

Nov. 15-18 2021 TAIPEI TAIWAN



TACT 2021

International Thin Film Conference Oral Session Program Book

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Plenary and keynote speeches

2021/11/15

Opening, & Plenary Session chair:

Prof. Ming-Tzer Lin National Chung Hsing University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|------------------------------|---------------------------------------|---|
| 09:00–09:20 | Opening | Prof. Jia-Hong Huang | Opening talks | President of TACT |
| | | Prof. Sea-Fue Wang | | President of National Taipei University of Technology, Taiwan |
| 09:20–10:10 | Plenary | Prof. Horacio Dante Espinosa | Multiscale Mechanics of Metamaterials | Northwestern University, USA |

2021/11/15

Keynote I & II Session chair:

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

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|--|--|
| 10:30–11:10 | Keynote I | Prof. Eun Ha Choi | Nonthermal atmospheric pressure plasma (NAP) sources and their plasma treated liquid (PTL) for oral administration of cancer treatment and inactivation of human corona virus 229E | Kwangwoon University, Korea |
| 11:10–11:50 | Keynote II | Prof. Jinn P. Chu | Metallic glass coatings: properties, application, and beyond | National Taiwan University of Science and Technology, Taiwan |

2021/11/15**Keynote III & IV** Session chair:

Prof. Jia-Hong Huang National Tsing Hua University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|---|--|
| 15:40–16:20 | Keynote III | Prof. Paul H. Mayrhofer | Coatings from intermetallic phases having a high-entropy metal sublattice; A case study of nitrides and diborides | TU Wien University, Austria |
| 16:20–17:00 | Keynote IV | Dr. Jörg Vetter | Sustainable Surface Solutions = Enabler for ecological transformations? | Oerlikon Balzers Coatings Germany GmbH, German |

2021/11/16**Keynote V & VI** Session chair:

Prof. Chau-Chang Chou National Taiwan Ocean University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|---|-------------------------------|
| 09:00–09:40 | Keynote V | Prof. Richard R.Chromik | Cold-Sprayed Metal Matrix Composites | McGill University, Canada |
| 09:40–10:20 | Keynote VI | Prof. Yu-Lin Shen | Deformation, SurfacePatterns, and their NumericalPrediction | University of New Mexico, USA |

2021/11/17**Keynote VII & VIII** Session chair:

Prof. Bohr-Ran Huang National Taiwan University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|--|--|
| 11:00–11:40 | Keynote VII | Prof. Yi-Jun Jen | Metamaterial inspired optical coatings for various filters | National Taipei University of Technology, Taiwan |
| 11:40–12:20 | Keynote VIII | Prof. Kazuhiro Ohkawa | Red micro-LEDs made of InGaN grown by MOVPE | King Abdullah University of Science and Technology, Saudi Arabia |

2021/11/18**Closing** Session chair:

Prof. Chau-Chang Chou National Taiwan Ocean University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|-------------------------------|-----------------------------|
| 15:45 – 16:45 | Closing | Prof. Ming-Tzer Lin | Announcement of Student award | Chair of Student Award |
| | | Prof. Chau-Chang Chou | Lucky draw & Others | Chair of Academic Committee |

Student award competition

2021/11/17 Oral competition I

Session chair:

| | | | |
|-----------------|---|--------------|--|
| Ming-Tzer Lin | National Chung Hsing University, Taiwan | H. C. Huang | National Taiwan University of Science and Technology, Taiwan |
| Chuan-Pu Liu | National Cheng Kung University, Taiwan | Yu-Ze Chen | National Cheng Kung University, Taiwan |
| Chen-Kuei Chung | National Cheng Kung University, Taiwan | T-C Wei | Chung Yuan Christian University, Taiwan |
| Ming-Hung Tsai | National Chung Hsing University, Taiwan | Po-Liang Liu | National Chung Hsing University, Taiwan |

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|----------------------------|-------------------|--|--|
| 13:30 - 13:45 | Preparation & Announcement | | | |
| 13:45 - 14:00 | G-O-43 | I-Sheng Ting | Evaluation of stress relief efficiency in ZrN/Zr and ZrN/Ti bilayer thin films using an energy balance model | National Tsing Hua University, Taiwan |
| 14:00 – 14:15 | C-O-98 | Ching-Yao Cheng | Low Temperature Metal-to-Metal Direct Bonding on Highly (111) Oriented Nanotwinned Silver and Fine-grained Silver Thin Films | National Tsing Hua University, Taiwan |
| 14:15 - 14:30 | A-O-112 | Song-Yu Chen | Polydopamine Coating on Graphite Felt by Tornado-type Atmospheric Pressure Plasma Jet for Vanadium Redox Flow Batteries | National Taiwan University of Science and Technology, Taiwan |
| 14:30 - 14:45 | B-O-150 | Wei-Cheng Chang | Effect of substrate bias to thermal stability and microstructure evolution in highly (111)-oriented nanotwinned Ag thin films during annealing process | National Tsing Hua University , Taiwan |
| 14:45 - 15:00 | D-O-156 | Jun Yen Lee | Effective Reduction of Non-twinned Transition Region in Sputtered Nanotwinned Ag Thin Films | National Tsing Hua University, Taiwan |

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|---------------|---------|---------------|--|---------------------------------------|
| 15:00 - 15:15 | F-O-165 | Jian-Jie Wang | Ultra-High Hardness Nanotwinned High Entropy Alloys CoCrFeNi Thin Films: Modifying Residual Stress without Scarifying Hardness Through Tuning Substrate Bias | National Tsing Hua University, Taiwan |
|---------------|---------|---------------|--|---------------------------------------|

2021/11/17 Oral competition II

Session chair:

| | | | |
|-----------------|---|--------------|--|
| Ming-Tzer Lin | National Chung Hsing University, Taiwan | H. C. Huang | National Taiwan University of Science and Technology, Taiwan |
| Chuan-Pu Liu | National Cheng Kung University, Taiwan | Yu-Ze Chen | National Cheng Kung University, Taiwan |
| Chen-Kuei Chung | National Cheng Kung University, Taiwan | T-C Wei | Chung Yuan Christian University, Taiwan |
| Ming-Hung Tsai | National Chung Hsing University, Taiwan | Po-Liang Liu | National Chung Hsing University, Taiwan |

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--------------------------------------|
| 15:30 – 15:45 | B-O-196 | Yu-An Chien | Nanoparticle Reinforced High Strength Ni-TiO ₂ Composite Film Electroplated by Supercritical Carbon Dioxide Assisted Method | Tokyo Institute of Technology, Japan |
| 15:45 – 16:00 | B-O-269 | Yu-Tang Luo | Facile high haze transparent electrode preparation by atmospheric pressure plasma jet for photovoltaic application | National Taiwan University, Taiwan |
| 16:00 – 16:15 | B-O-280 | Lei Huang | Control of Self-Assembly Seeding of Diamond Nanoparticles on Nanowall Structures for Enhancing Field Emission | Kyushu University, Japan |
| 16:15 – 16:30 | F-O-364 | Sen-You Hou | Biocompatibility evaluation of ZrTiNbTaFe thin films: in vitro and in vivo study | Chang Gung University, Taiwan |

2021/11/17 Poster competition I

Session chair:

Prof. He-Yun Du Ming Chi University of Technology, Taiwan

Prof. Chia-Yun Chen National Cheng Kung University, Taiwan

Prof. Kuan-Che Lan National Tsing Hua University Taiwan

Dr. Sumanta Kumar Sahoo National Cheng Kung University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|--|--------------------|--------------------------|---|--|
| 13:30 – 14:45 (6-7 minutes for each presentation) | A-P-114 | Jung-Bin Chen | Plasma Functional Treatment on Graphite Felt Using Atmospheric Pressure Plasma Jets for All-Vanadium Redox Flow Battery | National Taiwan University of Science and Technology, Taiwan |
| | B-P-38 | Nghi Nhan Nguyen Thi | Multi-Application of Piezo-composite Thin Film | National Cheng Kung University, Taiwan |
| | B-P-49 | Wei-Chieh Chen | Study on the phase transition of low-temperature deposited tantalum film using high-power pulsed magnetron sputtering (HiPIMS) | National Chung Hsing University, Taiwan |
| | B-P-82 | Yiming Jiang | Electrodeposition of Nickel-Cobalt Alloy Films and their Micro-Hardness | Tokyo Institute of Technology, Japan |
| | B-P-110 | Hiroki Kawakami | Non-enzymatic Polypyrrole/Nano-Gold Composite Electrode for Glucose Oxidation | Tokyo Institute of Technology, Japan |
| | B-P-131 | Ting-Hsun Lai | Effects of Process Parameters on Structure and Properties of Molybdenum Nitride Thin Films by High-Power Impulse Magnetron Sputtering | National Tsing Hua University, Taiwan |
| | B-P-333 | Igamcha Moirangthem | Microstructural, optical and mechanical properties of tungsten oxide films fabricated using superimposed HiPIMS-MF system | National Taiwan University of Science and Technology, Taiwan |
| | B-P-367 | Zi-Ling Zeng | Design of superhydrophobic SERS substrate by deposited organic conjugated molecules and noble metal nanoislands | National Taiwan University of Science and Technology, Taiwan |

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|--|---------|--------------|--|--|
| | C-P-206 | Po Wei Cheng | Supercritical Carbon Dioxide Assisted Metallization of 3D-Printed Polymer Structure as Functional Components in Electronic Devices | Institute of Innovative Research, Tokyo Institute of Technology, Japan |
|--|---------|--------------|--|--|

2021/11/17 Poster competition II

Session chair:

Prof. Chia-Lin Li National Taiwan University, Taiwan

Prof. Ko-Wei Lin National Chung Hsing University, Taiwan

Prof. Her-Hsiung Huang National Yang Ming Chiao Tung University, Taiwan

Prof. Jen-Chuan Tung Chang Gung University, Taiwan

Prof. Shih-Hsun Che National Taiwan University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|--|--------------------|--------------------------|---|---|
| 15:30 – 17:00 (6-7 minutes for each presentation) | D-P-40 | Matthew Wei-Jun Liu | Effect of Coating Architecture on Stress Relief Mechanism of TiZrN Coating on Silicon Substrate | National Tsing Hua University, Taiwan |
| | D-P-163 | Yiqun Feng | The fracture toughness of V(1-x)/2Mo(1-x)/2Nx coatings measured by internal energy-induced cracking method | National Tsing Hua University, Taiwan |
| | D-P-348 | Sheng-Yan Chen | Microstructure and mechanical properties investigation of TiZrSiN coatings: Effect of Si content | Ming Chi University of Technology, Taiwan |
| | E-P-198 | Kuan Syun Wang | The thiol-end group dendritic polymer graft Au nanoparticle arrays on low-damage plasma treated CVD-graphene TEM grid as highly efficient SERS platform | National Taiwan University, Taiwan |
| | E-P-242 | Yen-Ting Lin | Raman Enhanced Chip with Bionic Nepenthes Structure Applied in Biomedical Detection | Ming Chi University of Technology, Taiwan |
| | F-P-218 | Van Dung Nguyen | High-entropy High-k Ba(Ti,Zr,Ta,Hf,Mo)O ₃ Films for Advanced Gate Stacks | National Cheng Kung University, Taiwan |

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|--|---------|---------------|--|--|
| | F-P-250 | Taro Omura | Effect of Current Density on Micro-Mechanical Characteristic of Electrodeposited Gold Evaluated from Cyanide Bath | Tokyo Institute of Technology, Japan |
| | F-P-380 | Kan Fang Rong | Property evaluation of TiZrNbTaFeB high entropy alloy coatings: Effect of Ti and B contents | Ming Chi University of Technology, Taiwan |
| | G-P-116 | Yi-Hsuan Wang | Study of stress relief mechanism in TiN/Ti bilayer thin film using energy balance model | National Tsing Hua University, Taiwan |
| | G-P-378 | Yi-Tzu Wu | First-principles Study on Evaluating Coating Materials for High-Ni NMC Cathodes in Solid- and Liquid-states Li-ion Batteries | National Taiwan University of Science and Technology, Taiwan |

HiPIMS forum

HiPIMS Forum, TACT2021 will provide a platform for six invited speakers from research institute, industry and academia in Europe and Asia. These invited speakers will present the fundamental scientific aspects, the latest application-oriented results, and the real application of HiPIMS in industries. Attendees can discuss with six invited speakers during the Q & A time.

2021/11/16

HiPIMS Session chair:

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

| Time | Presenting Author | Title | Affiliation |
|---------------|-----------------------------|---|--|
| 14:20 - 14:25 | Prof. Jyh-Wei Lee | Opening | Ming Chi University of Technology, Taiwan |
| 14:25 - 14:45 | Prof. Arutjun P. Eghisarian | High-Quality CMOS-compatible TiN Thin Films for Next Generation Optoelectronic and Plasmonic Devices | Sheffield Hallam University, Sheffield, UK |
| 14:45 - 15:05 | Dr. Ralf Bandorf | Using optical emission for control of ionization and stoichiometry in metallic and reactive HIPIMS processes | Fraunhofer Institute for Surface Engineering and Thin Films, Braunschweig, Germany |
| 15:05 - 15:25 | Dr. Denis Kurapov | Beyond HIPIMS – smooth, defect free coatings for demanding cutting tool applications | Global Market Segment Manager, Cutting tools at Oerlikon Balzers, Germany |
| 15:25 - 15:45 | Prof. Jón Tómas Guðmundsson | Optimizing the deposition rate and the ionized flux fraction in high power impulse magnetron sputtering | University of Iceland, Iceland |
| 15:45 – 16:05 | Prof. Tetsuhide Shimizu | Low temperature growth of stress-free single phase α -W films using HiPIMS with synchronized pulsed substrate bias | Tokyo Metropolitan University, Japan |

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|---------------|-------------------|---|--|
| 16:05 - 16:25 | Prof. Jyh-Wei Lee | Research and industrial applications of HiPIMS technology in Taiwan | Ming Chi University of Technology, Taiwan |
| 16:25 - 17:00 | Q & A time | | |

Symposium A. Coatings for sustainable energy

2021/11/15

A1 Session chair:

Prof. Chen-Hao Wang National Taiwan University of Science and Technology, Taiwan

Prof. Han-Yi Chen National Tsing Hua University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 13:30 - 14:00 | A-I-360 | Han-Yi Chen | Nanoporous Carbon-Modified Electrodes for Sustainable Microbial Fuel Cells | National Tsing Hua University, Taiwan |
| 14:00 - 14:15 | A-O-402 | Yun-Ting Ou | Electrode modification by metal-organic frameworks derived catalyst for improving the performance of vanadium redox flow batteries | National Taiwan University of Science and Technology, Taiwan |
| 14:15 - 14:30 | A-O-157 | Kai-Hsiang Lo | Solvent-free synthesis of ZIF-67 thin films as the catalyst for the directly growth of carbon nanotubes or the fabrication of electrical double layer capacitors | Ming Chi University of Technology, Taiwan |
| 14:30 - 14:45 | A-O-159 | Po-Hung Yeh | Sulfurization of VSB-5 hexagonal nanorod arrays for the performance boosting of the supercapacitors | Ming Chi University of Technology, Taiwan |
| 14:45 - 15:00 | A-O-170 | Van Thanh Nguyen | Room temperature synthesis of 3D cobalt vanadate nanosheet arrays on Ni foam coupled with a redox additive electrolyte for enhanced supercapacitor performance | National Cheng Kung University, Taiwan |
| 15:00 - 15:15 | A-O-266 | Rose Anne Acedera | Templated synthesis of CoFe ₂ O ₄ on carbonized KOH-activated kapok fibers as supercapacitor electrode material | University of the Philippines Diliman, Philippine |

2021/11/16

A2 Session chair:

Prof. He-Yun Du Ming Chi University of Technology, Taiwan

Prof..Hsin-Chih Huang National Taiwan University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 10:30 – 11:00 | A-I-67 | He-Yun Du | Investigation and optimization of cathode structure by hierarchical sulfur confinement for high performance Lithium sulfur battery | Ming Chi University of Technology, Taiwan |
| 11:00 – 11:30 | A-I-313 | Hsin-Chih Huang | Electrodeposited Hydrangea-like Cobalt Oxyhydroxide Supported by Thin-Layer Copper for Oxygen Evolution Reaction | National Taiwan University of Science and Technology, Taiwan |
| 11:30 – 11:45 | A-O-217 | Tien-Hsiang Hsueh | The effect of lithium cobalt oxide (LCO) cathode deposited by Atmospheric plasma spraying (APS) on LCO-coated aluminum foil in gel polymer electrolyte lithium battery | Institute of Nuclear Energy Research, Taiwan |
| 11:45 – 12:00 | A-O-50 | Wei Li | Electrochemical capacitor characteristics of MoS ₂ coated onto honeycomb-shaped carbon nanotubes | National Taiwan University of Science and Technology, Taiwan |
| 12:00 – 12:15 | A-O-365 | Takashi Harumoto | Stress-induced magnetic anisotropy in palladium cobalt alloy film and its application to hydrogen sensor | Tokyo Institute of Technology, Japan |

2021/11/17

A3 Session chair:

Prof. Yu-Lin Kuo

National Taiwan University of Science and Technology, Taiwan

Prof. Sagung Dewi Kencana

National Taiwan University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 9:00 – 9:30 | A-I-307 | Sagung Dewi Kencana | The Preparation La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} Mesoporous Cathode Material via Atmospheric-Pressure Plasma Jet for Solid Oxide Fuel Cells Application | National Taiwan University of Science and Technology |
| 9:30 – 9:45 | A-O-10 | Tai-Nan Lin | Fabrication and performance evaluation for low-temperature anode-supported solid oxide fuel cell with samarium-doped ceria electrolyte | Institute of Nuclear Energy Research |
| 9:45 – 10:00 | A-O-349 | Po-Hao Wang | Influences of Feedstocks on Microstructures of Plasma Sprayed SOFC anode | National Taipei University of Technology |
| 10:00 – 10:15 | A-O-62 | Yen-Yu Chen | Fabrication of BaCeZrYYbO _{3-d} Thin Films by Colloidal Coating Processes for Sustainable Energy Application | Chinese Culture University |
| 10:15 – 10:30 | A-O-109 | Min-Chen Chuang | Fabrications and electrical properties of (Bi ₂ Te ₃) _{100-x} Cox thin films deposited by direct current magnetron sputtering | Ming Chi University of Technology |
| 10:30 – 10:45 | A-O-232 | Iuliia Papina | Fabrication and Characterization for Vanadium Oxynitride Thin Films by Magnetron Sputtering | National Yang Ming Chiao Tung University |
| 10:45 – 11:00 | A-O-69 | Shao-Ju Shih | Preparation and characterization of SiO ₂ -polymethyl methacrylate films for radiative cooling applications | National Taiwan University of Science and Technology, Taiwan |

2021/11/17

A4 Session chair:

Prof. Meng-Lin Tsai National Taiwan University of Science and Technology, Taiwan

Prof. Cheng-Ying Chen Ming Chi University of Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 13:30 – 14:00 | A-I-328 | Cheng-Ying Chen | Nontoxic/ Earth-abundant Metal Chalcogenide Materials for Photovoltaics: $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ and $\text{Cu}_2\text{BaSn}(\text{S},\text{Se})_4$ | Ming Chi University of Technology, Taiwan |
| 14:00 – 14:15 | A-O-133 | Cheng-Yu Liu | Preparation, Structure and Properties of Perovskite Oxides as Transparent Conducting Films | National Dong Hwa University, Taiwan |
| 14:15 – 14:30 | A-O-137 | Shui-Yang Lien | Enhanced electron transport in Ta ⁵⁺ doped TiO ₂ prepared by plasma-enhanced atomic layer deposition for perovskite solar cells | Xiamen University of Technology, China |
| 14:30 – 14:45 | A-O-138 | Shui-Yang Lien | Optoelectronic properties of Ga-doped ITO thin films deposited by plasma enhanced atomic layer deposition | Xiamen University of Technology, China |
| 14:45 – 15:00 | A-O-249 | Montree Hankoy | Effect of Oxygen Flow Rate on Physical, Optical and Electrical Properties of SnO ₂ Thin Films Prepared by Reactive DC Magnetron Sputtering | King Mongkut's Institute of Technology Ladkrabang, Thailand |
| 15:00 – 15:15 | A-O-54 | Aparporn Sakulkalavek | Enhanced Thermoelectric Properties of Bi ₂ Te ₃ Film via CuI Doping | King Mongkut's Institute of Technology Ladkrabang, Thailand |

Symposium B. Nanostructured and nanocomposite coatings

2021/11/15

B1 Session chair:

Prof. Hong-Ying Chen National Kaohsiung University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 13:30 – 14:00 | B-I-406 | Neeraj Khare | Nanocomposites for Clean Energy Generation | Indian Institute of Technology Delhi, India |
| 14:00 – 14:15 | B-O-118 | Mai Ugajin | Time-resolved Photoluminescence Study of Alq3 in the presence of Ag Nanomesh Structure | Kitami Institute of Technology, Japan |
| 14:15 – 14:30 | B-O-150 | Wei-cheng chang | Effect of substrate bias to thermal stability and microstructure evolution in highly (111)-oriented nanotwinned Ag thin films during annealing process | National Tsing Hua University, Taiwan |
| 14:30 – 14:45 | B-O-269 | Yu-Tang Luo | Facile high haze transparent electrode preparation by atmospheric pressure plasma jet for photovoltaic application | National Taiwan University, Taiwan |
| 14:45 – 15:00 | B-O-309 | Yi-Xiu Chen | Outstanding Rate Capability of Silicon-based Anode by Interlayered Silver Nanoparticles for Lithium-Ion Thin-film Battery | National Cheng Kung University, Taiwan |

2021/11/16

B2 Session chair:

Prof. Fan-Yi Ouyang

National Tsing Hua University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|----------------------------|---|---|
| 10:30 – 10:45 | B-O-324 | C. A. Ku | A novel application of nanostructured anodic alumina to alcohol vapor sensing and the structure analysis | National Cheng Kung University, Taiwan |
| 10:45 – 11:00 | B-O-335 | Muhammad Muqeet Rehman | Characterization of graphene flower-doped ZnO thin film, and its application to triboelectric nanogenerator | Jeju National University, Korea |
| 11:00 – 11:15 | B-O-376 | Aimee Lorraine M. Blaquera | Oil adsorption kinetics of calcium stearate-coated kapok fibers | University of the Philippines Diliman, Philippine |
| 11:15 – 11:30 | B-O-351 | Khan Shenawar Ali | Humidity Sensing Behaviour on 2-Dimensional In ₂ Se ₃ Layer | Jeju National University, Korea |

2021/11/17

B3 Session chair:

Prof. Chia-Yun Chen

National Cheng Kung University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 9:00 – 9:30 | B-I-433 | Shang-Jui Chiu | Structural enhancement of BiFeO ₃ /SrTiO ₃ artificial superlattices | National Synchrotron Radiation Research Center, Taiwan |
| 9:30 – 9:45 | B-O-260 | Cheng-Wei Chang | Magnetic properties of MnGa thin film on BCC, FCC, and HCP crystal underlayers | Yuan Ze University, Taiwan |
| 9:45 – 10:00 | B-O-30 | Ya-Hsueh Lin | Magnetic Fe ₃ O ₄ Composite Particles with Ag-TiO ₂ -xN _x Shell Structure for Dye Adsorption and Visible-Light Photocatalysis | National Chung Hsing University, Taiwan |
| 10:00 – 10:15 | B-O-317 | Wei-En Ke | Magnetic property of epitaxial high entropy oxide | National Yang Ming Chiao Tung University, Taiwan |
| 10:15 – 10:30 | B-O-361 | Xinxing Xu | Soft magnetic properties of AlN/Fe-Co-N/AlN thin films | Tokyo Institute of Technology, Japan |

2021/11/17

B4 Session chair:

Prof. Shang-Jui Chiu

National Synchrotron Radiation Research Center, Japan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 13:30 – 13:45 | B-O-64 | Nan-Ming Lin | Green LED Mirror Tunnel with a Metal-based half Mirror | Technology Research Institute, Taiwan |
| 13:45 – 14:00 | B-O-147 | Nan-Ming Lin | Design and Fabrication of Distributed Bragg Reflector and Its application to LED Mirror Tunnel | Technology Research Institute, Taiwan |
| 14:00 – 14:15 | B-O-329 | Wenchang Li | Constituting-layer-thickness effect on primitive exchange coupling in CoPt/MnN layered structures | Tokyo Institute of Technology, Japan |
| 14:15 – 14:30 | B-O-330 | Qianwen Wang | Enhancement of positive magnetoresistance of graphene by depositing Co particles on the surface | Tokyo Institute of Technology, Japan |
| 14:30 – 14:45 | B-O-196 | Yu-An Chien | Nanoparticle Reinforced High Strength Ni-TiO ₂ Composite Film Electroplated by Supercritical Carbon Dioxide Assisted Method | Tokyo Institute of Technology, Japan |
| 14:45 – 15:00 | B-O-375 | Kun-Ta, Lin | Impacts of mutual phase interactions on piezoelectric responses and photocatalytic hydrogen evolution reactions | National Cheng Kung University, Taiwan |

2021/11/17

B5 Session chair:

Prof. Kuan-Che Lan

National Tsing Hua University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 15:30 – 13:45 | B-O-36 | Chen Chien-Chieh | Mechanical Properties and High-Temperature Oxidation of CrMoN/TiVxN Multilayered Coatings with Different Vanadium Contents | National Formosa University, Taiwan |
| 15:45 – 16:00 | B-O-80 | Chih-Min Tu | Fabrication and mechanical properties of sputtering HfN/TiN multilayer film | National United University, Taiwan |
| 16:00 – 16:15 | B-O-280 | Lei Huang | Control of Self-Assembly Seeding of Diamond Nanoparticles on Nanowall Structures for Enhancing Field Emission | Kyushu University, Japan |
| 16:15 – 16:30 | B-O-73 | Abdelrahman Zkria | Thermal stability of nanodiamond composite films coated on Silicon and Tungsten carbide substrates by arc plasma deposition method | Kyushu University, Japan |
| 16:30 – 16:45 | B-O-372 | Lalani Fernando | Biocompatibility and antimicrobial activity of Copper(II) oxide hybridized with Nano silicate platelets | National Chung Hsing University, Taiwan |

Symposium C. Semiconductor, optoelectronic, and flexible device films

2021/11/15

C1 Session chair:

Prof. Ching-Lien Hsiao Linköping University, Sweden

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 13:30 – 14:00 | C-I-213 | Qixin Guo | Color-tunable emission from rare earth doped gallium oxide films | Saga University, Japan |
| 14:00~14:15 | C-O-90 | Sian-Hong Ciou | A high sensitivity strain sensor based on Kirigami graphene | Ming Chi University of Technology, Taiwan |
| 14:15~14:30 | C-O-98 | Ching Yao Cheng | Low Temperature Metal-to-Metal Direct Bonding on Highly (111) Oriented Nanotwinned Silver and Fine-grained Silver Thin Films | National Tsing Hua University, Taiwan |
| 14:30~15:00 | C-I-248 | Shui-Yang Lien | Titanium-based oxides prepared by plasma-enhanced atomic layer deposition and their applications in perovskite solar cells | Xiamen University of Technology, China |
| 15:00~15:15 | C-O-113 | Yong Jyun Wang | The application of flexible magnetoelectric element made by $\text{PbZr}_{0.52}\text{Ti}_{0.48}\text{O}_3/\text{CoFe}_2\text{O}_4$ composite ceramics on mica substrate. | National Tsing Hua University, Taiwan |

2021/11/16

C2 Session chair:

Prof. Bohr-Ran Huang National Taiwan University of Science and Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 10:30 – 11:00 | C-I-225 | Wei-Fang Su | Disruptive Innovation for Photovoltaic Technology: Perovskite Solar Cells | National Taiwan University and Ming-Chi University of Technology, Taiwan |
| 11:00~11:30 | C-I-233 | Pei-Wen Li | The Wonderful World of Designer Germanium Quantum Dots | National Yang Ming Chiao Tung University, Taiwan |
| 11:30~11:45 | C-O-117 | Naoya Satoh | Fabrication and Characterization of Blue OLED with Ag thin-film and Ag/ZnS/Ag Multilayered Electrodes | Kitami Institute of Technology, Japan |
| 11:45~12:15 | C-I-203 | Jian-Jang Huang | Optical frequency modulation based on Acousto- Optical Interactions for visible light communication | National Taiwan University, Taiwan |

2021/11/17

C3 Session chair:

Prof. Hiroyuki Oguchi

Applied Chemistry, Japan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|-----------------------------|--|--|
| 9:00~9:30 | C-I-362 | Prof. Bui Nguyen Quoc Trinh | Solution-Processable ZnO-based and CuO-based Thin Films towards. Application of Oxide-Semiconducting Electronic Devices | Vietnam National University, Vietnam |
| 9:30~9:45 | C-O-139 | Shui-Yang Lien | Modulated work function of MoO _x thin film deposited by PEALD with various oxygen plasma exposure times | Xiamen University of Technology, China |
| 9:45~10:00 | C-O-151 | Ting-Kai Lin | Multiferroic and Nanomechanical Properties of Bi _{1-x} Dy _x FeO ₃ Nanocrystalline Films (x = 0.00–0.15) | National Taipei University of Technology, Taiwan |
| 10:00~10:15 | C-O-175 | Faezeh Alijan Farzad Lahiji | Optical and electrical properties of NiO films grown by reactive magnetron sputtering | Linköping University, Sweden |
| 10:15~10:30 | C-O-227 | Ing-Song Yu | Nitrogen-rich MoS ₂ surface for the van der Waals epitaxy of GaN films | National Dong Hwa University, Taiwan |
| 10:30~10:45 | C-O-251 | Chun Fan Wen | Characteristics and applications of ZnGa ₂ O ₄ thin films grown on sapphire substrates by sputtering | National Chung Hsing University, Taiwan |

2021/11/17

C4 Session chair:

Prof. Bui Nguyen Quoc Trinh Vietnam National University, Vietnam

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|--|--|
| 11:00~11:30 | C-I-226 | Prof. Akihiko Fujiwara | Solution Processed Field-Effect Transistor for Printed Electronics | Kwansei Gakuin University, Japan |
| 11:30~11:45 | C-O-253 | Deng Li Ko | High-stability transparent flexible energy storage device based on antiferroelectric perovskite lead zirconate | National Yang Ming Chiao Tung University, Taiwan |
| 11:45~12:00 | C-O-256 | WEI-HAN CHEN | High-performing Flexible and Transparent Deep-Ultraviolet Photodiode of NiO-Ga ₂ O ₃ Heteroepitaxy | National Yang Ming Chiao Tung University, Taiwan |
| 12:00~12:15 | C-O-265 | Yu-Hong Lai | Elasto-magnetoelectric Coupling in Flexible Cr ₂ O ₃ /muscovite Heteroepitaxy | National Yang Ming Chiao Tung University, Taiwan |
| 12:15~12:45 | C-I-422 | Prof. Heeyeop Chae | Plasma Atomic Layer Etching Processes for Dielectric and Metals | Sungkyunkwan University (SKKU), Korea |

2021/11/17

C5 Session chair:

Prof. Akihiko Fujiwara Kwansei Gakuin University, Japan

| Time | Oral number | Presenting Author | Title | Affiliation |
|-------------|--------------------|--------------------------|---|--|
| 13:30~14:00 | C-I-404 | Prof. Hiroyuki Oguchi | Film growth of hydrides toward hydride-based devices | Shibaura Institute of Technology, Japan |
| 14:00~14:15 | C-O-286 | Hsiang-Wei Tsai | Improving H ₂ Production Using Water-Splitting of LaMO ₃ (M= Al, M, Co, Ni) Photocathode and Au-Nanoparticle Decorated LaFeO ₃ | National Cheng-Kung University, Taiwan |
| 14:15~14:30 | C-O-302 | Eun Chong Ko | Growth of low resistivity Ruthenium thin film by atomic layer deposition | Seoul national university of science and technology, Korea |
| 14:30~14:45 | C-O-315 | Ahmad Nur Riza | An Atmospheric Pressure Plasma (APP) for Cutting Tin (Sn) Whiskers Growth Driven by Mechanical Stressing | National Taiwan University of Science and Technology, Taiwan |
| 14:45~15:15 | C-I-472 | Dr. Ching-Lien Hsiao | A comprehensive study of high-quality GaN film grown by magnetron sputter epitaxy | Linköping University, Sweden |

2021/11/18

C6 Session chair:

Prof. Kao-Shuo Chang National Cheng Kung University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 09:00 - 09:15 | C-O-316 | Bruno Rao | Development of DC piezoelectric nanogenerators based on ZnO homojunction multilayers | National Cheng-Kung University, Taiwan |
| 09:15 - 09:30 | C-O-345 | Aftab Saleem | Flexible Memristor for wearable electronics with TaOx as switching layer Comprising Synaptic Behaviour for Neuromorphic Computing | National Yang Ming Chiao Tung University, Taiwan |
| 09:30 - 09:45 | C-O-415 | Kyeong-Youn Song | Microstructure and Electrical Properties of Co-sputtered CoAl Thin Films as VLSI Interconnect Material | Sungkyunkwan University |
| 09:45 – 10:00 | C-O-357 | UMESH GAWAI | Interfacial switching AlOx/TaOx based synaptic RRAM for Neuromorphic applications | National Yang Ming Chiao Tung University, Taiwan |

Symposium D. Tribological and protective coatings

2021/11/17

D1 Session chair:

Prof. Yin-Yu Chang

National Formosa University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 9:00 – 9:30 | D-I-373 | Tetsuya Takahashi | Contribution towards Sustainable Society through Development of Coating Materials and Equipment by Arc Ion Plating Technology | Kobe Steel Ltd, Japan |
| 9:30 – 9:45 | D-O-395 | Tai-Cheng Chen | The effect of microstructure on the corrosion behavior of Inconel 625 coatings prepared by various thermal spraying process | Institute of Nuclear Energy Research, Taiwan |
| 9:45 - 10:00 | D-O-381 | Teng Zhou | Mechanical and tribological property of the Cr/Zr and CrN/Zr coating treated by high temperature oxidation | Southwest Jiaotong University, China |
| 10:00 - 10:15 | D-O-358 | Hsuan Ming Liao | Developments of the multi-layered acoustic absorption coatings | National Taipei University of Technology, Taiwan |
| 10:15 - 10:30 | D-O-336 | ziyi zhao | Microstructure, Wear and Corrosion Behaviors of Electrodeposited Ni-diamond Micro-composite Coatings | Jiangsu Ocean University, China |

2021/11/17

D2 Session chair:

Prof. Wan-Yu Wu

Da-Yeh University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 15:30 – 16:00 | D-I-368 | Shih-Hsun Chen | Investigation of Plasma Sprayed and Cold Sprayed Al _{0.5} CoCrFeNi ₂ Ti _{0.5} High Entropy Alloy Coatings | National Taiwan University of Science and Technology, Taiwan |
| 16:00 – 16:15 | D-O-356 | I Mo Haung | Developments of functional coating with various structures for the under water applications | National Taipei University of Technology, Taiwan |
| 16:15 – 16:30 | D-O-353 | Xi-Zhen Lin | Preparation and characteristics of the thermal sprayed thermal barrier coatings | National Taipei University of Technology, Taiwan |
| 16:30 – 16:45 | D-O-297 | Che-An Lin | Improve the corrosion resistance of Haynes 282 with ZrN coating | National Tsing Hua University, Taiwan |
| 16:45 – 17:00 | D-O-293 | Chin-Han Tseng | Structural and mechanical properties of TaWN films | National Taiwan Ocean University, Taiwan |
| 17:00 – 17:15 | D-O-277 | Kungen Teii | Wetting Behavior of Plasma-Treated Ultrahard Boron Nitride Films | Kyushu University, Japan |
| 17:15 – 17:30 | D-O-029 | Shi-Yu Huang | Effect of pulse on-time different of substrate bias and target power output on the performance of TiN deposited by HiPIMS process | Ming Chi University of Technology, Taiwan |

2021/11/18

D3 Session chair:

Prof. Fan-Bean Wu National United University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|---|
| 9:00 – 9:30 | D-I-320 | Ben Beake | Optimization of coating microstructure and mechanical properties for improved fracture resistance under impact loading | Micro Materials Ltd Micro, UK |
| 9:30 – 9:45 | D-O-350 | Zeng Sheng Wei | Development of boron carbide coating by the thermal spraying method | National Taipei University of Technology, Taiwan |
| 9:45 – 10:00 | D-O-340 | Si-Wei Lin | Thermal spraying YAG coating for the plasma etching protection | Nation Taipei University of Technology, Taiwan |
| 10:00 – 10:15 | D-O-264 | Wei Chieh Su | Effect of molybdenum disulfide addition on tribocorrosion of plasma electrolytic oxidation coatings on AZ31 magnesium alloy | Ming Chi University of Technology, Taiwan |
| 10:15 – 10:30 | D-O-263 | Neng-Kun Zheng | The effect of MoS ₂ addition on tribocorrosion by plasma electrolytic oxidation on Ti | Ming Chi University of Technology, Taiwan |
| 10:30 – 10:45 | D-O-231 | Lama Osman | Ultrananocrystalline diamond film coated on Titanium substrates by Arc Plasma Deposition Technique for biomedical applications. | Dept. of Appl. Sci. for Electr. & Mat., Kyushu Univ., Fukuoka 816-8580, Japan |

2021/11/18

D4 Session chair:

Prof. Yin-Yu Chang National Formosa University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 11:00 – 11:15 | D-O-081 | Shu-Yu Hsu | Microstructure and mechanical characteristics of (Mo, Hf)N coatings co-sputtered by input power modulation | National United University , Taiwan |
| 11:15 – 11:30 | D-O-220 | Bing Hao Liang | Layer Thickness Modulation Effect on Mechanical Properties of Nanolayered Mo-Si-N coatings | National Chung Hsing University, Taiwan |
| 11:30 – 11:45 | D-O-156 | Lee Jun Yen | Effective Reduction of Non-twinned Transition Region in Sputtered Nanotwinned Ag Thin Films | National Tsing Hua University, Taiwan |
| 11:45 – 12:00 | D-O-145 | Yi-Jyun Chen | Effect of nitrogen content on the mechanical properties of (NbTaMoW) _{Nx} films | National Taiwan Ocean University, Taiwan |
| 12:00 – 12:15 | D-O-084 | Cecil Cherian Lukose | Mechanical performance of biocompatible Ti-Au thin films grown on glass and Ti6Al4V substrates. | Northumbria University, England |
| 12:15 – 12:30 | D-O-028 | Kuo-Chun Lo | Characterization of enhanced TiN coating deposited by an arc-HiPIMS hybrid process: Effect of the power output of HiPIMS | Ming Chi University of Technology, Taiwan |
| 12:30 – 12:45 | D-O-015 | Yuanyuan Xu | Hard reflective thick Cr-C solid solution by magnetron sputtering: A simple multifunctional coating | Ningbo Institute of Materials Technology and Engineering, China |

Symposium E. Organic and biological coatings

2021/11/18

E1 Session chair:

Prof. Her-Hsiung Huang National Yang Ming Chiao Tung University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 9:00 – 9:30 | E-I-392 | Han-Cheol Choe | Surface Modification for Dental Implant Alloy Using Various Experimental Methods | Chosun University, Korea |
| 9:45 – 10:00 | E-I-262 | Peng Chen | Nanobiotechnology for Smart Surface Designing of Metallic Dental Implants | Tokyo Medical and Dental University, Japan |
| 10:00 – 10:30 | E-I-296 | Chia-Fei Liu | Using a multiple surface treatment to enhance osteogenesis and inhibit osteoclastogenesis | National Yang Ming Chiao Tung University, Taiwan |

2021/11/18

E2 Session chair:

Prof. Po-Yu Chen National Tsing Hua University, Taiwan

Prof. Chia-Fei Liu Natioanl Yang Ming Chiao Tung University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 11:00 – 11:30 | E-I-197 | Po-Yu Chen | Bio-Inspired Hybrid Wettability Surfaces for Fog Collection via Rapid 3D Printing and Atmospheric Pressure Plasma Treatment | National Tsing Hua University, Taiwan |
| 11:30 – 12:00 | E-I-221 | Han-Yu Hsueh | Frog-Skin-Inspired Slippery Antibiofouling Coatings Through Degradable Block Copolymer Wrinkling | National Chung Hsing University, Taiwan |
| 12:00 – 12:15 | E-O-334 | Muhammad Muqheet Rehman | High performance biocompatible humidity sensor based on hydrophilic albumin | Jeju National University, Korea |
| 12:15 – 12:30 | E-O-339 | Chia-Chi Wu | Hydroxyapatite coating with various morphology by the suspension thermal spray | National Taipei University of Technology, Taiwan |

2021/11/18

E3 Session chair:

Prof. Ta-Chin Wei Chung Yuan Christian University, Taiwan

Prof. Yi-Chang Chung National University of Kaohsiung, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 13:30 – 14:00 | E-I-387 | Yi-Chang Chung | Controllable Catechol-derived polymer coatings on variety of surface | National University of Kaohsiung, Taiwan |
| 14:00 – 14:30 | E-I-171 | Jrjeng Ruan | Impacts of phase interactions on materials polarity, piezoelectricity and catalytic performance | National Cheng Kung University, Taiwan |
| 14:30 – 14:45 | E-O-208 | Min-Shin Huang | Low-damage plasma treated CVD-grown bilayer graphene for chemiresistive biosensor applications | Ming Chi University of Technology, Taiwan |
| 14:45 – 15:00 | E-O-124 | Yu-Cheng Liu | Preparation and characterization of thin film bioactive glass via magnetron sputtering | National Taiwan University of Science and Technology, Taiwan |

Symposium F. Metallic and high entropy alloys coatings

2021/11/18

F1 Session chair:

Prof. Shou-Yi Chang National Tsing Hua University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 9:00 – 9:30 | F-I-414 | Ulf Jansson | The Influence of Kinetic Effects in Magnetron Sputtering of High-Entropy Thin Film Materials | Uppsala University, Sweden |
| 9:30 – 9:45 | F-O-017 | Ngetich Gilbert Kipkirui | Microstructures and mechanical properties of Al _{0.5} CoCrFeNi ₂ Ti _{0.5} thin film coatings | National Taiwan University of Science and Technology, Taiwan |
| 9:45 – 10:00 | F-O-035 | Kai-Chun Huang | Why do We add Silicon and Boron to be AlTiCrNbSiBN High Entropy Alloy Nitride Hard Coatings? | National Formosa University, Taiwan |
| 10:00 – 10:15 | F-O-097 | Jyh-Wei Lee | Fabrication of AlCrNbSiTiB thin films using a high power impulse magnetron sputtering technique: Effects of boron addition | Ming Chi university of Technology, Taiwan |
| 10:15 – 10:30 | F-O-219 | Yuhang Li | Long-term oxidation resistance and degradation behavior of multi-principal amorphous FeCrAlMoSiY coating on Zry-4 in 1200 °C steam | Ningbo Institute of Industrial Technology, China |
| 10:30 – 10:45 | F-O-366 | Weikai Luo | Magnetic properties and microstructure of Fe _{0.18} Co _{0.36} Ni _{0.21} Al _{0.10} Cr _{0.15} high entropy alloy under different annealing temperature | Tokyo Institute of Technology, Japan |

2021/11/18

F2 Session chair:

Prof. Ko-Wei Lin National Chung Hsing University, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|---|--|
| 11:00 – 11:15 | F-O-014 | Pei-Tzu Lee | Strong Dependence of Sn Electromigration on Its Crystallographic Orientation in a Blech Structure | National Taiwan University, Taiwan |
| 11:15 – 11:30 | F-O-123 | Hiroteru Ohara | Influence of exposure to water vapor in vacuum on agglomeration of Ag thin films | Kitami Institute of Technology, Japan |
| 11:30 – 11:45 | F-O-271 | Pattraporn Krajaisri | Investigation of Pulse Current Densities and Temperatures on Electrodeposition of Tin-Copper Alloys | Kasetsart University, Thailand |
| 11:45 – 12:00 | F-O-359 | Suiyu Qiu | Perpendicular Magnetic Anisotropy of CoPt/VO ₂ Bilayer Films Grown on Glass Substrate | Tokyo Institute of Technology, Japan |
| 12:00 – 12:15 | F-O-398 | Jeng Shun Lo | Fabrication and evaluation of electroplated grinding tools strengthened with Cr-C and Ni-B deposits using diamond particles in an average size of 150 μm | Chang Gung University, Taiwan |
| 12:15 – 12:30 | F-O-169 | Jhen-De You | Time-dependent surface wetting property of nano-textured stainless steel thin film deposited by DC magnetron sputtering | National Taiwan University, Taiwan |

2021/11/18

F3 Session chair:

Prof. Jyh-Wei Lee

Ming Chi University of Technology, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|--|
| 13:30 – 13:45 | F-O-374 | Jia-Wei Chen | Physical property of epitaxial high entropy alloy films | National Yang Ming Chiao Tung University, Taiwan |
| 13:45 – 14:00 | F-O-027 | Ting-Wei Liu | Study on microstructure and antimicrobial properties of Zr-Cu-Ti thin film metallic glasses deposited by high power impulse magnetron sputtering | Ming Chi University of Technology, Taiwan |
| 14:00 – 14:15 | F-O-103 | Cheng-Yi Lai | Mechanical properties and corrosion resistance of TiNbTa films on Ti-6Al-4V alloy | National Taiwan Ocean University, Taiwan |
| 14:15 – 14:30 | F-O-393 | Chun-Wen Chan | Microstructures and properties evaluation of the thermal sprayed CuNiTi ternary alloy coating | National Taipei University of Technology, Taiwan |
| 14:30 – 14:45 | F-O-399 | Yu-Chen Liu | Study of the tensile fracture behavior of Cu-, Ni/Cu-, and Cr-C/Ni/Cu-coated Magnesium alloy (AZ31) specimens | Chang Gung University, Taiwan |
| 14:45 – 15:00 | F-O-165 | Jian-Jie Wang | Ultra-High Hardness Nanotwinned High Entropy Alloys CoCrFeNi Thin Films: Modifying Residual Stress without Scarifying Hardness Through Tuning Substrate Bias | National Tsing Hua University, Taiwan |

Symposium G. Topical symposium: theory, simulation, and modelling; quantitative surface analysis

2021/11/16

G Session chair:

Dr. Chun-Wei Pao Research Center for Applied Sciences, Academia Sinica, Taiwan

| Time | Oral number | Presenting Author | Title | Affiliation |
|---------------|--------------------|--------------------------|--|---|
| 10:30 – 10:45 | G-O-386 | Wan-Ta Fan | Numerical Analysis of Improved Hump Characteristics by Quantum Effect in Amorphous In-W-O Nanosheet Thin-Film Transistor | National Yang Ming Chiao Tung University, Taiwan; Slivaco Taiwan Co., Ltd. |
| 10:45 – 11:00 | G-O-371 | Yves Ira A. Reyes | Effects of different surface facets on the binding of metals to MgO substrate: a DFT study. | Naitonal Tsing Hua University, Taiwan |
| 11:00 – 11:15 | G-O-343 | Moritz Sontheimer | Deep learning based morphological solder segmentation: baseline on small-scale datasets | National Taiwan University of Science and Technology, Taiwan |
| 11:15– 11:30 | G-O-043 | I-Sheng Ting | Evaluation of stress relief efficiency in ZrN/Zr and ZrN/Ti bilayer thin films using an energy balance model | National Tsing Hua University, Taiwan |