for Advanced Surface Modification and Coatings Technologies for Turbine Engine Applications, *David Furrer*, Pratt and Whitney, USA

12:00pm **COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)**

# Tuesday Afternoon, May 23, 2023

<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Town &amp; Country A - Session H3-1-TuA</b>  <b>Characterization of Coatings and Small Volumes in Extreme and Cyclic Conditions I</b>  <b>Moderators:</b>  <b>Peter Hosemann</b>, Univ. of California, Berkeley, USA,  <b>Barbara Putz</b>, Montanuniversität Leoben, Austria</p>		<p><b>Coatings for Biomedical and Healthcare Applications</b>  <b>Room Pacific D - Session D3-TuA</b>  <b>Biointerfaces: Coatings to Promote Cell Adhesion while Inhibiting Microbial Growth</b>  <b>Moderators:</b>  <b>Valentim A.R. Barão</b>, University of Campinas (UNICAMP), Brazil,  <b>Sandra E. Rodil</b>, Universidad Nacional Autónoma de México</p>	
1:40pm	<p><b>INVITED: H3-1-TuA-1</b> Local Deformation Mechanisms under Ambient and Non-Ambient Conditions Tested via Advanced Nanoindentation, <b>Verena Maier-Kiener</b>, Montanuniversität Leoben, Leoben, Austria</p>	1:40pm	<p><b>INVITED: D3-TuA-1</b> Chemical Vapor Deposition of Tantalum for Enhanced Cell Adhesion, <b>Jessica DeBerardinis</b>, Ultramet, USA</p>
2:00pm		2:00pm	
2:20pm	<p><b>H3-1-TuA-3</b> Extracting High-Temperature Stress-Strain Curves and Assessing Transformation Pressures: The Spherical Indentation of Silicon, <b>Gerald Schaffar</b>, Montanuniversität Leoben, Austria; <b>D. Tscharnuter</b>, KAI Kompetenzzentrum Automobil- und Industrieelektronik GmbH, Austria; <b>V. Maier-Kiener</b>, Montanuniversität Leoben, Austria</p>	2:20pm	<p><b>D3-TuA-3</b> The Functionalization of N95 Masks Using Atomic Layer Deposited Silver Nano-Islands to Induce Antimicrobial Activity, <b>Harshdeep Bhatia</b>, <b>C. Takoudis</b>, University of Illinois, Chicago, USA</p>
2:40pm	<p><b>H3-1-TuA-4</b> Micro-Impact Tests of Novel Thermal Barrier Coating Systems and &gt;1000C Nanoindentation on Ni-Base Superalloy, <b>Ben Beake</b>, Micro Materials Ltd, UK; <b>C. Chalk</b>, Cranfield University, UK; <b>S. Goodes</b>, <b>A. Harris</b>, Micro Materials Ltd, UK; <b>L. Isern</b>, <b>J. Nicholls</b>, Cranfield University, UK</p>	2:40pm	<p><b>INVITED: D3-TuA-4</b> Cold Atmospheric Plasma Jets Generated from Flexible Sources, <b>C. Corbella</b>, <b>Sabine Portal</b>, <b>H. Solomon</b>, <b>M. McCraw</b>, <b>M. Keidar</b>, <b>S. Solares</b>, George Washington University, USA</p>
3:00pm	<p><b>H3-1-TuA-5</b> Influence of Si on the Mechanical Properties and High-temperature Fracture Toughness of Cr-Si-B<sub>2x2</sub> Coatings, <b>L. Zauner</b>, <b>Rainer Hahn</b>, CDL-SEC at TU Wien, Austria; <b>O. Hunold</b>, <b>J. Ramm</b>, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <b>S. Kolozsvari</b>, <b>P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>H. Riedl</b>, CDL-SEC at TU Wien, Austria</p>	3:00pm	
3:20pm	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	3:20pm	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>
3:40pm		3:40pm	
4:00pm	<p><b>INVITED: H3-1-TuA-8</b> Nanoindentation Measurements at Combined High Sustained Strain Rates and Elevated Temperatures, <b>Benoit Merle</b>, University of Kassel, Germany</p>	4:00pm	<p><b>D3-TuA-8</b> Multifunctional Coating Approach Integrating Visible-Light Driven Photodynamic Therapy and Photocatalytic Activity for Controlling Biofilm Accumulation and Reinforcing Wear Protection, <b>Bruna Nagay<sup>1</sup></b>, <b>C. Dini</b>, <b>R. Costa</b>, <b>A. Santos</b>, University of Campinas (UNICAMP), Brazil; <b>J. Cordeiro</b>, Centro Universitário das Faculdades Associadas de Ensino, Brazil; <b>B. Gomes</b>, University of Campinas (UNICAMP), Brazil; <b>E. Rangel</b>, <b>N. Cruz</b>, Sao Paulo State University, Brazil; <b>J. van den Beucken</b>, Radboud University Medical Center, Netherlands; <b>V. Barão</b>, University of Campinas (UNICAMP), Brazil</p>
4:20pm		4:20pm	<p><b>D3-TuA-9</b> ZnO<sub>x</sub> Nanolayers as Antimicrobial Surfaces, <b>L. Reyes-Carmona</b>, Universidad Nacional Autónoma de México; <b>O. Sepulveda-Robles</b>, Instituto Mexicano del Seguro Social, Mexico; <b>A. Almaguer-Flores</b>, <b>C. Ramos-Vilchis</b>, <b>Sandra E. Rodil</b>, Universidad Nacional Autónoma de México</p>
4:40pm		4:40pm	<p><b>D3-TuA-10</b> Cytocompatibility of Chitosan-Silver Coated Titanium Coupons, <b>E. Coleman Montgomery</b>, <b>J. Amber Jennings</b>, <b>M. Atwill</b>, <b>J. Bumgardner</b>, University of Memphis, USA</p>
5:00pm		5:00pm	<p><b>D3-TuA-11</b> Nonsurgical Decontamination Protocols for 3D-Printed Implant Surfaces, <b>Valentim Barão</b>, <b>R. Costa</b>, <b>T. Takeda</b>, <b>C. Dini</b>, University of Campinas (UNICAMP), Brazil; <b>M. Bertolini</b>, University of Pittsburgh, USA; <b>M. Feres</b>, <b>J. Shibli</b>, <b>J. Souza</b>, Guarulhos University, Brazil</p>



# Tuesday Afternoon, May 23, 2023

<b>Coatings for Use at High Temperatures</b> <b>Room Pacific E - Session A2-1-TuA</b> <b>Thermal and Environmental Barrier Coatings I</b> <b>Moderators:</b> <b>Sabine Faulhaber</b> , University of California, San Diego, USA, <b>Kang N. Lee</b> , NASA Glenn Research Center, USA		<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country D - Session B4-4-TuA</b> <b>Properties and Characterization of Hard Coatings and Surfaces IV</b> <b>Moderators: Naureen Ghafoor</b> , Linköping University, Sweden, <b>Marcus Günther</b> , Robert Bosch GmbH, Germany, <b>Fan-Yi Ouyang</b> , National Tsing Hua University, Taiwan	
1:40pm	<b>A2-1-TuA-1</b> Influence of Microstructure on Phase Transformation of Plasma Sprayed YSZ Coatings Under Thermal Gradient Cycling Conditions, <i>Simon Schöler</i> , <i>D. Mack</i> , <i>Y. Sohn</i> , Forschungszentrum Juelich GmbH, Germany; <i>M. Rudolphi</i> , DECHEMA, Germany; <i>M. Adam</i> , TU Darmstadt, Germany; <i>R. Vassen</i> , <i>O. Guillon</i> , Forschungszentrum Juelich GmbH, Germany	B4-4-TuA-1	Magnetron Sputter Deposition of Ultrathick Boron Carbide Coatings on Spherical Substrates for Inertial Confinement Fusion, <i>J. B. Merlo</i> , <i>G. Taylor</i> , <i>S. Shin</i> , <i>L. Bayu Aji</i> , <i>J. Bae</i> , <i>L. Sohngen</i> , <i>S. Kucheyev</i> , Lawrence Livermore National Laboratory, USA
2:00pm	<b>A2-1-TuA-2</b> A New Method to Diagnose Early Stages of CMAS Infiltration in Thermal Barrier Coatings, <i>Vladimir Pankov</i> , <i>K. Chen</i> , <i>P. Patnaik</i> , National Research Council of Canada	B4-4-TuA-2	Corrosion and Electrical Insulation Properties of SiO <sub>x</sub> Thin Films Deposited by Microwave PECVD, <i>Atreya Danturthi</i> , <i>R. Drummond Brydson</i> , University of Leeds, UK; <i>I. Kolev</i> , Hauzer, Netherlands; <i>L. Yang</i> , <i>A. Bell</i> , <i>G. Wu</i> , University of Leeds, UK
2:20pm	<b>A2-1-TuA-3</b> Mechanical Behavior of a Nial Coating: Effect of Thermal Aging on the Brittle-to-Ductile Transition Temperature, <i>Capucine Billard</i> , <i>V. Maurel</i> , Mines ParisTech, PSL Research University, France; <i>D. Texier</i> , Institut Clement Ader (ICA), France; <i>D. Marquie</i> , Safran Aircraft Engines, France; <i>N. Bourhila</i> , Safran aircraft engines, France; <i>L. Marcin</i> , Safran aircraft engines, France	INVITED: B4-4-TuA-3	High-Throughput Methodology for The Realization of High-Entropy High-Dielectric-Constant Ba(Ti,Zr,Ta,Hf,Mo)O <sub>3</sub> Film-Based Metal-Oxide-Semiconductor-Related Devices, <i>Kao-Shuo Chang</i> , National Cheng Kung University (NCKU), Taiwan; <i>V. Nguyen</i> , No.1, University Road, Taiwan; <i>T. NAGATA</i> , National Institute for Materials Science, Japan
2:40pm	<b>INVITED: A2-1-TuA-4</b> Failure Mechanisms of Conventional Thermal Barrier Coatings and Development of Alternate Coating Systems for IGT Applications, <i>Prabhakar Mohan</i> , <i>B. Cottom</i> , Solar Turbines Inc., USA	B4-4-TuA-5	Effects of Nitrogen Flow Ratio on the Mechanical and Anticorrosive Properties of Co-sputtered (TiZrHfTa)N <sub>x</sub> Films, <i>Tzu-Yu Ou</i> , National Taiwan Ocean University, Taiwan; <i>L. Chang</i> , Ming Chi University of Technology, Taiwan; <i>Y. Chen</i> , National Taiwan Ocean University, Taiwan
3:00pm			
3:20pm	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	3:20pm	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>
3:40pm		3:40pm	
4:00pm	<b>A2-1-TuA-8</b> Manufacturing and Performance of a Three-Layer Environmental Barrier Coating System for SiC/SiC CMCs by Magnetron Sputtering, <i>Ronja Anton</i> , <i>V. Leisner</i> , <i>U. Schulz</i> , German Aerospace Center (DLR), Germany	B4-4-TuA-8	Magnetron Sputter Deposition of Boron Carbide in Ne and Ar Plasmas, <i>Liam Sohngen</i> , <i>S. Shin</i> , <i>L. Bayu Aji</i> , <i>G. Taylor</i> , <i>J. Bae</i> , <i>A. Engwall</i> , <i>J. Hammons</i> , <i>S. Kucheyev</i> , Lawrence Livermore National Laboratory, USA
4:20pm	<b>A2-1-TuA-9</b> EBC Multi-Layer Coatings on SiC-CMC Substrates Synthesized in a Continuous Vacuum Deposition Process, <i>Xavier Maeder</i> , <i>D. Casari</i> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; <i>D. Chen</i> , Oerlikon Metco (US) Inc., USA; <i>K. Glaentz</i> , Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <i>J. Michler</i> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; <i>H. Schoech</i> , <i>B. Widrig</i> , <i>J. Ramm</i> , Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein		
4:40pm	<b>A2-1-TuA-10</b> Developments of the Slag-Based Geopolymer Coatings by the Flame Spray, <i>Wan-Ting Huang</i> , <i>I. Huang</i> , <i>W. Lee</i> , <i>Y. Yang</i> , Department of Material and Mineral Resources Engineering, National Taipei University of Technology, Taipei, TAIWAN		
5:00pm	<b>A2-1-TuA-11</b> Thermal Spray Coating with Ceramic Microspheres for Acoustic Absorption Applications, <i>Ting-Ya Chuang</i> , <i>W. Lee</i> , <i>Y. Yang</i> , National Taipei University of Technology, Taiwan		

# Tuesday Afternoon, May 23, 2023

	<p><b>New Horizons in Coatings and Thin Films</b>  <b>Room Town &amp; Country C - Session F3-TuA</b>  <b>2D Materials: Synthesis, Characterization, and Applications</b>  <b>Moderators: Ying-Hao Chu</b>, National Tsing Hua University, Taiwan , <b>Chih-Yen Chen</b>, National Sun Yat-sen University, Taiwan , <b>Yi-Cheng Chen</b>, National Tsing Hua University, Taiwan</p>	<p><b>Topical Symposia</b>  <b>Room Pacific F-G - Session TS2-TuA</b>  <b>Sustainable Surface Solutions, Materials, Processes and Applications</b>  <b>Moderators: Justin Cheney</b>, Oerlikon Balzers Coating Germany GmbH, Germany, <b>Fan-Bean Wu</b>, National United University, Taiwan</p>
1:40pm	<p><b>INVITED: F3-TuA-1</b> Tellurene Electronics and Sensors, <b>Wenzhuo Wu</b>, Purdue University, USA</p>	<p><b>TS2-TuA-1</b> Application of High Entropy Spinel Oxides on Photodetector, <b>Jyun-Yi Li</b>, <b>K. Kuo</b>, National Cheng Kung University (NCKU), Taiwan; <b>T. Nguyen</b>, National Cheng Kung University (NCKU), Taiwan, Viet Nam; <b>P. Hsiao</b>, <b>C. Chen</b>, <b>J. Ting</b>, National Cheng Kung University (NCKU), Taiwan</p>
2:00pm		<p><b>TS2-TuA-2</b> Euro 7/VII – Challenges for Surface Solutions in ICEVs and EVs, <b>J. Vetter</b>, Oerlikon Balzers Coating Germany GmbH, Germany; <b>Justin Cheney</b>, Oerlikon Balzers Coating; <b>J. Becker</b>, JB, Germany; <b>M. Esselbach</b>, Oerlikon Surface Solutions AG, Liechtenstein</p>
2:20pm	<p><b>INVITED: F3-TuA-3</b> Phase/Structure-Engineered Two-Dimensional Layered Materials for Innovative Nanoelectronics, <b>Yu-Lun Chueh</b>, National Tsing Hua University, Taiwan</p>	<p><b>INVITED: TS2-TuA-3</b> Surface Technology as a Key Technology for New Energy Systems, <b>Yashar Musayev</b>, <b>L. Dobrenizki</b>, Siemens Energy Global GmbH &amp; Co. KG, Germany</p>
2:40pm		
3:00pm	<p><b>F3-TuA-5</b> Tellurene-Based Wearable Biosensor for Real-Time Longitudinal Monitoring of Neurotransmitters in Human Sweat, <b>Ruifang Zhang</b>, <b>W. Wu</b>, Purdue University, USA</p>	
3:20pm	<p><b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b></p>	<p><b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b></p>
3:40pm		
4:00pm	<p><b>F3-TuA-8</b> A Two-Dimensional <math>Ti_3C_2Tx</math> MXene/Mesochannel Ionic Diode Membrane for High-Performance Osmotic Energy Harvesting, <b>Wen-Hsin Hung</b>, National Taiwan University of Science and Technology, Taiwan; <b>C. Chu</b>, Feng Chia University, Taiwan; <b>L. Yeh</b>, National Taiwan University of Science and Technology, Taiwan</p>	<p><b>INVITED: TS2-TuA-8</b> Progress on Piezoelectrocatalysis for Hydrogen Production and Environmental Science, <b>Jyh-Ming Wu</b>, National Tsing Hua University, Taiwan</p>
4:20pm	<p><b>F3-TuA-9</b> Discussion on the Growth Parameters and Oxygen Evolution Reaction Performance of Copper Sulfide, <b>Li-Wen Lin</b>, <b>C. Chen</b>, Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Taiwan</p>	
4:40pm	<p><b>F3-TuA-10</b> Cation and Anion Co-Doped Iron Oxide Toward Efficient Hydrogen Peroxide Formation and Electro-Fenton Degradation of Organic Pollutant, <b>Yemima Purba</b>, <b>J. Ting</b>, National Cheng Kung University (NCKU) Tainan, Taiwan</p>	<p><b>TS2-TuA-10</b> Visible Light Activated Photocatalytic Coatings by Reactive Magnetron Sputtering for Environmental Applications, <b>Peter Kelly</b>, John Dalton Building, Chester Street, UK; <b>M. Ratava</b>, <b>J. Redfern</b>, Manchester Metropolitan University, U.K.</p>
5:00pm	<p><b>F3-TuA-11</b> Molten Salt Synthesis of Highly Dispersible Hexagonal Boron Nitride Nanosheets for Ultrafiltration, <b>Neon Vicente III Rosell</b>, National Cheng Kung University (NCKU), Taiwan, Philippines; <b>K. Chang</b>, National Cheng Kung University (NCKU), Taiwan</p>	<p><b>TS2-TuA-11</b> A Covalent Organic Framework-Based Ionic Diode Membrane for Ultrahigh Blue Energy Generation, <b>Yu-Chun Su</b>, <b>L. Yeh</b>, National Taiwan University of Science and Technology, Taiwan</p>

# Tuesday Afternoon, May 23, 2023

<p><b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b>  <b>Room Town &amp; Country B - Session E1-1-TuA</b>  <b>Friction, Wear, Lubrication Effects, and Modeling I</b>  <b>Moderators: Noora Manninen, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein, Andreas Rosenkranz, Universidad de Chile, Manel Rodriguez Ripoll, AC2T Research GmbH, Austria</b></p>		
1:40pm	<p><b>INVITED: E1-1-TuA-1</b> Chemistry and Mechanical Properties of 2D Transition Metal Carbides and Carbonitrides (MXenes), <b>Vadym Mochalin</b>, University of Missouri S&amp;T, USA</p>	
2:00pm		
2:20pm	<p><b>E1-1-TuA-3</b> Tribocorrosion Behaviours of VNbMoTaWCr High Entropy Alloy Coatings, <b>Ismail Rahmadtulloh</b>, C. Wang, W. Wang, National Taiwan University of Science and Technology, Taiwan; B. Lou, Chang Gung University, Taiwan; J. Lee, Ming Chi University of Technology, Taiwan</p>	
2:40pm	<p><b>E1-1-TuA-4</b> Fundamentals of Phototribology, B. Perotti, UCS, Brazil; A. Cammarata, Czech Technical University in Prague, Czech Republic; F. Cemin, Nantes Université, France; S. Sales de Mello, Université Grenoble Alpes, CNRS, France; L. Leidens, UCS, Brazil; F. Echeverrigaray, UNICAMP, Brazil; T. Minea, Université Paris-Saclay, France; F. Alvarez, UNICAMP, Brazil; A. Michels, UCS, Brazil; T. Polcar, University of Southampton, UK; <b>Carlos Figueroa</b>, UCS, Brazil</p>	
3:00pm	<p><b>E1-1-TuA-5</b> Ultra-thin nanotwinned (CoCrNi)<sub>100-x</sub>W<sub>x</sub> Medium Entropy Alloy Film: Role of Nanotwin in Mechanical and Tribology Behaviors, <b>Jhen-De You</b>, National Taiwan University, Taiwan; P. Yiu, Ming Chi University of Technology, Taiwan; C. Hsueh, National Taiwan University, Taiwan</p>	
3:20pm	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	
3:40pm		
4:00pm	<p><b>E1-1-TuA-8</b> Understanding the Tribology Behavior of Carbon Thin Films Deposited by the HiPIMS Technique in Ar+Ne Atmospheres, <b>Cesar D. Rivera Tello</b>, Universidad de Guadalajara CUCEI, Departamento de Ingeniería mecánica eléctrica, Mexico; L. Flores Cova, A. Guerrero de León, J. Pérez Alvarez, M. Flores Martínez, Universidad de Guadalajara CUCEI, Mexico</p>	
4:20pm	<p><b>E1-1-TuA-9</b> Effect of Sizing on the Adhesion Properties of Reclaimed Fiberglass Composites, <b>Nour Halawani</b>, Composite Recycling and LPAC - EPFL, Switzerland; M. Anderson, P. Gallo, G. Perben, Composite Recycling, Switzerland; V. Michaud, LPAC - EPFL, Switzerland</p>	
4:40pm	<p><b>E1-1-TuA-10</b> The Effect of Core Crystallographic Orientation on the Dislocation Dynamics of Core-Shell Nanostructures: A Molecular Dynamics Study, <b>Robert Fleming</b>, Arkansas State University, USA</p>	
5:00pm		

# Tuesday Evening, May 23, 2023

## Special Interest Talks

Room Town & Country A - Session SIT2-TuSIT

### Special Interest Session II

Moderator:

Jyh-Wei Lee, Ming Chi University of Technology, Taiwan

7:00pm **INVITED: SIT2-TuSIT-1** Functional Nitride and Oxide Thin Films – the Key to Our Digital World, **Joerg Patscheider**, Evatec AG, Switzerland

7:20pm

# Wednesday Morning, May 24, 2023

	<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Pacific D - Session H2-2-WeM</b>  <b>Advanced Mechanical Testing of Surfaces, Thin Films, Coatings and Small Volumes II</b>  <b>Moderator: James Gibson, University of Oxford, UK</b></p>	<p><b>Coatings for Use at High Temperatures</b>  <b>Room Pacific E - Session A2-2-WeM</b>  <b>Thermal and Environmental Barrier Coatings II</b>  <b>Moderators: Vladislav Kolarik, Fraunhofer Institute for Chemical Technology ICT, Germany,</b>  <b>Pantcho Stoyanov, Concordia University, Canada</b></p>
8:00am		<p><b>A2-2-WeM-1</b> On the Suitability of MoNbTaW Based Thin Films to Act as Diffusion Barriers, <b>Georg C. Gruber<sup>1</sup></b>, Montanuniversität Leoben, Austria; <b>A. Lassnig, S. Zak</b>, Austrian Academy of Sciences, Austria; <b>M. Kirchmair</b>, Montanuniversität Leoben, Austria; <b>S. Wurster, C. Gammer, M. Cordill</b>, Austrian Academy of Sciences, Austria; <b>R. Franz</b>, Montanuniversität Leoben, Austria</p>
8:20am		<p><b>INVITED: A2-2-WeM-2</b> Improvement of EBC Performance by Controlling Driving Forces for Mass Transfers in Oxides, <b>Satoshi Kitaoka</b>, JFCC, Japan; <b>T. Matsudaira, T. Ogawa, M. Wada</b>, Japan Fine Ceramics Center, Japan</p>
8:40am	<p><b>INVITED: H2-2-WeM-3</b> The Nature of Defects and their Dynamics Characterized using Scanning Electron Microscopy Approaches, <b>Dan S. Gianola</b>, University of California Santa Barbara, USA</p>	
9:00am		<p><b>A2-2-WeM-4</b> Steam Oxidation Kinetics of Si / Modified Yb<sub>2</sub>Si<sub>2</sub>O<sub>7</sub> Environmental Barrier Coatings on SiC/SiC Ceramic Matrix Composites at 1250 °C – 1350 °C, <b>Kang Lee, J. Stuckner, M. Presby, B. Pulio</b>, NASA Glenn Research Center, USA; <b>W. Jennings</b>, HX5, USA</p>
9:20am	<p><b>H2-2-WeM-5</b> Measurement of Hardness and Elastic Modulus by Depth Sensing Indentation: Improvements to the Technique Based on Continuous Stiffness Measurement, <b>Warren Oliver</b>, KLA-Tencor, USA; <b>P. Sudharshan</b>, ARCI, India; <b>G. Pharr</b>, Texas A&amp;M University, USA</p>	<p><b>A2-2-WeM-5</b> Oxygen Permeability, Failure Analysis and Life Prediction of Environmental Barrier Coatings Under Adverse Environments, <b>Prakash Patnaik</b>, Aerospace Research Centre, National Research Council Canada; <b>A. Kumar</b>, TECSIS Corporation, Canada; <b>K. Chen</b>, Aerospace Research Centre, National Research Council Canada</p>
9:40am	<p><b>H2-2-WeM-6</b> Ultrasonically Induced Nanofatigue During Nanoindentation, <b>Antanas Daugela</b>, Nanometronix LLC, USA; <b>J. Daugela</b>, Johns Hopkins University, USA</p>	<p><b>A2-2-WeM-6</b> Raman Spectroscopic Investigation of SiO<sub>2</sub> TGO Phase Transformation and Si and SiC Substrate Stress, <b>Michael J. Lance</b>, Oak Ridge National Laboratory, USA; <b>M. Ridley, T. Aguirre, B. Pint</b>, Oak Ridge National Laboratory, USA</p>
10:00am	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>
10:20am		
10:40am		
11:00am	<p><b>H2-2-WeM-10</b> Comparison of Electrical and Image-Based Sensing for Quantitative in Situ TEM Nanomechanical Testing, <b>S. Stangebye, L. Daza, X. Liu, J. Kacher, Olivier Pierron</b>, Georgia Tech, USA</p>	<p><b>INVITED: A2-2-WeM-10</b> Hot Section Coating Technology as an Enabler for Sustainable Propulsion, <b>Eli Ross</b>, Pratt &amp; Whitney, USA</p>
11:20am	<p><b>H2-2-WeM-11</b> Understanding the Interface Strain Induced hcp-to-bcc Phase Transformation in Nanolaminate Mg, <b>K. Jacob</b>, Iowa State University, USA; <b>K. Yaddanapudi</b>, University of California, Davis, USA; <b>M. Jain</b>, University of Nevada, Sandia National Laboratory, USA; <b>J. Michler</b>, EMPA Swiss Federal Laboratories for Materials Science and Technology, Switzerland; <b>S. Pathak</b>, Iowa State University, USA</p>	
11:40am		<p><b>A2-2-WeM-12</b> Development of Tantalum Coating by the Cold Spray, <b>Sheng-Wei Zeng</b>, Department of Material and Mineral Resources Engineering, National Taipei University of Technology, Taipei, Taiwan; <b>Y. Chung, W. Li</b>, National Chung Shan Institute of Science and Technology, Materials and Electro-Optics Research Division, Long-tan, Taiwan; <b>Y. Yang</b>, Department of Material and Mineral Resources Engineering, National Taipei University of Technology, Taipei, Taiwan</p>
12:00pm		
12:20pm	<b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b>	<b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b>

# Wednesday Morning, May 24, 2023

Room Pacific F-G		
8:00am		<b>Functional Thin Films and Surfaces</b> <b>Session C1-1-WeM</b> <b>Optical Materials and Thin Films I</b> <b>Moderators:</b> <b>Silvia Schwyn-Theony</b> , Evatec AG, Switzerland, <b>Juan Antonio Zapien</b> , City University of Hong Kong
8:20am		
8:40am	<b>C1-1-WeM-3</b> High-Rate Deposition of Calcium Fluoride Coatings Using Radio-Frequency Magnetron Sputtering, <i>Sharon Waichman, I. Zukerman, M. Buzaglo, S. Barzilai</i> , NRCN, Israel	
9:00am	<b>C1-1-WeM-4</b> Reactive Sputter Deposition of Nanoporous Black Zinc and White Zinc Oxide Coatings, <i>Jakub Zawadzki</i> , Łukasiewicz Research Network - Institute of Microelectronics and Photonics, Faculty of Materials Science and Engineering - Warsaw University of Technology, Poland; <i>M. Borysiewicz</i> , Łukasiewicz Research Network - Institute of Microelectronics and Photonics, Poland	
9:20am	<b>C1-1-WeM-5</b> High Hall Mobility W-Doped In <sub>2</sub> O <sub>3</sub> Conductive Films with Thicknesses of Less Than 10 Nm Deposited on Glass Substrates, <i>Tetsuya Yamamoto, R. Palani, H. Makino</i> , Kochi University of Technology, Japan	
9:40am	<b>C1-1-WeM-6</b> The Effects of Growth and Post-Annealing Temperatures on MoS <sub>2</sub> Thin Films Deposited by Magnetron Sputtering, <i>C. Chao</i> , National Dong Hwa University, Taiwan; <i>P. Tsai</i> , National Chung-Shan Institute of Science & Technology, Taiwan; <i>P. Wu</i> , Stone & Resource Industry R&D Center, Taiwan; <i>Ing-Song Yu</i> , National Dong Hwa University, Taiwan	
10:00am	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	
10:20am		
10:40am		
11:00am	<b>G2-1-WeM-10</b> Enhanced Tool Surface Properties Against Adhesion in Aluminum Forging, <i>Hanno Paschke, T. Brueckner</i> , Fraunhofer IST am DOC, Germany; <i>A. Thewes</i> , Institute for Surface Technology, TU Braunschweig, Germany; <i>J. Peddinghaus</i> , Institute of Forming Technology and Machines, Leibniz University Hanover, Germany	<b>Surface Engineering - Applied Research and Industrial Applications</b> <b>Session G2-1-WeM</b> <b>Surface Modification of Components in Automotive, Aerospace and Manufacturing Applications I</b> <b>Moderator:</b> <b>Jan-Ole Achenbach</b> , KCS Europe GmbH, Germany
11:20am	<b>G2-1-WeM-11</b> Evaluation of Permanent Thin-Film Coatings Applied to Die Surfaces to Reduce Lubricant Use during Aluminum Forging Operations, <i>J. Vazquez Gonzalez, Stephen Midson, A. Korenyi-Both, K. Clarke</i> , Colorado School of Mines, USA	
11:40am		
12:00pm		
12:20pm	<b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b>	

# Wednesday Morning, May 24, 2023

	<p><b>Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes</b>  <b>Room Town &amp; Country A - Session H3-2-WeM</b>  <b>Characterization of Coatings and Small Volumes in Extreme and Cyclic Conditions II</b>  <b>Moderators:</b>  <b>Peter Hosemann</b>, Univ. of California, Berkeley, USA,  <b>Barbara Putz</b>, Montanuniversität Leoben, Austria</p>	<p><b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b>  <b>Room Town &amp; Country B - Session E1-2-WeM</b>  <b>Friction, Wear, Lubrication Effects, and Modeling II</b>  <b>Moderators: Noora Manninen</b>, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein,  <b>Michael Chandross</b>, Sandia National Laboratories, USA,  <b>Andreas Rosenkranz</b>, Universidad de Chile</p>
8:00am	<p><b>INVITED: H3-2-WeM-1</b> Characterizing Interfacial Straining Mechanisms Using High Temperature <i>in situ</i> Tem, <b>Shen Dillon</b>, University of California Irvine, USA</p>	
8:20am		<p><b>E1-2-WeM-2</b> Coatings and Composites for Extreme Environments Lab (CE)2, <b>Achyuth Kulkarni</b>, <b>T. Ansell</b>, Naval Postgraduate School, USA</p>
8:40am	<p><b>H3-2-WeM-3</b> Quantitative in Situ TEM Observations of a Grain-Boundary-Migration-Assisted, Radiation-Damage Healing Mechanism in Ultrafine Grained Au Thin Films, <b>Lina Daza</b>, <b>S. Stangebye</b>, <b>K. Ding</b>, <b>X. Liu</b>, <b>T. Zhu</b>, <b>J. Kacher</b>, <b>O. Pierron</b>, Georgia Tech, USA</p>	<p><b>E1-2-WeM-3</b> Tribological Behavior of MoS<sub>2</sub> Based Coatings Under Different Sliding to Rolling Lubricated Contact Conditions, <b>Newton Fukumasu</b>, <b>I. Machado</b>, University of São Paulo, Brazil; <b>R. Rego</b>, Aeronautics Institute of Technology, Brazil; <b>A. Tschiptschin</b>, <b>R. Souza</b>, University of São Paulo, Brazil</p>
9:00am		<p><b>E1-2-WeM-4</b> Catalytic Transformation of Lubricants to Wear-Protective Tribofilms on Selected Steel Surfaces During Sliding, <b>Yip-Wah Chung</b>, <b>A. Khan</b>, <b>J. Ahmed</b>, <b>T. Martin</b>, <b>S. Liu</b>, Northwestern University, USA; <b>S. Berkebile</b>, Army Research Laboratory, USA; <b>Q. Wang</b>, Northwestern University, USA</p>
9:20am		<p><b>INVITED: E1-2-WeM-5</b> Aromatic Compounds as Sustainable Lubricants for Iron, <b>Sophie Loehlé</b>, TotalEnergies, France</p>
9:40am		
10:00am	<p><b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b></p>	<p><b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b></p>
10:20am		
10:40am		
	<p><b>Hard Coatings and Vapor Deposition Technologies</b>  <b>Room Town &amp; Country A - Session B3-WeM</b>  <b>Deposition Technologies and Applications for Carbon-Based Coatings</b>  <b>Moderators:</b>  <b>Konrad Fadenberger</b>, Robert Bosch GmbH, Germany,  <b>Ivan Kolev</b>, IHI Hauzer Techno Coating B.V., Netherlands</p>	
11:00am	<p><b>B3-WeM-10</b> ta-C by Magnetron Sputtering Using a Newly Designed Cylindrical Rotating Cathode with Significantly Enhanced Sputter Power Density, <b>Andreas Lümkmann</b>, Platit AG, Switzerland; <b>J. Kluson</b>, <b>M. Učík</b>, Platit a.s., Czechia; <b>H. Bolvardi</b>, Platit AG, Switzerland</p>	<p><b>INVITED: E1-2-WeM-10</b> How Efficient Is the Self Adaption Concept for Low Friction with TMD-Based Sputtered Coatings, <b>Albano Cavaleiro</b>, University of Coimbra, Portugal</p>
11:20am	<p><b>B3-WeM-11</b> High Performance ta-C Coatings with Enhanced Temperature Stability for Industrial Applications, <b>Klaus Böbel</b>, Bosch Manufacturing Solutions, Germany; <b>S. Wetzels</b>, <b>J. Jiao</b>, Bosch Automotive Products, China</p>	
11:40am	<p><b>B3-WeM-12</b> DLC Coatings for Mechanical Seals Applications, <b>S. Tervakangas</b>, Oerlikon Balzers Coating Finland Oy, Finland; <b>N. Manninen</b>, <b>Julien Keraudy</b>, Oerlikon Surface Solutions AG, Liechtenstein; <b>O. Jarry</b>, Oerlikon Balzers Coating Germany GmbH, Germany</p>	<p><b>E1-2-WeM-12</b> Self-Lubricating Titanium Alloys: Design and High Temperature Tribological Performance Up to 800 °C, <b>H. Torres</b>, <b>K. Pichelbauer</b>, <b>S. Budnyk</b>, AC2T Research GmbH, Austria; <b>T. Schachinger</b>, <b>C. Gachot</b>, TU Wien, Austria; <b>Manel Rodriguez Ripoll</b>, AC2T Research GmbH, Austria</p>
12:00pm		<p><b>E1-2-WeM-13</b> Electrodeposited of Silver Nano-Particules Plant Based to Improve Lubrication of Composite Films, <b>Pierre-Antoine Gay</b>, Haute Ecole Arc Ingénierie, Switzerland; <b>I. Markovic Milosevic</b>, HEPIA Institut inSTI, Switzerland; <b>T. Journot</b>, HE ARC Ingénierie, Switzerland; <b>J. Maurer</b>, Faculty of Biology and Medicine. Clinical pharmacology, Switzerland</p>
12:20pm	<p><b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b></p>	<p><b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b></p>

# Wednesday Morning, May 24, 2023

Room Town & Country C		
8:00am	<b>G1-WeM-1</b> Improve Cutting Performance of Carbide Cutting Tools with Multilayer TiAlxN-Based Arc-Cathodic PVD Coating for Industrial Applications, <i>Fernando Santiago</i> , SADOSA, Mexico; <i>D. Melo</i> , ITESM, Mexico	<b>Surface Engineering - Applied Research and Industrial Applications</b> <b>Session G1-WeM</b> <b>Advances in Application Driven Research: New Methods, Materials, and Equipment for PVD, CVD, and PECVD Processes</b> <b>Moderators:</b> <b>Ladislav Bardos</b> , Uppsala University, Sweden, <b>Vikram Bedekar</b> , The Timken Company, USA
8:20am	<b>G1-WeM-2</b> Correlation between Deposition Conditions, Properties and Cutting Performance of Al-Rich AlCrN Wear Protective Coatings Produced by Reactive Arc Evaporation, <i>Alexandre Michau</i> , <i>D. Kurapov</i> , <i>I. Iovkov</i> , <i>S. Fabbro</i> , Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <i>L. Zauner</i> , <i>H. Riedl</i> , CDL-SEC at TU Wien, Austria; <i>D. Cahill</i> , University of Illinois at Urbana-Champaign, USA	
8:40am	<b>G1-WeM-3</b> Designed for Impact: Successful Forming of 3 <sup>rd</sup> Generation Advanced High Strength Steels in Electric Vehicles' Body-in-White, <i>Tobias Brögelmann</i> , <i>T. Hurkmans</i> , IHI Ionbond Netherlands B.V., Netherlands; <i>J. Owens-Mawson</i> , <i>G. Savva</i> , IHI Ionbond LLC, USA	
9:00am	<b>G1-WeM-4</b> In-Situ Incorporation of Nanocontainers During Plasma Electrolytic Oxidation, <i>S. Al Abri</i> , <i>A. Rogov</i> , <i>A. Matthews</i> , <i>B. Mingo</i> , <i>Aleksey Yerokhin</i> , The University of Manchester, UK	
9:20am	<b>G1-WeM-5</b> High-Resolution Investigation of the Microstructural Features and Crystal Forms of Industrial Ti(C,N) CVD Thin Hard Coating, <i>Idriss El Azhari</i> , Saarland University, Germany; <i>J. García</i> , Sandvik Coromant R&D Materials and Processes, Sweden; <i>C. Pauly</i> , <i>J. Barrreiro</i> , <i>M. Engstler</i> , <i>F. Soldera</i> , Saarland University, Germany; <i>L. Llanes</i> , Universitat Politècnica de Catalunya, Spain; <i>F. Mücklich</i> , Saarland University, Germany	
9:40am		
10:00am	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	
10:20am		
10:40am		
11:00am	<b>G4-WeM-10</b> Water-Repellent and Low Emissivity Coatings on Fabric Prepared by Roll-to-Roll Hollow Cathode PECVD and Magnetron Sputtering, <i>J. Jolibois</i> , AGC Interpane Demonstration Center, Germany; <i>G. Arnault</i> , AGC Plasma Technology Solutions, Belgium; <i>N. Koyra</i> , AGC Interpane Demonstration Center, Germany; <i>John Chambers</i> , AGC Plasma Technology Solutions, USA; <i>H. Weis</i> , AGC Interpane Demonstration Center, Germany; <i>H. Wiame</i> , AGC Plasma Technology Solutions, Belgium	<b>Surface Engineering - Applied Research and Industrial Applications</b> <b>Session G4-WeM</b> <b>Hybrid Systems, Processes and Coatings</b> <b>Moderators:</b> <b>Hana Barankova</b> , Uppsala University, Sweden, <b>Sang-Yul Lee</b> , Korea Aerospace University, Republic of Korea
11:20am	<b>G4-WeM-11</b> Amorphous Carbon Coatings on Glass for High Voltage Protection, <i>Hana Barankova</i> , <i>L. Bardos</i> , Uppsala University, Sweden	
11:40am	<b>G4-WeM-12</b> Plasma Pretreatment of Small Parts and Granular Materials in Bulk Vacuum Coating, <i>Heidrun Klostermann</i> , <i>B. Krätzschmar</i> , <i>F. Fietzke</i> , Fraunhofer FEP, Germany	
12:00pm		
12:20pm	<b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b>	



# Wednesday Morning, May 24, 2023

Room Town & Country D		
8:00am	<b>G3-WeM-1</b> A Novel AlCr-Based PVD Coating Design for Threading Operation of Super Duplex Stainless Steel, <i>Qianxi He, J. M. DePaiva, T. K. Filho</i> , McMaster University, Canada; <i>F. L. Amorim, R. D. Torres</i> , Pontificia Universidade Católica do Paraná, Brazil; <i>G. Fox-Rabinovich, S. C. Veldhuis</i> , McMaster University, Canada	<b>Surface Engineering - Applied Research and Industrial Applications</b> <b>Session G3-WeM</b> <b>Innovative Surface Engineering for Advanced Cutting and Forming Tool Applications</b> <b>Moderators:</b> <b>Christoph Schiffers</b> , CemeCon AG, Germany
8:20am	<b>G3-WeM-2</b> Property and Deposition Technology for Highly Al-Containing AlCrN Coatings by Arc Ion Plating, <i>Ryosuke Takei, T. Takahashi, S. Kujime</i> , Kobe Steel Ltd., Japan	
8:40am	<b>INVITED: G3-WeM-3</b> Challenges and Target-Oriented Paths to Maintenance-Free High-Performance Progressive Dies Using HiPIMS-Coatings, <i>Martin Hess</i> , Robert-Bosch-Str., 5, Germany	
9:00am		
9:20am	<b>G3-WeM-5</b> Oxidation and Wear Behavior of CrAlMoN with Varied Mo-content for Cutting TiAl <sub>6</sub> V <sub>4</sub> , <i>K. Bobzin, C. Kalscheuer, Nina Stachowski</i> , Surface Engineering Institute - RWTH Aachen University, Germany; <i>W. Hintze, J. Dege, C. Möller, P. Ploog</i> , Institute of Production Management and Technology - Hamburg University of Technology, Germany	
9:40am		
10:00am	<b>COMPLIMENTARY REFRESHMENTS IN EXHIBIT HALL</b>	
10:20am		
10:40am		
11:00am	<b>INVITED: G3-WeM-10</b> The Significance and Application Area of CVD TiCN/Al <sub>2</sub> O <sub>3</sub> based Coatings for Today's Cutting Tools, <i>Christoph Czettl</i> , CERATIZIT Austria Gesellschaft m.b.H., Austria; <i>M. Pohler</i> , CERATIZIT Austria GmbH, Austria; <i>N. Schalk, M. Tkadletz</i> , Montanuniversität Leoben, Austria; <i>F. Konstantiniuk</i> , Christian Doppler Laboratory for Advanced Coated Cutting Tools at the Department of Materials Science, Montanuniversität Leoben, Austria	
11:20am		
11:40am	<b>G3-WeM-12</b> Indentation and Sliding Contact Testing of Three Laser-textured and PVD-coated Cemented Carbide Tools, <i>Shiqi Fang</i> , Saarland University, Germany; <i>C. Colominas</i> , Flubetech, S.L., Spain; <i>C. Pauly</i> , Saarland University, Germany; <i>N. Salán, L. Llanes</i> , Universitat Politècnica de Catalunya, Spain	
12:00pm		
12:20pm	<b>COMPLIMENTARY LUNCH IN EXHIBIT HALL (While Supplies Last)</b>	

# Wednesday Afternoon, May 24, 2023

## Special Interest Talks

Room Town & Country A - Session SIT3-WeSIT

### Special Interest Session III

Moderator:

Jyh-Wei Lee, Ming Chi University of Technology, Taiwan

1:00pm **INVITED: SIT3-WeSIT-1** Thin Film Sputtering Technologies Enabling Manufacturing of Functional Devices for Smart Society, *Koukou Suu*, ULVAC, Inc., USA

1:20pm

# Wednesday Afternoon, May 24, 2023

	<p><b>Surface Engineering - Applied Research and Industrial Applications</b>  <b>Room Pacific D - Session G2-2-WeA</b>  <b>Surface Modification of Components in Automotive, Aerospace and Manufacturing Applications II</b>  <b>Moderator: Jan-Ole Achenbach, KCS Europe GmbH, Germany</b></p>	<p><b>New Horizons in Coatings and Thin Films</b>  <b>Room Pacific E - Session F4-1-WeA</b>  <b>Boron-Containing Coatings I</b>  <b>Moderators: Marcus Hans, RWTH Aachen University, Germany, Helmut Riedl, TU Wien, Institute of Materials Science and Technology, Austria,</b>  <b>Johanna Rosén, Linköping University, Sweden</b></p>
2:00pm		<p><b>F4-1-WeA-1</b> Improving the Oxidation Resistance of TiB<sub>2</sub> Coatings by TM-silicide Alloying (TM = Ti, Ta, Mo), <b>Ahmed Bahr<sup>1</sup>, O. Beck, T. Glechner, A. Grimmer, T. Wojcik, P. Kutrowatz</b>, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; <b>J. Ramm, O. Hunold</b>, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <b>S. Kolozsvári, P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>E. Ntemou, D. Primetzhofer</b>, Department of Physics and Astronomy, Uppsala University, Sweden; <b>H. Riedl</b>, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria</p>
2:20pm	<p><b>G2-2-WeA-2</b> Effect of Different Diffusion Treatments on the Surface Properties of Austenitic Stainless Steels, <b>Phillip Marvin Reinders, P. Kaestner, G. Bräuer</b>, Technische Universität Braunschweig, Germany</p>	<p><b>INVITED: F4-1-WeA-2</b> Quaternary CrTaBN: Experimental and Theoretical Insights Into a Novel Coating Material with Promising Mechanical Properties and Exceptional Thermal Stability, <b>Christina Kainz</b>, Christian Doppler Lab, Montanuniversität Leoben, Austria; <b>M. Tkadletz</b>, Montanuniversität Leoben, Austria; <b>L. Patterer, D. Bogdanovski</b>, RWTH Aachen University, Germany; <b>H. Krüger</b>, Institute of Mineralogy and Petrography, University of Innsbruck, Austria; <b>A. Stark, N. Schell</b>, Institute of Materials Physics, Helmholtz-Zentrum Hereon, Germany; <b>I. Letofsky-Papst</b>, Institute for Electron Microscopy and Nanoanalysis and Center for Electron Microscopy, Austria; <b>M. Pohler, C. Czettl</b>, Ceratizit Austria GmbH, Austria; <b>J. Schneider</b>, Materials Chemistry, RWTH Aachen University, Germany; <b>C. Mitterer</b>, Montanuniversität Leoben, Austria; <b>N. Schalk</b>, Christian Doppler Lab for Advanced Coated Cutting Tools at the Department of Materials Science, Austria</p>
2:40pm	<p><b>INVITED: G2-2-WeA-3</b> Fine-Tuning of PVD Conditions for Tools Used in Automotive and Manufacturing Applications, <b>Miha Cekada, A. Drnovek, M. Drobnic, M. Panjan, P. Panjan</b>, Jozef Stefan Institute, Slovenia</p>	
3:00pm		<p><b>F4-1-WeA-4</b> Transition Metal Diboride Superlattices: Combination of <i>Ab Initio</i> and Experimental Approach for Investigation of Ceramic Thin Films with Improved Ductility and Fracture Toughness, <b>Tomáš Fiantok</b>, Comenius University, Slovakia; <b>N. Koutná</b>, Linköping University, IFM, Sweden; <b>V. Šroba</b>, Comenius University, Slovakia; <b>M. Meindlhummer</b>, Austrian Academy of Sciences, Austria; <b>T. Roch, M. Truchlý, M. Vidiš, L. Satrapinskyy, M. Gocník</b>, Comenius University, Slovakia; <b>D. G. Sangiovanni</b>, Linköping University, IFM, Sweden; <b>M. Mikula</b>, Comenius University, Slovakia</p>
3:20pm	<p><b>G2-2-WeA-5</b> Development of Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Glass for Space Shuttle Coating, <b>Jun-Yan Qiu, Y. Lee, C. You, G. Hung</b>, Ming Chi University of Technology, Taiwan; <b>R. Montecillo</b>, Ming Chi University of Technology, Taiwan, Philippines; <b>P. Chen, C. Tu, K. Feng</b>, Ming Chi University of Technology, Taiwan</p>	<p><b>F4-1-WeA-5</b> Tissue Phase Affected Fracture Toughness of Nano-Columnar TiB<sub>2+z</sub> Thin Films, <b>Anna Hirle, C. Fuger, R. Hahn, T. Wojcik, P. Kutrowatz</b>, Christian Doppler Laboratory for Surface Engineering of High-performance Components, TU Wien, Austria; <b>M. Weiss</b>, Institute of Chemical Technologies and Analytics, TU Wien, A-1060 Vienna, Austria; <b>O. Hunold</b>, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; <b>P. Polcik</b>, Plansee Composite Materials GmbH, D-86983 Lechbruck am See, Germany; <b>H. Riedl</b>, Christian Doppler Lab for Surface Engineering of High-performance Components, TU Wien, Austria</p>
3:40pm	<p><b>G2-2-WeA-6</b> Analysis of the Temperature Variation of Bizarre Thermal Barrier Coatings and Their Impacts on Engine, <b>Thirunavukkarasu Raja</b>, P.S.V College of Engineering and Technology, India; <b>P. Sivanandi</b>, Government College of Technology, Coimbatore, India; <b>S. Dhandabani, V. Murugan</b>, Sri Ramakrishna Institute of Technology, India</p>	<p><b>INVITED: F4-1-WeA-6</b> Characterization of Ti-Al-La-B-N Hard Coating and Cutting Tool Application, <b>Shin Takayama, T. Ishigaki, M. Takahashi</b>, Mitsubishi Materials Corporation, Japan</p>
4:00pm	<p><b>G2-2-WeA-7</b> Novel High-Entropy Alloy Powders and Their Thermal-Sprayed Coatings for High-Temperature Applications, <b>Shih-Hsun Chen</b>, NTUST, Taiwan</p>	
4:20pm	<p><b>G2-2-WeA-8</b> A Facile Fluoride Sealing Treatment to Improve Corrosion Resistance of Magnetism Alloy (AZ31B) Micro-arc Oxidation Layer, <b>C. Lee</b>, National Defense University, Republic of China; <b>J. Lee</b>, Lung Hwa University of Science and Technology, Taiwan; <b>S. Jian</b>, Ming Chi University of Technology, Taiwan; <b>Ming-Der Ger</b>, National Defense University, Republic of China</p>	<p><b>F4-1-WeA-8</b> Mechanical Properties and Thermal Stability of ZrBSiTaN Films, <b>Kuo-Hong Yeh</b>, National Taiwan Ocean University, Taiwan; <b>L. Chang</b>, Ming Chi University of Technology, Taiwan; <b>Y. Chen</b>, National Taiwan Ocean University, Taiwan</p>
4:40pm	<p><b>G2-2-WeA-9</b> Chemical Vapor Infiltration Technology for Coatings of Fibers and 3D Porous Bodies, <b>Dennis Zywitzki, H. Strakov</b>, IHI Bernex AG, Switzerland</p>	<p><b>F4-1-WeA-9</b> Formation of Orthorhombic MAB Phase Mo<sub>1-x</sub>Cr<sub>x</sub>AlB Solid Solution Thin Films, <b>Peter J. Poellmann, D. Bogdanovski, S. Lellig, M. Hans</b>, RWTH Aachen University, Germany; <b>P. Schweizer</b>, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; <b>D. Holzapfel, P. Zoell, S. Karimi Aghda</b>, Materials Chemistry, RWTH Aachen University, Germany; <b>D. Primetzhofer</b>, Uppsala University, Angstrom Laboratory, Sweden; <b>S. Kolozsvári, P. Polcik</b>, Plansee Composite Materials GmbH, Germany; <b>J. Michler</b>, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; <b>J. Schneider</b>, Materials Chemistry, RWTH Aachen University, Germany</p>
5:00pm		<p><b>F4-1-WeA-10</b> Application of AlTiBN Coating for Cutting Tools for Exotic Materials Machining, <b>Yuta Suzuki, H. Kanaoka</b>, Sumitomo Electric Hardmetal Corporation, Japan</p>
5:20pm		

# Wednesday Afternoon, May 24, 2023

Room Pacific F-G		
2:00pm	<b>C1-2-WeA-1</b> Perovskite Stannate BaSnO <sub>3</sub> Films for Near- and Mid-Infrared Plasmonic Applications, <i>Heungsoo Kim, A. Piqué</i> , Naval Research Laboratory, USA	<b>Functional Thin Films and Surfaces</b> <b>Session C1-2-WeA</b> <b>Optical Materials and Thin Films II</b> <b>Moderators:</b> <b>Silvia Schwyn-Theony</b> , Evatec AG, Switzerland, <b>Juan Antonio Zapien</b> , City University of Hong Kong
2:20pm	<b>C1-2-WeA-2</b> 2-Dimensional Growth of GaS <sub>2</sub> Crystal by Low-Pressure Vapor Phase Deposition, <i>Yijia Chen</i> , National Dong Hwa University, Taiwan; <i>C. Huang</i> , National Dong Hwa University, Taiwan	
2:40pm	<b>C1-2-WeA-3</b> Hysteresis on Voltage-Current Characteristics and Optical Responses of PEDOT:PSS/ZnO Nanorods/ZnO:Ga Heterojunctions, <i>Tomoaki Terasako</i> , Graduate School of Science and Engineering, Ehime University, Japan; <i>M. Yagi</i> , National Institute of Technology, Kagawa College, Japan; <i>T. Yamamoto</i> , Materials Design Center, Research Institute, Kochi University of Technology, Japan	
3:00pm	<b>C1-2-WeA-4</b> Effective Ways to Enhance the Performance of n-MoS <sub>2</sub> /p-CuO Heterojunction Based Self-Powered Photodetectors, <i>KRISHAN KUMAR, D. Kaur</i> , Indian Institute of Technology Roorkee, India	
3:20pm	<b>C1-2-WeA-5</b> Femtosecond Laser Ablation (FESLA) XPS – A Novel XPS Depth Profiling Technique for Optical/Electrical Thin Films and Multi-Layered Structures, <i>Mark Baker, S. Bacon, S. Sweeney</i> , University of Surrey, UK; <i>A. Bushell, T. Nunney, R. White</i> , Thermo Fisher Scientific, UK	
3:40pm		
4:00pm		
4:20pm	<b>E3-2-WeA-8</b> Hard MoSC Solid Lubricant Coating, <i>Tomas Polcar, I. Ponomarev, T. Vitu</i> , Czech Technical University in Prague, Czech Republic	<b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b> <b>Session E3-2-WeA</b> <b>Tribology of Coatings and Surfaces for Industrial Applications II</b> <b>Moderators:</b> <b>Nazlim Bagcivan</b> , Schaeffler Technologies GmbH & Co. KG, Germany, <b>Rainer Cremer</b> , KCS Europe GmbH, Germany, <b>Philipp Grützmaier</b> , Institute of Engineering Design and Product Development, Austria
4:40pm	<b>E3-2-WeA-9</b> Coating Solutions for Wind Turbine Bearings, <i>Esteban Broitman</i> , SKF - Research and Technology Development, Netherlands; <i>T. von Schleinitz</i> , SKF GmbH, Germany	
5:00pm	<b>E3-2-WeA-10</b> Scratch Testing and Tribology Combined with Integrated 3D-Profilometry for in-Depth Characterization of Damage Modes in PVD Coatings, <i>Philippe Kempe</i> , Rtec-Instruments SA, Switzerland	
5:20pm	<b>E3-2-WeA-11</b> Structural, Electrochemical, and Tribological Evaluation of Silver - Hydroxyapatite Multilayer Coatings Obtained by Magnetron Sputtering with Potential Application in Implants, <i>Julián Andrés Lenis Rodas</i> , University of Antioquia, Politécnico Colombiano Jaime Isaza Cadavid and Servicio Nacional de Aprendizaje - SENA, Colombia	

# Wednesday Afternoon, May 24, 2023

	<b>Topical Symposia</b> <b>Room Town &amp; Country B - Session TS3-WeA</b> <b>Processes of Materials for Printed and Flexible Film Technologies</b> <b>Moderators: Panos Patsalas, Aristotle University of Thessaloniki, Greece,</b> <b>Demosthenes Koutsogeorgis, Nottingham Trent University, UK</b>	<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country D - Session B8-1-WeA</b> <b>HIPIMS, Pulsed Plasmas and Energetic Deposition I</b> <b>Moderators:</b> <b>Tiberiu Minea, Université Paris-Saclay, France,</b> <b>Jon Tomas Gudmundsson, University of Iceland</b>
2:00pm	<b>INVITED: TS3-WeA-1</b> Upscalable Nanomanufacturing of Thin-Film Electronics, <b>Thomas Anthopoulos</b> , King Abdullah University of Science and Technology (KAUST), Division of Physical Sciences and Engineering, Saudi Arabia	<b>INVITED: B8-1-WeA-1</b> Impact of Selective Acceleration of High-mass Ions - Low Temperature Growth of Stress-free Single Phase $\alpha$ -W Films, <b>Tetsuhide Shimizu</b> , Tokyo Metropolitan University, Japan; <b>H. Du</b> , Guizhou University, China; <b>R. Boyd, R. Vilooan, D. Lundin</b> , Linköping University, IFM, Sweden; <b>M. Yang</b> , Tokyo Metropolitan University, Japan; <b>U. Helmersson</b> , Linköping University, IFM, Sweden
2:20pm		
2:40pm	<b>TS3-WeA-3</b> Plasma Technologies for Sustainable Packaging Materials, <b>Glen West</b> , Manchester Metropolitan University, U.K.; <b>T. Cosnahan, C. Struller, N. Copeland</b> , Bobst Manchester Ltd., UK; <b>P. Kelly</b> , Manchester Metropolitan University, U.K.	<b>B8-1-WeA-3</b> Modeling of High Power Impulse Magnetron Sputtering Discharges with Tungsten Target, <b>Swetha Suresh Babu</b> , University of Iceland; <b>M. Rudolph</b> , Leibniz Institute of Surface Engineering (IOM), Germany; <b>D. Lundin</b> , Linköping University, Sweden; <b>T. Shimizu</b> , Tokyo Metropolitan University, Japan; <b>J. Fischer</b> , Linköping University, Sweden; <b>J. Bradley</b> , University of Liverpool, UK; <b>J. Gudmundsson</b> , University of Iceland
3:00pm	<b>TS3-WeA-4</b> Transition Metal Nitride Colloids: From PVD Targets to Laser-Ablated Nanoparticles, <b>N. Pliatsikas, S. Panos, I. Fekas, S. Kassavetis, Panos Patsalas</b> , Aristotle University of Thessaloniki, Greece	<b>B8-1-WeA-4</b> Combinatorial Deposition of Highly Oriented AlScN Films Using Synchronized-HiPIMS for Piezoelectric Applications, <b>Jyotish Patidar</b> , S. Zhuk, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland; <b>A. Sharma</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; <b>M. Ghosh, A. Wieczorek, K. Thorwarth, S. Siol</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland
3:20pm	<b>TS3-WeA-5</b> Fully Inkjet-Printed Gas Sensing Antenna Based on Carbon Nanotubes for Wireless Communication Applications, <b>Hsuan-Ling Kao</b> , Chang Gung University, Taiwan; <b>L. Chang</b> , Ming Chi University of Technology, Taiwan; <b>Y. Tsai</b> , Chang Gung University, Taiwan	<b>B8-1-WeA-5</b> Fabrication of TiZrNbTaFeBN Coatings Using Superimposed HiPIMS-MF Systems: Mechanical and Chemical Properties Evaluation, <b>I. Moirangthem, S. Chen, C. Wang</b> , National Taiwan University of Science and Technology, Taiwan; <b>B. Lou</b> , Chang Gung University, Taiwan; <b>Jyh-Wei Lee</b> , Ming Chi University of Technology, Taiwan
3:40pm	<b>TS3-WeA-6</b> Characterization and Evaluation of PVD-Coatings on Bipolar Plates for PEMFC, <b>Julian Kapp, V. Lukassek, V. Mackert, J. Wartmann, H. Hoster</b> , ZBT Zentrum für BrennstoffzellenTechnik GmbH, Germany; <b>R. Cremer, P. Jaschinski</b> , KCS Europe GmbH, Germany	<b>B8-1-WeA-6</b> Effect of Synchronous Bias Mode with Different Duty Cycles on Microstructure and Mechanical Properties of AlTiN Coatings Deposited by HiPIMS Process, <b>J. Tang</b> , Department of Electronic Engineering, Loughwa University of Science and Technology, Germany; <b>S. Huang, I-Hong Chen, G. Shen, F.-C. Yang</b> , Department of Materials Engineering, Ming Chi University of Technology, Germany; <b>C. Chang</b> , Department of Materials Engineering, Center for Plasma and Thin Film Technologies, Ming Chi University, Taiwan
4:00pm	<b>INVITED: TS3-WeA-7</b> Towards Large Area Scalable Organic Solar Cells using Solution Processing, <b>S. Ravi P. Silva</b> , Advanced Technology Institute, University of Surrey, UK	<b>B8-1-WeA-7</b> Bipolar HiPIMS: A New Route to Deposit Advanced Coatings on 3D Complex Geometries, <b>I. Fernandez, J. Santiago-Varela, P. Diaz-Rodriguez</b> , NANO4ENERGY SLNE, Spain; <b>L. Mendizabal, C. Zubizarreta</b> , IK4 TEKNIKER, Spain, <b>Ambiörn Wennberg</b> , NANO4ENERGY, Spain
4:20pm		<b>B8-1-WeA-8</b> On the Control of the Composition of NbC Films Deposited by HiPIMS from a Compound Target: Plasma Diagnostics, <b>Tomáš Kozák, M. Farahani, A. Pajdarová</b> , University of West Bohemia, Czechia; <b>A. Bahr, R. Hahn, H. Riedl</b> , TU Wien, Austria; <b>P. Zeman</b> , University of West Bohemia, Czechia
4:40pm	<b>TS3-WeA-9</b> Rational Design of Perfluorocarbon-Free Oleophobic Textiles, <b>Sadaf Shabaniyan</b> , University of British Columbia, Canada; <b>K. Golovin</b> , University of Toronto, Canada	<b>B8-1-WeA-9</b> Comparative Study of DC and HiPIMS Discharge Characteristics of Cylindrical Magnetron in Open and Confined Space, <b>Wojciech Trzewczyński, A. Oniszczuk, W. Gajewski</b> , Trumpf Huettinger Sp. z o.o., Poland; <b>M. Betiuk, A. Mirońska</b> , Łukasiewicz Research Network – The Institute of Precision Mechanics, Poland
5:00pm		<b>B8-1-WeA-10</b> A Hybrid Plasma Model for Cr Thin Films Deposition by Deep Oscillation Magnetron Sputtering, <b>J. Gao</b> , Dalian University of Technology, China; <b>F. Ferreira</b> , University of Coimbra, Portugal; <b>M.K. Lei</b> , Dalian University of Technology, China
5:20pm		<b>B8-1-WeA-11</b> Optimization of Si Addition on AlTiN and AlTiCrN Coatings Synthesized by Hipims for the Stability of the Mechanical and Thermal Properties and Development of a Multilayer Architecture Coating, <b>Patrick Choquet</b> , Luxembourg Institute of Science and Technology (LIST), Luxembourg

# Wednesday Afternoon, May 24, 2023

**Awards Ceremony and Honorary Lecture**  
**Room Town & Country A - Session HL-WeHL**  
**Bunshah Award Honorary Lecture**  
**Moderator:**  
**Ivan G. Petrov**, University of Illinois at Urbana-Champaign, USA

5:45pm		
6:05pm	<b>INVITED: HL-WeHL-2</b> R.F. Bunshah Award and ICMCTF Lecture Invited Talk: What TEM, XRD, STM, AFM, HIM, LEED, 3DATP, DSC, Nanoindentation, DFT, and MD Tell You About Functional Nanostructured Ceramics, <b>Lars Hultman</b> <sup>1</sup> , Linköping University, Sweden	
6:25pm		

<sup>1</sup> R.F. Bunshah Awardee

# Thursday Morning, May 25, 2023

<b>Functional Thin Films and Surfaces</b> <b>Room Pacific D - Session C3-1-ThM</b> <b>Thin Films and Novel Surfaces for Energy I</b> <b>Moderators:</b> <b>Clio Azina, RWTH Aachen University, Germany,</b> <b>Carlos Tavares, University of Minho, Portugal</b>		<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country C - Session B1-1-ThM</b> <b>PVD Coatings and Technologies I</b> <b>Moderators:</b> <b>Christian Kalscheuer, RWTH Aachen University, Germany,</b> <b>Vladimir Pankov, National Research Council of Canada</b>	
8:00am		<b>INVITED: B1-1-ThM-1</b> New Challenges and Opportunities for PVD Coatings in Metal Cutting Applications, <b>Aharon Insektor</b> , Carnegie Mellon University, USA	
8:20am			
8:40am	<b>INVITED: C3-1-ThM-3</b> Tailoring Surface Reactivity of Perovskite Oxides for Water Oxidation, <b>Kelsey Stoerzinger</b> , Oregon State University, USA	<b>B1-1-ThM-3</b> Custom-Fit Hipims Coatings for Cutting Tools Used in a Wide Variety of Machining Applications, <b>Stephan Bolz</b> , <b>B. Mestic</b> , <b>O. Lemmer</b> , <b>W. Kölker</b> , <b>C. Schiffers</b> , CemeCon AG, Germany	
9:00am		<b>B1-1-ThM-4</b> Film Growth Control at Cutting Edges to Overcome Edge Rounding, <b>Otmar Zimmer</b> , <b>T. Litterst</b> , Fraunhofer Institute for Material and Beam Technology (IWS), Germany; <b>T. Kruelle</b> , Technical University Dresden, Germany	
9:20am	<b>C3-1-ThM-5</b> The Influence of Sb Doping on the Local Structure and Disorder in Thermoelectric ZnO:Sb Thin Films, <b>J. Ribeiro</b> , <b>F. Rodrigues</b> , <b>F. Correia</b> , University of Minho, Portugal; <b>A. Kuzmin</b> , University of Latvia; <b>E. Alves</b> , <b>N. Barradas</b> , University of Lisbon, Portugal; <b>O. Bondarchuk</b> , International Iberian Nanotechnology Laboratory, Portugal; <b>A. Welle</b> , Karlsruhe Institute of Technology (KIT), Portugal; <b>Carlos Jose Tavares</b> , University of Minho, Portugal	<b>B1-1-ThM-5</b> Computational Tool for Analyzing Stress in Thin Films, <b>Eric Chason</b> , <b>T. Su</b> , <b>Z. Rao</b> , Brown University, USA	
9:40am	<b>C3-1-ThM-6</b> An Economic Experimental Approach to Optimize the Microstructure and Thermoelectric Performance of ZnSe Thin Films, <b>Khalid Mahmood</b> , Department Of Physics, Government College University Faisalabad, Pakistan	<b>B1-1-ThM-6</b> Effect of CrAlN Coating Properties on Impact Fatigue of Tool Steel, <b>K. Bobzin</b> , <b>C. Kalscheuer</b> , <b>M. Carlet</b> , <b>Muhammad Tayyab</b> , Surface Engineering Institute - RWTH Aachen University, Germany	
10:00am	<b>C3-1-ThM-7</b> The Influences of Plasmonic Resonance and Coupling Effect on Photocatalysis of MoS <sub>2</sub> /Gold Hybrid Nanoparticles for Hydrogen Production, <b>Yi-Hsueh CHEN</b> , <b>J. Ruan</b> , National Cheng Kung University (NCKU), Taiwan	<b>B1-1-ThM-7</b> Toward Energy-efficient Physical Vapor Deposition: Routes Fordensification of (Ti <sub>1-y</sub> Al <sub>y</sub> ) <sub>1-x</sub> W <sub>x</sub> N Thin Films Grown with no External Heating, <b>Xiao Li</b> , <b>A. Pshyk</b> , <b>B. Bakhit</b> , Linköping Univ., IFM, Thin Film Physics Div., Sweden; <b>M. Johansson Jöesaar</b> , <b>J. Andersson</b> , SECO Tools AB, Sweden; <b>I. Petrov</b> , University of Illinois at Urbana, USA; <b>L. Hultman</b> , <b>G. Greczynski</b> , Linköping Univ., IFM, Thin Film Physics Div., Sweden	
10:20am	<b>C3-1-ThM-8</b> Self-Reconstruction of Sulfate-Containing High Entropy Sulfide for Exceptionally High-Performance Oxygen Evolution Reaction Electrocatalyst, <b>Thi Xuyen Nguyen</b> , <b>Y. Su</b> , <b>C. Lin</b> , <b>J. Ting</b> , National Cheng Kung University (NCKU), Taiwan	<b>B1-1-ThM-8</b> Effects of Nitrogen Contents on the Microstructure and Corrosion Resistant Evaluation of ZrTiNbSiFeN <sub>x</sub> High Entropy Alloy Coatings, <b>Chen Wei-Yang</b> , <b>K. Yu-Lin</b> , National Taiwan University of Science and Technology, Taiwan; <b>L. Bih-Show</b> , Chang Gung University, Taiwan; <b>L. Jyh-Wei</b> , Ming Chi University of Technology, Taiwan	
10:40am	<b>C3-1-ThM-9</b> Hydrothermal-Based Synthesis of Piezo-Composite Thin Films and Their Applications, <b>Thi Nghi Nhan Nguyen</b> , <b>K. Chang</b> , National Cheng Kung University, Taiwan	<b>B1-1-ThM-9</b> Development of a Multilayer Ti/TiN/TiAlN/ReN Coating System and Evaluation of their Microstructural, Mechanical and Tribological Properties, <b>Hernán Darío Mejía Vásquez</b> , <b>G. Bejarano Gaitán</b> , University of Antioquia, Colombia	
11:00am	<b>C3-1-ThM-10</b> A Comparative Study of the Thermochromic Performances of VO <sub>2</sub> Films Obtained by Air Oxidation of V and VN Precursors, <b>D. Pilloud</b> , <b>A. Garcia-Wong</b> , <b>F. Capon</b> , <b>Jean-François Pierson</b> , Institut Jean Lamour - Université de Lorraine, France	<b>B1-1-ThM-10</b> High-Power-Density Sputtering of Industrial-Scale Targets: Micromechanical Case Study of Al-Cr-N, <b>Fedor F. Klimashin</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland; <b>A. Lümkmann</b> , PLATIT AG, Switzerland; <b>J. Kluson</b> , <b>M. Uciik</b> , <b>M. Jilek</b> , PLATIT a.s., Czechia; <b>J. Michler</b> , <b>T. Edwards</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland	
11:20am	<b>C3-1-ThM-11</b> Revolutionizing Concentrated Solar Thermal Power Technology: Developing Self-Cleaning Mirrors with TiO <sub>2</sub> Films, <b>Nafsika Mouti</b> , <b>V. Terziyska</b> , <b>N. Kostoglou</b> , Montanuniversität Leoben, Austria; <b>A. Kaidatzis</b> , <b>M. Arfanis</b> , National Centre of Scientific Research "Demokritos", Greece; <b>A. Eliades</b> , <b>K. Milidonis</b> , The Cyprus Institute, Cyprus; <b>K. Giannakopoulos</b> , National Centre of Scientific Research "Demokritos", Greece; <b>C. Mitterer</b> , Montanuniversität Leoben, Austria	<b>B1-1-ThM-11</b> Triboactive CrAlN+XS Coatings Deposited by Pulsed Arc PVD, <b>K. Bobzin</b> , <b>C. Kalscheuer</b> , <b>Max Philip Möbius</b> , Surface Engineering Institute - RWTH Aachen University, Germany	
11:40am		<b>B1-1-ThM-12</b> Mechanical and Electrochemical Properties of AlCrN/FeN Coating Deposited onto AISI 4140 Steel, <b>Omar Ramirez-Reyna</b> , National Polytechnic Institute, Mexico; <b>J. Pérez-Álvarez</b> , University of Guadalajara, Mexico; <b>G. Rodríguez-Castro</b> , National Polytechnic Institute, Mexico; <b>C. Rivera-Tello</b> , University of Guadalajara, Mexico; <b>A. Meneses-Amador</b> , National Polytechnic Institute, Mexico	
12:00pm		<b>B1-1-ThM-13</b> Mechanical and Electrochemical Properties for SiC <sub>x</sub> N <sub>y</sub> Coating as a Function of Nitrogen Content, <b>L. Chang</b> , <b>Pin-Feng Huang</b> , <b>B. Chen</b> , <b>S. Tsai</b> , Ming Chi University of Technology, Taiwan	

# Thursday Morning, May 25, 2023

<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Pacific F-G - Session B5-ThM</b> <b>Hard and Multifunctional Nanostructured Coatings</b> <b>Moderators: Rainer Hahn, TU Wien, Institute of Materials Science and Technology, Austria,</b> <b>Tomas Kozak, University of West Bohemia, Czechia</b>		<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country D - Session B8-2-ThM</b> <b>HIPIMS, Pulsed Plasmas and Energetic Deposition II</b> <b>Moderators:</b> <b>Tiberiu Minea, Université Paris-Saclay, France,</b> <b>Jon Tomas Gudmundsson, University of Iceland</b>	
8:00am			
8:20am			
8:40am			
9:00am	<b>INVITED: B5-ThM-4</b> High-Temperature Properties of Multicomponent Nitride Coatings Deposited by PVD, <b>Yuxiang Xu</b> , Guangdong University of Technology, China	<b>B8-2-ThM-4</b> Hipims Deposition of Ultrathick Au-Ta Coatings: Effects of Deposition Rate and Substrate Tilt, <b>Leonardus Bimo Bayu Aji, E. Kim, J. Merlo, S. Shin, G. Taylor, L. Sohngen, A. Engwall, A. Baker, D. Strozzi, B. Bocklund, E. Moore, A. Perron, S. Kucheyev</b> , Lawrence Livermore National Laboratory, USA	
9:20am		<b>B8-2-ThM-5</b> Self-Sputtering Identification in Helium HIPIMS Discharge with Molybdenum Target, <b>Abderzak el-Farsy, E. Mmorel</b> , Laboratoire de Physique des Gaz et des Plasmas, France; <b>Y. Yoann Rozier</b> , SuperGrid Institute, Villeurbanne, France; <b>T. Minea</b> , Laboratoire de Physique des Gaz et des Plasmas, France	
9:40am	<b>B5-ThM-6</b> Effect of Ion Density Flux Ratio on Properties of Protective Hard (Ti,V)B <sub>2</sub> Coatings Sputtered by Cylindrical Magnetron, <b>Daniel Karpinski, P. Karvankova, C. Krieg</b> , Platit AG, Switzerland; <b>J. Kluson</b> , Platit a.s., Czechia; <b>B. Torp</b> , Platit Inc., USA; <b>A. Lümkmann</b> , Platit AG, Switzerland	<b>B8-2-ThM-6</b> On Working Gas Rarefaction in High Power Impulse Magnetron Sputtering, <b>Kateryna Barynova, S. Suresh Babu</b> , University of Iceland; <b>M. Rudolph</b> , Leibniz Institute of Surface Engineering (IOM), Germany; <b>J. Gudmundsson</b> , University of Iceland	
10:00am	<b>B5-ThM-7</b> Development of TiB <sub>2</sub> Coatings in a New Generation Industrial Reactor Based on Hybrid DC-Pulsed and HIPIMS Magnetron Sputtering on HSS Steels – A Tribological Study, <b>Gonzalo Garcia Fuentes, J. Fernández, J. Fernández-Palacio</b> , AIN, Spain; <b>H. Gabriel</b> , PVT Vakuum Technik, Germany	<b>INVITED: B8-2-ThM-7</b> Spokes in HiPIMS: Help or Hindrance?, <b>Julian Held</b> , University of Minnesota, USA; <b>P. Maaß, M. George, W. Breilmann, S. Thiemann-Monjé, V. Schulz-von der Gathen, A. von Keudell</b> , Ruhr University Bochum, Germany	
10:20am	<b>INVITED: B5-ThM-8</b> Nanoporous/Nanocomposite Thin Films by Magnetron Sputtering Deposition in Helium and Other Light Gases: New Materials and Applications, <b>Asunción Fernández</b> , Instituto de Ciencia de Materiales de Sevilla (CSIC-US), Spain		
10:40am		<b>B8-2-ThM-9</b> Effect of Plasma Nitriding Pretreatment on the Mechanical and Wear Properties of Tungsten Carbide Substrate, and AlCrN Coating Deposited by High-Power Impulse Magnetron Sputtering, <b>F. Yang</b> , Department of Mechanical Engineering, National Taiwan University of Science and Technology, and Center for Plasma and Thin Film Technologies, Ming Chi University of Technology, Taiwan; <b>T. Liu, Guan-Lun Shen, I. Chen</b> , Department of Materials Engineering, Ming Chi University of Technology, Taiwan; <b>Y. Kuo</b> , Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan; <b>C. Chang</b> , Department of Materials Engineering, Ming Chi University of Technology, and Center for Plasma and Thin Film Technologies, Ming Chi University of Technology, Taiwan	
11:00am	<b>B5-ThM-10</b> Mechanical Properties of Epitaxial TiN(001)-TiC(001) Superlattices, <b>Moishe Azoff-Slifstein</b> , Rensselaer Polytechnic Institute, USA; <b>S. Lee</b> , University of Connecticut, USA; <b>D. Gall</b> , Rensselaer Polytechnic Institute, USA	<b>B8-2-ThM-10</b> Highly Ionized Pulse Sputtering of Seed Layers for Through Silicon Vias, <b>Juergen Weichart</b> , Evatec AG, Switzerland	
11:20am	<b>B5-ThM-11</b> Tensile and Compressive Stress in Sputtered Cu/W Nanomultilayers: Correlation with Microstructure, Thermal Stability, and Thermal Conductivity, <b>Giacomo Lorenzin</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland; <b>M. bin Hoque</b> , University of Virginia, USA; <b>D. Ariosa</b> , Universidad de la Republica, Montevideo, Uruguay; <b>L. Jeurgens</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland; <b>E. Haglund, J. Tomko, P. Hopkins</b> , University of Virginia, USA; <b>C. Cancellieri</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland	<b>B8-2-ThM-11</b> Deposition Environment and Microstructure of Transition Metal Nitride Thin Films Deposited at CMOS-Compatible Temperatures for Tunable Optoelectronic and Plasmonic Devices, <b>Arutjun P. Eghasarian</b> , Sheffield Hallam University, UK; <b>R. Bower</b> , Imperial College London, UK; <b>D. Loch</b> , Sheffield Hallam University, UK; <b>A. Berenov, B. Zou</b> , Imperial College London, UK; <b>P. Hovsepian</b> , Sheffield Hallam University, UK; <b>P. Petrov</b> , Imperial College London, UK	
11:40am	<b>B5-ThM-12</b> Investigation of Thermal Properties of PECVD Ti-Si-C-N Nanocomposite Coatings, <b>Alexander Thewes, L. Broecker</b> , IOT TU Braunschweig, Germany; <b>H. Paschke, T. Brueckner</b> , Fraunhofer Institute for Surface Engineering and Thin Films IST, Germany; <b>C. Sternemann, M. Paulus</b> , DELTA TU Dortmund, Germany	<b>B8-2-ThM-12</b> On the Connection between the Self-Sputter Yield and Deposition Rate in High Power Impulse Magnetron Sputtering Operation, <b>Jon Tomas Gudmundsson</b> , University of Iceland; <b>M. Rudolph</b> , Leibniz Institute of Surface Engineering (IOM), Germany; <b>K. Barynova</b> , University of Iceland; <b>J. Fischer</b> , Linköping University, Sweden; <b>S. Suresh Babu</b> , University of Iceland; <b>N. Brenning, M. Raadu</b> , KTH Royal Institute of Technology, Sweden; <b>D. Lundin</b> , Linköping University, Sweden; <b>H. Hajihoseini</b> , University of Twente, Netherlands	



# Thursday Morning, May 25, 2023

	<p><b>New Horizons in Coatings and Thin Films</b>  <b>Room Pacific E - Session F4-2-ThM</b>  <b>Boron-Containing Coatings II</b>  <b>Moderators:</b> Marcus Hans, RWTH Aachen University, Germany,  <b>Helmut Riedl</b>, TU Wien, Institute of Materials Science and Technology, Austria,  <b>Johanna Rosén</b>, Linköping University, Sweden</p>	<p><b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b>  <b>Room Town &amp; Country B - Session E2-1-ThM</b>  <b>Mechanical Properties and Adhesion I</b>  <b>Moderators:</b> Jazmin Duarte, MPI für Eisenforschung GMBH, Germany, Alice Lassnig, Austrian Academy of Sciences, Austria,  <b>Bo-Shiuan Li</b>, National Sun-Yat Sen University, Taiwan</p>
8:00am		<p><b>INVITED: E2-1-ThM-1</b> Residual Stress and Interfaces in Optical Coatings for Space Applications, <b>Chelsea Appleget</b>, K. Folgner, V. Jiao, S. Dunscombe, S. Sitzman, The Aerospace Corporation, USA; D. White, A. Hodge, University of Southern California, USA; J. Barrie, The Aerospace Corporation, USA</p>
8:20am		
8:40am	<p><b>INVITED: F4-2-ThM-3</b> Ternary Tungsten Boride Coatings with Improved Mechanical Properties Deposited by High-Power Pulsed Magnetron Sputtering from One Spark Plasma Sintered Target, <b>Tomasz Mościcki</b>, R. Psiuk, J. Chrzanowska-Gizynska, Institute of Fundamental Technological Research of Polish Academy of Science, Poland; D. Garbiec, Łukasiewicz Research Network – Poznań Institute of Technology, Poland</p>	<p><b>E2-1-ThM-3</b> Increased Adhesion of Mo Films on Polyimide Through Interface Modification, <b>Megan Cordill</b>, P. Kreiml, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Austria; M. Rausch, C. Mitterer, Dept. of Materials Science, Montanuniversität Leoben, Austria</p>
9:00am		<p><b>E2-1-ThM-4</b> Picosecond Acoustics as a Local and Quantitative Adhesion Technique, <b>Arnaud DEVOS</b>, A. Vital-Juarez, IEMN, France; J. Desmarres, CNES, France</p>
9:20am	<p><b>F4-2-ThM-5</b> The Architectural Design of High-Temperature Protective Coatings: Improving the Oxidation Resistance of TMB<sub>2</sub> (TM = Hf, Ti, W) Thin Films, <b>Sophie Richter</b>, T. Glechner, T. Wojcik, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; B. Widrig, O. Hunold, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; S. Kolozsvári, P. Polcik, Plansee Composite Materials GmbH, Germany; J. Ramm, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; H. Riedl, TU Wien, Institute of Materials Science and Technology, Austria</p>	<p><b>E2-1-ThM-5</b> What Controls Size Effects on the Mechanical Properties of Additive Manufactured Polymers, K. Shergill, Y. Chen, <b>Steve Bull</b>, Newcastle University, UK</p>
9:40am	<p><b>F4-2-ThM-6</b> Stoichiometry, Structure, and Mechanical Properties of Superhard Zirconium Diboride Films Prepared by the High-Power Impulse Magnetron Sputtering, <b>Viktor Šroba</b>, K. Viskupová, T. Roch, L. Satrapinskyy, M. Truchlý, T. Fiantok, Comenius University, Bratislava, Slovakia; Š. Nagy, Institute of Materials and Machine Mechanics SAS, Slovakia; B. Grančič, P. Kúš, M. Mikula, Comenius University, Bratislava, Slovakia</p>	<p><b>E2-1-ThM-6</b> Mechanical Properties and Microstructure Evaluation of HIPIMS Cu/W and Cu/Cr bilayers with Different Thickness Ratios, <b>Tra Anh Khoa Nguyen</b>, T. Zhang, Graduate Institute of Precision Engineering, National Chung Hsing University, Taiwan; H. Wang, H. Wu, National Chung Hsing University, Taiwan; M. Lin, Graduate Institute of Precision Engineering, National Chung Hsing University, Taiwan</p>
10:00am	<p><b>F4-2-ThM-7</b> Exploring Phase Evolution and its Consequences on Mechanical Properties of a Novel HfB<sub>2</sub>-AlB<sub>2</sub> Coating System, <b>Samyukta Shrivastav</b>, D. Yun, K. Canova, J. Abelson, J. Krogstad, University of Illinois at Urbana Champaign, USA</p>	<p><b>E2-1-ThM-7</b> Nanoengineered Thin Film Metallic Glasses with Mutual Combination of Large Yield Strength and Ductility, F. Bignoli, CNRS, France; A. Brognara, J. Best, Max-Planck Institut für Eisenforschung GmbH, Germany; P. Djemia, D. Faurie, CNRS, France; A. Li Bassi, Politecnico di Milano, Italy; G. Dehm, Max-Planck Institut für Eisenforschung GmbH, Germany; <b>Matteo Ghidelli</b>, CNRS, France</p>
10:20am	<p><b>INVITED: F4-2-ThM-8</b> Challenges and Perspectives of Wear Resistant Boron-Containing Coatings, <b>Jose L Endrino</b>, Nano4energy SL, Spain; J. Rao, Cranfield University, UK; T. Brzezinka, Dell Technologies, UK; A. Mendez, J. Santiago, Nano4energy SL, Spain; J. Molina, Polytechnic University of Madrid, Spain</p>	<p><b>E2-1-ThM-8</b> Measurements and Simulation of Mechanical Behavior of Amorphous and Crystalline Zr(-Hf)-Cu Thin-Film Alloys, <b>Stanislav Haviar</b>, T. Kozák, University of West Bohemia, Czechia; M. Meindlhumer, Montanuniversität Leoben, Austria; M. Zitek, University of West Bohemia, Czechia; J. Keckes, Erich Schmid Institute of Materials Science, Austria; P. Zeman, University of West Bohemia, Czechia</p>
10:40am		<p><b>E2-1-ThM-9</b> A Nanotwinned CoCrFeNi Medium Entropy Alloy with Ultrahigh Strength Over a Wide Range of Temperature, <b>Yun-Xuan Lin</b>, J. Wang, C. Tsai, S. Chang, F. Ouyang, National Tsing Hua University, Taiwan</p>
11:00am	<p><b>F4-2-ThM-10</b> TiB<sub>x</sub> Thin Film Synthesis from an Industrial-Sized DC Vacuum Arc Source, <b>Igor Zhirkov</b>, A. Petruhins, A. Shamshirgar, Materials Design, Department of Physics, Chemistry and Biology (IFM), Linköping University, Sweden; N. Hellgren, Department of Computing, Mathematics, and Physics, Messiah University, USA; S. Kolozsvári, P. Polcik, PLANSEE Composite Materials GmbH, Germany; J. Rosen, Materials Design, Department of Physics, Chemistry and Biology (IFM), Linköping University, Sweden</p>	<p><b>INVITED: E2-1-ThM-10</b> Material Properties and Mechanics of Eggshells—Nature’s Survival Capsules, <b>Jia-Yang Juang</b>, National Taiwan University, Taiwan</p>
11:20am	<p><b>F4-2-ThM-11</b> Oxidation Behavior of Stoichiometric Ti<sub>0.35</sub>Al<sub>0.65</sub>B<sub>2</sub> Coatings, <b>Sebastian Lellig</b>, Materials Chemistry, RWTH Aachen University, Germany, and Empa, Swiss Federal Lab for Materials Science and Technology, Switzerland; A. Navidi Kashani, RWTH Aachen University, Germany; P. Schweizer, Empa, Swiss Federal Lab for Materials Science and Technology, Switzerland, and Lawrence Berkeley Lab, USA; M. Hans, RWTH Aachen University, Germany; J. Michler, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; J. Schneider, Materials Chemistry, RWTH Aachen University, Germany</p>	
11:40am		<p><b>E2-1-ThM-12</b> Effects of Cathodic Currents on Mechanical and Corrosion Behaviors of Plasma Electrolytic Oxidation Coatings on 6061 Aluminum Alloy, C. Tseng, Department of Materials Engineering, Ming Chi University of Technology, Center for Plasma and Thin Film Technologies, Ming Chi University of Technology, Taiwan; <b>Xianghe Wang</b>, Department of Materials Engineering, Ming Chi University of Technology, Taiwan</p>
12:00pm		

# Thursday Lunch, May 25, 2023

**Focused Topic Session**  
**Room Town & Country C - Session FTS-ThL**  
**Focused Topic Session**

12:20pm **FTS-ThL-1** How to Publish in a Scientific Journal, *Allan Matthews, University of Manchester, UK; D. Biswanath, Elsevier, USA*

12:40pm

1:00pm

# Thursday Afternoon, May 25, 2023

	<b>Functional Thin Films and Surfaces</b> <b>Room Pacific F-G - Session C2-1-ThA</b> <b>Thin Films for Electronic Devices I</b> <b>Moderators: Julien Keraudy, Oerlikon Balzers, Oerlikon Surface Solution AG, Liechtenstein,</b> <b>Jörg Patscheider, Evatec AG, Switzerland</b>	<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country C - Session B1-2-ThA</b> <b>PVD Coatings and Technologies II</b> <b>Moderators: Christian Kalscheuer, RWTH Aachen University, Germany,</b> <b>Vladimir Pankov, National Research Council of Canada</b>
1:20pm	<b>INVITED: C2-1-ThA-1</b> An Imperfect High k Dielectric (O Vacancies, Contamination) Can Give a Perfect MIM Device, <b>Christophe Vallee, N. Tokranova, K. Beckmann, SUNY College of Nanoscale Science and Engineering, USA; N. Cady, SUNY college of Nanoscale Science and Engineering, USA</b>	<b>B1-2-ThA-1</b> Contemporary Trends in the Decorative Coatings, <b>Ivan Kolev, A. Fuchs, P. Immich, H. Vercoulen, D. Barnholt, IHI Hauzer Techno Coating B.V., Netherlands</b>
1:40pm		<b>B1-2-ThA-2</b> Metallic Chromium Coatings with Different Thicknesses on Polycarbonate Surface, <b>Filipa Ponte, P. Sharma, N. Figueiredo, S. Carvalho, CEMMPRE, Department of Mechanical Engineering, University of Coimbra, Coimbra, Portugal</b>
2:00pm	<b>C2-1-ThA-3</b> Optoelectronic and Thermoelectric Properties of New Heterobilayers of Janus-Type Noble-Metal Chalcogenides Materials, <b>Mourad Boujnah, CINVESTAV-Unidad Queretaro, Mexico</b>	<b>B1-2-ThA-3</b> Effect of O <sub>2</sub> Addition During Magnetron Sputtering Deposition on the Growth and Chemistry of Ag Thin Films, <b>Ramiro Zapata, Laboratoire Surface du Verre et Interfaces UMR 125 / Institut de Nanosciences de Paris UMR 7588, France; R. Lazzari, Institut des Nanosciences de Paris UMR 7588, France; H. Montigaud, M. Balestrieri, I. Gozhyk, Laboratoire Surface du Verre et Interfaces UMR 125, France</b>
2:20pm	<b>C2-1-ThA-4</b> High-Entropy Ba(Ti,Zr,Ta,Hf,Mo)(on) <sub>3</sub> Gate Dielectric Films for Zn-Channel Thin Film Transistors, <b>Van Dung Nguyen, Department of Materials Science and Engineering, National Cheng Kung University (NCKU), Taiwan, Viet Nam; K. Chang, Department of Materials Science and Engineering, National Cheng Kung University (NCKU), Taiwan</b>	<b>B1-2-ThA-4</b> Effect of Molybdenum Interlayer on Mechanical and Elevated Temperature Tribological Properties of Molybdenum Nitride-Coated D2 Steel, <b>Te-Hsin Liu, J. Huang, National Tsing Hua University, Taiwan</b>
2:40pm	<b>C2-1-ThA-5</b> Hydrothermal Fabrication of The Heterojunction of BaTiO <sub>3</sub> Nanorod Arrays with Ag <sub>2</sub> O and their Applications, <b>Yen-Lun Chiu, K. Chang, National Cheng Kung University (NCKU), Taiwan</b>	<b>B1-2-ThA-5</b> Enhanced Adhesion and Thermal Stability of Thick (Al,Cr) <sub>2</sub> O <sub>3</sub> Coatings on Hot Work Steel, <b>K. Bobzin, C. Kalscheuer, Parisa Hassanzadegan Aghdam, RWTH Aachen University, Germany</b>
3:00pm	<b>C2-1-ThA-6</b> Toughening Mechanisms of Al Nanoparticles in Flexible Mo Thin Films Revealed by in-Situ Synchrotron Diffraction Experiments, <b>Barbara Putz, T. Edwards, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; P. Kreiml, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria; E. Huszar, L. Pethö, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; D. Töbrens, Helmholtz Zentrum Berlin, Germany; J. Michler, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland</b>	<b>B1-2-ThA-6</b> Combinatorial Synthesis of Novel Compositionally, Mechanically, and Structurally Heterogenous CuWCrTi Alloys with Unique Properties, <b>Michal Zitek, Montanuniversität Leoben, Austria; E. Rossi, Università degli Studi Roma Tre, Italy; G. Konstantopoulos, National Technical University of Athens, Greece; M. Sebastiani, Università degli Studi Roma Tre, Italy; J. Keckes, R. Daniel, Montanuniversität Leoben, Austria</b>
3:20pm	<b>C2-1-ThA-7</b> Fabrication of 5g sub-6 Ghz Antennas on Polyimide Substrates Using Laser Thermo-Responsive Polymer Silver Nanocatalysts, <b>Y. Chen, J. You, National Defense University, Republic of China; M. Youh, Ming Chi University of Technology, Taiwan, Republic of China; C. Lee, T. Chiang, Chang-Pin Chang, M. Ger, National Defense University, Republic of China</b>	<b>B1-2-ThA-7</b> Deposition Aspects of High Entropy Alloy Nitride Coatings with Arc-PVD, <b>Tim Krülle, M. Kuczyk, TU Dresden, Germany; M. Leonhardt, O. Zimmer, J. Kaspar, Fraunhofer Institute for Material and Beam Technology (IWS), Germany; C. Leyens, TU Dresden, Germany</b>
3:40pm	<b>C2-1-ThA-8</b> Metal-Semiconductor Amorphous Boron Carbide Contacts, <b>Vojislav Medic, N. Ianno, University of Nebraska - Lincoln, USA</b>	<b>B1-2-ThA-8</b> Compositional Modulations in Coatings Synthesized by Cathodic Arc Deposition from a Multi-Element Target with Substrate Rotation, <b>Nicholas Bandiera, S. Veldhuis, McMaster University, Canada</b>
4:00pm	<b>C2-1-ThA-9</b> Modifying Oxidation State Distribution in Interfacial Layer of Ge Nmosfet with Pre- or Post- Remote Plasma Oxidation Treatment, <b>Pei-Hsiu Hsu, National Tsing Hua University, Taiwan; D. Ruan, Fuzhou University, China; K. Chang-Liao, National Tsing Hua University, Taiwan</b>	<b>B1-2-ThA-9</b> Modifications of Structure Tuning and Mechanical Properties on CoCrNi Medium-Entropy Alloys Films by Multiple Strengthening Mechanism, <b>Chia-lin Li, National Taiwan University, Taiwan</b>
4:20pm		

# Thursday Afternoon, May 25, 2023

<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Pacific D - Session B7-ThA</b> <b>Plasma Surface Interactions, Diagnostics and Growth Processes</b> <b>Moderators: Yin-Yu Chang</b> , National Formosa University, Taiwan, <b>Arutun P. Ehasarian</b> , Sheffield Hallam University, UK, <b>Yolanda Aranda Gonzalvo</b> , University of Minnesota, USA		<b>New Horizons in Coatings and Thin Films</b> <b>Room Pacific E - Session F2-ThA</b> <b>High Entropy and Other Multi-principal-element Materials</b> <b>Moderators: Erik Lewin</b> , Uppsala University, Sweden, <b>Jean-François Pierson</b> , IJL - Université de Lorraine, France	
1:20pm	<b>INVITED: B7-ThA-1</b> On (simple) Measurement of Energy and Momentum Transport Between Process Plasmas and Substrates, <b>Holger Kersten</b> , T. Trottenberg, M. Klette, L. Hansen, IEAP, U Kiel, Germany; F. Schlichting, IAEP, U Kiel, Germany	<b>INVITED: F2-ThA-1</b> Data Driven Methods Enable Rational Design of High Entropy Materials for Hydrogen Storage, <b>Matthew Witman</b> , V. Stavila, M. Allendorf, Sandia National Laboratories, USA	
1:40pm			
2:00pm	<b>B7-ThA-3</b> Chemical Stability of Sputter Deposited Silver Thin Films, <b>Diederik Depla</b> , Ghent University, Belgium	<b>F2-ThA-3</b> Effect of Mo Content on the Corrosion and Tribocorrosion Behavior of (CoCrFeNi) <sub>100-x</sub> Mo <sub>x</sub> HEA Thin Films Deposited by HiPIMS, <b>Alessandro Togni</b> , R. Tinazzi, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Italy; S. Deambrosio, E. Miorin, F. Montagner, C. Mortalò, V. Zin, Institute of Condensed Matter Chemistry and Technologies for Energy, National Research Council, Italy; G. Bolelli, L. Lusvardi, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Italy	
2:20pm	<b>B7-ThA-4</b> Electron Drift and Electron Property Studies in HiPIMS by Incoherent Thomson Scattering, T. Dubois, S. Tsikata, CNRS-ICARE, France; <b>Tiberiu Minea</b> , Université Paris-Saclay, France	<b>F2-ThA-4</b> Corrosion Behavior of Sputter-Deposited CoCrNiFeAl High Entropy Alloy, A. Korra, University of Tennessee at Chattanooga, USA; H. Raji, Florida Institute of Technology, USA; <b>Hamdy Ibrahim</b> , University of Tennessee at Chattanooga, USA; S. Saedi, Florida Institute of Technology, USA	
2:40pm	<b>B7-ThA-5</b> Engineered Phase Differences between HiPIMS Power and Substrate bias for Improved Mechanical Properties of TiN and CrN, <b>Ying-Xiang Lin</b> , P. Liu, National Chung Hsing University, Taiwan; D. Wu, National Chinan International University, Taiwan; W. Wu, National United University, Taiwan	<b>F2-ThA-5</b> Mechanical Properties of Low Density Ternary Titanium-rich Medium-entropy Alloy with Heterogeneous Structure, <b>Che-Wei Chang</b> , Department of Materials and Optoelectronic Science, National Sun Yat-sen University, Taiwan; P. Chen, S. Jang, Institute of Material Science and Engineering, National Central University, Taiwan; C. Chen, Department of Materials and Optoelectronic Science, National Sun Yat-sen University, Taiwan	
3:00pm	<b>B7-ThA-6</b> Influence of Microwave Power and Substrate Biasing on the Structure and Properties of Zinc Tin Nitride Films Deposited via Microwave Plasma-Assisted R-HiPIMS, <b>Caroline Hain</b> , EMPA (Swiss Federal Laboratories for Materials Science and Technology), Swiss Cluster AG, Bern University of Applied Sciences, Switzerland; K. Wiczerzak, D. Casari, A. Sharma, A. Xomalis, EMPA (Swiss Federal Laboratories for Materials Science and Technology), Switzerland; P. Sturm, Tofwerk AG, Switzerland; J. Michler, EMPA (Swiss Federal Laboratories for Materials Science and Technology), Switzerland; A. Hessler-Wyser, EPFL, Switzerland; T. Nelis, Bern University of Applied Sciences, Switzerland	<b>F2-ThA-6</b> Charge Transfer Effects in Multicomponent Materials – Shown by Ab-Initio Calculations and X-Ray Photoelectron Spectroscopy XPS, <b>Barbara Osinger</b> , Uppsala University, Angstrom Laboratory, Sweden; L. Casillas-Trujillo, Linköping University, Sweden; R. Lindblad, Uppsala University, Angstrom Laboratory, Sweden; B. Alling, Linköping University, Sweden; U. Jansson, Uppsala University, Angstrom Laboratory, Sweden; I. Abrisov, Linköping University, Sweden; E. Lewin, Uppsala University, Angstrom Laboratory, Sweden	
3:20pm	<b>B7-ThA-7</b> Influence of Duty Cycle on Microstructure of TaN Coatings Prepared by High-Power Pulse Magnetron Sputtering Technique, <b>Yung-Chi Chang</b> , National United University, Taiwan; F. Wu, National United University, Taiwan	<b>F2-ThA-7</b> Toughness Estimation of High Entropy Nitride Coatings by Tensile Testing, <b>Martin Kuczyk</b> , T. Krülle, Technische Universität Dresden, Germany; M. Zawischa, M. Leonhardt, O. Zimmer, J. Kaspar, Fraunhofer IWS, Germany; C. Leyens, M. Zimmermann, Technische Universität Dresden, Germany	
3:40pm	<b>B7-ThA-8</b> Synthesis of Vanadium Dioxide and Vanadium Pentoxide Nanoparticle Films Using Magnetron-Based Gas Aggregation Source, A. Kuzminova, N. Khomiakova, J. Prokes, T. Kosutova, M. Prochazka, <b>Ondrej Kylian</b> , Charles University, Prague, Czech Republic	<b>F2-ThA-8</b> Synthesis and Characterisation of (Gd,Hf,Sc,Ti,Zr)-Oxide Coatings, <b>Alexander Kirnbauer</b> , E. Peck, M. Derflinger, TU Wien, Institute of Materials Science and Technology, Austria; P. Polcik, Plansee Composite Materials GmbH, Germany; P. Mayrhofer, TU Wien, Institute of Materials Science and Technology, Austria	
4:00pm	<b>B7-ThA-9</b> Diagnostics with an Optically Trapped Microparticle in the Sheath of an Asymmetric CCP, <b>Viktor Schneider</b> , J. Schleitzer, H. Kersten, Institute of Experimental and Applied Physics, Kiel University, Germany	<b>INVITED: F2-ThA-9</b> Functional Materials for Energy Applications, <b>Susan Sinnott</b> , Pennsylvania State University, USA	
4:20pm	<b>B7-ThA-10</b> Investigating the Plasma Physics of Plasma-Enhanced Pulsed Laser Deposition of Photocatalytic Thin Films, <b>Matthew Hill</b> , University of York, UK		
4:40pm	<b>B7-ThA-11</b> Thin Film Modification in a DC Microplasma – Understanding the Importance of Ions under Atmospheric Pressure Conditions for the Plasma Surface Interaction, <b>Luka Hansen</b> , Institute of Experimental and Applied Physics, Kiel University, Germany; N. Kohlmann, L. Kienle, Institute of Materials Science, Kiel University, Germany; H. Kersten, Institute of Experimental and Applied Physics, Kiel University, Germany		

# Thursday Afternoon, May 25, 2023

<b>Tribology and Mechanical Behavior of Coatings and Engineered Surfaces</b> <b>Room Town &amp; Country B - Session E2-2-ThA</b> <b>Mechanical Properties and Adhesion II</b> <b>Moderators: Jazmin Duarte</b> , MPI für Eisenforschung GMBH, Germany, <b>Alice Lassnig</b> , Austrian Academy of Sciences, Austria, <b>Bo-Shiuan Li</b> , National Sun-Yat Sen University, Taiwan		
1:20pm	<b>INVITED: E2-2-ThA-1</b> Scratching the Surface: Understanding Plasticity Associated with Microscale Asperity Contacts, <b>Anna Kareer</b> , University of Oxford, UK	
1:40pm		
2:00pm	<b>E2-2-ThA-3</b> Effect of Al/Ti ratio and Bias on Mechanical and Tribological Properties of AlTiN Coatings, <b>Jiri Nohava</b> , Anton Paar TriTec SA, Switzerland; <b>J. Sondor</b> , LISS, a.s., Czechia	
2:20pm	<b>E2-2-ThA-4</b> Effect of Nb and V Doped Elements on the Mechanical and Tribological Properties of CrYN Coatings, <b>İhsan Efeoğlu</b> , <b>G. Gülten</b> , <b>B. Yaylalı</b> , <b>Y. Totik</b> , Atatürk University, Turkey; <b>P. Kelly</b> , <b>J. Malecka</b> , Manchester Metropolitan University, U.K.	
2:40pm	<b>E2-2-ThA-5</b> Effect of Mo Interlayer on the Mechanical Properties and Tribology Behavior of Molybdenum Nitride Coatings Deposited by High Power Pulsed Magnetron Sputtering, <b>Yu-Che Fang</b> , <b>J. Huang</b> , National Tsing Hua University, Taiwan	
3:00pm	<b>E2-2-ThA-6</b> Tribological Behavior of TiN Thin Film Deposited by Magnetron Sputtering System on Ti6Al4V with different $\alpha/\beta$ Grain Sizes, <b>K. Lan</b> , <b>An-Jia Chen</b> , National Tsing Hua University, Taiwan	
3:20pm	<b>E2-2-ThA-7</b> Tailor the Tribological Behavior of TiN Coatings on D2 Steel by Adjusting Process Parameters during Deposition, <b>I-Sheng Ting</b> , <b>J. Huang</b> , National Tsing Hua University, Taiwan	
3:40pm	<b>E2-2-ThA-8</b> Micromechanics of Hydrogen Barrier Coatings During <i>in Situ</i> Hydrogen Charging, <b>Maria Jazmin Duarte Correa</b> , <b>H. Gopalan</b> , <b>J. Rao</b> , <b>P. Patil</b> , <b>C. Scheu</b> , <b>G. Dehm</b> , Max-Planck Institut für Eisenforschung, Germany	
4:00pm	<b>E2-2-ThA-9</b> Nano-Scale Mechanical Characteristics of Epitaxial Stabilization Zrtin/Nbn Superlattice Coatings, <b>Pin-Yuan Lai</b> , <b>T. Ku</b> , <b>S. Hsu</b> , <b>P. Chen</b> , <b>J. Duh</b> , National Tsing Hua University, Taiwan	
4:20pm	<b>E2-2-ThA-10</b> Mechanical and Tribological Behavior of Nitrided AISI/SAE 4340 Steel Coated With NiP and AlCrN, <b>Ricardo Torres</b> , Pontificia Universidade Católica do Paraná, Brazil; <b>M. Soares</b> , Universidade Tecnológica do Parana, Brazil; <b>P. Soares</b> , Pontificia Universidade Católica do Paraná, Brazil	
4:40pm	<b>E2-2-ThA-11</b> Designing Hydrogen-Free Diamond Like Multilayer Carbon Coatings for Superior Mechanical and Tribological Performance, <b>Muhammad Usman</b> , City University of Hong Kong	

## Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes

Room Golden State Ballroom - Session HP-ThP

## Advanced Characterization Techniques for Coatings, Thin Films, and Small Volumes (Symposium H) Poster Session 5:00pm

**HP-ThP-1** Femtosecond Laser Ablation (FESLA) XPS – A Novel XPS Depth Profiling Technique for Thin Films, Coatings and Multi-Layered Structures, *Mark Baker, S. Bacon, S. Sweeney*, University of Surrey, UK; *A. Bushell, T. Nunney, R. White*, ThermoFisher Scientific, UK

**HP-ThP-3** *In Situ* and Real-Time Measurements in Metallic Thin Film Research and Applications: The MISSTIC Experimental Setup, *Ramiro Zapata*, Laboratoire Surface du Verre et Interfaces UMR 125 / Institut des Nanosciences de Paris UMR 7588, France; *R. Lazzari*, Institut des Nanosciences de Paris UMR 7588, France; *H. Montigaud, M. Balestrieri, I. Gozhyk*, Laboratoire Surface du Verre et Interfaces UMR 125, France

**HP-ThP-4** Ultrasonic Contact Impedance Measurements at Nanometer Scale, *Jurgis Daugela*, Johns Hopkins University, USA; *A. Daugela*, Nanometronix LLC, USA

**HP-ThP-5** A Direct Correlation between Structural and Morphological Defects of TiO<sub>2</sub> Thin Films on Fto Substrates and Photovoltaic Performance of Planar Perovskite Solar Cells, *Mario Alejandro Millan Franco*, IER-UNAM, Mexico

**HP-ThP-6** In-Situ Stress Evolution in Sputtered Metal Alloy Films, *Vania Jiao, C. Appleget, C. Panetta, K. Folgner, J. Barrie*, The Aerospace Corporation, USA

**HP-ThP-7** Characterising Thin Films Using Hard X-Ray Angle Resolved XPS, *T Swift*, Kratos Analytical Inc, USA; *J. Counsell, S. Coultas*, Kratos Analytical Ltd, UK; *C. Tupei, Y. Li*, Nanyang Technological University, Singapore

**HP-ThP-8** The Anisotropic Behavior of Super-Hard TiB<sub>2</sub> Films Studied by Synchrotron Nano-Diffraction, *Anna Hirle, C. Fuger, R. Hahn, T. Wojcik, P. Kutrowatz*, Christian Doppler Laboratory for Surface Engineering of High-performance Components, TU Wien, Austria; *M. Weiss*, Institute of Chemical Technologies and Analytics, TU Wien, A-1060 Vienna, Austria; *O. Hunold*, Oerlikon Balzers, Oerlikon Surface Solutions AG, 9496 Balzers, Liechtenstein; *S. Kolozsvari, P. Polcik*, Plansee Composite Materials GmbH, D-86983 Lechbruck am See, Germany; *H. Riedl*, Christian Doppler Laboratory for Surface Engineering of High-performance Components, TU Wien, Austria; Institute of Materials Science and Technology, TU Wien, A-1060 Wien, Austria

## Coatings for Biomedical and Healthcare Applications

Room Golden State Ballroom - Session DP-ThP

## Coatings for Biomedical and Healthcare Applications (Symposium D) Poster Session 5:00pm

**DP-ThP-1** Antibacterial Properties of Ag Doped Tetrahedral Amorphous Carbon Coatings Synthesized Using Hybrid Filtered Cathodic Vacuum Arc and Magnetron Sputtering System, *SangYul Lee, K. Oh, J. Park*, Korea Aerospace University, Republic of Korea; *D. Kim, J. Kim*, KIMS, Republic of Korea

**DP-ThP-2** Adhesion, Corrosion Resistance, and Blood Compatibility of Mao-Pretreated Magnesium Alloy Coated with Graphene Oxide and Pyrolytic 1,8-Diaminooctane-Incorporated Oxidized Polydopamine, *Chau-Chang Chou, S. Chang, H. Lee*, National Taiwan Ocean University, Taiwan; *W. Chen*, Cheng Gung Memorial Hospital, Keelung, Taiwan

**DP-ThP-3** Surface Alloying for Antibacterial Martensitic Stainless Steel Fabrication, *Z. Chen, B. Liu, Wen-Ta Tsai*, National Cheng Kung University (NCKU), Taiwan; *C. Huang*, Tung Mung Development Co., Ltd., Taiwan

**DP-ThP-4** Enhancing the Surface Properties of Polymethylmethacrylate (PMMA) by Functionalizing with Atomic Layer Deposited Titanium(IV) Dioxide, *Harshdeep Bhatia, C. Takoudis*, University of Illinois, Chicago, USA

**DP-ThP-5** Diffusion-Based Plasma Nitriding for Surgical Needle, *Takao Yamauchi, P. Abraha*, Meiji University, Japan

**DP-ThP-6** Development of TiO<sub>2</sub>/Ag Multilayer Antibacterial Coatings Using Magnetron Sputtering Technique for Potential Applications in Non-Permanent Implants, *Sebastián Rodríguez Maya, M. Restrepo Posada, F. Bolívar Osorio, G. Bejarano Gaitán, J. Lenis Rodas*, Universidad de Antioquia, Colombia

**DP-ThP-8** Evaluation of Biocompatibility and Corrosion Resistance of Strontium-Calcium Phosphate Coated Magnesium by Electrodeposition, *Jung-Eun Park, J. Ji, Y. Kim, S. Byeon, M. Lee*, Chonbuk National University, Korea

**DP-ThP-9** Improvement in Corrosion Resistance and Biocompatibility of Biodegradable Mg Surface with Combination of Calcium Phosphate and Chitosan, *Seo-young Kim, Y. Jang, T. Bae, M. Lee*, Jeonbuk National University, Republic of Korea

**DP-ThP-10** Influence of Plasma-Enhanced Chemical Vapor Deposition Associated with Different Finishing Procedure on the Degradation of CAD/CAM Dental Ceramic, *Aldiêris Alves Pesqueira, L. Scaion Silva*, São Paulo State University (Unesp), School of Dentistry, Araçatuba, Brazil; *V. Adelino Ricardo Barão*, (University of Campinas (UNICAMP), Piracicaba Dental School, Brazil; *K. Henrique Cruz, V. Alves Nascimento, J. Pedro Justino de Oliveira Limirio*, São Paulo State University (Unesp), School of Dentistry, Araçatuba, Brazil; *B. Egumi Nagay*, University of Campinas (UNICAMP), Piracicaba Dental School, Brazil; *E. Cipriano Rangel*, Sao Paulo State University (UNESP), Laboratory of Technological Plasmas (LaPTec), Engineering College, Sorocaba, Brazil

## Coatings for Use at High Temperatures

Room Golden State Ballroom - Session AP-ThP

## Coatings for Use at High Temperatures (Symposium A) Poster Session 5:00pm

**AP-ThP-1** Thermal Stability of Thick  $\alpha$ - and  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> Coatings Deposited by High Speed PVD, *K. Bobzin, Christian Kalscheuer, M. Moebius, P. Hassanzadegan Aghdam*, RWTH Aachen University, Germany

**AP-ThP-3** e-Poster Presentation: High-Temperature Stability and Mechanical Properties of Non-Reactive PVD-Synthesized MoSi<sub>2</sub> Coatings, *Sophie Richter, A. Bahr, T. Wojcik*, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; *O. Hunold*, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; *S. Kolozsvári, P. Polcik*, Plansee Composite Materials GmbH, Germany; *J. Ramm*, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; *H. Riedl*, TU Wien, Institute of Materials Science and Technology, Austria

**AP-ThP-4** Thermal Stability of Atmospheric Pressure Plasma Jet Deposited YSZ Top Coats and Sputtered Al Bond Coats on Inconel 617, *Yung-I Chen, L. Wang, X. Qiu*, National Taiwan Ocean University, Taiwan

**AP-ThP-5** Ti<sub>1-x</sub>Al<sub>x</sub>N PVD Coatings in Hot-Corrosion Environments, *O. Hudak, Rainer Hahn, A. Scheiber*, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; *L. Shang, O. Hunold*, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; *S. Kolozsvari*, Plansee Composite Materials GmbH, Germany; *H. Riedl*, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria

## Functional Thin Films and Surfaces

Room Golden State Ballroom - Session CP-ThP

## Functional Thin Films and Surfaces (Symposium C) Poster Session 5:00pm

**CP-ThP-1** Structural and Compositional Analysis of Titanium-Based PVD Coatings, *Celia Rojo-Blanco*, Sheffield University, UK, Mexico; *J. Qi*, Sheffield University, UK, China; *G. Wu, L. Yang*, University of Leeds, UK, China; *S. Creasey-Gray, A. Leyland*, Sheffield University, UK

**CP-ThP-3** Study of Spatial Distribution of Sputtered Al-Doped Zinc Oxide for Optoelectronic Applications, *Eduard Llorens, E. Stamate*, DTU, Denmark

**CP-ThP-4** Optical and Electrical Characterization of Thin NiO<sub>x</sub> Films Obtained by R.F. Sputtering, *Francisco David Mateos-Anzaldo, R. Nedev, E. Osorio-Urquiza, M. Curiel-Alvarez, O. Perez-Landeros, J. Castillo-Saenz*, Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico; *A. Arias-Leon*, Universidad Autónoma de Baja California, Facultad de Ingeniería Mexicali, Mexico; *B. Valdez-Salas*, Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico; *N. Nedev*, Universidad Autónoma de Baja California, Instituto de Ingeniería, Mexico

**CP-ThP-5** Deposition of Lanthanum-Doped Barium Stannate as Transparent conducting Oxides, *C. Liu, Y. Yan, S. Chen, Yijia Chen, M. Wong*, National Dong Hwa University, Taiwan

**CP-ThP-6** Electrical Evaluation of Micro Water Droplets During Solidification Process Using Galvanic Array with Micro to Nano Gaps, *K. Hirayama*, Chiba Institute of Technology, Japan; *M. Mekawy, J. Kawakita*, NIMS, Japan; *Y. Sakamoto*, Chiba Institute of Technology, Japan

**CP-ThP-7** Engineered Ionic Diode Membranes Based on Subnanochannel Metal-Organic Frameworks with High Space Charges for Boosted Lithium Ion Transport and Unprecedented Osmotic Energy Conversion in Organic Solution, *Amalia Rizki Fauziah, L. Yeh*, National Taiwan University of Science and Technology, Taiwan

**CP-ThP-8** Designing Experimental Determination of Sheet Resistance of a Titanium Self-Aligned Silicide Formation, *Jau-Shiung Fang, Y. Chang, Y. Kuo*, National Formosa University, Taiwan

**CP-ThP-9** Hybrid Structures of p-n junction for Improving Efficiency of Photovoltaic Devices, *Pawel Jarka, T. Tański*, Department of Engineering Materials and Biomaterials, Faculty of Mechanical Engineering, Silesian University of Technology, Poland; *B. Hajduk, H. Bednarski*, Centre of Polymer and Carbon Materials, Polish Academy of Sciences, Poland

**CP-ThP-10** The Investigation of Electro-Optical Properties of Hybrid Organic-Inorganic Thin Films, *Tomasz Tański*, Department of Engineering Materials and Biomaterials, Faculty of Mechanical Engineering, Silesian University of Technology, Poland

**CP-ThP-11** Multilayer Growth of 2D Layered Material Bi<sub>2</sub>Se<sub>3</sub> Through Heteroatom-Assisted Step-Edge Barrier Reduction, *Namdong Kim*, Pohang Accelerator Laboratory, Republic of Korea

**CP-ThP-12** Metallic Ground States of Strained Ti<sub>2</sub>O<sub>3</sub> Thin Films, *Heungsoo Kim, S. Mathews, E. Lock, H. Prestigiacomo*, Naval Research Laboratory, USA; *M. Qazilbash*, William and Mary University, USA; *A. Piqué*, Naval Research Laboratory, USA

**CP-ThP-14** Rapid Thermal Annealing and Structural Evolution of Sputter-Deposited AlScN Thin Films, *Hongfei Liu, A. Yang, N. Gong, R. Karyappa, T. Meng*, Institute of Materials Research and Engineering (IMRE), Singapore

**CP-ThP-15** Work Function Enhancement of WO<sub>3</sub> Filamentous Films Obtained by Resistive Heating Evaporation Technique, *Fabien Sanchez, L. Marot, R. Antunes, R. Steiner, E. Meyer*, University of Basel, Switzerland

**CP-ThP-17** Controlled Thermal Conduction-based Detection of Dew Condensation on Target Solid Surface by Galvanic Arrays Sensor Chip, *K. Iida*, Chiba Institute of Technology, Japan; *M. Mekawy, N. satoh, J. Kawakita*, NIMS (National Institute for Materials Science), Japan; *Y. Sakamoto*, Chiba Institute of Technology, Japan

**CP-ThP-18** Polyimide-Based Gate Dielectrics for High-Performance Organic Thin Film Transistors, *Yan-Ting Chen, Y. Yu*, Ming Chi University of Technology, Taiwan

**CP-ThP-19** Epitaxially Grown Gold (100) Surfaces for Oxygen Reduction Reactions, *Katharina Kohlmann, D. Guay*, Institut national de la recherche scientifique, Canada; *A. Sarkissian*, Plasmonique Inc., Canada; *C. Schindler*, Munich University of Applied Sciences, Germany; *A. Rüdiger*, Institut national de la recherche scientifique, Canada

**CP-ThP-20** Ion-Selective Capacitive Deionization of Saltwater Using Functionalized Graphene Thin-Film Coated Electrodes, *H. Cheng*, National Cheng Kung University, Taiwan; *J. Wang*, Stanford University, USA; *Hong Paul Wang*, National Cheng Kung University, Taiwan

**CP-ThP-21** Research on the Application of the Double-layer Hole Transport Layer of Novel Functional Organic Small Molecule Materials in High-efficiency Inverted-Perovskite Solar Cells, *Wei-En Wu, Y. Yu*, Ming Chi University of Technology, Taiwan

**CP-ThP-22** High-Performance non-Fullerene Systems for Organic Solar Cells, *Chun-Chieh Lee, Y. Yu*, Ming Chi University of Technology, Taiwan

**CP-ThP-23** Vanadium Doped Zn Nanorod Array Piezoelectric Pressure Sensor, *Shu-Yu Lin, J. Huang, S. Brahma*, National Cheng Kung University (NCKU), Taiwan

## Hard Coatings and Vapor Deposition Technologies Room Golden State Ballroom - Session BP-ThP Hard Coatings and Vapor Deposition Technologies (Symposium B) Poster Session 5:00pm

**BP-ThP-1** Superhard Tungsten-tantalum Diboride (W,Ta)B<sub>2</sub> Coatings Prepared by High Power Impulse Magnetron Sputtering HiPIMS, *Rafat Psiuk, P. Denis*, Institute of Fundamental Technological Research, Polish Academy of Sciences, Poland; *t. Kurpaska*, National Centre for Nuclear Research, Poland; *T. Mościcki*, Institute of Fundamental Technological Research, Polish Academy of Sciences, Poland

**BP-ThP-2** First Principles Calculation of Thermal Properties for an Aeronautic Ni Alloy, *Luis Dacal, M. Lima*, Instituto de Estudos Avançados (IEAv - DCTA), Brazil

**BP-ThP-3** Direct Deposition of Nano-crystalline Diamond Coating on Steel (SS 301), *Nikhil C*, Indian Institute of Technology, Madras, India; *R. Kannan*, Indian Institute of Technology Madras, India; *R. Kannan, P. Bagaria*, Kapindra Precision Engineering Pvt. Ltd., India; *N. Arunachalam, M. Ramachandra Rao*, Indian Institute of Technology, Madras, India

**BP-ThP-4** Synergistic Effect of He for the Incorporation of Ne and Ar During Magnetron Sputtering Fabrication of Gas-Charged Silicon Films: A Microstructural and Chemical Characterization Study, *Asunción Fernández, V. Godinho*, Instituto de Ciencia de Materiales de Sevilla, CSIC-Univ. Sevilla, Spain; *J. Colaux*, Synthesis, Irradiation & Analysis of Materials (SIAM) Platform, Namur Institute of Structured Matter (NISM), University of Namur, Belgium; *J. Ávila*, Synchrotron SOLEIL and Université Paris-Saclay, France; *J. López-Viejobueno, J. Caballero-Hernández, D. Hufschmidt, M. Jiménez de Haro*, Instituto de Ciencia de Materiales de Sevilla, CSIC-Univ. Seville, Spain; *S. Lucas*, Laboratoire d'Analyse par Réactions Nucléaires (LARN), Namur Institute of Structured Matter (NISM), University of Namur, Belgium; *M. Asensio*, Madrid Institute of Materials Science (ICMM), CSIC, Cantoblanco, Spain

**BP-ThP-5** Custom Coating Solution for Coin Minting Dies, *Guillaume Wahli, J. Wehrs, S. Kaminski, A. Lümekemann*, PLATIT AG, Switzerland

**BP-ThP-6** Influence of the Period of a Multilayer TiN / TiAlN Coating System on its Microstructure and Electrochemical Behavior for Potential Applications in Hot Work Steel, *Hernán Darío Mejía Vásquez, G. Bejarano Gaitán*, University of Antioquia, Colombia

**BP-ThP-7** Diamond Synthesis on 2-Inch Si Substrates by Mode Conversion Type Microwave Plasma CVD, *Akira Inaba*, Chiba Institute of Technology, Japan

**BP-ThP-8** The Phase Transformation and Mechanical Properties of Magnetron Co-Sputtering (MoHf)N Coatings through Heat Treatment, *S. Hsu, Yu-Hsien Liao, F. Wu, Y. Chang*, Dept. of Materials Science and Engineering, National United University, Taiwan

**BP-ThP-9** Realistic Structural Properties of Amorphous SiN<sub>x</sub> from Machine-Learning-Assisted Molecular Dynamics, *Ganesh Kumar Nayak*, Montanuniversität Leoben, Austria; *P. Srinivasan*, Universität Stuttgart, Germany, Austria; *J. Todt, R. Daniel, D. Holec*, Montanuniversität Leoben, Austria

**BP-ThP-10** Reactive Remote Plasma Sputtering of Titania Thin Films Using r.f. Substrate Biasing, *Joseph Lawton*, University of Surrey, UK; *S. Thornley*, Plasma Quest Limited, UK; *M. Baker*, University of Surrey, UK

**BP-ThP-11** Influence of Process Gas on Properties and Residual Stress State of TiAlCrSiN PVD Coatings, *K. Bobzin, C. Kalscheuer, M. Carlet, Muhammad Tayyab*, Surface Engineering Institute - RWTH Aachen University, Germany

**BP-ThP-12** Control of TiN Thin Film Properties by the Energy of Sputtered Atoms in DC Magnetron, *Abderzak el-Farsy*, LPGP - Université Paris Saclay, France; *J. Pierson, T. Gries, L. de Poucques*, IJL - Université de Lorraine, France; *J. Bougdira*, IJL - Université de Lorraine, France

**BP-ThP-13** Fabrication of TiN Coatings Using Superimposed HiPIMS and MF: Effect of Target Poisoning Ratios and MF Power, *Bih-Show Lou*, Chang Gung University, Taiwan; *W. Yang, J. Lee*, Ming Chi University of Technology, Taiwan, Republic of China

**BP-ThP-14** Adhesion of Hydrogenated DLC Coatings on Polymer Substrates, *Akira Chikamoto, P. Abraha*, Meijo University, Japan

**BP-ThP-15** e-Poster Presentation: Fabrication of Pt-Nanocluster Decorated Porous Ni/MoS<sub>2</sub> for Hydrogen Evolution Reaction Application, *Po-Chun Chen*, National Taipei University of Technology, Taiwan

**BP-ThP-16** Optimization of Doping Content for Sputtered a-C:H:Si:O Coatings, *Abqaat Naseer, M. Evaristo, T. Bin Yaqub, S. Carvalho*, University of Coimbra, Portugal; *M. Kalin*, University of Ljubljana, Slovenia; *A. Cavaleiro*, University of Coimbra, Portugal

**BP-ThP-17** Surface Quality Improvement for Ge Device with Ozone ALD Formed Interfacial Layer and In-situ Hydrogen Plasma Treatment, *Pei-Hsiu Hsu*, National Tsing Hua University, Taiwan; *D. Ruan*, Fuzhou University, China; *K. Chang-Liao*, National Tsing Hua University, Taiwan, China

**BP-ThP-18** On the High Temperature Oxidation Behavior of AlCrBN/TiAlNbSiN Multilayer Coatings with Addition of Boron and Silicon, *Y. Chang, He-Qian Feng, K. Huang*, National Formosa University, Taiwan

**BP-ThP-19** Annealing Modulated Microstructural and Electrical Properties of PEALD-derived HfO<sub>2</sub>/SiO<sub>2</sub> Nanolaminates on AlGaN/GaN, *B. Wang, Y. Li, M. Chen, Duo Cao, F. Liu, W. Shi*, Shanghai Normal University, China

**BP-ThP-20** Self-Formation of Dual-Phase Nanocomposite nc-ZrN/a-ZrCu Coatings by Reactive Magnetron Co-Sputtering, *Stanislav Haviar, M. Červená*, University of West Bohemia, Czechia; *A. Bondarev*, Czech Technical University in Prague, Czechia; *R. Čerstvý, P. Zeman*, University of West Bohemia, Czechia

**BP-ThP-21** Structural Configuration of Functionalized Amorphous Silica Surfaces using Classical and *ab initio* Molecular Dynamics, **Azharul Islam, R. Fleming**, Arkansas State University, USA

**BP-ThP-22** The Mechanical and Corrosion Resistance Properties Study of Ultra-thick DLC Film by Filtered Arc Ion Plating (FAIP), **Hao-Wen Cheng**, Industrial Technology Research Institute, Taiwan

## New Horizons in Coatings and Thin Films

Room Golden State Ballroom - Session FP-ThP

## New Horizons in Coatings and Thin Films (Symposium F)

Poster Session

5:00pm

**FP-ThP-1** Fabrication of Chemical Bath Deposited ZnO Nanorods Layer Based Ultraviolet Light Detectors and Their Device Properties: Influences of Solution Concentration and Thermal Annealing, **Tomoaki Terasako, T. Fujikawa, K. Hirota, K. Kobayashi**, Graduate School of Science and Engineering, Ehime University, Japan; **M. Yagi**, National Institute of Technology, Kagawa College, Japan; **T. Yamamoto**, Materials Design Center, Research Institute, Kochi University of Technology, Japan

**FP-ThP-2** Advances in Nanosynthesis by Atmospheric Pulsed Arc Discharges, **C. Corbella, Sabine Portal**, George Washington University, USA; **M. Kundrapu**, Tech-X Corporation, USA; **M. Keidar**, George Washington University, USA

**FP-ThP-3** Structure, Mechanical Properties, and Thermal Stability of (Gd,Hf,Sc,Ti,Zr)-Nitride Thin Films, **Alexander Kirnbauer, M. Derflinger**, TU Wien, Institute of Materials Science and Technology, Austria; **P. Polcik**, Plansee Composite Materials GmbH, Germany; **P. Mayrhofer**, TU Wien, Institute of Materials Science and Technology, Austria

**FP-ThP-4** Demystifying the Entropy Forming Ability – The Role of Atomic Size Effects, **Andreas Kretschmer, P. Mayrhofer**, TU Wien, Institute of Materials Science and Technology, Austria

**FP-ThP-5** High-Temperature Oxidation Resistance of CrB<sub>2</sub> Coatings Alloyed by Transition Metal Disilicide Phases, **Ahmed Bahr, T. Glechner, T. Wojcik, P. Kutrowatz**, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria; **J. Ramm, O. Hunold**, Oerlikon Balzers, Oerlikon Surface Solutions AG, Liechtenstein; **S. Kolozsvári, P. Polcik**, Plansee Composite Materials GmbH, Germany; **E. Ntemou, D. Primetzhofer**, Department of Physics and Astronomy, Uppsala University, Sweden; **H. Riedl**, Christian Doppler Laboratory for Surface Engineering of high-performance Components, TU Wien, Austria

**FP-ThP-6** The Photodetection of the in-, Sn-, and Te-Doped Bi<sub>2</sub>Se<sub>3</sub> Nanoplatelets, **Chih-Chiang Wang**, National Chin-Yi University of Technology, Taiwan; **H. Shih**, Chinese Culture University, Taiwan; **F. Shieu**, National Chung Hsing University, Taiwan; **A. Lo**, National Chin-Yi University of Technology, Taiwan

**FP-ThP-7** Metallic Zn and Mg Nanowire Coatings by Conventional Reactive DC Sputter Deposition, **J. Zawadzki, Michał, Adam Borysiewicz, M. Wzorek**, Łukasiewicz Research Network - Institute of Microelectronics and Photonics, Poland

**FP-ThP-8** Synthesis and Electrical Properties of Gasb Nanowires, **Tzai-Wei Chen, C. Wang**, National Taiwan University of Science and Technology, Taiwan

**FP-ThP-9** Spacing-controllable core@shell TiO<sub>2</sub>@Ru/RuOx Nanotube Array for Biocompatible Stimulating Electrode Applications, **Jia-Jun Li**, National Taipei University of Technology, Taiwan

**FP-ThP-10** Nickel Sulfide on Organic Framework for Efficient Hydrogen Evolution Reaction, **Yu-An Chi**, Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Taiwan; **T. Chang, C. Kung**, Department of Chemical Engineering, National Cheng Kung University, Taiwan; **C. Chen**, Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Taiwan

**FP-ThP-11** Research of The Growth Mechanism of Solvothermally Synthesized Sb<sub>2</sub>Te<sub>3</sub> Nanosheets, **Yen-Jen Lin, C. Chen**, Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Taiwan

**FP-ThP-12** Exploring Zn-Sn-O (ZTO) Composition Spreads with Combinatorial Sputtering, **Siang-Yun Li, Y. Shen, K. Chang, W. Wu, J. Ting**, National Cheng Kung University, Taiwan

**FP-ThP-14** High-Precision Feedback Control Measurements of the Aluminum-Oxygen Double Hysteresis Curve in Reactive Magnetron Sputtering, **Josja Van Bever, K. Strijckmans, D. Depla**, Ghent University, Belgium

**FP-ThP-16** Synthesis and Characterization of Titanium Thin Films by Magnetron Sputtering and the Effect of the Addition of a Graphite Anode, **D. Jacobo Mora, M. Martinez Fuentes, Stephen Muhl**, Universidad Nacional Autónoma de México

**FP-ThP-17** Developing Materials for Future Generation Nuclear Reactors, **Vladimir Vishnyakov**, Huddersfield University, UK

**FP-ThP-19** Effect of Surface Treatment on the Bifunctional Performance of Core-Shelled High Entropy Spinel Oxides, **Yi-Ting Jhuo**, National Cheng Kung University (NCKU), Taiwan; **T. Nguyen**, National Cheng Kung University (NCKU), Taiwan, Viet Nam; **J. Ting**, National Cheng Kung University (NCKU), Taiwan

## Surface Engineering - Applied Research and Industrial Applications

Room Golden State Ballroom - Session GP-ThP

## Surface Engineering - Applied Research and Industrial Applications (Symposium G) Poster Session

5:00pm

**GP-ThP-1** Enhanced Corrosion Resistance, Wear and Antibacterial Properties of TiO<sub>2</sub>-Incorporated Micro-Arc Oxidation on AZ31 Magnesium Alloy, **Wei-Hao Chen, Y. Lee, S. Huang, Y. Chu**, National Taiwan University, Taiwan

**GP-ThP-2** The Influence of the Pause Time on Microstructure and Corrosion Resistance of AZ31 Magnesium Alloy Micro-Arc Oxidation Coating, **Shih-Yen Huang, Y. Lee, Y. Chu**, National Taiwan University, Taiwan

**GP-ThP-3** Microstructure and Properties of HVOF Sprayed Coatings Remelted by Laser, **E. Jonda, Marek Sraka, W. Pakieta**, Silesian University of Technology, Poland; **T. Jung**, Łukasiewicz Research Network - Institute for Ferrous Metallurgy, Poland

**GP-ThP-4** Fabrication Feasibility Study on Cu and Cu Alloy Coating for Spent Fuel Canister of Deep Geological Disposal, **Young-Ho Lee, Y. Jung, D. Kim, S. Yoon, H. Kim**, Korea Atomic Energy Research Institute, Republic of Korea

**GP-ThP-5** Etching of B-doped Diamond Films Using RF Plasma, **Ryuhei UEDA**, Chiba Institute of Technology, Japan

**GP-ThP-6** Fabrication of Si/C/SiNW Arrays Sandwich Structure at Different Annealing Parameters for Solar Cell Application, **Ai-Huei Chiou, J. Wei**, National Formosa University, Taiwan

**GP-ThP-7** Barrier Properties Enhancement of Bio-Based Polymers by Means of Multilayer Coatings Applied by Pulsed DC PACVD, **C. Nicoletti, C. Forsich**, University of Applied Sciences Upper Austria; **Francisco A. Delfin**, University of Applied Sciences Upper Austria, Austria, National University of Technology, Concepción del Uruguay, Argentina; **S. Augl, S. Danningner**, University of Applied Sciences Upper Austria; **M. Schachinger**, (University of Applied Sciences Upper Austria; **C. Burgstaller, D. Heim, J. Weghuber**, University of Applied Sciences Upper Austria

**GP-ThP-8** Effect of Fluoride on Adhesion of Electroless Nickel-Phosphorus Coating on MAO-Coated AZ31B Magnesium Alloy, **J. Lee, C. Lee**, National Defense University, Republic of China; **J. Lee**, Lung Hwa University of Science and Technology, Taiwan; **S. Jian**, Ming Chi University of Technology, Taiwan, Republic of China; **Ming-Der Ger, A. Cheng**, National Defense University, Republic of China

**GP-ThP-9** Effect of Mechanical Stress on Electrical Characteristics of Low-Dielectric-Constant Dielectric Materials, **Yi-Lung Cheng**, National Chi-Nan University, Taiwan

**GP-ThP-10** Monolithic Integration of Lead Selenide Films via Surface Morphology Engineering, **Sejeong Park, J. Park**, Opto Diode Corporation, USA

**GP-ThP-12** Degradation Effect of Multilayer Stacking Superlattice/Si/SiGe/SiChannel on FinFET and GAAFET Device, **Yu-Hsin Chen**, National Tsing Hua University, Taiwan; **D. Ruan**, Fuzhou University, China; **K. Chang-Liao**, National Tsing Hua University, Taiwan

**GP-ThP-13** Industrialization of Precious Metal-Free Bipolar Plates for Use in Pem Fuel Cells, **Julian Kapp, V. Lukasek, V. Mackert**, ZBT GmbH; **M. Welters, KCS Europe GmbH; H. Hoster**, ZBT GmbH; **R. Cremer, P. Jaschinski**, KCS Europe GmbH, Germany

**GP-ThP-15** Corrosion Resistance in Synthetic Seawater Plus Diluted Sulfuric Acid of DLC/Crc/Cr Multilayers Co-Deposited by HIPIMS and DCMS, **Martin Flores, L. Flores Cova**, Universidad de Guadalajara, Mexico



## Topical Symposia

### Room Golden State Ballroom - Session TS1P-ThP

#### Coatings for Energy Storage and Conversion - Batteries and Hydrogen Applications - TS1 Poster Session 5:00pm

**TS1P-ThP-1** Bacezrybo<sub>3-6</sub> Coatings Deposited by Colloidal Coating Process for Sustainable Energy Application, *Chien-Ming Lei, P. Lin, Y. Chen*, Department of Chemical and Materials Engineering, Chinese Culture University, Taiwan

**TS1P-ThP-2** PVD Core-Shell-Catalysts for Use in Electrolyzers, *Jan-Ole Achenbach, S. Cremer, R. Cremer*, KCS Europe GmbH, Germany

**TS1P-ThP-3** Repressing Noble Metal Ruthenium Target to Reduce the Cost of Bipolar Plate Manufacture in Fuel Cells, *Jing Yang*, SCI Engineered Materials, inc, USA

**TS1P-ThP-4** Corrosion Protection of Bipolar Plates in Electrolysers, *M. Welters*, KCS Europe GmbH, Germany; *N. Kruppe*, Schaeffler Technologies GmbH & Co. KG, Germany; *Peter Jaschinski, T. Breuer, S. Yang, R. Cremer*, KCS Europe GmbH, Germany; *M. Öte, N. Bagcivan*, Schaeffler Technologies GmbH & Co. KG, Germany

**TS1P-ThP-5** MOF-Derived Molybdenum Carbide-Copper as an Electrocatalyst for The Hydrogen Evolution Reaction, *W. Chen, Yu-Chin Shen, J. Huang*, National Cheng Kung University (NCKU), Taiwan; *S. Wang*, Southern Taiwan University of Science and Technology, Taiwan; *Y. Shen*, National Cheng Kung University (NCKU), Taiwan

**TS1P-ThP-7** rGo-SiOx Nanocomposite as Anode Material in Lithium Ion Battery, *Sheng Hsu, J. Huang*, National Cheng Kung University (NCKU), Taiwan; *B. Sanjaya*, National Cheng Kung University (NCKU), Taiwan, India

## Topical Symposia

### Room Golden State Ballroom - Session TS2P-ThP

#### Sustainable Surface Solutions, Materials, Processes and Applications - TS2 Poster Session 5:00pm

**TS2P-ThP-1** The Study of Different Crystalline Moissanite: Nucleation and Growth of Nanoparticle Gold Coatings, *Tsung-Jen Wu, S. Song, W. Chen*, Institute of Geosciences, National Taiwan University, Taiwan; *W. Lin*, Department of Materials and Mineral Resources Engineering, National Taipei University of Technology, Taiwan

**TS2P-ThP-2** Multilayered Structure of PE-Based Polymer Film Composites, *Marcin Bilewicz*, Silesian University of Technology, Poland

**TS2P-ThP-3** Understanding the Mechanical Behavior of Nanoporous Si by Molecular Dynamics Simulations, *B. Crutchfield, Robert Fleming*, Arkansas State University, USA

## Topical Symposia

### Room Golden State Ballroom - Session TS3P-ThP

#### Processes of Materials for Printed and Flexible Film Technologies - TS3 Poster Session 5:00pm

**TS3P-ThP-1** Organic and Perovskite Solar Cells based on 3D-Printed Transparent Conducting Electrodes, *H. Lee, B. Tyagi, Jae-Wook Kang*, Jeonbuk National University, Republic of Korea

**TS3P-ThP-2** Development of a Microfluidic System for Oxygen Environment Detection in Cell Culture, *Wen-Cheng Kuo, L. Wu, J. Wang*, National Kaohsiung University of Science and Technology, Taiwan

**TS3P-ThP-3** Radiation Effect on Trapping States Modification for Nanowire Junction-less Charge Trapping Flash Memory Devices, *Che-Wei Lin*, National Tsing Hua University, Taiwan; *D. Ruan*, Fuzhou University, China; *K. Chang-Liao*, National Tsing Hua University, Taiwan

## Tribology and Mechanical Behavior of Coatings and Engineered Surfaces

### Room Golden State Ballroom - Session EP-ThP

#### Tribology and Mechanical Behavior of Coatings and Engineered Surfaces (Symposium E) Poster Session 5:00pm

**EP-ThP-1** e-Poster Presentation: Combinatorial Study of Mo<sub>2</sub>N-Cu Coatings to Optimize Tribological Performance in Low Viscosity Fuel Environments, *Slater Caldwell, M. Dockins, E. Cairns*, University of North Texas, USA; *S. Berkebile*, US DEVCOM Army Research Laboratory, USA; *A. Voevodin, D. Berman, S. Aouadi*, University of North Texas, USA

**EP-ThP-2** Triboactive CrAlXN Coatings for Wear and Friction Reduction under Grease Lubrication, *K. Bobzin*, Surface Engineering Institute - RWTH Aachen University, Germany; *C. Kalscheuer*, surface Engineering Institute - RWTH Aachen University, Germany; *Max Philip Möbius*, Surface Engineering Institute - RWTH Aachen University, Germany; *M. Rank*, Institute of Machine Elements, Gears and Tribology - TU Kaiserslautern, Germany; *M. Oehler, O. Koch*, Institute for Machine Elements, Gears and Tribology, Germany

**EP-ThP-3** Influence of Nb and Ta Added Elements on the Corrosion and Mechanical Properties of CrYN Coatings, *İhsan Efeoğlu, B. Yaylalı, G. Gülten, Y. Totik*, Atatürk University, Turkey; *P. Kelly, J. Malecka*, Manchester Metropolitan University, U.K.

**EP-ThP-4** Evaluation of the Adhesive Strength of a Nitrided Stainless Steel Under Cyclic Contact Loads, *D. Fernández-Valdés, Jesús Vidal-Torres*, SEPI ESIME Instituto Politécnico Nacional, Mexico; *A. López-Liévano*, Universidad Veracruzana, Mexico; *G. Rodríguez-Castro, A. Meneses-Amador*, SEPI ESIME Instituto Politécnico Nacional, Mexico

**EP-ThP-5** Effect of Annealing Treatment on Mechanical Properties of Nanostructured Metallic Films Deposited by Pulsed Laser Deposition, *Francesco Bignoli*, CNRS, France; *S. Rashid, E. Rossi*, Università degli studi Roma 3, Italy; *P. Djemia, CNRS, France; M. Sebastiani*, Università degli studi Roma 3, Italy; *A. Li Bassi*, Politecnico di Milano, Italy; *M. Ghidelli*, CNRS, France

**EP-ThP-6** Accurate Measurement of Thin Film Elastic Properties Using Thermal Loading, *C. Trost*, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences & Dept. of Materials Science, Montanuniversität Leoben, 8700 Leoben, Austria; *S. Zak*, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Austria; *Megan J. Cordill*, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences & Dept. of Materials Science, Montanuniversität Leoben, 8700 Leoben, Austria

**EP-ThP-7** Microstructural, Mechanical and Tribological Properties of TiAlSiN-Cu Superhard Nanocomposite Coatings Deposited by Filtered Cathodic Arc Ion Plating Technique, *In-Wook Park, S. Heo, W. Kim, J. Kim, E. Choi, S. Choe*, Korea Institute of Industrial Technology (KITECH), Republic of Korea; *J. Lim*, BMT Co., Ltd, Republic of Korea

**EP-ThP-8** Adhesion of WTi to Polyimide Measured by Complementary Methods, *D. Gutnik, Alice Lassnig*, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria; *A. Kleinbichler*, Infineon Technologies AG, Austria; *P. Imrich*, KAI Kompetenzzentrum Automobil- und Industrieelektronik, Austria; *M. Cordill*, Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria

**EP-ThP-9** On the Use of Integrated 3D-Profilometry to Bring New Insights on Mechanical Characterization of PVD Coatings by Scratch and Tribology Tests, *Philippe Kempe*, Rtec-Instruments SA, Switzerland

**EP-ThP-10** Typical Gaffes During the Nanoindentation of Coatings, *Esteban Broitman*, SKF - Research and Technology Development, Netherlands

**EP-ThP-11** High Temperature Tribological Behavior of TiAlN Coatings with Different Ti/Al Ratios, *C. Pereira, F. Amorim*, Pontificia Universidade Católica do Paraná, Brazil; *G. Souza*, UEPG, Brazil; *P. Soares, M. Meruvia, Ricardo Torres*, Pontificia Universidade Católica do Paraná, Brazil

**EP-ThP-12** Structural, Phase, Electrochemical, and Tribological Evaluation of TiO<sub>2</sub> and SiO<sub>2</sub> Multilayer Coatings Obtained by Reactive Magnetron Sputtering with Potential Biomedical Applications, *Julián Andrés Lenis Rodas*, University of Antioquia, Politécnico Colombiano Jaime Isaza Cadavid and Servicio Nacional de Aprendizaje - SENA, Colombia

**EP-ThP-13** Tribological Performance of Sliding Pads Against Ti<sub>6</sub>Al<sub>4</sub>V for Aeronautic Applications, *Manel Rodríguez Ripoll, A. Ventura*, AC2T Research GmbH, Austria

# Friday Morning, May 26, 2023

<b>Functional Thin Films and Surfaces</b> <b>Room Pacific F-G - Session C2-2-FrM</b> <b>Thin Films for Electronic Devices II</b> <b>Moderators: Julien Keraudy, Oerlikon Balzers, Oerlikon Surface Solution AG, Liechtenstein,</b> <b>Jörg Patscheider, Evatec AG, Switzerland</b>		<b>Functional Thin Films and Surfaces</b> <b>Room Town &amp; Country B - Session C3-2-FrM</b> <b>Thin Films and Novel Surfaces for Energy II</b> <b>Moderators:</b> <b>Clio Azina, RWTH Aachen University, Germany,</b> <b>Carlos Tavares, University of Minho, Portugal</b>	
8:00am	<b>INVITED: C2-2-FrM-1</b> 3D Device Integration Technology for AI Computing, <i>S. Chang</i> , Powerchip Semiconductor, Taiwan; <i>S.-Z. Chang, Chun-Lin Lu</i> , Powerchip Semiconductor Manufacturing Corporation, Taiwan		
8:20am			
8:40am	<b>C2-2-FrM-3</b> Magnetic Nanolaminates Deposited by Magnetron Sputtering for Next Generation Electronic Devices, <i>Claudiu V. Falub, M. Bless, J. Richter, X. Zhao, H. Rohrmann, M. Tschirky, M. Padrun</i> , Evatec AG, Switzerland	<b>INVITED: C3-2-FrM-3</b> Survey for Ferroelectric/Antiferroelectric Films for Energy Storage, <i>Mitsuru Itoh, H. Takashima</i> , National Institute of Advanced Industrial Science and Technology/Tokyo institute of Technology, Japan	
9:00am	<b>C2-2-FrM-4</b> Tungsten-Based Thin Film Metallic Glass as Diffusion Barrier between Copper and Silicon, <i>Pei-Yu Chen, J. You, C. Hsueh</i> , National Taiwan University, Taiwan		
9:20am	<b>C2-2-FrM-5</b> Investigation of Properties and Microstructures of Ag-Cu Alloy Thin Films by Co-sputtering and First-principles Calculations, <i>Yu-Chieh Wang, C. Chen, F. Ouyang, H. Chen</i> , National Tsing Hua University, Taiwan	<b>C3-2-FrM-5</b> First Attempt to Describe the Effect of the Substrate Temperature on the Depth Concentration Profile of Reactively Sputtered ZnGeN <sub>2</sub> Thin Films, <i>A. Virfeu, F. Alnjiman, A. Borroto, S. Migot, J. Ghanbaja, D. Mangin, D. Pilloud, Jean-Francois Pierson</i> , Institut Jean Lamour - Université de Lorraine, France	
9:40am	<b>C2-2-FrM-6</b> Multi-Step Method for the Fabrication of High-Performance Continuous Ultra-Thin Silver Films for Energy Applications, <i>Phillip Rumsby, B. Baloukas, O. Zabeida, L. Martinu</i> , Polytechnique Montréal, Canada	<b>C3-2-FrM-6</b> CVD Process Development of Thin Film Triniobium-Tin on Copper SRF Cavities, <i>Mohamed A. Cheikh, S. McNeal, V. Arrieta</i> , Ultramet, USA	
10:00am	<b>C2-2-FrM-7</b> Structural, Electrical, and Thermal Properties of Ge-Rich Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> Alloys, <i>Matias Kalaswad, A. Jarzembki, P. Kotula</i> , Sandia National Laboratories, USA; <i>T. Beechem</i> , Purdue University, USA; <i>M. King, D. Adams</i> , Sandia National Laboratories, USA	<b>C3-2-FrM-7</b> Engineered Metal-Organic Framework-Based Heterogeneous Membranes with High Ionic Rectification for Ultrahigh Osmotic Power Generation from Organic Solutions, <i>Amalia Rizki Fauziah, L. Yeh</i> , National Taiwan University of Science and Technology, Taiwan	
10:20am	<b>C2-2-FrM-8</b> Preparation and Electrical Properties of Tantalum Silicate Thin Films, <i>You-Sheng Lu, C. Chen, C. Huang, S. Chen, Y. Liu</i> , Ming Chi University of Technology, Taiwan; <i>W. Huang</i> , Chien Hwa Coating Technology Inc., Taiwan; <i>W. Yang</i> , General Research Institute for Nonferrous Metals, China		
10:40am	<b>C2-2-FrM-9</b> Enhanced Reliability Characteristic Oftri-Gatepoly-Ge Charge Trapping Flash Memory with Ultra-Thin Tunneling Layer Engineering, <i>Che-Wei Lin</i> , National Tsing Hua University, Taiwan; <i>D. Ruan</i> , Fuzhou University, China; <i>K. Chang-Liao</i> , National Tsing Hua University, Taiwan		
11:00am			
11:20am			

# Friday Morning, May 26, 2023

<b>Hard Coatings and Vapor Deposition Technologies</b> <b>Room Town &amp; Country C - Session B1-3-FrM</b> <b>PVD Coatings and Technologies III</b> <b>Moderators:</b> <b>Christian Kalscheuer, RWTH Aachen University, Germany,</b> <b>Vladimir Pankov, National Research Council of Canada</b>		
8:00am	<b>B1-3-FrM-1</b> Effect of Wettability Modification of Ti-Al-Based Thin Films on Heat Transfer Exchange During Water Drop Cooling, <b>Alexis Carlos Garcia Wong</b> , G. Marcos, Institut Jean Lamour - Université de Lorraine, France; G. Castanet, O. Caballina, F. Lemoine, Laboratoire d'Energétique et de Mécanique Théorique et Appliquée, France; J. Pierson, T. Czerwiec, Institut Jean Lamour - Université de Lorraine, France	
8:20am	<b>B1-3-FrM-2</b> Rf-Bias Assisted, Combinatorial Sputtering of Conductive (TiZr)N Hard Coatings on Insulating Substrates, <b>Kerstin Thorwarth</b> , Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland; M. Watroba, Empa, Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland; J. Sommerhaeuser, S. Zhuk, J. Patidar, A. Wiecek, S. Siol, Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland	
8:40am	<b>B1-3-FrM-3</b> The Microstructure and Properties of Highly (111)-Oriented Nano-Twinned Cu-Ag Thin Film Prepared by DC Sputtering System, <b>Ko-Chieh Hsueh</b> , National Tsing Hua University, Taiwan; J. Lee, F. Ouyang, National Tsing Hua University, Taiwan	
9:00am	<b>B1-3-FrM-4</b> High Gain CMOS inverter with Vertically-Stacked Hybrid PVD-Formed IWZO TFT and Monolithic FinFET, <b>Yu-Hsin Chen</b> , National Tsing Hua University, Taiwan; D. Ruan, Fuzhou University, China; K. Chang-Liao, National Tsing Hua University, Taiwan	
9:20am	<b>B1-3-FrM-5</b> Development of New Magnetron Sputter Deposition Processes for Inertial Confinement Fusion Targets, <b>S. O. Kucheyev</b> , S. Shin, L. Bayu Aji, G. Taylor, A. Engwall, J. Merlo, L. Sohngen, Lawrence Livermore National Laboratory, USA; J. Bae, General Atomics, USA	

# Friday Morning, May 26, 2023

<b>New Horizons in Coatings and Thin Films</b> <b>Room Pacific E - Session F1-FrM</b> <b>Nanomaterial-based Coatings and Structures</b> <b>Moderators: Ondrej Kylian, Charles University, Prague, Czechia,</b> <b>Vladimir Popok, Aalborg University, Denmark</b>		
8:00am		
8:20am	<b>F1-FrM-2</b> Giant Actuated Van der Waals Metal/Muscovite Heteroepitaxy, <b>Jia-Wei Chen</b> , National Yang Ming Chiao Tung University, Taiwan; <b>Y. Chu</b> , National Tsing Hua University, Taiwan	
8:40am	<b>INVITED: F1-FrM-3</b> Brain-Like Behaviour in Percolating Films of Nanoparticles, <b>Simon Brown</b> , The MacDiarmid Institute for Advanced Materials and Nanotechnology, School of Physical and Chemical Sciences, University of Canterbury, New Zealand	
9:00am		
9:20am	<b>F1-FrM-5</b> RBS Study of Silver/Copper Diffusions in the Matrix of Amorphous Carbon Coatings Produced by Magnetron Sputtering, <b>G. Sanzone</b> , Teer Coatings Ltd, UK; <b>M. Sharpe, P. Couture, J. England</b> , University of Surrey, UK; <b>S. Field, H. Sun, Jinlong Yin</b> , Teer Coatings Ltd, UK	
9:40am	<b>F1-FrM-6</b> C:H:N:O Plasma-polymer with Anchored LSPR Active Ag Nanoparticles for Detection of Borrelia Pathogen, <b>S. Kumar</b> , University of South Bohemia, Czechia; <b>H. Maskova</b> , University of South Bohemia, Biology Centre ASCR, Institute of Parasitology Branisovska, Czechia; <b>A. Kuzminova</b> , Charles University, Czechia; <b>R. Rego</b> , University of South Bohemia, Biology Centre ASCR, Institute of Parasitology Branisovska, Czechia; <b>J. Sterba</b> , University of South Bohemia, Czechia; <b>O. Kylian</b> , Charles University, Czechia; <b>Vitezslav Stranak</b> , University of South Bohemia, Czechia	
10:00am	<b>F1-FrM-7</b> Aln Nanostructures for Piezoelectric Nanogenerators, <b>Manohar Chirumamilla</b> , <b>M. Sandager, V. Popok, K. Pedersen</b> , Aalborg University, Denmark	
10:20am	<b>F1-FrM-8</b> Super-Amphiphobic Nano-Wall Structured Teflon Films Deposited by Microwave Plasma, <b>Ta-Chin Wei</b> , Chung Yuan Christian University, Taiwan	
10:40am	<b>F1-FrM-9</b> Diamond-Based Nanostructured Interfaces for Electrochemical Applications, <b>Robert Bogdanowicz</b> , Gdańsk University of Technology, Poland	
11:00am	<b>F1-FrM-10</b> Engineering Nanostructured Metallic Thin Films by Pulsed Laser Deposition with an Outstanding Combination of Mechanical Properties, <b>Francesco Bignoli, D. Faurie</b> , CNRS, France; <b>C. Gammer, A. Lassnig</b> , Austrian Academy of Sciences, Austria; <b>S. Lee, C. Aguiar Teixeira</b> , Karlsruhe Institute of Technology (KIT), Institute for Applied Materials (IAM), Germany; <b>A. Li Bassi</b> , Politecnico di Milano, Italy; <b>M. Ghidelli</b> , CNRS, France	
11:20am	<b>F1-FrM-11</b> Preparation and Properties of Fluoroalkyl End-Capped Oligomer/Cellulose Nanofiber Composites, <b>Hideo Sawada, Y. Endo, Y. Oikawa</b> , Hirosaki University, Japan	
11:40am	<b>F1-FrM-12</b> Synthesis and Electrical Properties of Single Crystalline Cu <sub>3</sub> Ge Nanowires, <b>Chang Ting-Hsiang, L. Bo-Yan, W. Chiu-Yen</b> , National Taiwan University of Science and Technology, Taiwan	

**Bold page numbers indicate presenter**

— **A** —

Abadias, G.: B6-MoA-5, 10  
 Abelson, J.: F4-2-ThM-7, 34  
 Abraha, P.: BP-ThP-14, 41; DP-ThP-5, 40  
 Abrikosov, I.: F2-ThA-6, 38  
 Achenbach, J.: TS1P-ThP-2, **43**  
 Adalati, R.: TS3-WeA-4, 30  
 Adam, M.: A2-1-TuA-1, 17  
 Adams, D.: B6-MoA-11, 10; C2-2-FrM-9, 45  
 Adelino Ricardo Barão, V.: DP-ThP-10, 40  
 Aguiar Teixeira, C.: F1-FrM-10, 47  
 Aguirre, T.: A2-2-WeM-6, 21  
 Ahmed, J.: E1-2-WeM-4, 23  
 AISSANI, L.: D1-2-MoA-7, 8  
 Al Abri, S.: G1-WeM-4, **24**  
 Alfonso-Reyes, F.: B4-3-TuM-5, 13  
 ALHUSSEIN, A.: D1-2-MoA-7, **8**  
 Allendorf, M.: F2-ThA-1, 38  
 Alling, B.: F2-ThA-6, 38  
 Almaguer-Flores, A.: D3-TuA-9, 16  
 Alnjiman, F.: C3-2-FrM-5, 45  
 Al-Sardia, M.: B6-MoA-4, **10**  
 Altaf Husain, S.: H2-1-TuM-6, **12**  
 Altama, A.: D2-TuM-5, **12**  
 Alvarez, F.: E1-1-TuA-4, 19  
 Alves Nascimento, V.: DP-ThP-10, 40  
 Alves Pesqueira, A.: DP-ThP-10, **40**  
 Alves, E.: C3-1-ThM-5, 32  
 Amorim, F.: EP-ThP-11, 44  
 Amster, O.: H1-2-MoA-10, 8  
 An, T.: D1-2-MoA-5, 8  
 Anders, A.: B8-2-ThM-4, 33  
 Anderson, M.: EP-ThP-13, 44  
 Andersson, J.: B1-1-ThM-7, 32  
 Ankamma, K.: E3-1-TuM-5, 14  
 Ansell, T.: E1-2-WeM-2, 23  
 Anthopoulos, T.: TS3-WeA-1, **30**  
 Anton, R.: A1-1-MoM-4, 5; A2-1-TuA-8, **17**  
 Antunes, R.: CP-ThP-15, 41  
 Aouadi, S.: E3-1-TuM-9, 14; EP-ThP-1, 43  
 Appleget, C.: E2-1-ThM-1, **34**; HP-ThP-6, 40  
 Arciniega-Martínez, J.: B4-2-MoA-3, **10**  
 Arfanis, M.: C3-1-ThM-11, 32  
 Arias-Leon, A.: CP-ThP-4, 41  
 Ariosa, D.: B5-ThM-11, 33  
 Arnoult, G.: G4-WeM-10, 24  
 Arrieta, V.: C3-2-FrM-8, 45  
 Arunachalam, N.: BP-ThP-3, 41  
 Asensio, M.: BP-ThP-4, 41  
 Atakan, B.: H1-2-MoA-8, 8  
 Atanasoff, G.: H1-1-MoM-5, **4**  
 Atwill, M.: D3-TuA-10, 16  
 Augl, S.: GP-ThP-7, 43  
 Ávila, J.: BP-ThP-4, 41  
 Azina, C.: A1-2-MoA-9, **9**; FP-ThP-18, 42  
 Azoff-Slifstein, M.: B5-ThM-10, **33**

— **B** —

Bacon, S.: C1-2-WeA-5, 29; HP-ThP-1, 40  
 Bae, J.: B1-3-FrM-5, 46; B4-4-TuA-1, 17; B4-4-TuA-8, 17

Bae, T.: DP-ThP-9, 40  
 Bagaria, P.: BP-ThP-3, 41  
 Bagcivan, N.: TS1P-ThP-4, 43  
 Bahillo, A.: A1-3-TuM-7, 13  
 Bahr, A.: AP-ThP-3, 40; B8-1-WeA-8, 30; F4-1-WeA-1, **27**; FP-ThP-5, **42**  
 Bairagi, S.: B4-1-MoM-6, 5  
 Baker, A.: B8-2-ThM-3, 33  
 Baker, M.: BP-ThP-10, 41; C1-2-WeA-5, **29**; HP-ThP-1, **40**  
 Bakhit, B.: B1-1-ThM-7, 32  
 Baldwin, J.: H1-2-MoA-5, 8  
 Balestrieri, M.: B1-2-ThA-3, 37; HP-ThP-3, 40  
 Ballesteros-Arguello, A.: B4-3-TuM-5, **13**  
 Baloukas, B.: C2-2-FrM-8, 45  
 Bandiera, N.: B1-2-ThA-8, **37**  
 Barankova, H.: G4-WeM-11, **24**  
 Barão, V.: D3-TuA-11, **16**; D3-TuA-8, 16  
 Bardos, L.: G4-WeM-11, 24  
 Barnholt, D.: B1-2-ThA-1, 37  
 Barradas, N.: C3-1-ThM-5, 32  
 Barrie, J.: E2-1-ThM-1, 34; HP-ThP-6, 40  
 Barrirero, J.: G1-WeM-5, 24  
 Bartosik, M.: B4-3-TuM-2, 13  
 Barynova, K.: B8-2-ThM-12, 33; B8-2-ThM-6, **33**  
 Barzilai, S.: C1-1-WeM-3, 22  
 Basu, R.: B6-MoA-3, **10**  
 Bauer, P.: A1-1-MoM-3, **5**  
 Bayu Aji, L.: B1-3-FrM-5, 46; B4-4-TuA-1, 17; B4-4-TuA-8, 17; B8-2-ThM-3, **33**  
 Beake, B.: H3-1-TuA-4, **16**  
 Beck, O.: F4-1-WeA-1, 27  
 Becker, J.: TS2-TuA-2, 18  
 Beckmann, K.: C2-1-ThA-1, 37  
 Bednarski, H.: CP-ThP-9, 41  
 Beechem, T.: C2-2-FrM-9, 45  
 Beisenherz, D.: TS1-3-TuM-5, 14  
 Bejarano Gaitán, G.: B1-1-ThM-9, 32; BP-ThP-6, 41; DP-ThP-6, 40  
 BELGROUNE, A.: D1-2-MoA-7, 8  
 Bell, A.: B4-4-TuA-2, 17  
 Ben Mahmoud, H.: H2-1-TuM-7, 12  
 Benito, M.: A1-3-TuM-7, 13  
 Berenov, A.: B8-2-ThM-11, 33  
 Berkebile, S.: E1-2-WeM-4, 23; EP-ThP-1, 43  
 Berman, D.: E3-1-TuM-9, 14; EP-ThP-1, 43  
 Bertolini, M.: D3-TuA-11, 16  
 Best, J.: E2-1-ThM-7, 34  
 Betiuk, M.: B8-1-WeA-9, 30  
 Beyerlein, I.: H1-2-MoA-5, 8  
 Bhatia, H.: D3-TuA-3, **16**; DP-ThP-4, **40**  
 Bignoli, F.: E2-1-ThM-7, 34; EP-ThP-5, **43**; F1-FrM-10, **47**  
 Bih-Show, L.: B1-1-ThM-8, 32  
 Bilewicz, M.: TS2P-ThP-2, **43**  
 Billard, C.: A2-1-TuA-3, **17**  
 bin Hoque, M.: B5-ThM-11, 33  
 Bin Yaqub, T.: BP-ThP-16, 42  
 Birch, J.: B4-1-MoM-6, 5  
 Biswanath, D.: FTS-ThL-1, **36**  
 Bless, M.: C2-2-FrM-5, 45

Böbel, K.: B3-WeM-11, **23**; TS1-3-TuM-5, 14  
 Bobzin, K.: AP-ThP-1, 40; B1-1-ThM-11, 32; B1-1-ThM-6, 32; B1-2-ThA-5, 37; BP-ThP-11, 41; EP-ThP-2, 43; G3-WeM-5, 25  
 Boccaccini, L.: A1-2-MoA-8, 9  
 Bocklund, B.: B8-2-ThM-3, 33  
 Bogdanovski, D.: F4-1-WeA-2, 27; F4-1-WeA-9, 27  
 Bogdanowicz, R.: F1-FrM-9, **47**  
 Böhm, D.: F5-MoM-7, **6**  
 Bohrn, F.: A1-1-MoM-6, 5  
 Bolelli, G.: F2-ThA-3, 38  
 Bolink, N.: D2-TuM-4, 12  
 Bolívar Osorio, F.: DP-ThP-7, 40  
 Bolívar Osorio, F.: DP-ThP-6, 40  
 Bolvardi, H.: B3-FrM-3, 46; D1-2-MoA-1, 8  
 Bolz, S.: B1-1-ThM-3, **32**; B2-MoA-6, 9  
 Bondarchuk, O.: C3-1-ThM-5, 32  
 Bondarev, A.: BP-ThP-20, 42; E3-1-TuM-4, **14**  
 Bonnet, G.: A1-2-MoA-8, 9  
 Bönninghoff, N.: F2-ThA-9, 38  
 Borges, M.: D1-2-MoA-9, **8**  
 Borroto, A.: C3-2-FrM-5, 45  
 Borysiewicz, M.: C1-1-WeM-4, 22; FP-ThP-7, **42**  
 Bougdira, J.: BP-ThP-12, 41  
 Boujnah, M.: C2-1-ThA-3, **37**  
 Bourhila, N.: A2-1-TuA-3, 17  
 Bower, R.: B8-2-ThM-11, 33  
 Bo-Yan, L.: F1-FrM-12, 47  
 Boyd, R.: B8-1-WeA-1, 30  
 Brachet, J.: A2-2-WeM-12, 21  
 Bradley, J.: B8-1-WeA-3, 30  
 Brahma, S.: CP-ThP-23, 41  
 Bräuer, G.: G2-2-WeA-1, 27  
 Breilmann, W.: B8-2-ThM-7, 33  
 Brenning, N.: B8-2-ThM-12, 33  
 Breuer, T.: TS1P-ThP-4, 43  
 Brittain, R.: E3-1-TuM-8, 14  
 Broecker, L.: B5-ThM-12, 33  
 Brögelmann, T.: G1-WeM-3, **24**  
 Brognara, A.: E2-1-ThM-7, 34  
 Broitman, E.: E3-1-TuM-8, 14; E3-2-WeA-9, **29**; EP-ThP-10, **44**  
 Brown, S.: F1-FrM-3, **47**  
 Brueckner, T.: B5-ThM-12, 33; G2-1-WeM-10, 22  
 Brühl, S.: E3-1-TuM-1, **14**  
 Brzezinka, T.: F4-2-ThM-8, 34  
 Budnyk, S.: E1-2-WeM-12, 23  
 Bukowski, C.: B5-ThM-7, 33  
 Bull, S.: E2-1-ThM-5, **34**  
 Bumgardner, J.: D3-TuA-10, 16  
 Bundesmann, C.: B8-2-ThM-4, 33  
 Burghammer, M.: H1-2-MoA-6, 8  
 Burgstaller, C.: GP-ThP-7, 43  
 Bushell, A.: C1-2-WeA-5, 9; HP-ThP-1, 40  
 Buzaglo, M.: C1-1-WeM-3, 22; TS1-1-MoM-1, 6  
 Byeon, S.: DP-ThP-8, 40

— **C** —

C, N.: BP-ThP-3, **41**; E3-1-TuM-3, 14

## Author Index

- C. Veldhuis, S.: G3-WeM-1, 25  
 Caballero-Hernández, J.: BP-ThP-4, 41  
 Caballina, O.: B1-3-FrM-1, 46  
 Cady, N.: C2-1-ThA-1, 37  
 Cahill, D.: G1-WeM-2, 24  
 Cairns, E.: E3-1-TuM-5, **14**; EP-ThP-1, 43  
 Caldwell, S.: EP-ThP-1, **43**  
 Cammarata, A.: E1-1-TuA-4, 19  
 Campos-Silva, I.: B4-2-MoA-4, 10  
 Cancellieri, C.: B5-ThM-11, 33  
 Canova, K.: F4-2-ThM-7, 34  
 Cao, D.: BP-ThP-19, **42**  
 Capon, F.: C3-1-ThM-10, 32  
 Carlet, M.: B1-1-ThM-6, 32; BP-ThP-11, 41  
 Carvalho, S.: B1-2-ThA-2, 37; BP-ThP-16, 42  
 Casadebaigt, A.: A1-3-TuM-3, 13  
 Casari, D.: A2-1-TuA-9, 17; B7-ThA-6, 38; H1-1-MoM-3, 4  
 Casillas-Trujillo, L.: F2-ThA-6, 38  
 Cassar, G.: G2-2-WeA-9, 27  
 Castanet, G.: B1-3-FrM-1, 46  
 Castaño-Londoño, C.: B1-2-ThA-4, 37; G1-WeM-6, 24; GP-ThP-14, 43  
 Castillo-Saenz, J.: CP-ThP-4, 41  
 Cavaleiro, A.: BP-ThP-16, 42; E1-2-WeM-10, **23**  
 Cekada, M.: G2-2-WeA-3, **27**  
 Cemin, F.: E1-1-TuA-4, 19  
 Čerstvý, R.: BP-ThP-20, 42  
 Červená, M.: BP-ThP-20, 42  
 Chalk, C.: H3-1-TuA-4, 16  
 Chambers, J.: G4-WeM-10, 24  
 Chan, Y.: B4-2-MoA-7, **10**  
 Chang, C.: B8-1-WeA-6, 30; B8-2-ThM-9, 33; C2-1-ThA-7, **37**; F2-ThA-5, **38**; TS1-3-TuM-3, 14; TS1P-ThP-6, 43  
 Chang, K.: B4-4-TuA-3, **17**; C2-1-ThA-4, 37; C2-1-ThA-5, 37; C3-1-ThM-9, 32; F3-TuA-11, 18; FP-ThP-12, 42  
 Chang, L.: B1-1-ThM-13, 32; B4-4-TuA-5, 17; F4-1-WeA-8, 27; TS3-WeA-5, 30  
 Chang, S.: A1-1-MoM-5, 5; C2-2-FrM-3, 45; DP-ThP-2, 40; E2-1-ThM-9, 34  
 Chang, T.: FP-ThP-10, 42  
 Chang, Y.: B4-2-MoA-8, 10; B7-ThA-7, **38**; BP-ThP-18, 42; BP-ThP-8, 41; CP-ThP-8, 41  
 Chang-Liao, K.: B1-3-FrM-4, 46; BP-ThP-17, 42; C2-1-ThA-10, 37; C2-2-FrM-11, 45; GP-ThP-12, 43; TS3P-ThP-3, 43  
 Chanson, R.: A2-2-WeM-12, 21  
 Chao, C.: C1-1-WeM-6, 22  
 Chason, E.: B1-1-ThM-5, **32**; B4-3-TuM-6, 13  
 Chavanne, A.: TS1-2-MoA-9, 11  
 Chefer Apolinario, R.: E1-1-TuA-9, 19  
 Cheikh, M.: C3-2-FrM-8, **45**  
 Chen, A.: E2-2-ThA-6, **39**  
 Chen, B.: B1-1-ThM-13, 32  
 Chen, C.: C2-2-FrM-10, 45; C2-2-FrM-7, 45; F2-ThA-5, 38; F3-TuA-9, 18; FP-ThP-10, 42; FP-ThP-11, 42; TS2-TuA-1, 18  
 Chen, D.: A2-1-TuA-9, 17  
 Chen, H.: B6-MoA-9, 10; C2-2-FrM-7, 45  
 Chen, I.: B8-1-WeA-6, **30**; B8-2-ThM-9, 33  
 Chen, J.: F1-FrM-2, **47**  
 Chen, K.: A2-1-TuA-2, 17; A2-2-WeM-5, 21  
 Chen, L.: PL-MoM-1, **3**  
 Chen, M.: BP-ThP-19, 42  
 Chen, P.: B4-2-MoA-7, 10; BP-ThP-15, **41**; C2-2-FrM-6, **45**; E2-2-ThA-9, 39; F2-ThA-5, 38; G2-2-WeA-5, 27  
 Chen, S.: B8-1-WeA-5, 30; C2-2-FrM-10, 45; CP-ThP-5, 41; G2-2-WeA-7, **27**  
 Chen, T.: FP-ThP-8, **42**  
 Chen, W.: D1-2-MoA-5, **8**; DP-ThP-2, 40; GP-ThP-1, **42**; TS1P-ThP-5, 43; TS2P-ThP-1, 43  
 Chen, Y.: AP-ThP-4, **40**; B1-3-FrM-4, **46**; B4-4-TuA-5, 17; C1-2-WeA-6, **29**; C2-1-ThA-7, 37; C3-2-FrM-6, **45**; CP-ThP-18, **41**; CP-ThP-5, **41**; E2-1-ThM-5, 34; F4-1-WeA-8, 27; GP-ThP-12, **43**; TS1-2-MoA-5, **11**; TS1P-ThP-1, 43  
 CHEN, Y.: C3-1-ThM-12, **32**  
 Chen, Z.: DP-ThP-3, 40  
 Cheney, J.: TS2-TuA-2, **18**  
 Cheng, A.: GP-ThP-8, 43  
 Cheng, H.: BP-ThP-22, **42**; CP-ThP-20, 41  
 Cheng, J.: H1-2-MoA-5, **8**  
 Cheng, K.: D2-TuM-4, 12  
 Cheng, Y.: GP-ThP-9, **43**  
 Chiang, T.: C2-1-ThA-7, 37  
 Chiang, W.: D2-TuM-5, 12  
 Chikamoto, A.: BP-ThP-14, **41**  
 Chiou, A.: GP-ThP-6, **42**; TS1-3-TuM-6, 14  
 Chirumamilla, M.: F1-FrM-7, **47**  
 Chiu, Y.: C2-1-ThA-5, **37**  
 Chiu-Yen, W.: F1-FrM-12, 47  
 Choe, S.: EP-ThP-7, 44  
 Choi, E.: EP-ThP-7, 44  
 Chollon, G.: B2-MoA-1, **9**  
 Choquet, P.: B8-1-WeA-11, **30**  
 Chou, C.: DP-ThP-2, **40**  
 Christophe, H.: TS1-2-MoA-9, 11  
 Chrzanowska-Gizynska, J.: F4-2-ThM-3, 34  
 Chu, C.: F3-TuA-8, 18  
 Chu, J.: D2-TuM-5, 12; F2-ThA-9, 38  
 Chu, Y.: F1-FrM-2, 47; GP-ThP-1, 42; GP-ThP-2, 42  
 Chuang, T.: A2-1-TuA-11, **17**  
 Chueh, Y.: F3-TuA-3, **18**; TS1-3-TuM-2, **14**  
 Chung, S.: TS1-2-MoA-2, 11  
 Chung, T.: B4-1-MoM-5, 5  
 Chung, Y.: A2-2-WeM-13, 21; E1-2-WeM-4, **23**  
 Cipriano Rangel, E.: DP-ThP-10, 40  
 Clarke, A.: G2-1-WeM-12, 22  
 Clarke, K.: G2-1-WeM-11, 22; G2-1-WeM-12, 22  
 Cobleby, A.: D1-1-MoM-1, 4  
 Cohen, N.: B5-ThM-7, 33  
 Colaux, J.: BP-ThP-4, 41  
 Coleman Montgomery, E.: D3-TuA-10, 16  
 Colominas, C.: G3-WeM-12, 25  
 Copeland, N.: TS3-WeA-3, 30  
 Corbella, C.: D3-TuA-4, **16**; FP-ThP-2, **42**  
 Cordeiro, J.: D3-TuA-8, 16  
 Cordill, M.: A2-2-WeM-1, 21; E2-1-ThM-3, **34**; EP-ThP-6, **44**; EP-ThP-8, 44; H1-1-MoM-4, 4; H2-1-TuM-6, 12  
 Correia, F.: C3-1-ThM-5, 32  
 Cosnahan, T.: TS3-WeA-3, 30  
 Costa, R.: D3-TuA-11, 16; D3-TuA-8, 16  
 Cottom, B.: A2-1-TuA-4, 17  
 Couégnat, G.: B2-MoA-1, 9  
 Coultas, S.: HP-ThP-7, 40  
 Counsell, J.: HP-ThP-7, 40  
 Couture, P.: F1-FrM-5, 47  
 Couturier, K.: A1-3-TuM-3, 13  
 Creasey-Gray, S.: CP-ThP-1, 40  
 Cremer, R.: GP-ThP-13, 43; TS1P-ThP-2, 43; TS1P-ThP-4, 43; TS3-WeA-6, 30  
 Cremer, S.: TS1P-ThP-2, 43  
 Crosby, A.: B5-ThM-7, 33  
 Crutchfield, B.: TS2P-ThP-3, 43  
 Cruz, N.: D3-TuA-8, 16  
 Cuénod, B.: H1-2-MoA-10, 8  
 Curiel-Alvarez, M.: CP-ThP-4, 41  
 Czerwiec, T.: B1-3-FrM-1, 46  
 Czettl, C.: B2-MoA-9, 9; B4-3-TuM-2, 13; F4-1-WeA-2, 27; G3-WeM-10, **25**; H2-1-TuM-8, 12
- D —**
- D.Torres, R.: G3-WeM-1, 25  
 Dacal, L.: BP-ThP-2, **41**  
 Daly, M.: D2-TuM-6, 12; D2-TuM-8, 12  
 Daniel, R.: B1-2-ThA-6, 37; BP-ThP-9, 41; H1-2-MoA-6, 8  
 Danninger, S.: GP-ThP-7, 43; TS1-1-MoM-4, **6**  
 Danturthi, A.: B4-4-TuA-2, **17**  
 Daoud, H.: A1-2-MoA-2, 9; A1-2-MoA-5, 9  
 Daugela, A.: H2-2-WeM-6, **21**; HP-ThP-4, 40  
 Daugela, J.: H2-2-WeM-6, 21; HP-ThP-4, **40**  
 Daum, P.: E1-1-TuA-9, 19  
 Daza, L.: H2-2-WeM-10, 21; H3-2-WeM-3, **23**  
 De Leo, M.: H1-2-MoA-5, 8  
 de Miguel Gamo, M.: A1-3-TuM-7, 13; A1-3-TuM-8, 13  
 de Poucques, L.: BP-ThP-12, 41  
 Deambrosio, S.: F2-ThA-3, 38  
 DeBerardinis, J.: D3-TuA-1, **16**  
 Dege, J.: G3-WeM-5, 25  
 Degen, T.: H1-2-MoA-9, **8**  
 Dehm, G.: E2-1-ThM-7, 34; E2-2-ThA-8, 39  
 Delfin, F.: E3-1-TuM-1, 14; GP-ThP-7, **43**; TS1-1-MoM-4, 6  
 Denis, P.: BP-ThP-1, 41  
 Depla, D.: B7-ThA-3, **38**; F5-MoM-4, 6; FP-ThP-14, 42  
 Derflinger, M.: F2-ThA-8, 38; FP-ThP-3, 42  
 Desmarres, J.: E2-1-ThM-4, 34  
 DEVOS, A.: E2-1-ThM-4, **34**  
 Dey, P.: TS2-TuA-5, **18**  
 Dhandabani, S.: G2-2-WeA-6, 27

## Author Index

DIAZ-RODRIGUEZ, P.: B8-1-WeA-7, 30  
Dienwiebel, M.: A1-2-MoA-3, 9  
Dillon, S.: H3-2-WeM-1, 23  
Ding, K.: H3-2-WeM-3, 23  
Dini, C.: D3-TuA-11, 16; D3-TuA-8, 16  
Dipolt, C.: TS1-1-MoM-4, 6  
Dixit, S.: E3-1-TuM-9, 14  
Djemia, P.: B6-MoA-5, 10; E2-1-ThM-7, 34; EP-ThP-5, 43  
Dobrenizki, L.: TS2-TuA-3, 18  
Dockins, M.: EP-ThP-1, 43  
Drieux, P.: B2-MoA-1, 9  
Drnovsek, A.: G2-2-WeA-3, 27  
Drobnic, M.: G2-2-WeA-3, 27  
Drummond Brydson, R.: B4-4-TuA-2, 17  
Du, H.: B8-1-WeA-1, 30  
Duarte Correa, M.: E2-2-ThA-8, 39  
Dubois, T.: B7-ThA-4, 38  
Duh, J.: A1-1-MoM-5, 5; B4-2-MoA-7, 10; E2-2-ThA-9, 39  
Dunscombe, S.: E2-1-ThM-1, 34  
Duraiswamy, N.: D1-1-MoM-5, 4

### — E —

Eapen, J.: D2-TuM-3, 12  
Echeverria, E.: C1-2-WeA-2, 29  
Echeverrigaray, F.: E1-1-TuA-4, 19  
Ecker, W.: H2-1-TuM-8, 12  
Eckert, J.: H2-2-WeM-11, 21  
Eder, A.: F5-MoM-7, 6  
Edwards, T.: B1-1-ThM-10, 32; C2-1-ThA-6, 37  
Efeoğlu, İ.: E2-2-ThA-4, 39; EP-ThP-3, 43  
Egumi Nagay, B.: DP-ThP-10, 40  
Ehiasarian, A.: B8-2-ThM-11, 33; D1-2-MoA-2, 8  
Eisenmenger-Sittner, C.: F5-MoM-7, 6  
Eklund, P.: A1-2-MoA-9, 9  
El Azhari, I.: G1-WeM-5, 24  
el-Farsy, A.: B8-2-ThM-5, 33; BP-ThP-12, 41  
Eliades, A.: C3-1-ThM-11, 32  
Endo, Y.: F1-FrM-11, 47  
Endrino, J.: F4-2-ThM-8, 34  
Engel, C.: TS1-2-MoA-1, 11  
England, J.: F1-FrM-5, 47  
Engstler, M.: G1-WeM-5, 24  
Engwall, A.: B1-3-FrM-5, 46; B4-4-TuA-8, 17; B8-2-ThM-3, 33  
Escobar-Hernández, J.: B4-2-MoA-3, 10  
Esselbach, M.: TS2-TuA-2, 18  
Evaristo, M.: BP-ThP-16, 42

### — F —

Fabbro, S.: G1-WeM-2, 24  
Falub, C.: C2-2-FrM-5, 45  
Fang, J.: CP-ThP-8, 41  
Fang, S.: G3-WeM-12, 25  
Fang, Y.: E2-2-ThA-5, 39  
Farahani, M.: B8-1-WeA-8, 30  
Faurie, D.: E2-1-ThM-7, 34; F1-FrM-10, 47; H2-1-TuM-6, 12; H2-1-TuM-7, 12  
Fauziah, A.: C3-2-FrM-7, 45; CP-ThP-7, 41  
Fedrigo, M.: B6-MoA-8, 10  
Fekas, I.: TS3-WeA-10, 30  
Fellner, S.: H2-2-WeM-11, 21

Fendrych, F.: A1-3-TuM-5, 13  
Feng, H.: B4-2-MoA-8, 10; BP-ThP-18, 42  
Feng, K.: D1-2-MoA-6, 8; G2-2-WeA-5, 27  
Feng, Y.: B4-1-MoM-5, 5  
Feres, M.: D3-TuA-11, 16  
Fernandez Romero, I.: TS1-2-MoA-3, 11  
Fernández, A.: B5-ThM-8, 33; BP-ThP-4, 41  
FERNANDEZ, I.: B8-1-WeA-7, 30  
Fernández, J.: B5-ThM-2, 33  
Fernández-Palacio, J.: B5-ThM-2, 33  
Fernández-Valdés, D.: EP-ThP-4, 43  
Ferreira, F.: B8-1-WeA-10, 30  
Fiantok, T.: F4-1-WeA-4, 27; F4-2-ThM-6, 34  
Fidanboy, G.: FP-ThP-18, 42  
Field, S.: F1-FrM-5, 47  
Fietzke, F.: G4-WeM-12, 24  
Figueiredo, N.: B1-2-ThA-2, 37  
Figueroa, C.: E1-1-TuA-4, 19  
Fischer, J.: B8-1-WeA-3, 30; B8-2-ThM-12, 33  
Fleig, J.: TS1-2-MoA-1, 11  
Fleming, R.: B6-MoA-10, 10; BP-ThP-21, 42; E1-1-TuA-10, 19; TS2P-ThP-3, 43  
Flores Cova, L.: E1-1-TuA-8, 19; GP-ThP-15, 43  
Flores Martínez, M.: E1-1-TuA-8, 19  
Flores, M.: GP-ThP-15, 43  
Folgnier, K.: E2-1-ThM-1, 34; HP-ThP-6, 40  
Forsich, C.: GP-ThP-7, 43; TS1-1-MoM-4, 6  
Fox-Rabinovich, G.: G3-WeM-1, 25  
Franz, R.: A2-2-WeM-1, 21  
Fuchs, A.: B1-2-ThA-1, 37  
Fuentes, J.: B2-MoA-6, 9  
Fuger, C.: F4-1-WeA-5, 27; HP-ThP-8, 40  
Fujikawa, T.: FP-ThP-1, 42  
Fukumasu, N.: E1-2-WeM-3, 23  
Furrer, D.: EX-TuM-1, 15

### — G —

G. Sangiovanni, D.: F4-1-WeA-4, 27  
Gabriel, H.: B5-ThM-2, 33  
Gachot, C.: E1-2-WeM-12, 23  
Gajewski, W.: B8-1-WeA-9, 30  
Galeano-Osorio, D.: G1-WeM-6, 24  
Galetz, M.: A1-2-MoA-1, 9; A1-2-MoA-2, 9; A1-2-MoA-5, 9; A1-2-MoA-6, 9; A1-2-MoA-8, 9  
Gall, D.: B5-ThM-10, 33  
Gallo, P.: EP-ThP-13, 44  
Gammer, C.: A2-2-WeM-1, 21; F1-FrM-10, 47; H1-1-MoM-4, 4  
Ganguly, R.: E3-1-TuM-3, 14  
Gao, J.: B8-1-WeA-10, 30  
Garbiec, D.: F4-2-ThM-3, 34  
García Fuentes, G.: B5-ThM-2, 33  
García Martín, G.: A1-3-TuM-7, 13; A1-3-TuM-8, 13  
García Wong, A.: B1-3-FrM-1, 46  
García, J.: G1-WeM-5, 24  
García-Wong, A.: C3-1-ThM-10, 32  
Gay, P.: E1-2-WeM-13, 23  
George, M.: B8-2-ThM-7, 33

Ger, M.: C2-1-ThA-7, 37; G2-2-WeA-8, 27; GP-ThP-8, 43  
Geringer, J.: D2-TuM-7, 12  
Gerlach, J.: B8-2-ThM-4, 33  
Ghafoor, N.: B4-1-MoM-6, 5  
Ghanbaja, J.: C3-2-FrM-5, 45  
Ghidelli, M.: E2-1-ThM-7, 34; EP-ThP-5, 43; F1-FrM-10, 47  
Ghosh, M.: B8-1-WeA-4, 30  
Giannakopoulos, K.: C3-1-ThM-11, 32  
Gianola, D.: H2-2-WeM-3, 21  
Gibson, J.: H2-1-TuM-5, 12  
Glaentz, K.: A2-1-TuA-9, 17  
Glaser, D.: G2-2-WeA-9, 27  
Glatzel, U.: A1-2-MoA-2, 9; A1-2-MoA-5, 9  
Glavin, N.: D2-TuM-9, 12  
Glechner, T.: F4-1-WeA-1, 27; F4-2-ThM-5, 34; FP-ThP-5, 42  
Gmuender, R.: F5-MoM-5, 6  
Gocník, M.: F4-1-WeA-4, 27  
Godinho, V.: BP-ThP-4, 41  
Golovin, K.: TS3-WeA-9, 30  
Gomes, B.: D3-TuA-8, 16  
Gonçalves, F.: A1-3-TuM-7, 13  
Gong, N.: A1-3-TuM-9, 13; CP-ThP-14, 41  
Gonzalez-Julian, J.: A1-2-MoA-9, 9  
Goodes, S.: H3-1-TuA-4, 16  
Gopalan, H.: E2-2-ThA-8, 39  
Gossé, S.: A2-2-WeM-12, 21  
Gozhyk, I.: B1-2-ThA-3, 37; HP-ThP-3, 40  
Gradt, T.: B4-2-MoA-1, 10  
Grančić, B.: F4-2-ThM-6, 34  
Greczynski, G.: B1-1-ThM-7, 32  
Greczynski, G.: B4-1-MoM-3, 5  
Greiner, C.: E1-1-TuA-9, 19; FP-ThP-13, 42  
Gries, T.: BP-ThP-12, 41  
Grimm, S.: H1-2-MoA-8, 8  
Grimme, C.: A1-2-MoA-1, 9  
Grimmer, A.: F4-1-WeA-1, 27  
Groetsch, A.: E2-1-ThM-13, 35  
Grovenor, C.: H2-1-TuM-5, 12  
Gruber, G.: A2-2-WeM-1, 21  
Gu, W.: H1-1-MoM-1, 4  
Guay, D.: CP-ThP-19, 41  
Gudmundsson, J.: B8-1-WeA-3, 30; B8-2-ThM-12, 33; B8-2-ThM-6, 33  
Guerra-Nuñez, C.: H1-1-MoM-3, 4  
Guerrero de León, A.: E1-1-TuA-8, 19  
Guilbert, T.: A2-2-WeM-12, 21  
Guillon, O.: A2-1-TuA-1, 17  
Gülten, G.: E2-2-ThA-4, 39; EP-ThP-3, 43  
Guo, L.: C1-1-WeM-1, 22  
Gutnik, D.: EP-ThP-8, 44

### — H —

HABCHI, R.: D1-2-MoA-7, 8  
Habibi, P.: TS2-TuA-5, 18  
Hahn, R.: AP-ThP-5, 40; B8-1-WeA-8, 30; F4-1-WeA-5, 27; H3-1-TuA-5, 16; HP-ThP-8, 40  
Hain, C.: B7-ThA-6, 38  
Hajduk, B.: CP-ThP-9, 41  
Hajjoseini, H.: B8-2-ThM-12, 33  
Halawani, N.: E1-1-TuA-9, 19  
Hammons, J.: B4-4-TuA-8, 17

## Author Index

Hankin, A.: TS1-1-MoM-2, 6  
 Hans, M.: A1-2-MoA-9, 9; B4-3-TuM-2, **13**; B6-MoA-7, 10; F4-1-WeA-9, 27; F4-2-ThM-11, 34; FP-ThP-18, 42; H1-2-MoA-7, 8  
 Hansen, L.: B7-ThA-1, 38; B7-ThA-11, **38**  
 Harris, A.: H3-1-TuA-4, 16  
 Hasnain, J.: H3-1-TuA-10, **16**  
 Hassanzadegan Aghdam, P.: AP-ThP-1, 40; B1-2-ThA-5, **37**  
 Haviar, S.: BP-ThP-20, **42**; E2-1-ThM-8, **34**  
 Hayun, S.: TS1-1-MoM-1, 6  
 He, Q.: G3-WeM-1, **25**  
 Heim, D.: E3-1-TuM-1, 14; GP-ThP-7, 43; TS1-1-MoM-4, 6  
 Held, J.: B8-2-ThM-7, **33**  
 Hellgren, N.: F4-2-ThM-10, 34  
 Helmersson, U.: B8-1-WeA-1, 30  
 Hemberger, P.: H1-2-MoA-8, 8  
 Henrique Cruz, K.: DP-ThP-10, 40  
 Heo, S.: EP-ThP-7, 44  
 Hernández Rodríguez, E.: D1-1-MoM-2, 4  
 Herrera, A.: D1-1-MoM-2, 4  
 Hess, M.: G3-WeM-3, **25**  
 Hessler-Wyser, A.: B7-ThA-6, 38  
 Hill, M.: B7-ThA-10, **38**  
 Hintze, W.: G3-WeM-5, 25  
 Hirayama, K.: CP-ThP-6, **41**  
 Hirle, A.: F4-1-WeA-5, **27**; HP-ThP-8, **40**  
 Hirota, K.: FP-ThP-1, 42  
 Hoche, H.: D2-TuM-1, **12**  
 Hodge, A.: E2-1-ThM-1, 34; H2-1-TuM-3, **12**  
 Hoglund, E.: B5-ThM-11, 33  
 Höhn, M.: B2-MoA-5, **9**  
 Holec, D.: B6-MoA-7, 10; BP-ThP-9, 41  
 Holzapfel, D.: F4-1-WeA-9, 27  
 Hopkins, P.: B5-ThM-11, 33  
 Hoster, H.: GP-ThP-13, 43; TS3-WeA-6, 30  
 Hovsepian, P.: B8-2-ThM-11, 33; D1-2-MoA-2, **8**  
 Hsiao, P.: TS2-TuA-1, 18  
 Hsu, P.: BP-ThP-17, **42**; C2-1-ThA-10, **37**  
 Hsu, S.: A1-1-MoM-5, **5**; B4-2-MoA-5, 10; B4-2-MoA-7, 10; BP-ThP-8, 41; E2-2-ThA-9, 39; TS1P-ThP-7, **41**  
 Hsueh, C.: B4-1-MoM-1, 5; B4-1-MoM-2, 5; C2-2-FrM-6, 45; E1-1-TuA-5, 19  
 Hsueh, K.: B1-3-FrM-3, **46**  
 Huang, C.: C1-2-WeA-6, 29; C2-2-FrM-10, 45; DP-ThP-3, 40  
 Huang, I.: A2-1-TuA-10, 17  
 Huang, J.: B1-2-ThA-10, 37; B4-1-MoM-5, 5; B4-3-TuM-3, 13; CP-ThP-23, 41; E2-2-ThA-5, 39; E2-2-ThA-7, 39; SIT1-MoSIT-1, **7**; TS1-1-MoM-7, 6; TS1-2-MoA-6, 11; TS1-3-TuM-1, 14; TS1-3-TuM-3, 14; TS1P-ThP-5, 43; TS1P-ThP-6, 43  
 Huang, K.: BP-ThP-18, 42  
 Huang, P.: B1-1-ThM-13, **32**  
 Huang, S.: B8-1-WeA-6, 30; GP-ThP-1, 42; GP-ThP-2, **42**  
 Huang, W.: A2-1-TuA-10, **17**; C2-2-FrM-10, 45

Hudak, O.: A1-1-MoM-6, 5; AP-ThP-5, 40  
 Huebner, S.: TS1-3-TuM-5, 14  
 Hufschmidt, D.: BP-ThP-4, 41  
 Hultman, L.: B1-1-ThM-7, 32; B4-1-MoM-3, 5; HL-WeHL-2, **31**  
 Hung, G.: G2-2-WeA-5, 27  
 Hung, W.: F3-TuA-8, **18**  
 Hunold, O.: A1-1-MoM-6, 5; AP-ThP-3, 40; AP-ThP-5, 40; F4-1-WeA-1, 27; F4-1-WeA-5, 27; F4-2-ThM-5, 34; FP-ThP-5, 42; H3-1-TuA-5, 16; HP-ThP-8, 40  
 Hurkmans, T.: G1-WeM-3, 24  
 Huszar, E.: C2-1-ThA-6, 37

### — I —

Ianno, N.: C2-1-ThA-8, 37  
 Ibrahim, H.: F2-ThA-4, **38**  
 Iida, K.: CP-ThP-17, **41**  
 Immich, P.: B1-2-ThA-1, 37  
 Imrich, P.: EP-ThP-8, 44  
 Inaba, A.: BP-ThP-7, **41**  
 Inspektor, A.: B1-1-ThM-1, **32**  
 Iovkov, I.: G1-WeM-2, 24  
 Isern, L.: H3-1-TuA-4, 16  
 Ishigaki, T.: F4-1-WeA-6, 27  
 Islam, A.: BP-ThP-21, **42**  
 Itoh, M.: C3-2-FrM-3, **45**

### — J —

Jacobo Mora, D.: FP-ThP-16, 42  
 Jacques, S.: B2-MoA-1, 9  
 Jaeger, D.: F5-MoM-5, 6  
 Jahn, F.: B4-3-TuM-4, **13**  
 Jang, I.: TS1-1-MoM-2, 6  
 Jang, S.: F2-ThA-5, 38  
 Jang, Y.: DP-ThP-9, 40  
 Jansen, H.: E2-1-ThM-13, 35  
 Jansson, U.: F2-ThA-6, 38  
 Jarka, P.: CP-ThP-9, **41**  
 Jarry, O.: B3-FrM-5, 46  
 Jarzembowski, A.: C2-2-FrM-9, 45  
 Jaschinski, P.: GP-ThP-13, 43; TS1P-ThP-4, **43**; TS3-WeA-6, 30  
 Jen, T.: A1-3-TuM-1, 13  
 Jennings, J.: D3-TuA-10, **16**  
 Jennings, W.: A2-2-WeM-4, 21  
 Jeurgens, L.: B5-ThM-11, 33  
 Jhuo, Y.: FP-ThP-19, **42**  
 Ji, J.: DP-ThP-8, 40  
 Ji, Y.: FP-ThP-10, **42**  
 Jian, S.: G2-2-WeA-8, 27; GP-ThP-8, 43  
 Jiao, J.: B3-FrM-4, 46; TS1-3-TuM-5, 14  
 Jiao, V.: E2-1-ThM-1, 34; HP-ThP-6, **40**  
 Jilek, M.: B1-1-ThM-10, 32  
 Jiménez de Haro, M.: BP-ThP-4, 41  
 Johansson Jöesaar, M.: B1-1-ThM-7, 32  
 Johnson, W.: H1-2-MoA-10, 8  
 Jolibois, J.: G4-WeM-10, **24**  
 Jonda, E.: GP-ThP-3, 42  
 Journot, T.: E1-2-WeM-13, 23  
 Juan, H.: TS1P-ThP-6, 43  
 Juang, J.: E2-1-ThM-10, **34**  
 Juez Lorenzo, M.: A1-2-MoA-7, 9  
 Jun, B.: A1-3-TuM-4, 13  
 Jung, T.: GP-ThP-3, 42  
 Jung, Y.: GP-ThP-4, 42  
 Juttin, R.: H1-2-MoA-10, 8

Jyh-Wei, L.: B1-1-ThM-8, 32

## — K —

K. Filho, T.: G3-WeM-1, 25  
 KAADY, E.: D1-2-MoA-7, 8  
 Kacher, J.: H1-2-MoA-1, **8**; H2-2-WeM-10, 21; H3-2-WeM-3, 23  
 Kaestner, P.: G2-2-WeA-1, 27  
 Kaidatzis, A.: C3-1-ThM-11, 32  
 Kailer, A.: A1-2-MoA-3, 9  
 Kainz, C.: F4-1-WeA-2, **27**  
 Kalaswad, M.: B6-MoA-11, 10; C2-2-FrM-9, **45**  
 Kaliappan, S.: C1-2-WeA-2, 29  
 Kalin, M.: BP-ThP-16, 42  
 Kalscheuer, C.: AP-ThP-1, **40**; B1-1-ThM-11, 32; B1-1-ThM-6, 32; B1-2-ThA-5, 37; BP-ThP-11, 41; EP-ThP-2, 43; G3-WeM-5, 25  
 Kaminski, S.: BP-ThP-5, 41  
 Kanaoka, H.: F4-1-WeA-10, 28  
 Kang, J.: TS3P-ThP-1, **43**  
 Kannan, R.: BP-ThP-3, 41; E3-1-TuM-3, 14  
 Kao, H.: TS3-WeA-5, **30**  
 Kapp, J.: GP-ThP-13, **43**; TS3-WeA-6, **30**  
 Kareer, A.: E2-2-ThA-1, **39**  
 Karimi Aghda, S.: F4-1-WeA-9, 27  
 Karpinski, D.: B5-ThM-3, **33**  
 Karvankova, P.: B5-ThM-3, 33  
 Karyappa, R.: A1-3-TuM-9, 13; CP-ThP-14, 41  
 Kaspar, J.: B1-2-ThA-7, 37; F2-ThA-7, 38  
 Kassavetis, S.: TS3-WeA-10, 30  
 Kaufman, M.: G2-1-WeM-12, 22  
 Kaur, D.: C1-2-WeA-4, 29; C2-1-ThA-9, 37; G3-WeM-6, 25; GP-ThP-11, 43; TS1-2-MoA-7, 11  
 Kawakita, J.: CP-ThP-17, 41; CP-ThP-6, 41  
 Keaty, B.: D2-TuM-3, **12**  
 Keckes, J.: B1-2-ThA-6, 37; E2-1-ThM-8, 34; H1-2-MoA-6, 8  
 Keidar, M.: D3-TuA-4, 16; FP-ThP-2, 42  
 Kelly, P.: E2-2-ThA-4, 39; EP-ThP-3, 43; TS1-1-MoM-2, 6; TS2-TuA-10, **18**; TS3-WeA-3, 30  
 Kempe, P.: E3-2-WeA-10, **29**; EP-ThP-9, **44**  
 Keraudy, J.: B3-WeM-12, **23**  
 Kerbstadt, M.: A1-2-MoA-6, **9**  
 Kersten, H.: B7-ThA-1, **38**; B7-ThA-11, 38; B7-ThA-9, 38  
 Khan, A.: E1-2-WeM-4, 23  
 Khan, I.: D1-2-MoA-2, 8  
 Khomiakova, N.: B7-ThA-8, 38  
 Kiani, M.: H1-1-MoM-1, 4  
 Kienle, L.: B7-ThA-11, 38  
 Kim, D.: A1-3-TuM-4, 13; DP-ThP-1, 40; GP-ThP-4, 42  
 Kim, E.: B8-2-ThM-3, 33  
 Kim, H.: C1-2-WeA-1, **29**; CP-ThP-12, **41**; GP-ThP-4, 42  
 Kim, J.: DP-ThP-1, 40; EP-ThP-7, 44  
 Kim, M.: B5-ThM-7, 33  
 Kim, N.: CP-ThP-11, **41**  
 Kim, S.: DP-ThP-9, **40**



## Author Index

- Kim, W.: A1-3-TuM-4, 13; EP-ThP-7, 44  
 Kim, Y.: DP-ThP-8, 40  
 Kimpel, T.: A1-2-MoA-3, 9  
 King, M.: C2-2-FrM-9, 45  
 Kinnerk, K.: D2-TuM-6, 12  
 Kirchmair, M.: A2-2-WeM-1, 21  
 Kirnbauer, A.: F2-ThA-8, **38**; FP-ThP-3, **42**  
 Kitaoka, S.: A2-2-WeM-2, **21**  
 Klamann, L.: A1-1-MoM-3, 5  
 Klein, S.: TS1-2-MoA-1, 11  
 Kleinbichler, A.: EP-ThP-8, 44  
 Klemberg-Sapieha, J.: H1-2-MoA-4, 8  
 Klette, M.: B7-ThA-1, 38  
 Klimashin, F.: B1-1-ThM-10, **32**  
 Klostermann, H.: G4-WeM-12, **24**  
 Kluson, J.: B1-1-ThM-10, 32; B3-FrM-3, 46; B5-ThM-3, 33  
 Kobayashi, K.: FP-ThP-1, 42  
 Koch, O.: EP-ThP-2, 43  
 Kohlmann, K.: CP-ThP-19, **41**  
 Kohlmann, N.: B7-ThA-11, 38  
 Kolarik, V.: A1-2-MoA-7, 9  
 Kolev, I.: B1-2-ThA-1, **37**; B4-4-TuA-2, 17  
 Kölker, W.: B1-1-ThM-3, 32  
 Kolozsvári, S.: AP-ThP-5, 40; H3-1-TuA-5, 16; HP-ThP-8, 40  
 Kolozsvári, S.: A1-1-MoM-7, 5; AP-ThP-3, 40; F4-1-WeA-1, 27; F4-1-WeA-9, 27; F4-2-ThM-10, 34; F4-2-ThM-5, 34; FP-ThP-18, 42; FP-ThP-5, 42  
 König, T.: A1-2-MoA-3, 9  
 Konstantiniuk, F.: G3-WeM-10, 25; H2-1-TuM-8, 12  
 Konstantopoulos, G.: B1-2-ThA-6, 37  
 Korenyi-Both, A.: G2-1-WeM-11, 22  
 Korra, A.: F2-ThA-4, 38  
 Kostoglou, N.: C3-1-ThM-11, 32; TS1-2-MoA-3, 11  
 Kosutova, T.: B7-ThA-8, 38  
 Kotula, P.: C2-2-FrM-9, 45  
 Kousaka, H.: B2-MoA-7, 9  
 Koutná, N.: B5-ThM-6, 33; F4-1-WeA-4, 27  
 Koyra, N.: G4-WeM-10, 24  
 Kozák, T.: B8-1-WeA-8, **30**; E2-1-ThM-8, 34  
 Krätzschar, B.: G4-WeM-12, 24  
 Kreiml, P.: C2-1-ThA-6, 37; E2-1-ThM-3, 34; H2-1-TuM-6, 12  
 Kretschmer, A.: B6-MoA-7, 10; B6-MoA-8, **10**; FP-ThP-4, **42**  
 Krieg, C.: B5-ThM-3, 33  
 Krobath, M.: H2-1-TuM-8, 12  
 Krogstad, J.: F4-2-ThM-7, 34  
 Kruelle, T.: B1-1-ThM-4, 32  
 Krug, M.: B2-MoA-5, 9  
 Krüger, H.: F4-1-WeA-2, 27  
 Krülle, T.: B1-2-ThA-7, **37**; F2-ThA-7, 38  
 Kruppe, N.: TS1P-ThP-4, 43  
 Ku, T.: E2-2-ThA-9, 39  
 Kucheyev, S.: B1-3-FrM-5, **46**; B4-4-TuA-1, 17; B4-4-TuA-8, 17; B8-2-ThM-3, 33  
 Kuczyk, M.: B1-2-ThA-7, 37; F2-ThA-7, **38**  
 Kuerten, D.: A1-2-MoA-3, 9  
 Kujime, S.: G3-WeM-2, 25  
 Kulczyk-Malecka, J.: TS1-1-MoM-2, **6**  
 Kulig, A.: A1-2-MoA-2, 9; A1-2-MoA-5, **9**
- Kulkarni, A.: E1-2-WeM-2, **23**  
 Kumar, A.: A2-2-WeM-5, 21  
 KUMAR, K.: C1-2-WeA-4, **29**  
 Kumar, S.: F1-FrM-6, 47  
 Kundrapu, M.: FP-ThP-2, 42  
 Kung, C.: FP-ThP-10, 42  
 Kuo, K.: TS2-TuA-1, 18  
 Kuo, W.: TS3P-ThP-2, **43**  
 Kuo, Y.: B8-2-ThM-9, 33; CP-ThP-8, 41  
 Kurapov, D.: G1-WeM-2, 24  
 Kurpaska, Ł.: BP-ThP-1, 41  
 Kúš, P.: F4-2-ThM-6, 34  
 Kutrowatz, P.: A1-1-MoM-6, 5; F4-1-WeA-1, 27; F4-1-WeA-5, 27; FP-ThP-5, 42; HP-ThP-8, 40  
 Kuzmin, A.: C3-1-ThM-5, 32  
 Kuzminova, A.: B7-ThA-8, 38; F1-FrM-6, 47  
 Kylian, O.: B7-ThA-8, **38**; F1-FrM-6, 47
- L —
- L. Amorim, F.: G3-WeM-1, 25  
 L. Korenyi-Both, A.: G2-1-WeM-12, 22  
 Lai, N.: B4-3-TuM-3, **13**  
 Lai, P.: E2-2-ThA-9, **39**  
 Lambrecht, M.: A1-3-TuM-7, 13; A1-3-TuM-8, 13  
 Lan, K.: A1-3-TuM-6, **13**; C3-2-FrM-6, 45; E2-2-ThA-6, 39  
 Lance, M.: A2-2-WeM-6, **21**  
 Lasanta Carrasco, M.: A1-3-TuM-7, 13; A1-3-TuM-8, 13  
 Lasfargues, H.: FP-ThP-18, 42  
 Laska, N.: A1-1-MoM-4, **5**  
 Lassnig, A.: A2-2-WeM-1, 21; EP-ThP-8, **44**; F1-FrM-10, 47; H1-1-MoM-4, **4**; H2-2-WeM-11, 21  
 Lavalley, F.: E3-1-TuM-6, 14  
 Lawton, J.: BP-ThP-10, **41**  
 Lazzari, R.: B1-2-ThA-3, 37; HP-ThP-3, 40  
 Le Doze, A.: B2-MoA-1, 9  
 Lechner, A.: B2-MoA-9, 9  
 Lee, A.: H1-1-MoM-1, 4  
 Lee, C.: B6-MoA-9, **10**; C2-1-ThA-7, 37; CP-ThP-22, **41**; G2-2-WeA-8, 27; GP-ThP-8, 43  
 Lee, H.: A1-3-TuM-4, **13**; DP-ThP-2, 40; TS3P-ThP-1, 43  
 Lee, J.: A1-3-TuM-4, 13; B1-3-FrM-3, 46; B6-MoA-9, 10; B8-1-WeA-5, 30; BP-ThP-13, 41; D1-2-MoA-5, 8; E1-1-TuA-3, 19; G2-2-WeA-8, 27; GP-ThP-8, 43; TS1-1-MoM-3, 6  
 Lee, K.: A2-2-WeM-4, **21**; B3-FrM-1, **46**  
 Lee, M.: DP-ThP-8, 40; DP-ThP-9, 40  
 Lee, S.: B5-ThM-10, 33; DP-ThP-1, **40**; F1-FrM-10, 47  
 Lee, W.: A2-1-TuA-10, 17; A2-1-TuA-11, 17  
 Lee, Y.: G2-2-WeA-5, 27; GP-ThP-1, 42; GP-ThP-2, 42; GP-ThP-4, **42**  
 Lei, C.: TS1P-ThP-1, **43**  
 Lei, M.: B8-1-WeA-10, **30**  
 Leidens, L.: E1-1-TuA-4, 19  
 Leisner, V.: A2-1-TuA-8, 17  
 Lelliger, S.: F4-1-WeA-9, 27; F4-2-ThM-11, **34**  
 Lemmer, O.: B1-1-ThM-3, 32; B2-MoA-6, 9  
 Lemoine, F.: B1-3-FrM-1, 46
- Lenis Rodas, J.: DP-ThP-6, 40; DP-ThP-7, 40; E3-2-WeA-11, **29**; EP-ThP-12, **44**  
 Leonhardt, M.: B1-2-ThA-7, 37; F2-ThA-7, 38  
 Leroy, M.: TS1-2-MoA-9, 11  
 Letofsky-Papst, I.: F4-1-WeA-2, 27  
 Lewin, E.: F2-ThA-6, 38  
 Leyens, C.: B1-2-ThA-7, 37; F2-ThA-7, 38  
 Leyland, A.: CP-ThP-1, 40  
 Lezuo, L.: B6-MoA-8, 10  
 Li Bassi, A.: E2-1-ThM-7, 34; EP-ThP-5, 43; F1-FrM-10, 47  
 Li, C.: A1-3-TuM-6, 13; B1-2-ThA-9, **37**; B6-MoA-5, 10  
 Li, J.: FP-ThP-9, **42**; TS2-TuA-1, **18**  
 Li, S.: FP-ThP-12, **42**  
 Li, W.: A2-2-WeM-13, 21  
 Li, X.: B1-1-ThM-7, **32**; B3-FrM-1, 46  
 Li, Y.: BP-ThP-19, 42; HP-ThP-7, 40  
 Liang, J.: H1-2-MoA-10, **8**  
 Liao, G.: TS1-2-MoA-6, **11**  
 Liao, H.: TS1-3-TuM-6, 14  
 Liao, Y.: B4-2-MoA-5, **10**; BP-ThP-8, **41**  
 Lim, J.: EP-ThP-7, 44  
 Lima, M.: BP-ThP-2, 41  
 Lin, C.: C2-2-FrM-11, **45**; C3-1-ThM-13, 32; TS3P-ThP-3, **43**  
 Lin, H.: FP-ThP-15, **42**; TS1-3-TuM-8, **14**  
 Lin, J.: A1-3-TuM-2, **13**  
 Lin, K.: FP-ThP-15, 42  
 Lin, L.: F3-TuA-9, **18**  
 Lin, M.: E2-1-ThM-6, 34  
 Lin, P.: TS1P-ThP-1, 43  
 Lin, S.: B5-ThM-6, 33; CP-ThP-23, **41**  
 Lin, W.: TS2P-ThP-1, 43  
 Lin, Y.: B7-ThA-5, **38**; E2-1-ThM-9, **34**; FP-ThP-11, **42**; TS1-2-MoA-2, 11  
 Lindblad, R.: F2-ThA-6, 38  
 Litterst, T.: B1-1-ThM-4, 32  
 Liu, B.: DP-ThP-3, 40  
 Liu, C.: CP-ThP-5, 41; TS1-1-MoM-7, 6; TS1-2-MoA-5, 11  
 Liu, F.: BP-ThP-19, 42  
 Liu, H.: A1-3-TuM-3, **13**; CP-ThP-14, **41**  
 Liu, P.: B7-ThA-5, 38  
 Liu, S.: E1-2-WeM-4, 23  
 Liu, T.: B1-2-ThA-10, **37**; B8-2-ThM-9, 33; TS1-1-MoM-7, **6**  
 Liu, X.: H2-2-WeM-10, 21; H3-2-WeM-3, 23  
 Liu, Y.: C2-2-FrM-10, 45  
 Liu, Z.: B2-MoA-3, **9**  
 Llanes, L.: G1-WeM-5, 24; G3-WeM-12, 25  
 Llorens, E.: CP-ThP-3, **40**  
 Lo, A.: FP-ThP-6, 42  
 Lo, C.: TS1-3-TuM-3, **14**  
 Loch, D.: B8-2-ThM-11, 33  
 Lock, E.: CP-ThP-12, 41  
 Loehlé, S.: E1-2-WeM-5, **23**  
 Lomello, F.: A1-3-TuM-3, 13; A2-2-WeM-12, 21  
 López-Liévano, A.: EP-ThP-4, 43  
 López-Viejobueno, J.: BP-ThP-4, 41  
 Lorentzon, M.: B4-1-MoM-6, 5  
 Lorenzin, G.: B5-ThM-11, **33**  
 Lotnyk, A.: B8-2-ThM-4, 33

## Author Index

Lou, B.: B8-1-WeA-5, 30; BP-ThP-13, **41**;  
E1-1-TuA-3, 19; TS1-1-MoM-3, 6  
Lu, Y.: C2-2-FrM-10, **45**  
Lucas, S.: BP-ThP-4, 41  
Lukassek, V.: GP-ThP-13, 43; TS3-WeA-6,  
30  
Lümckemann, A.: B1-1-ThM-10, 32; B3-  
WeM-10, **23**; B5-ThM-3, 33; BP-ThP-5,  
41  
Lundin, D.: B8-1-WeA-1, 30; B8-1-WeA-  
3, 30; B8-2-ThM-12, 33  
Lusvarghi, L.: F2-ThA-3, 38

### — M —

M. DePaiva, J.: G3-WeM-1, 25  
Maaß, P.: B8-2-ThM-7, 33  
Machado, I.: E1-2-WeM-3, 23  
Mack, D.: A2-1-TuA-1, 17  
Mackert, V.: GP-ThP-13, 43; TS3-WeA-6,  
30  
Maeder, X.: A2-1-TuA-9, **17**; H1-1-MoM-  
3, 4; HP-ThP-2, 40  
Mahmood, K.: C3-1-ThM-6, **32**  
Maier-Kiener, V.: H3-1-TuA-1, **16**; H3-1-  
TuA-3, 16  
Makino, H.: C1-1-WeM-5, 22  
Malecka, J.: E2-2-ThA-4, 39; EP-ThP-3, 43  
Mandal, S.: E3-1-TuM-3, 14  
Mangin, D.: C3-2-FrM-5, 45  
Manninen, N.: B3-FrM-5, 46  
Mara, N.: H1-2-MoA-5, 8  
Marcin, L.: A2-1-TuA-3, 17  
Marcos, G.: B1-3-FrM-1, 46  
Markovic Milosevic, I.: E1-2-WeM-13, 23  
Marot, L.: CP-ThP-15, 41  
Marquie, D.: A2-1-TuA-3, 17  
Martin, T.: E1-2-WeM-4, 23  
Martinez Fuentes, M.: FP-ThP-16, 42  
Martínez-Gutiérrez, H.: B4-2-MoA-3, 10  
Martínez-Trinidad, J.: B4-3-TuM-5, 13  
Martinu, L.: C2-2-FrM-8, 45; H1-2-MoA-  
4, 8  
Maskova, H.: F1-FrM-6, 47  
Mateos-Anzaldo, F.: CP-ThP-4, **41**  
Mathew, M.: D2-TuM-3, 12; D2-TuM-4,  
**12**; D2-TuM-6, 12; D2-TuM-8, 12  
Mathews, S.: CP-ThP-12, 41  
Matsudaira, T.: A2-2-WeM-2, 21  
Matthews, A.: D1-2-MoA-5, 8; G1-WeM-  
4, 24  
Matthews, D.: D2-TuM-4, 12  
Matthey, B.: B2-MoA-5, 9  
Maurel, V.: A2-1-TuA-3, 17  
Maurer, J.: E1-2-WeM-13, 23  
Mayrhofer, P.: A1-1-MoM-1, **5**; A1-1-  
MoM-7, 5; B5-ThM-6, 33; B6-MoA-7, 10;  
B6-MoA-8, 10; F2-ThA-8, 38; FP-ThP-3,  
42; FP-ThP-4, 42  
McCraw, M.: D3-TuA-4, 16  
McIlroy, D.: C1-2-WeA-2, 29  
McNallan, M.: D2-TuM-6, 12; D2-TuM-8,  
12  
McNamara, S.: D1-1-MoM-4, 4  
McNeal, S.: C3-2-FrM-8, 45  
Medic, V.: C2-1-ThA-8, **37**  
Medjahed, A.: H1-2-MoA-6, 8

Meindlhumer, M.: E2-1-ThM-8, 34; F4-1-  
WeA-4, 27; H1-2-MoA-6, **8**  
Mejía Vásquez, H.: B1-1-ThM-9, **32**; BP-  
ThP-6, **41**  
Mekawy, M.: CP-ThP-17, 41; CP-ThP-6,  
41  
Melo, D.: G1-WeM-1, 24  
Mendez, A.: F4-2-ThM-8, 34  
MENDIZABAL, L.: B8-1-WeA-7, 30  
Meneses-Amador, A.: B1-1-ThM-12, 32;  
B4-2-MoA-3, 10; B4-2-MoA-4, 10; B4-3-  
TuM-5, 13; EP-ThP-4, 43  
Meng, T.: A1-3-TuM-9, 13; CP-ThP-14,  
41  
Mengis, L.: A1-2-MoA-2, 9; A1-2-MoA-5,  
9  
Merle, B.: H3-1-TuA-8, **16**  
Merlo, J.: B1-3-FrM-5, 46; B4-4-TuA-1,  
**17**; B8-2-ThM-3, 33  
Meruvia, M.: EP-ThP-11, 44  
Mesic, B.: B1-1-ThM-3, 32  
Meyer, E.: CP-ThP-15, 41  
Michalczewski, R.: G2-2-WeA-9, 27  
Michau, A.: G1-WeM-2, **24**  
Michaud, V.: EP-ThP-13, 44  
Michels, A.: E1-1-TuA-4, 19  
Michler, J.: A2-1-TuA-9, 17; B1-1-ThM-  
10, 32; B7-ThA-6, 38; C2-1-ThA-6, 37;  
E2-1-ThM-13, 35; F4-1-WeA-9, 27; F4-2-  
ThM-11, 34; H1-1-MoM-3, 4; HP-ThP-2,  
40  
Midson, S.: G2-1-WeM-11, **22**; G2-1-  
WeM-12, 22  
Migot, S.: C3-2-FrM-5, 45  
Mikula, M.: F4-1-WeA-4, 27; F4-2-ThM-  
6, 34  
Milidonis, K.: C3-1-ThM-11, 32  
Millan Franco, M.: HP-ThP-5, **40**  
Miller, C.: GP-ThP-14, 43  
Minea, T.: B7-ThA-4, **38**; B8-2-ThM-5,  
33; E1-1-TuA-4, 19  
Mingo, B.: G1-WeM-4, 24; G2-2-WeA-2,  
27  
Miorin, E.: F2-ThA-3, 38  
Mirońska, A.: B8-1-WeA-9, 30  
Miserque, F.: A1-3-TuM-3, 13  
Mitterer, C.: B4-3-TuM-2, 13; C3-1-ThM-  
11, 32; E2-1-ThM-3, 34; F4-1-WeA-2, 27;  
H2-1-TuM-6, 12; TS1-2-MoA-3, 11  
Mmorel, E.: B8-2-ThM-5, 33  
Möbius, M.: B1-1-ThM-11, **32**; EP-ThP-2,  
**43**  
Mochalin, V.: E1-1-TuA-1, **19**  
Moebius, M.: AP-ThP-1, 40  
Mohan, P.: A2-1-TuA-4, **17**  
Moirangthem, I.: B8-1-WeA-5, **30**  
Molina, J.: F4-2-ThM-8, 34  
Möller, C.: G3-WeM-5, 25  
Mollicone, P.: G2-2-WeA-9, 27  
Monnatte, J.: D2-TuM-7, 12  
Montagner, F.: F2-ThA-3, 38  
Montecillo, R.: G2-2-WeA-5, 27  
Montero, X.: A1-2-MoA-8, 9  
Montigaud, H.: B1-2-ThA-3, 37; HP-ThP-  
3, 40  
Moore, E.: B8-2-ThM-3, 33  
Morina, A.: E3-1-TuM-8, 14

Mortalò, C.: F2-ThA-3, 38  
Mościcki, T.: BP-ThP-1, 41; F4-2-ThM-3,  
**34**  
Moultos, O.: TS2-TuA-5, 18  
Mouti, N.: C3-1-ThM-11, **32**  
Mráz, S.: B5-ThM-6, 33; FP-ThP-18, 42  
Mücklich, F.: G1-WeM-5, 24  
Mueller, M.: TS1-3-TuM-5, **14**  
Muhl, S.: FP-ThP-16, **42**  
Müller, T.: TS1-1-MoM-4, 6  
Munroe, P.: B4-2-MoA-6, 10  
Murugan, V.: G2-2-WeA-6, 27  
Musayev, Y.: TS2-TuA-3, **18**

### — N —

NAGATA, T.: B4-4-TuA-3, 17  
Nagay, B.: D3-TuA-8, **16**  
Nagy, Š.: F4-2-ThM-6, 34  
Najm, H.: B6-MoA-11, 10  
Nascimento Pereira, J.: E1-1-TuA-9, 19;  
FP-ThP-13, 42  
Naseer, A.: BP-ThP-16, **42**  
Navidi Kashani, A.: F4-2-ThM-11, 34  
Nayak, G.: B6-MoA-7, **10**; BP-ThP-9, **41**  
Nedev, N.: CP-ThP-4, 41  
Nedev, R.: CP-ThP-4, 41  
Nelis, T.: B7-ThA-6, 38  
Nellessen, P.: A1-1-MoM-4, 5  
Neuß, D.: H1-1-MoM-6, **4**  
Nguyen, T.: C3-1-ThM-13, **32**; C3-1-ThM-  
9, **32**; E2-1-ThM-6, **34**; FP-ThP-19, 42;  
TS2-TuA-1, 18  
Nguyen, V.: B4-4-TuA-3, 17; C2-1-ThA-4,  
**37**  
Nicholls, J.: H3-1-TuA-4, 16  
Nicoletti, C.: GP-ThP-7, 43  
Nieto-Sosa, A.: B4-2-MoA-3, 10  
Nohava, J.: E2-2-ThA-3, **39**  
Norberg, N.: H1-2-MoA-9, 8  
Ntemou, E.: A1-1-MoM-6, 5; F4-1-WeA-  
1, 27; FP-ThP-5, 42  
Nunney, T.: C1-2-WeA-5, 29; HP-ThP-1, 40  
Nyffeler, C.: F5-MoM-5, **6**

### — O —

Obrusnik, A.: F5-MoM-6, 6  
Obrusnik, A.: F5-MoM-3, 6  
Ocampo-Ramírez, A.: B4-2-MoA-4, 10;  
B4-3-TuM-5, 13  
Ociepa, J.: TS1-2-MoA-8, **11**  
Oechsner, M.: D2-TuM-1, 12  
Oehler, M.: EP-ThP-2, 43  
Ogawa, T.: A2-2-WeM-2, 21  
Oh, K.: DP-ThP-1, 40  
Oikawa, Y.: F1-FrM-11, 47  
Oliver, W.: H2-2-WeM-5, **21**  
Olubambi, P.: D1-2-MoA-3, **8**  
Oniszczyk, A.: B8-1-WeA-9, 30  
Osinger, B.: F2-ThA-6, **38**  
Oskay, C.: A1-2-MoA-1, 9; A1-2-MoA-2,  
**9**; A1-2-MoA-5, 9  
Osorio-Urquiza, E.: CP-ThP-4, 41  
Öte, M.: TS1P-ThP-4, 43  
Ott, V.: A1-1-MoM-7, 5; FP-ThP-13, 42  
Ou, T.: B4-4-TuA-5, **17**  
Ougier, M.: TS1-2-MoA-9, **11**

## Author Index

Ouyang, F.: B1-3-FrM-3, 46; C2-2-FrM-7, 45; E2-1-ThM-9, 34  
 Owens-Mawson, J.: G1-WeM-3, 24  
 Ozbay, S.: D1-1-MoM-1, 4  
 Ozevin, D.: D2-TuM-3, 12

### — P —

P. Chu, J.: D1-1-MoM-3, 4  
 Padrun, M.: C2-2-FrM-5, 45  
 Paik, H.: C3-1-ThM-7, **32**  
 Pajdarová, A.: B8-1-WeA-8, 30  
 Pakieła, W.: GP-ThP-3, 42  
 Palani, R.: C1-1-WeM-5, 22  
 Panetta, C.: HP-ThP-6, 40  
 Panjan, M.: G2-2-WeA-3, 27  
 Panjan, P.: G2-2-WeA-3, 27  
 Pankov, V.: A2-1-TuA-2, **17**  
 Panos, S.: TS3-WeA-10, 30  
 Parakh, A.: H1-1-MoM-1, 4  
 Park, I.: EP-ThP-7, **44**  
 Park, J.: A1-3-TuM-4, 13; DP-ThP-1, 40; DP-ThP-8, **40**; GP-ThP-10, 43  
 Park, S.: GP-ThP-10, **43**  
 Paschke, H.: B5-ThM-12, 33; G2-1-WeM-10, **22**  
 Pathak, S.: H2-1-TuM-9, 12  
 Patidar, J.: B1-3-FrM-2, 46; B8-1-WeA-4, **30**; H1-1-MoM-6, 4  
 Patil, P.: E2-2-ThA-8, 39  
 Patnaik, P.: A2-1-TuA-2, 17; A2-2-WeM-5, **21**  
 Patsalas, P.: TS3-WeA-4, **30**  
 Patscheider, J.: SIT2-TuSIT-1, **20**  
 Patterer, L.: F4-1-WeA-2, 27  
 Paul, B.: D1-2-MoA-1, 8  
 Paulus, M.: B5-ThM-12, 33  
 Pauly, C.: G1-WeM-5, 24; G3-WeM-12, 25  
 Peck, E.: F2-ThA-8, 38  
 Peddinghaus, J.: G2-1-WeM-10, 22  
 Pedersen, K.: F1-FrM-7, 47  
 Pedraza, F.: A1-2-MoA-8, 9  
 Pedro Justino de Oliveira Limírio, J.: DP-ThP-10, 40  
 Peng, H.: B4-1-MoM-2, 5  
 Peñuela Cruz, C.: D1-1-MoM-2, 4  
 Perben, G.: EP-ThP-13, 44  
 Pereira, C.: EP-ThP-11, 44  
 Pérez Alvarez, J.: E1-1-TuA-8, 19  
 Pérez Trujillo, F.: A1-3-TuM-7, **13**; A1-3-TuM-8, 13  
 Pérez-Álvarez, J.: B1-1-ThM-12, 32  
 Perez-Landeros, O.: CP-ThP-4, 41  
 Perotti, B.: E1-1-TuA-4, 19  
 Perron, A.: B8-2-ThM-3, 33  
 Pethö, L.: C2-1-ThA-6, 37  
 Petrov, I.: B1-1-ThM-7, 32  
 Petrov, P.: B8-2-ThM-11, 33  
 Petruhins, A.: F4-2-ThM-10, 34  
 Pflug, A.: F5-MoM-1, 6  
 Pharr, G.: H2-2-WeM-5, 21  
 Pichelbauer, K.: E1-2-WeM-12, 23  
 Pierron, O.: H2-2-WeM-10, **21**; H3-2-WeM-3, 23  
 Pierson, J.: B1-3-FrM-1, 46; BP-ThP-12, 41; C3-1-ThM-10, **32**; C3-2-FrM-5, **45**  
 Pikner, J.: B2-MoA-4, 9

Pilloud, D.: C3-1-ThM-10, 32; C3-2-FrM-5, 45  
 Pint, B.: A2-2-WeM-6, 21  
 Piqué, A.: C1-2-WeA-1, 29; CP-ThP-12, 41  
 Planche, G.: D2-TuM-7, 12  
 Pliatsikas, N.: TS3-WeA-10, 30  
 Ploog, P.: G3-WeM-5, 25  
 Poellmann, P.: F4-1-WeA-9, **27**  
 Pohler, M.: F4-1-WeA-2, 27; G3-WeM-10, 25  
 Polcar, T.: E1-1-TuA-4, 19; E3-1-TuM-4, 14; E3-2-WeA-8, **29**  
 Polcik, P.: A1-1-MoM-6, 5; A1-1-MoM-7, 5; AP-ThP-3, 40; D2-TuM-1, 12; F2-ThA-8, 38; F4-1-WeA-1, 27; F4-1-WeA-5, 27; F4-1-WeA-9, 27; F4-2-ThM-10, 34; F4-2-ThM-5, 34; FP-ThP-18, 42; FP-ThP-3, 42; FP-ThP-5, 42; H3-1-TuA-5, 16; HP-ThP-8, 40  
 Pöllmann, P.: B5-ThM-6, 33  
 Ponomarev, I.: E3-1-TuM-4, 14; E3-2-WeA-8, 29  
 Ponte, F.: B1-2-ThA-2, **37**  
 Popok, V.: F1-FrM-7, 47  
 Portal, S.: D3-TuA-4, 16; FP-ThP-2, 42  
 Porteus, J.: D2-TuM-7, 12  
 Praks, P.: A1-2-MoA-7, 9  
 Presby, M.: A2-2-WeM-4, 21  
 Prestigiaco, J.: CP-ThP-12, 41  
 Primetzhofer, D.: A1-1-MoM-6, 5; B4-3-TuM-2, 13; F4-1-WeA-1, 27; F4-1-WeA-9, 27; FP-ThP-18, 42; FP-ThP-5, 42; H1-2-MoA-7, 8  
 Prochazka, M.: B7-ThA-8, 38  
 Prokes, J.: B7-ThA-8, 38  
 Pshyk, A.: B1-1-ThM-7, 32  
 Psiuk, R.: BP-ThP-1, **41**; F4-2-ThM-3, 34  
 Puetz, W.: B2-MoA-6, 9  
 Pulio, B.: A2-2-WeM-4, 21  
 Purba, Y.: F3-TuA-10, **18**  
 Putz, B.: C2-1-ThA-6, **37**; E2-1-ThM-13, 35

### — Q —

Qazilbash, M.: CP-ThP-12, 41  
 Qi, J.: CP-ThP-1, 40  
 Qiu, J.: G2-2-WeA-5, **27**  
 Qiu, X.: AP-ThP-4, 40  
 Qu, C.: D1-1-MoM-4, 4  
 Quaini, A.: A2-2-WeM-12, 21

### — R —

Raadu, M.: B8-2-ThM-12, 33  
 Rafaja, D.: B2-MoA-4, 9  
 Rahmadtulloh, I.: E1-1-TuA-3, **19**  
 Raja, T.: G2-2-WeA-6, **27**  
 Raji, H.: F2-ThA-4, 38  
 Rajmohan, G.: D1-1-MoM-1, 4  
 Ramachandra Rao, M.: BP-ThP-3, 41; E3-1-TuM-3, **14**  
 Ramanath, G.: B4-3-TuM-7, **13**  
 Ramanjaneyulu, K.: E3-1-TuM-5, 14  
 Ramanujam, S.: E3-1-TuM-5, 14  
 Ramchandra Reddy, A.: E3-1-TuM-5, 14  
 Ramirez-Reyna, O.: B1-1-ThM-12, **32**

Ramm, J.: A2-1-TuA-9, 17; AP-ThP-3, 40; F4-1-WeA-1, 27; F4-2-ThM-5, 34; FP-ThP-5, 42; H3-1-TuA-5, 16  
 Ramos-Vilchis, C.: D3-TuA-9, 16  
 Rangasamy, B.: C1-2-WeA-2, 29  
 Rangel, E.: D3-TuA-8, 16  
 Rank, M.: EP-ThP-2, 43  
 Rao, J.: E2-2-ThA-8, 39; F4-2-ThM-8, 34  
 Rao, S.: E3-1-TuM-3, 14  
 Rao, Z.: B1-1-ThM-5, 32  
 Rashid, S.: EP-ThP-5, 43  
 Ratova, M.: TS2-TuA-10, 18  
 Rattunde, O.: F5-MoM-5, 6  
 Rausch, M.: E2-1-ThM-3, 34  
 Rebholz, C.: TS1-2-MoA-3, **11**  
 Redfern, J.: TS2-TuA-10, 18  
 Rego, R.: E1-2-WeM-3, 23; F1-FrM-6, 47  
 Rehman, Z.: D1-1-MoM-7, **4**  
 Reinders, P.: G2-2-WeA-2, **27**  
 Ren, J.: A1-3-TuM-1, 13  
 Renault, P.: H2-1-TuM-6, 12; H2-1-TuM-7, 12  
 Restrepo Posada, M.: DP-ThP-6, 40; DP-ThP-7, **40**  
 Reyes-Carmona, L.: D3-TuA-9, 16  
 Ribeiro, J.: C3-1-ThM-5, 32  
 Richter, J.: C2-2-FrM-5, 45  
 Richter, S.: AP-ThP-3, **40**; F4-2-ThM-5, **34**  
 Ridley, M.: A2-2-WeM-6, 21  
 Riedel, H.: A1-1-MoM-6, 5; A1-1-MoM-7, 5; AP-ThP-3, 40; AP-ThP-5, 40; B8-1-WeA-8, 30; F4-1-WeA-1, 27; F4-1-WeA-5, 27; F4-2-ThM-5, 34; FP-ThP-5, 42; G1-WeM-2, 24; H3-1-TuA-5, 16; HP-ThP-8, 40  
 Rivera Tello, C.: E1-1-TuA-8, **19**  
 Rivera-Tello, C.: B1-1-ThM-12, 32  
 Robinson, J.: B4-3-TuM-6, 13  
 Roch, T.: F4-1-WeA-4, 27; F4-2-ThM-6, 34  
 Rodil, S.: D3-TuA-9, **16**  
 Rodrigues, F.: C3-1-ThM-5, 32  
 Rodríguez Maya, S.: DP-ThP-7, 40  
 Rodríguez Maya, S.: DP-ThP-6, **40**  
 Rodríguez Ripoll, M.: E1-2-WeM-12, **23**  
 Rodríguez-Castro, G.: B1-1-ThM-12, 32; B4-2-MoA-3, 10; B4-2-MoA-4, 10; B4-3-TuM-5, 13; EP-ThP-4, 43  
 Rogov, A.: G1-WeM-4, 24  
 Rohrmann, H.: C2-2-FrM-5, 45  
 Rojo-Blanco, C.: CP-ThP-1, **40**  
 Romagnoli, D.: E3-1-TuM-6, **14**  
 Rosell, N.: F3-TuA-11, **18**  
 Rosen, J.: F4-2-ThM-10, 34  
 Ross, E.: A2-2-WeM-10, **21**  
 Rossi, E.: B1-2-ThA-6, 37; EP-ThP-5, 43  
 Roštek, A.: F5-MoM-3, **6**  
 Rouillard, F.: A1-3-TuM-3, 13; A2-2-WeM-12, 21  
 Rozsa, J.: D1-1-MoM-4, 4  
 Rtimi, S.: D1-2-MoA-7, 8  
 Ruan, D.: B1-3-FrM-4, 46; BP-ThP-17, 42; C2-1-ThA-10, 37; C2-2-FrM-11, 45; GP-ThP-12, 43; TS3P-ThP-3, 43  
 Ruan, J.: C3-1-ThM-12, 32; CP-ThP-16, 41; FP-ThP-15, 42; TS1-3-TuM-7, **14**

## Author Index

- Rübig, B.: TS1-1-MoM-4, 6  
 Rubin, K.: H1-2-MoA-10, 8  
 Rüdiger, A.: CP-ThP-19, 41  
 Rudigier, H.: B6-MoA-8, 10  
 Rudolph, M.: B8-1-WeA-3, 30; B8-2-ThM-12, 33; B8-2-ThM-6, 33  
 Rudolphi, M.: A2-1-TuA-1, 17  
 Rumsby, P.: C2-2-FrM-8, **45**  
 Running, M.: D1-1-MoM-4, 4  
 Rupakula, M.: D1-2-MoA-1, **8**  
 Rupp, J.: C3-1-ThM-7, 32
- S —
- Sadki, M.: H1-2-MoA-9, 8  
 Saedi, S.: F2-ThA-4, 38  
 Sagar, S.: TS2-TuA-5, 18  
 Sakamoto, Y.: CP-ThP-17, 41; CP-ThP-6, 41  
 Salán, N.: G3-WeM-12, 25  
 Sales de Mello, S.: E1-1-TuA-4, 19  
 Sälker, J.: B6-MoA-7, 10  
 Sanchette, F.: A1-3-TuM-3, 13  
 Sanchez, F.: CP-ThP-15, **41**  
 Sandager, M.: F1-FrM-7, 47  
 Sandstrom, P.: B4-1-MoM-6, 5  
 Sanjaya, B.: TS1-3-TuM-1, 14  
 Sankaran, P.: C1-2-WeA-2, 29  
 Sanni, O.: A1-3-TuM-1, **13**  
 Santiago, F.: G1-WeM-1, **24**  
 Santiago, J.: F4-2-ThM-8, 34  
 SANTIAGO-VARELA, J.: B8-1-WeA-7, 30  
 Santos, A.: D3-TuA-8, 16  
 Sanzone, G.: F1-FrM-5, 47  
 Sarkissian, A.: CP-ThP-19, 41  
 Sartory, B.: B2-MoA-9, 9  
 sato, N.: CP-ThP-17, 41  
 Satrapinsky, L.: F4-1-WeA-4, 27; F4-2-ThM-6, 34  
 Savva, G.: G1-WeM-3, 24  
 Sawada, H.: F1-FrM-11, **47**  
 Scaion Silva, L.: DP-ThP-10, 40  
 Schachinger, M.: GP-ThP-7, 43; TS1-1-MoM-4, 6  
 Schachinger, T.: E1-2-WeM-12, 23  
 Schaffar, G.: H3-1-TuA-3, **16**  
 Schalk, N.: B2-MoA-9, 9; B4-3-TuM-2, 13; F4-1-WeA-2, 27; G3-WeM-10, 25; H1-2-MoA-7, 8; H2-1-TuM-8, **12**  
 Scheiber, A.: AP-ThP-5, 40  
 Schell, N.: F4-1-WeA-2, 27  
 Schelwald, R.: H1-2-MoA-10, 8  
 Scheu, C.: E2-2-ThA-8, 39  
 Schiester, M.: B4-3-TuM-2, 13  
 Schiffers, C.: B1-1-ThM-3, 32; B2-MoA-6, 9  
 Schindler, C.: CP-ThP-19, 41  
 Schleitzer, J.: B7-ThA-9, 38  
 Schlichting, F.: B7-ThA-1, 38  
 Schneider, J.: A1-2-MoA-9, 9; B4-3-TuM-2, 13; B5-ThM-6, 33; B6-MoA-7, 10; F4-1-WeA-2, 27; F4-1-WeA-9, 27; F4-2-ThM-11, 34; FP-ThP-18, 42  
 Schneider, V.: B7-ThA-9, **38**  
 Schoech, H.: A2-1-TuA-9, 17  
 Schöler, S.: A2-1-TuA-1, **17**  
 Schrefl, T.: F5-MoM-7, 6  
 Schretter, L.: H2-2-WeM-11, 21
- Schulz, U.: A2-1-TuA-8, 17  
 Schulz-von der Gathen, V.: B8-2-ThM-7, 33  
 Schuster, F.: A2-2-WeM-12, 21  
 Schweizer, P.: F4-1-WeA-9, 27; F4-2-ThM-11, 34; HP-ThP-2, 40  
 Sebastiani, M.: B1-2-ThA-6, 37; EP-ThP-5, 43; H1-2-MoA-3, **8**  
 Segal-Peretz, T.: B5-ThM-7, 33  
 Sepulveda-Robles, O.: D3-TuA-9, 16  
 Shabani, S.: TS3-WeA-9, **30**  
 Shamsirgar, A.: F4-2-ThM-10, 34  
 Shang, L.: A1-1-MoM-6, 5; AP-ThP-5, 40  
 Sharma, A.: B7-ThA-6, 38; B8-1-WeA-4, 30  
 Sharma, G.: TS1-2-MoA-7, **11**  
 Sharma, K.: D1-2-MoA-1, 8  
 Sharma, M.: TS3-WeA-4, 30  
 Sharma, P.: B1-2-ThA-2, 37  
 Sharp, J.: D1-1-MoM-1, 4  
 Sharpe, M.: F1-FrM-5, 47  
 Shen, G.: B8-1-WeA-6, 30; B8-2-ThM-9, **33**  
 Shen, Y.: FP-ThP-12, 42; TS1-2-MoA-6, 11; TS1P-ThP-5, **43**  
 Sheng-Wei, Z.: A2-2-WeM-13, **21**  
 Shergill, K.: E2-1-ThM-5, 34  
 Shi, W.: BP-ThP-19, 42  
 Shibli, J.: D3-TuA-11, 16  
 Shieu, F.: FP-ThP-6, 42  
 Shih, H.: FP-ThP-6, 42  
 Shimizu, T.: B8-1-WeA-1, **30**; B8-1-WeA-3, 30  
 Shin, N.: H1-2-MoA-9, 8  
 Shin, S.: B1-3-FrM-5, 46; B4-4-TuA-1, 17; B4-4-TuA-8, 17; B8-2-ThM-3, 33  
 Shrivastav, S.: F4-2-ThM-7, **34**  
 Shrivastava, A.: B6-MoA-11, **10**  
 Shukla, P.: G2-2-WeA-9, 27  
 Silva, S.: TS3-WeA-7, **30**  
 Šima, M.: B2-MoA-4, 9  
 Sinnott, S.: F2-ThA-9, **38**  
 Siol, S.: B1-3-FrM-2, 46; B8-1-WeA-4, 30; H1-1-MoM-6, **4**  
 Sitzman, S.: E2-1-ThM-1, 34  
 Sivanandi, P.: G2-2-WeA-6, 27  
 Soares, M.: E2-2-ThA-10, 39  
 Soares, P.: E2-2-ThA-10, 39; EP-ThP-11, 44  
 Sohn, Y.: A2-1-TuA-1, 17  
 Sohngen, L.: B1-3-FrM-5, 46; B4-4-TuA-1, 17; B4-4-TuA-8, 17; B8-2-ThM-3, 33  
 Solares, S.: D3-TuA-4, 16  
 Soldera, F.: G1-WeM-5, 24  
 Solomon, H.: D3-TuA-4, 16  
 Sommerhaeuser, J.: B1-3-FrM-2, 46  
 Son Haji, H.: D1-1-MoM-3, **4**  
 Sondgeroth, E.: D2-TuM-4, 12  
 Sondor, J.: E2-2-ThA-3, 39  
 Song, S.: TS2P-ThP-1, 43  
 Sousa, M.: A1-3-TuM-7, 13  
 Souza, G.: EP-ThP-11, 44  
 Souza, J.: D3-TuA-11, 16  
 Souza, R.: E1-2-WeM-3, 23  
 Srinivasan, P.: BP-ThP-9, 41  
 Šroba, V.: F4-1-WeA-4, 27; F4-2-ThM-6, **34**
- Sroka, M.: GP-ThP-3, **42**  
 Stachowski, N.: G3-WeM-5, **25**  
 Stamate, E.: CP-ThP-3, 40  
 Stangebye, S.: H2-2-WeM-10, 21; H3-2-WeM-3, 23  
 Stark, A.: F4-1-WeA-2, 27  
 Stavila, V.: F2-ThA-1, 38  
 Steier, K.: TS1-1-MoM-2, 6  
 Steiner, R.: CP-ThP-15, 41  
 Steinmüller-Nethl, D.: H1-2-MoA-6, 8  
 Sterba, J.: F1-FrM-6, 47  
 Sternemann, C.: B5-ThM-12, 33  
 Stoerzinger, K.: C3-1-ThM-3, **32**  
 Strakov, H.: G2-2-WeA-10, 28  
 Stranak, V.: F1-FrM-6, **47**  
 Strijckmans, K.: F5-MoM-4, 6; FP-ThP-14, 42  
 Strozzi, D.: B8-2-ThM-3, 33  
 Struller, C.: TS3-WeA-3, 30  
 Stüber, M.: FP-ThP-13, 42  
 Stuckner, J.: A2-2-WeM-4, 21  
 Stueber, M.: A1-1-MoM-7, 5  
 Sturm, P.: B7-ThA-6, 38  
 Su, T.: B1-1-ThM-5, 32; B4-3-TuM-6, **13**  
 Su, Y.: B6-MoA-1, **10**; C3-1-ThM-13, 32; TS2-TuA-11, **18**  
 Subramaniam, P.: G2-2-WeA-9, 27  
 Sudhakar Reddy, K.: E3-1-TuM-5, 14  
 Sudharshan, P.: H2-2-WeM-5, 21  
 Sugumaran, A.: D1-2-MoA-2, 8  
 Sun, H.: F1-FrM-5, 47  
 Sun, X.: AP-ThP-2, **40**  
 Sun, Y.: D2-TuM-3, 12; D2-TuM-4, 12; D2-TuM-6, 12; D2-TuM-8, **12**  
 Sung, Y.: D1-2-MoA-8, **8**  
 Supakul, S.: H1-1-MoM-3, 4; H2-1-TuM-9, **12**  
 Suresh Babu, S.: B8-1-WeA-3, **30**; B8-2-ThM-12, 33; B8-2-ThM-6, 33  
 Suu, K.: SIT3-WeSIT-1, **26**  
 Suzuki, Y.: F4-1-WeA-10, **28**  
 Swadzba, R.: A1-1-MoM-4, 5  
 Swadzba, R.: A1-1-MoM-3, 5  
 Sweeney, S.: C1-2-WeA-5, 29; HP-ThP-1, 40  
 Swift, T.: HP-ThP-7, **40**
- T —
- Taghavi Pourian Azar, G.: D1-1-MoM-1, 4  
 Takahashi, M.: F4-1-WeA-6, 27  
 Takahashi, T.: G3-WeM-2, 25  
 Takashima, H.: C3-2-FrM-3, 45  
 Takayama, S.: F4-1-WeA-6, **27**  
 Takeda, T.: D3-TuA-11, 16  
 Takei, R.: G3-WeM-2, **25**  
 Takoudies, C.: D2-TuM-4, 12  
 Takoudies, C.: D3-TuA-3, 16; DP-ThP-4, 40  
 Tang, J.: B8-1-WeA-6, 30  
 Tański, T.: CP-ThP-10, **41**; CP-ThP-9, 41  
 Tavares Avila, P.: E1-1-TuA-9, 19; H1-2-MoA-4, **8**  
 Tavares, C.: C3-1-ThM-5, **32**  
 Taylor, G.: B1-3-FrM-5, 46; B4-2-MoA-6, **10**; B4-4-TuA-1, 17; B4-4-TuA-8, 17; B8-2-ThM-3, 33

## Author Index

Tayyab, M.: B1-1-ThM-6, **32**; BP-ThP-11, **41**  
Terasako, T.: C1-2-WeA-3, **29**; FP-ThP-1, **42**  
Tervakangas, S.: B3-FrM-5, 46  
Terziyska, V.: C3-1-ThM-11, 32  
Texier, D.: A2-1-TuA-3, 17  
Thewes, A.: B5-ThM-12, **33**; G2-1-WeM-10, 22  
Thiemann-Monjé, S.: B8-2-ThM-7, 33  
Thompson, G.: B4-3-TuM-6, 13  
Thornley, S.: BP-ThP-10, 41  
Thorwarth, K.: B1-3-FrM-2, **46**; B8-1-WeA-4, 30; H1-1-MoM-6, 4  
Tian, C.: H1-1-MoM-3, 4  
Tinazzi, R.: F2-ThA-3, 38  
Ting-Hsiang, C.: F1-FrM-12, **47**  
Ting, I.: E2-2-ThA-7, **39**  
Ting, J.: C3-1-ThM-13, 32; F3-TuA-10, 18; FP-ThP-12, 42; FP-ThP-19, 42; TS1-2-MoA-2, 11; TS1-3-TuM-4, 14; TS1-3-TuM-9, 14; TS2-TuA-1, 18  
Tiwari, K.: TS1-1-MoM-3, **6**  
Tkadletz, M.: B2-MoA-9, **9**; B4-3-TuM-2, 13; F4-1-WeA-2, 27; G3-WeM-10, 25; H1-2-MoA-7, 8; H2-1-TuM-8, 12  
Többens, D.: C2-1-ThA-6, 37  
Todt, J.: BP-ThP-9, 41; H1-2-MoA-6, 8  
Togni, A.: F2-ThA-3, **38**  
Tokranova, N.: C2-1-ThA-1, 37  
Tomko, J.: B5-ThM-11, 33  
Torp, B.: B5-ThM-3, 33  
Torres, H.: E1-2-WeM-12, 23  
Torres, R.: E2-2-ThA-10, **39**; EP-ThP-11, **44**  
Totik, Y.: E2-2-ThA-4, 39; EP-ThP-3, 43  
Troncy, R.: A1-2-MoA-8, 9  
Trost, C.: EP-ThP-6, 44  
Trottenberg, T.: B7-ThA-1, 38  
Truchlý, M.: F4-1-WeA-4, 27; F4-2-ThM-6, 34  
Trzewiczynski, W.: B8-1-WeA-9, **30**  
Tsai, C.: E2-1-ThM-9, 34  
Tsai, M.: TS1-3-TuM-9, **14**  
Tsai, P.: C1-1-WeM-6, 22  
Tsai, S.: B1-1-ThM-13, 32  
Tsai, W.: DP-ThP-3, **40**  
Tsai, Y.: TS3-WeA-5, 30  
Tscharnuter, D.: H3-1-TuA-3, 16  
Tschiptschin, A.: E1-2-WeM-3, 23  
Tschirky, M.: C2-2-FrM-5, 45  
Tseng, C.: D1-2-MoA-8, 8; E2-1-ThM-12, 34  
Tshephe, T.: D1-2-MoA-3, 8  
Tsikata, S.: B7-ThA-4, 38  
Tu, C.: G2-2-WeA-5, 27  
Tung, H.: A1-3-TuM-6, 13; C3-2-FrM-6, 45  
Tungli, J.: F5-MoM-3, 6  
Tupei, C.: HP-ThP-7, 40  
Tyagi, B.: TS3P-ThP-1, 43

### — U —

Ucik, M.: B1-1-ThM-10, 32; B3-FrM-3, 46  
UEDA, R.: GP-ThP-5, **42**  
Ulrich, S.: A1-1-MoM-7, 5  
Ulrich, T.: D2-TuM-1, 12

Unutulmazsoy, Y.: B8-2-ThM-4, 33  
Usman, M.: E2-2-ThA-11, **39**

### — V —

Valdez-Salas, B.: CP-ThP-4, 41  
Vallee, C.: C2-1-ThA-1, **37**  
Van Bever, J.: F5-MoM-4, **6**; FP-ThP-14, **42**  
van den Beucken, J.: D3-TuA-8, 16  
Varela Jiménez, L.: H1-2-MoA-4, 8  
Vargas-Giraldo, S.: B1-2-ThA-4, 37; G1-WeM-6, **24**; GP-ThP-14, 43  
Vassen, R.: A2-1-TuA-1, 17  
Vazquez Gonzalez, J.: G2-1-WeM-11, 22  
Velauthapillai, D.: C1-2-WeA-2, 29  
Veldhuis, S.: B1-2-ThA-8, 37  
Vercoulen, H.: B1-2-ThA-1, 37  
Vidal-Torres, J.: B4-2-MoA-4, **10**; EP-ThP-4, **43**  
Vidiš, M.: F4-1-WeA-4, 27  
Viloan, R.: B8-1-WeA-1, 30  
Virfeu, A.: C3-2-FrM-5, 45  
Vishnyakov, V.: FP-ThP-17, **42**  
Viskupová, K.: F4-2-ThM-6, 34  
Vital-Juarez, A.: E2-1-ThM-4, 34  
Vitu, T.: E3-2-WeA-8, 29  
Vlugt, T.: TS2-TuA-5, 18  
Voevodin, A.: E3-1-TuM-9, 14; EP-ThP-1, 43  
Vogl, L.: E2-1-ThM-13, 35  
von Keudell, A.: B8-2-ThM-7, 33  
von Schleinitz, T.: E3-2-WeA-9, 29  
Vries, E.: D2-TuM-4, 12

### — W —

Wächtler, C.: B2-MoA-4, **9**  
Wada, M.: A2-2-WeM-2, 21  
Wahli, G.: BP-ThP-5, **41**; D1-2-MoA-1, 8  
Waichman, S.: C1-1-WeM-3, **22**  
Waldl, H.: B4-3-TuM-2, 13; H1-2-MoA-7, 8  
Walsh, K.: D1-1-MoM-4, 4  
Wang, A.: B3-FrM-1, 46  
Wang, B.: BP-ThP-19, 42  
Wang, C.: B8-1-WeA-5, 30; E1-1-TuA-3, 19; FP-ThP-6, **42**; FP-ThP-8, 42; TS1-1-MoM-3, 6; TS1-1-MoM-5, **6**  
Wang, H.: CP-ThP-20, **41**; E2-1-ThM-6, 34  
Wang, J.: CP-ThP-20, 41; E2-1-ThM-9, 34; TS3P-ThP-2, 43  
Wang, L.: AP-ThP-4, 40  
Wang, Q.: E1-2-WeM-4, 23  
Wang, S.: TS1P-ThP-5, 43  
Wang, W.: E1-1-TuA-3, 19  
Wang, X.: E2-1-ThM-12, **34**  
Wang, Y.: C2-2-FrM-7, **45**  
Wann, M.: TS1-2-MoA-4, **11**  
Wartmann, J.: TS3-WeA-6, 30  
Watroba, M.: B1-3-FrM-2, 46; E2-1-ThM-13, 35  
Wegh, M.: B2-MoA-6, 9  
Weghuber, J.: GP-ThP-7, 43  
Wehrs, J.: BP-ThP-5, 41  
Wei, J.: GP-ThP-6, 42; TS1-3-TuM-6, **14**  
Wei, T.: F1-FrM-8, **47**  
Weichart, J.: B8-2-ThM-10, **33**

Weis, H.: G4-WeM-10, 24  
Wei-Sheng, L.: C1-2-WeA-2, 29  
Weiss, M.: F4-1-WeA-5, 27; HP-ThP-8, 40  
Weißmantel, S.: B4-3-TuM-4, 13  
Wei-Yang, C.: B1-1-ThM-8, **32**  
Welle, A.: C3-1-ThM-5, 32  
Welters, M.: GP-ThP-13, 43; TS1P-ThP-4, 43  
West, G.: TS3-WeA-3, **30**  
Wetzell, S.: B3-FrM-4, 46; TS1-3-TuM-5, 14  
White, D.: E2-1-ThM-1, 34  
White, E.: A1-2-MoA-6, 9  
White, R.: C1-2-WeA-5, 29; HP-ThP-1, 40  
Whitfield, B.: B6-MoA-10, **10**  
Wiame, H.: G4-WeM-10, 24  
Widrig, B.: A2-1-TuA-9, 17; F4-2-ThM-5, 34  
Wieczerek, K.: B7-ThA-6, 38  
Wieczorek, A.: B1-3-FrM-2, 46; B8-1-WeA-4, 30; H1-1-MoM-6, 4  
Wilkinson, A.: H2-1-TuM-5, 12  
Wimmer, M.: D2-TuM-6, 12  
Witman, M.: F2-ThA-1, **38**  
Woda, M.: B2-MoA-6, **9**  
Wojcik, T.: A1-1-MoM-6, 5; A1-1-MoM-7, 5; AP-ThP-3, 40; F4-1-WeA-1, 27; F4-1-WeA-5, 27; F4-2-ThM-5, 34; FP-ThP-5, 42; HP-ThP-8, 40  
Wong, M.: CP-ThP-5, 41  
Wu, F.: B4-2-MoA-5, 10; B7-ThA-7, 38; BP-ThP-8, 41  
Wu, G.: B4-4-TuA-2, 17; CP-ThP-1, 40; E3-1-TuM-8, **14**  
Wu, H.: E2-1-ThM-6, 34  
Wu, J.: TS2-TuA-8, **18**  
Wu, L.: TS3P-ThP-2, 43  
Wu, P.: C1-1-WeM-6, 22  
Wu, T.: TS2P-ThP-1, **43**  
Wu, W.: B7-ThA-5, 38; CP-ThP-21, **41**; F3-TuA-1, **18**; F3-TuA-5, 18; FP-ThP-12, 42  
WU, Y.: B4-1-MoM-1, **5**  
Wurster, S.: A2-2-WeM-1, 21  
Wüstefeld, C.: B2-MoA-4, 9  
Wuu, D.: B7-ThA-5, 38  
Wzorek, M.: FP-ThP-7, 42

### — X —

Xie, T.: E2-1-ThM-13, 35  
Xomalis, A.: B7-ThA-6, 38  
Xu, S.: H1-2-MoA-5, 8  
Xu, Y.: B5-ThM-4, **33**

### — Y —

Yaddanapudi, K.: H2-1-TuM-9, 12  
Yagi, M.: C1-2-WeA-3, 29; FP-ThP-1, 42  
Yalamançili, K.: B6-MoA-8, 10  
Yamamoto, T.: C1-1-WeM-5, **22**; FP-ThP-1, 42  
Yamaoto, T.: C1-2-WeA-3, 29  
Yamauchi, T.: DP-ThP-5, **40**  
Yan, Y.: CP-ThP-5, 41  
Yang, F.: B8-2-ThM-9, 33  
Yang, J.: TS1P-ThP-3, **43**

## Author Index

Yang, L.: B4-4-TuA-2, 17; CP-ThP-1, 40; E3-1-TuM-8, 14  
Yang, M.: B8-1-WeA-1, 30  
Yang, S.: TS1P-ThP-4, 43  
Yang, W.: BP-ThP-13, 41; C2-2-FrM-10, 45  
Yang, Y.: A2-1-TuA-10, 17; A2-1-TuA-11, 17; A2-2-WeM-13, 21; D1-2-MoA-6, 8  
Yao, G.: TS1-2-MoA-5, 11  
Yaylali, B.: E2-2-ThA-4, 39; EP-ThP-3, 43  
Yeh, K.: F4-1-WeA-8, **27**  
Yeh, L.: C3-2-FrM-7, 45; CP-ThP-7, 41; F3-TuA-8, 18; TS2-TuA-11, 18  
Yerokhin, A.: D2-TuM-4, 12; G1-WeM-4, 24; G2-2-WeA-2, 27  
Yin, J.: F1-FrM-5, **47**  
Yiu, P.: D1-1-MoM-3, 4; D2-TuM-5, 12; E1-1-TuA-5, 19  
Yoann Rozier, Y.: B8-2-ThM-5, 33  
Yong, A.: CP-ThP-14, 41  
Yoon, S.: GP-ThP-4, 42  
You, C.: G2-2-WeA-5, 27  
You, J.: C2-1-ThA-7, 37; C2-2-FrM-6, 45; E1-1-TuA-5, **19**

Youh, M.: C2-1-ThA-7, 37  
Yu, I.: C1-1-WeM-6, **22**  
Yu, J.: D1-2-MoA-6, **8**  
Yu, Y.: CP-ThP-18, 41; CP-ThP-21, 41; CP-ThP-22, 41; TS1-3-TuM-4, **14**  
Yu-Lin, K.: B1-1-ThM-8, 32  
Yun, D.: F4-2-ThM-7, 34

## — Z —

Zabeida, O.: C2-2-FrM-8, 45; H1-2-MoA-4, 8  
Zak, S.: A2-2-WeM-1, 21; EP-ThP-6, 44; H1-1-MoM-4, 4  
Zangerle, H.: F5-MoM-5, 6  
Zapata, R.: B1-2-ThA-3, **37**; HP-ThP-3, **40**  
Zauner, L.: G1-WeM-2, 24; H3-1-TuA-5, 16  
Zawadzki, J.: C1-1-WeM-4, **22**; FP-ThP-7, 42  
Zawischa, M.: F2-ThA-7, 38  
Zeman, P.: B8-1-WeA-8, 30; BP-ThP-20, 42; E2-1-ThM-8, 34  
Zeng, W.: TS1-2-MoA-5, 11  
Zhang, J.: H1-2-MoA-10, 8

Zhang, R.: F3-TuA-5, **18**  
Zhang, T.: D2-TuM-3, 12; E2-1-ThM-6, 34  
Zhao, X.: C2-2-FrM-5, 45  
Zhirkov, I.: F4-2-ThM-10, **34**  
Zhu, T.: H3-2-WeM-3, 23  
Zhuk, S.: B1-3-FrM-2, 46; B8-1-WeA-4, 30; H1-1-MoM-6, 4  
Zighem, F.: H2-1-TuM-7, 12  
Zikán, P.: F5-MoM-3, 6; F5-MoM-6, **6**  
Zimmer, O.: B1-1-ThM-4, **32**; B1-2-ThA-7, 37; F2-ThA-7, 38  
Zimmermann, M.: F2-ThA-7, 38  
Zin, V.: F2-ThA-3, 38  
Zitek, M.: H1-2-MoA-6, 8  
Zítek, M.: B1-2-ThA-6, **37**; E2-1-ThM-8, 34  
Zoell, P.: F4-1-WeA-9, 27  
Zou, B.: B8-2-ThM-11, 33  
Zougagh, K.: A2-2-WeM-12, **21**  
Zubizarreta, C.: B8-1-WeA-7, 30  
Zukerman, I.: C1-1-WeM-3, 22; TS1-1-MoM-1, **6**  
Zywitzki, D.: G2-2-WeA-10, **28**