



Monday, 12 June	
13:00-17:00	Registration
17:00-17:20	Official Opening
17:20-18:20	Plenary Session 1 Room: <i>Grand Ballroom</i>
17:20-18:20	[PL01] Surface Science of Oxides: Atomic-Scale Insights Relevant for Applications Ulrike Diebold, <i>TU Wien, Austria</i>
18:30-19:30	Welcome Reception

Tuesday, 13 June				
08:00-09:00	Plenary Session 2 Room: <i>Grand Ballroom</i>			
08:00-09:00	[PL02] Surface physics in superconductor and topological insulator, STM Q-K. Xue, <i>Tsinghua University, China</i>			
09:00-09:30	Refreshment Break Room: <i>Grand Ballroom and Reception Hall</i>			
09:30-12:20	Functional Surfaces and coatings <i>Session chair: Gunther Rupprechter</i> Room: <i>Grand Ballroom</i>	Surface nanoengineering <i>Session chair: Robert Opila</i> Room: <i>TianBoFu A</i>	Semiconductors and 2D materials <i>Session chair: Chris McConville</i> Room: <i>TianBoFu B</i>	Energy conversion and catalysis <i>Session chair: Kai Wu</i> Room: <i>TianBoFu C</i>
09:30-10:10	[K01] Addressing surface properties of morphologically complex and nano-structured systems with synchrotron-based photoelectron microscopy M. Kiskinova, <i>Elettra-Sincrotrone Trieste, Italy</i>	[K02] Surface chemistry and its effect on the photoluminescence spectrum of zinc oxide nanoparticles J. Whitten, <i>University of Massachusetts at Lowell, USA</i>	[K03] Surface science of complex molecular systems - from supported graphene to hydrogen carrier molecules H-P. Steinrueck, <i>University Erlangen Nurnberg, Germany</i>	[K04] Cu₂O-based nanocrystals: From model catalysts to efficient catalysts W. Huang, <i>University of Science and Technology of China, China</i>
10:10-10:30	[O1A1.1] Surface engineering of Gd-Zr-O amorphous films for IBAD-MgO templates	[O1B1.1] Behaviour of Cold-Spray Nanostructured Coating in Live Coal Fired Boiler	[O1C1.1] Synchrotron Radiation X-ray photoelectron spectroscopy of wide gap 4H-SiC	[O1D1.1] In vacuum black TiO₂ synthesized via IR nanosecond laser ablation

	J.Y. Chu*, Y. Zhao, W. Wu, Z.W. Zhang, Z.Y. Hong, Z.J. Jin <i>Shanghai Jiao Tong University, China</i>	M. Kumar.* ¹ , H. Singh. ² , N. Singh. ³ , ¹ CGC College of Engineering, India, ² Indian Institute of Technology Ropar, India, ³ Indian Institute of Technology Ropar, Rupnagar, India	semiconductor materials L. Wan* ¹ , D. Zhao ¹ , H. Liu ¹ , Z.R. Qiu ² , R. Rusli ³ , H-H. Lin ⁴ , Z.C. Feng ¹ , ¹ Guangxi University, China, ² Sun Yat-Sen University, China, ³ Nanyang Technological University, Singapore, ⁴ National Taiwan University, Taiwan	and its photocatalytic activities Q. Wei* ¹ , H. Lu ¹ , G. Liu ² , Z.R. Shen ¹ ¹ Tianjin University, China, ² Shanghai Institute of Spacecraft Equipment, China
10:30-10:50	[O1A1.2] The investigation of properties of high-speed steel after laser surface treatment M. Bonek, <i>Silesian University of Technology, Poland</i>	[O1B1.2] "Polymer-carbon multiwall nanotubes" nanocoatings on macroporous silicon matrix L. Karachevtseva* ^{1,2} , M. Kartel ¹ , W. Bo ¹ , Y. Sementsov ¹ , S. Trachevsky ¹ , O. Lytvynenko ² , V. Onyshchenko ² ¹ Ningbo University of Technology, Ningbo, China, ² V. Lashkaryov Institute of Semiconductor Physics, Kyiv, Ukraine	[O1C1.2] Thermal effect of epitaxial Zn nano-dots coherently grown on Si(111) L-C. Kao ¹ , B-J. Huang ¹ , S. Brahma ¹ , Y-E. Cheng ¹ , S-J. Chiu ² , C-S. Ku ² , K-Y. Lo* ¹ , ¹ National Cheng Kung University, Taiwan, ² National Synchrotron Radiation Research Center, Taiwan	[O1D1.2] Study of Structure and Electrocatalytic Properties of Platinum Subnanometer Clusters Supported on Defective TiO₂ X. Cheng*, G. Chen <i>Beijing University of Technology, China</i>
10:50-11:10	[O1A1.3] Effects of P content on the Pd(P) microstructure and its solderability: Sn-Ag-Cu/Au/Pd(P)/Ni(P) reactive system P.T. Lee* ¹ , W.Z. Hsieh ¹ , M.K. Lu ¹ , T.T. Kuo ^{1,2} , C.E. Ho ¹ ¹ Yuan Ze University, Taiwan, ² Taiwan Uyemura Limited Company, Taiwan	[O1B1.3] Influence of surface anisotropy of additive manufactured Ti6Al4V joint implants on micro-tribocorrosion response J.J. Ryu*, S. Shrestha, M.Q. Riaz <i>Youngstown State University, USA</i>	[O1C1.3] Growth temperature and post annealing effects on characteristics of aluminium-gallium oxide films on sapphire substrates by pulsed laser deposition C.C. Wang ¹ , C.M. Chen ¹ , S.H. Yuan ¹ , Z.C. Feng ³ , R.H. Horng ² , D.S. Wu* ¹ , ¹ National Chung Hsing University, Taiwan, ² National Chiao Tung University, Taiwan, ³ Guangxi University, China	[O1D1.3] 7,7,8,8-Tetracyanoquinodimethane/CMK-3 nanocomposite as cathode material for lithium-ion batterie H.J. Wu*, S.R. Sun <i>Beijing University of Technology, China</i>
11:10-11:30	[O1A1.4] High-temperature stability of Au/Pd/Cu and Au/Pd(P)/Cu surface finishes W.Z. Hsieh* ¹ , P.T. Lee ¹ , T.T. Kuo ^{1,2} , C.E. Ho ¹ , ¹ Yuan Ze	[O1B1.4] Characteristics of the Al₂O₃ coating on micro-arc oxidized aluminum alloy by laser cladding X.F. Wang*, Y.X. Li, Z.T. Zhu	[O1C1.4] Damage and annealing recovery of boron implanted ultra-shallow junction: The correlation between beam current and surface	[O1D1.4] Synthesis and characteristics of reduced graphene oxide/mesoporous silica composites as anode materials for lithium

	<i>University, Taiwan, ²Taiwan Uyemura Limited Company, Taiwan</i>	<i>Southwest Jiaotong University, China</i>	configuration F.M. Chang ^{*1} , Z.Z. Wu ¹ , Y.F. Lin ¹ , L.C. Kao ¹ , C.T. Wu ² , S.K. JangJian ² , K.Y. Lo ¹ , ¹ National Cheng Kung University, Taiwan, ² Fab 14B, Taiwan Semiconductor Manufacturing Co.Ltd., Science-Based Ind. Park, Taiwan	secondary batteries B. Son*, Y. Hyun, J-Y. Bae, H-K. Park, C-S. Lee, <i>Keimyung University, Republic of Korea</i>
11:30-11:50	[O1A1.5] Effect of surface etching on the oxidation behavior of plasma chromizing-treated AISI440B stainless steel T.X. Meng*, Q. Guo, W. Xi, W.Q. Ding, X.Z. Liu, N.M. Lin, Z.X. Wang, H.J. Hei, S.W. Yu, X.P. Liu et al, <i>Taiyuan University of Technology, China</i>	[O1B1.5] Effects of annealing and thickness on perpendicular magnetic properties of Pd/Co₂FeAl/MgO structured films K. Wang*, Z. Xu, S. Dong <i>Huaqiao University, China</i>	[O1C1.5] Influence of interface states on electronic performance in silicon nanocrystals based devices K. Chen*, J. Yu, X. zhang, Z. Ma, X. Huang, <i>Nanjing University, China</i>	[O1D1.5] Fastest and most reproducible optical contact angle determination using the novel liquid needle K. Oetjen ¹ , M. Jin ¹ , M. Kirchner ^{*1} , D. Frese ¹ , C. Scheithauer ¹ , R. Sanedrin ² , P.R. Waghmare ³ , T. Willers ¹ , ¹ KRÜSS GmbH, Germany, ² KRÜSS USA, USA, ³ University of Alberta, Canada
11:50-12:20	[INV01] Ultrathin Oxide Films on Metal Substrates S. Shaikhutdinov, <i>Fritz Haber Institute, Germany</i>	[INV02] Steering reaction pathways on surfaces Q.T. Fan, T. Wang, J.F. Zhu* <i>University of Science and Technology of China, China</i>	[INV03] Graphene-Based Supercapacitors Z.S. Wu*, S.H. Zheng, S. Wang, H. Xiao, F. Zhou, <i>Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China</i>	[INV04] Applications of ambient pressure photoelectron spectroscopy to studies of surfaces of catalysts F. Tao, <i>University of Kansas, USA</i>
12:20-14:00	Lunch Room: Grand Ballroom and Reception Hall			
14:00-16:20	Functional Surfaces and coatings <i>Session chair: David Starr</i> Room: <i>Grand Ballroom</i>	Surface nanoengineering <i>Session chair: Junfa Zhu</i> Room: <i>TianBoFu A</i>	Biointerfaces <i>Session chair: Gangyu Liu</i> Room: <i>TianBoFu B</i>	Electrochemistry at surfaces and corrosion protection strategies <i>Session chair: Weixin Huang</i> Room: <i>TianBoFu C</i>
14:00-14:40	[K05] Electronic Structure and Properties of Semiconducting Transparent Conducting Oxides Chris McConville, RMIT University, <i>Australia</i>	[K06] Tailored metallic nanoparticles fabricated via solid-state dewetting D. Wang, <i>TU Ilmenau, Germany</i>	[K07] Surface Modification of Biomaterials by Plasma-Based Technology P.K. Chu, <i>City University of Hong Kong, Hong Kong</i>	[K08] Surface Raman analysis with shell-isolated mode J-F. Li <i>Xiamen University, Xiamen, China</i>

14:40-15:00	<p>[O1A2.1] Oxidation resistant coatings prepared on carbon/carbon composites by plasma surface alloying of Co-Ni-Cr-Al-Ta-Hf-Y Q. Guo*, T.X. Meng, W. Xi, W.Q. Ding, X.Z. Liu, N.M. Lin, Z.X. Wang, H.J. Hei, S.W. Yu, X.P. Liu <i>Taiyuan University of Technology, China</i></p>	<p>[O1B2.1] Properties of plasma nitrided ferritic stainless steel plates S.C. Yang*, Q.S. Luo, H.L. Sun, K. Cooke, <i>Miba Coating Group TCL, UK</i></p>	<p>[O1C2.1] Surface of carbon sp^2 - nanomaterials as factor of their chemical and biological reactivity M. Kartel*^{1,2}, O. Bakalinska¹, L. Ivanov¹, W. Bo², ¹O.Chuiko <i>Institute of Surface Chemistry, NASU, Ukraine, ²Ninbo University of Technology, China</i></p>	<p>[O1D2.1] Electrochemical cold drawing of FeSi6.5 steel F. Ye*¹, D. Zhao¹, E.M. Gutman², Y. Unigovski², R. Shneck² ¹<i>University of Science and Technology Beijing, China, ²Ben-Gurion University of the Negev, Israel</i></p>
15:00-15:20	<p>[O1A2.2] Mechanical behavior of Ti-Ta-based surface alloy fabricated on TiNi SMA by pulsed electron-beam melting of film/substrate system S.N. Meisner*¹, L.L. Meisner^{1,4}, V.P. Rotshtein^{1,3}, G.E. Ozur², E.V. Yakovlev², V.O. Semin^{1,4}, F. D'jachenko^{1,4}, ¹<i>Institute of Strength Physics and Materials Science SB RAS, Russia, ²Institute of High Current Electronics SB RAS, Russia, ³Tomsk State Pedagogical University, Russia, ⁴National Research Tomsk State University, Russia</i></p>	<p>[O1B2.2] Surface and interface properties of HfO₂ on Si investigated by X-ray photoelectron spectroscopy and grazing incidence X-ray diffraction Y. Liang¹, X. Luo¹, Y-L. Liang¹, C-H. Chien², H-H. Tin³, X. Lu¹, L. Wan¹, Z.C. Feng*¹, ¹<i>Guangxi University, China, ²National Nano Device Laboratories, Taiwan, ³National Taiwan University, Taiwan</i></p>	<p>[O1C2.2] Cu-doped TNTZ thin films for biomedical applications A. Alhussein*, S. Achache, F. Sanchette, <i>University of Technology of Troyes, France</i></p>	<p>[O1D2.2] Study of the high-temperature initial oxidation behavior in LDX 2101 Y. Zhang*¹, Y. Li¹, J. Wang¹, Y.X. Lü¹, H.B. Li¹, P.D. Han¹ ¹<i>Taiyuan University of Technology, China, ²Shanxi Design and Research Institute of Mechanical and Electrical Engineering, China, ³Northeastern University, China</i></p>
15:20-15:40	<p>[O1A2.3] Characterization of Ti-Ta-based surface alloy fabricated on TiNi SMA by pulsed electron-beam melting of film/substrate system L.L. Meisner^{1,4}, A.B. Markov², V.P. Rotshtein^{1,3}, G.E. Ozur², S.N. Meisner¹, V.O. Semin*^{1,4}, E.V. Yakovlev², T.M. Poletika¹, S.L. Girsova¹, ¹<i>Institute of Strength Physics and Materials Science, Russia, ²Institute of High Current</i></p>	<p>[O1B2.3] Electrochemical etching of AISI 316 stainless steel in sodium chloride solutions: observation of textured surfaces and study on tribological behaviors N.M. Lin¹, Q. Liu*¹, J.J. Zou¹, R.Z. Xie¹, Z.X. Wang¹, Z.H. Wang, B. Tang¹, ¹<i>Taiyuan University of Technology, China, ²University of Alberta, Canada</i></p>	<p>[O1C2.3] Hydrophobic biofilm produced by bacillus genus inhibit the pitting corrosion of steel in seawater T. Liu*, N. Guo <i>Shanghai Maritime University, China</i></p>	<p>[O1D2.3] Electro wetting behavior of sodium chloride aqueous solution on hydrophobic surfaces of stainless steel and its influence on polarization behavior R. Wang*¹, J. Kaneko¹, K. Nakasa², A. Yamamoto³, Y. Ling⁴ ¹<i>Hiroshima Institute of Technology, Japan,</i></p>

	<i>Electronics, Russia, ³Tomsk State Pedagogical University, Russia, ⁴National Research Tomsk State University, Russia</i>			<i>²Hiroshima Kokusai Gakuin University, Japan, ³Asahi Surface Tec LLC, Japan, ⁴Tsinghua University, China</i>
15:40-16:00	[O1A2.4] Magnetic properties and thermal effects of thick Co₂FeAl alloy films K. Wang*, Z. Xu, S. Dong <i>Huaqiao University, China</i>	[O1B2.4] Surface chemistry and its effect on the photoluminescence spectrum of zinc oxide nanoparticles S. Kim, R.M.D.S. Somaratne, J.E. Whitten*, <i>University of Massachusetts Lowell, USA</i>	[O1C2.4] In vitro behaviour and antifungal activity of zinc-derived compounds M.M. Alves* ¹ , L. Marques ¹ , C.F. Santos ^{1,2} , S. Eugénio ^{1,3} , N. Mira ⁴ , M.F. Montemor ¹ <i>¹Instituto Superior Técnico, Portugal, ²Instituto Politécnico de Setúbal, Portugal, ³Universidade Atlântica, Portugal, ⁴Instituto de Bioengenharia e Biociências, Portugal</i>	[O1D2.4] Dynamic decomposition of barium alkyl-benzene / naphthalene sulfonates on the Al₃Mg (001) surface from ab initio molecular dynamics J. Zhong*, X. Li, Y. Tian, W. Wu <i>North China Institute of Aerospace Engineering, China</i>
16:00-16:20	[O1A2.5] X-ray photoelectron spectroscopy study of Zr-Si-N coatings Y.I. Chen ¹ , S.C. Chang ¹ , L.C. Chang ² , Y.Z. Zheng* ¹ , J.W. Lee ² <i>¹National Taiwan Ocean University, Taiwan, ²Ming Chi University of Technology, Taiwan</i>	[O1B2.5] Dart-MS as surface analysis technique for organic reactions at surfaces H. Zuilhof, <i>Wageningen University, The Netherlands</i>	[O1C2.5] Preparation, characterization and properties of PLA/curcumin/PEG porous nanofibers for drug delivery Z.Y. Sun*, L. Xu, Y.R. Wang <i>Soochow University, China</i>	[O1D2.5] Effect of hydrogen water chemistry on the passivity loss of Zr-Sn-Nb system N18 zircaloy Y.H. Ling* ¹ , J.J. Gu ¹ , Z.Y. Xin ¹ , R.G. Wang ² , Z.J. Zhang ¹ , <i>¹Tsinghua University, China, ²Hiroshima Institute of Technology, Japan</i>
16:20-18:20	Poster session 1 with refreshment break Room: Grand Ballroom and Reception Hall			

Wednesday, 14 June

Wednesday, 14 June				
08:00-09:00	Plenary Session 2 Room: Grand Ballroom			
08:00-09:00	[PL03] Converting Carbon Dioxide through Catalysis and Electrocatalysis J.G. Chen, <i>Columbia University, USA</i>			
09:00-09:30	Refreshment Break Room: Grand Ballroom and Reception Hall			
09:30-12:20	Functional Surfaces and coatings <i>Session chair: H-P. Steinrueck</i>	Surface nanoengineering <i>Session chair: Dong Wang</i>	Semiconductors and 2D materials	Energy conversion and catalysis

	Room: <i>Grand Ballroom</i>	Room: <i>TianBoFu A</i>	Session chair: <i>Paul K. Chu</i> Room: <i>TianBoFu B</i>	Session chair: <i>Franklin Feng Tao</i> Room: <i>TianBoFu C</i>
09:30-10:10	[K09] STM and self-assembly K. Wu, <i>Peking University, China</i>	[K10] Advances in Surface Nanotechnology towards 3D Nanoprinting G.Y. Liu, <i>University of California, Davis, USA</i>	[K11] Chemical reactivity of pristine and defected graphene grown on nickel(111) M. Rocca ^{*1,2} , G. Carraro ¹ , E. Celasco ^{1,2} , A. Lusuan ¹ , J. Pal ¹ , L. Savio ² , M. Smerieri ² , L. Vattuone ^{1,2} , ¹ <i>Dipartimento di Fisica dell'Università di Genova, Italy</i> , ² <i>MEM-CNR Unità di Genova, Italy</i>	[K12] Surface spectroscopy and surface microscopy of catalytic processes from UHV to operando conditions G. Rupprechter [*] , C. Rameshan, K. Föttinger, Y. Suchorski <i>Technische Universität Wien, Austria</i>
10:10-10:30	[O2A1.1] In-situ infrared spectroscopic characterization of the polydopamine (PDA) growth dependent on the selected buffer solution G.G. Sun [*] , K. Hinrichs <i>ISAS e.V., Germany</i>	[O2B1.1] Modelling and experimental study on effect of probe geometry on nanoscratching of single crystal copper Y. Geng [*] , J. Zhang, Y. Yan <i>Harbin Institute of Technology, China</i>	[O2C1.1] Infrared spectroscopic study of GaAs oxidation behaviour J. Lee [*] , J. Na, S. Lim <i>Yonsei university, Republic of Korea</i>	[O2D1.1] STM investigations of CO₂ and CO adsorbed on ZnO(10-10) surface H. Shi [*] , S. Ruan, W. Wang, Z. Li, X. Shao <i>University of Science and Technology of China, China</i>
10:30-10:50	[O2A1.2] Oxidation behavior of Hf-Si-N coatings with cyclic gradient concentration Y.I. Chen ¹ , B.W. Liu ^{*1} , L.C. Chang ² ¹ <i>National Taiwan Ocean University, Taiwan</i> , ² <i>Ming Chi University of Technology, Taiwan</i>	[O2B1.2] Morphology and properties evolution of tin-catalyzed silicon oxide nanowires synthesized by GJ EBP CVD method E. Baranov ^{*1} , A. Zamchiy ^{1,2} , S. Khmel ¹ , ¹ <i>Kutateladze Institute of Thermophysics, Russia</i> , ² <i>Novosibirsk State University, Russia</i>	[O2C1.2] STM visualization of defects migration on the ZnO (10-10) surface L. Li [*] , M.J. Xu, P. Li, Y.B. He <i>Hubei University, China</i>	[O2D1.2] Metal-support interactions in heterogeneous catalysis and electrocatalysis Y. Lykhach ^{*1} , V. Matolín ² , S. Fabris ³ , K.M. Neyman ⁴ , J. Libuda ¹ ¹ <i>Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany</i> , ² <i>Charles University in Prague, Czech Republic</i> , ³ <i>CNR-IOM DEMOCRITOS, SISSA, Italy</i> , ⁴ <i>Universitat de Barcelona, Spain</i>
10:50-11:10	[O2A1.3] Electrodeposition of aluminium in combination with plasma electrolytic oxidation as	[O2B1.3] Arrayed formation of single-electron transistors based on electromigration in series-	[O2C1.3] Surface smoothness effect of substrate on MoS₂ fabrication on HfO₂ dielectric	[O2D1.3] Near field optical microscopy studies on Mn-Fe doped ZnO thin films rf-

	protective coatings on unalloyed steel M. Schneider, M. Weiser*, C. Lämmel, K. Voigt, A. Michaelis <i>Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany</i>	connected nanogaps M. Ito*, K. Okada, K. Inoue, T. Ito, J. Shirakashi <i>Tokyo University of Agriculture & Technology, Japan</i>	film B. Li* ¹ , Y.C. Jung ¹ , S. Seong ¹ , T.H. Lee ¹ , S.H. Choi ² , W. Yang ² , I.S. Park ¹ , J.H. Ahn ¹ ¹ <i>Hanyang University, Republic of Korea</i> , ² <i>Dongguk University, Republic of Korea</i>	sputtered in nitrogen gas environment V. Malapati* ¹ , R. Singh ¹ ¹ <i>Central University of Karnataka, India</i> , ² <i>University of Hyderabad, India</i>
11:10-11:30	[O2A1.4] Effect of polyurea coating on the strength of glass/ceramic substrate for building construction K. Kamonchaivanich*, K. Kuboyama, T. Ougizawa <i>Tokyo Institute of Technology, Japan</i>	[O2B1.4] Improved resistive switching characteristics of ZnO on metal-capped ITO electrode for transparent flexible devices T. Lee*, Y.C. Jung, S. Seong, S.Y. Kim, B. Li, H-J. Hwang, H-S. Kim, I-S. Park, J. Ahn, <i>Hanyang University, Republic of Korea</i>	[O2C1.4] Impact of interfaces near anode in resistive switching of Pt/HfO₂/Pt by electroforming bias control Y.C. Jung*, S. Seong, T. Lee, B. Li, S.Y. Kim, I-S. Park, J. Ahn <i>Hanyang University, Republic of Korea</i>	[O2D1.4] Photocatalytic ZnO thin shell layers coating on plasmonic metal nanoparticles by using atomic layer deposition technology S. Seong*, Y.C. Jung, T. Lee, B. Li, I-S. Park, J. Ahn <i>Hanyang University, Republic of Korea</i>
11:30-11:50	[O2A1.5] Graphitic-Carbon Layers on Fe₃C nanoparticles: Toward a highly active and stable Fischer-Tropsch synthesis catalysts L. Wang*, S. Lv, X. Zhao, Y.H. Zhang, J.L. Li <i>South-Central University for Nationalities, China</i>	[O2B1.5] Intelligent control approach of quantized conductance of Au atomic junctions formed by feedback-controlled electromigration Y. Iwata*, Y. Katogi, N. Numakura, S. Sakai, J. Shirakashi, <i>Tokyo University of Agriculture & Technology, Japan</i>	[O2C1.5] Surface oxidation and particle deposition on InGaAs surface by wet chemical treatments J. Na*, S. Lim <i>Yonsei university, Republic of Korea</i>	[O2D1.5] Facile synthesis of Li₂S-P2S₅ glass-ceramics electrolytes with micron range particles for all-solid-state batteries via Low Temperature Solution Technique (LTST) S. Choi*, W. Lee, S. Oh, J. Park, W.T. Nichols, D. Shin <i>Hanyang University, Republic of Korea</i>
11:50-12:20	[INV05] New Materials for Advanced Chemical Separations and Sample Preparation, Matthew Linford, <i>Brigham Young University, USA</i>	[INV06] Interaction of copper and silver deposition precursor molecules with different surface functionalities Andrew V. Teplyakov, <i>University of Delaware, Newark, USA</i>	[INV07] Interface Engineering for 2D Phosphorene Based Optoelectronic Devices Wei Chen, <i>National University of Singapore, Singapore</i>	[INV08] Reactions on transition metal oxide surfaces studied by high-resolution STM S. Wendt <i>Aarhus University, Denmark</i>
12:20-14:00	Lunch Room: Grand Ballroom and Reception Hall			
14:20-16:20	Functional surfaces and coatings <i>Session chair: Guido Grundmeier</i>	Surface nanoengineering <i>Session chair: Andrew V.</i>	Electrochemistry at surfaces and corrosion protection strategies	Advances in surface characterization tools

	Room: <i>Grand Ballroom</i>	Teplyakov Room: <i>TianBoFu A</i>	Session chair: <i>Wei Chen</i> Room: <i>TianBoFu B</i>	Session chair: <i>M. Kiskinova</i> Room: <i>TianBoFu C</i>
14:00-14:20	<p>[O2A2.1] Influence of Si addition on the structure, deformation and tribological behaviour of nc-ALTiN/a-Si₃N₄ hard coatings M. Haršáni*¹, P. Zacková¹, M. Sahul¹, T. Vopát¹, L. Satrapinsky², M. Čaplovičová³, L. Čaplovič¹, ¹<i>Slovak University of Technology in Bratislava, Slovakia</i>, ²<i>Comenius University, Bratislava, Slovakia</i>, ³<i>Slovak University of Technology, Bratislava, Slovakia</i></p>	<p>[O2B2.1] Electrical properties of series-parallel-connected Au nanogaps during electromigration-based current biasing method K. Minami*, M. Ito, S. Tani, J. Shirakashi, <i>Tokyo University of Agriculture & Technology, Japan</i></p>	<p>[O2C2.1] Hydrogen permeation properties of Cr_xC_y @ Cr₂O₃ films derived from Cr-C amorphous alloy Z.X. Lu*¹, Q.Y. Zhou¹, J.P. Wang¹, Y.H. Ling^{1,2}, H. Liang^{1,3}, X.K. Deng^{1,3} ¹<i>Guangxi University, China</i>, ²<i>Tsinghua University, China</i>, ³<i>China Academy of Engineering Physics, China</i></p>	<p>[K13] Soft and hard X-ray ambient pressure photoelectron spectroscopy of semiconductor/electrolyte interfaces for water splitting applications D. Starr <i>Helmholtz-Zentrum Berlin, Germany</i></p>
14:20-14:40	<p>[O2A2.2] In-situ visualization of the kinetics of low temperature thiol-epoxy crosslinking reactions by using a pH-responsive epoxy resin T.H. Lee^{1,2}, Y.I. Park¹, S.M. Noh¹, J.C. Kim*¹ ¹<i>KRICT, Republic of Korea</i>, ²<i>UNIST, Republic of Korea</i></p>	<p>[O2B2.2] PMIDA-modified Fe₃O₄ magnetic nanoparticles: synthesis and application for liver MRI A.M. Demin*¹, A.G. Pershina², V.V. Ivanov² et al ¹<i>Postovsky Institute of Organic Synthesis of RAS (Ural Branch), Russia</i>, ²<i>Siberian State Medical University, Russia</i>, ³<i>Institute of Cytology and Genetics RAS (Siberian Branch), Russia</i>, ⁴<i>Miheev Institute of Metal Physics of RAS, Russia</i></p>	<p>[O2C2.2] Effect of nitridation on the surface structure and hydrogen adsorption characteristic of iron nickel based stainless steel Y.H. Yang*^{1,2}, Y.H. Ling¹, Y.H. Gu², Z.J. Zhang¹, ¹<i>Tsinghua University, China</i>, ²<i>Beijing Institute of Petrochemical Technology, China</i></p>	
14:40-15:00	<p>[O2A2.3] Complex fine-scale diffusion coatings formed at low temperature on high-speed steel substrate A.S. Chaus*¹, P. Pokorný¹, L. Caplovic¹, M.V. Sitkevich², J. Peterka¹, ¹<i>Slovak University of Technology in Bratislava, Slovakia</i>, ²<i>Belarus National</i></p>	<p>[O2B2.3] Low-temperature carburized high-alloyed austenitic stainless steels in PEMFC cathodic environment G. Maistro*¹, S. Kante¹, A. Karl², L. Nyborg¹, Y. Cao¹ ¹<i>Chalmers University of Technology, Sweden</i>, ²<i>Bodycote Specialist Technologies GmbH,</i></p>	<p>[O2C2.3] Electrochemical impedance characteristics of oxide layer on passivated duplex stainless steels Z. Brytan*, T. Tanski, T. Linek <i>Silesian University of Technology, Poland</i></p>	<p>[O2D2.1] EnviroESCA™ - Routine surface analysis under environmental conditions S. Boettcher*, S. Bahr, P. Dietrich, M. Meyer, A. Thissen <i>SPECS Surface Nano Analysis GmbH, Germany</i></p>

	<i>Technical University, Belarus</i>	<i>Germany</i>		
15:00-15:20	[O2A2.4] Enhancement of TiO₂ film morphology and deposition rate prepared by sparking process using external electrical field W. Thongpan*, E. Kantarak, P. Singjai, W. Thongsuwan <i>Chiang Mai University, Thailand</i>	[O2B2.4] Chemical Functionalization of CMOS Sensor Arrays V. Jain*, M.R. Linford <i>Brigham Young University, USA</i>	[O2C2.4] Glycine as a complexing agent for single step electrodeposition of CZTS R. Sani, A. Shelotkar, R. Manivannan, S. Noyel Victoria* <i>National Institute of Technology Raipur, India</i>	[O2D2.2] A surface science study of cobalt carbide supported on Al₂O₃/NiAl(110) T. Zhang*, Y. Xu, J.W. Niemantsverdriet, Y. Li <i>Synfuels China Technology Co. Ltd., China</i>
15:20-15:40	[O2A2.5] The structure and phase composition of NiTi surface layer formed by magnetron sputtering coating of tantalum remelted by electron beam A.A. Neiman* ¹ , L.L. Meisner ^{1,2} , O.V. Semin ^{1,2} et al, ¹ <i>Institute of Strength Physics and Materials Science, Russia,</i> ² <i>National Research Tomsk State University, Russia</i>	[O2B2.5] Effect of scanning speed on the laser metal deposited Copper on Titanium alloy M.F. Erinosh* ¹ , E.T. Akinlabi ¹ , S. Pityana ² , O.T. Johnson ³ , E. Makatha ¹ , M.B. Shongwe ⁴ ¹ <i>University of Johannesburg,, South Africa,</i> ² <i>National Laser Centre, Council for Scientific and Industrial Research (CSIR), South Africa,</i> ³ <i>University of Namibia,, Namibia,</i> ⁴ <i>Tshwane University of Technology, South Africa</i>	[O2C2.5] Chemical mechanical planarization of Ru using sodium hypochlorite based titania slurry K. Yadav, R. Sani, S. Noyel Victoria, R. Manivannan* <i>National Institute of Technology Raipur, India</i>	[O2D2.3] Surface and interface analyses under near-ambient conditions T. Luxbacher* ¹ , M. Espanol ² , M. Lorenzetti ³ , T.Y. Cath ⁴ ¹ <i>Anton Paar GmbH, Austria,</i> ² <i>Universitat Politecnica de Catalunya, Spain,</i> ³ <i>Institut Jozef Stefan, Slovenia,</i> ⁴ <i>Colorado School of Mines, USA</i>
15:40-16:00	Beijing HED Workshop	[O2B2.6] Recycling utilization of slag for synthesis of graphene reinforced composite and treatment of dyeing wastewater Y.J. Zhang*, P.Y. He, M.Y. Yang, L. Kang, <i>Xi'an University of Architecture and Technology, China</i>	[O2C2.6] High Cr content effect on the corrosion behaviour of Ni-free stainless steel for bipolar plate of polymer electrolyte fuel cell Y. Yu*, S. Shironita, K. Souma, M. Umeda et al, <i>Nagaoka University of Technology, Japan</i>	[O2D2.4] Characterization of solid-supported ultrathin films and molecular interactions using MP-SPR N.M. Granqvist, A.E. Jokinen, J. Kuncova-Kallio, J.W. Sadowski* <i>BioNavis Ltd., Finland</i>
16:00-16:20			[O2C2.7] Ozone corrosion effect of Kapton film in a ground near space simulator Q. Wei* ¹ , G.M. Yang ¹ , H.F. Jiang ² , T.T. Zhang ¹ . ¹ <i>Tianjin University, China,</i> ² <i>Beijing Institute of Spacecrafts Environment</i>	[O2D2.5] Optimization of punch land tool selection for shear extrusion of AA-6063 S.O. Ojo ¹ , M.F. Erinosh* ² , J.S. Ajiboye ³ , E.T. Akinlabi ² ¹ <i>Politecnico di Torino, Italy,</i> ² <i>University of Johannesburg,</i>

			Engineering, China	South Africa, ³ University of Lagos, Nigeria
16:20-18:20	Poster session 2 with refreshment break Room: Grand Ballroom and Reception Hall			
18:30-22:00	Conference Dinner			

Thursday, 15 June				
08:00-09:00	Plenary Session 4 Room: Grand Ballroom			
08:00-09:00	[PL04] Structure and reactions on electrode surfaces in ambient gas pressure and under liquids M. Salmeron, Berkeley National Lab, USA			
09:00-09:30	Refreshment Break Room: Grand Ballroom and Reception Hall			
09:30-12:20	Functional Surfaces and coatings Session chair: Matthew Linford Room: Grand Ballroom	Surface nanoengineering Session chair: Alfred Juan Room: TianBoFu A	Semiconductors and 2D materials Session chair: Maria Dinescu Room: TianBoFu B	Energy conversion and catalysis Session chair: Mario Rocca Room: TianBoFu C
09:30-09:50	[O3A1.1] Textured MgO films fabricated using resputtering effect of magnetron sputtering deposition and the surface scaling analysis F. Feng, X. Zhang*, T. Qu, P. Feng Tsinghua University, China	[O3B1.1] Characterization of Surface Roughness on laser deposited Titanium alloy and Copper using AFM M.F. Erinosh* ¹ , E.T. Akinlabi ¹ , O.T. Johnson ² , ¹ University of Johannesburg, South Africa, ² University of Namibia, Namibia	[O3C1.1] Comparative study of Surface and interface property of InAsSb layers grown on different substrates and improvement of InAsSb based devices P. Ni, L.T.M. Tobing, D.H. Zhang*, J. Tong, Nanyang Technological University, Singapore	[K14] Photocatalysts with enabled wide spectrum absorption & high charge separation ability G. Liu, Institute of Metal Research, Chinese Academy of Sciences, China
09:50-10:10	[O3A1.2] Influences of Different Alkyltrichlorosilane Molecular Structures Modified Hydrophilic SiO ₂ NPs on Superhydrophobicity A. Sriboonruang*, P. Singjai, W. Thongsuwan, Chiang Mai University, Thailand	[O3B1.2] Low-temperature scanning tunneling microscopy study of cobalt tetrakis(thiadiazole)porphyrazine on gold(111) Y. Wang* ^{1,3} , J. Hou ^{1,3} , K. Awaga ² , T. Komeda ³ , ¹ Tohoku University, Japan, ² Nagoya University, Japan, ³ IMRAM, Tohoku University, Japan	[O3C1.2] The structural dependent optical properties of Bi ₂ Se ₃ nanoscale films deposited by electron beam evaporation S.D. Yang*, Y.X. Zheng, L. Yang, Z.H. Liu, W.J. Zhou, S.Y. Wang, R.J. Zhang, L.Y. Chen Fudan University, China	
10:10-10:30	[O3A1.3] Microstructure and	[O3B1.3] Inter-molecule	[O3C1.3] Syntheses and	[O3D1.1] CO ₂ electro-

	<p>property of sol-enhanced Ni-W-TiO₂ nano-composite coatings Y.X. Wang*^{1,2}, J. Yang¹, Y.X. Geng¹, X. Li³, W. Gao² ¹<i>Jiangsu University of Science and Technology, China</i>, ²<i>The University of Auckland, New Zealand</i>, ³<i>University of Shanghai for Science and Technology, China</i></p>	<p>interaction for magnetic property of vanadyl tetrakis(thiadiazole) porphyrazine film on Au(111) J. Hou*^{1,3}, Y. Wang^{1,3}, T. Takaoka^{1,3}, K. Awaga², T. Komeda³ ¹<i>Tohoku University, Japan</i>, ²<i>Nagoya University, Japan</i>, ³<i>IMRAM, Tohoku University, Japan</i></p>	<p>Properties of Infrared Nonlinear Optical Materials with High Performance and Broad Band Gap D. Mei, <i>Shanghai University of Engineering Science, China</i></p>	<p>reduction characteristics at Pt-Ru powder and sputter electrodes in acidic condition H. Furukawa¹, S. Tanaka¹, S. Matsuda*¹, S. Shironita¹, M. Umeda^{1,2}, ¹<i>Nagaoka University of Technology, Japan</i>, ²<i>JST ACT-C, Japan</i></p>
10:30-10:50	<p>[O3A1.4] Synthesis and utilization of nano-particles in two pack PU nano-composite organic coatings: A comparative study for their significant effects / properties A. Anand*, R.D. Kulkarni, V.V. Gite, <i>North Maharashtra University, India</i></p>	<p>[O3B1.4] Study of the structure and optoelectronic properties of polymer composites reinforced by semiconducting nanoparticles. P. Jarka, T. Tanski*, W. Matysiak <i>Centre of Nanotechnology Silesian University of Technology, Poland</i></p>	<p>[O3C1.4] Structural and optical properties of nanoscale bismuth films L. Yang*, Y.X. Zheng, S.D. Yang, Z.H. Liu, R.J. Zhang, S.Y. Wang, L.Y. Chen, <i>Fudan University, China</i></p>	<p>[O3D1.2] Giant Energy Density of Polymer Nanocomposites Induced by Interface Engineering for Dielectric Energy Storage X. Zhang*, Y. Shen, C.W. Nan <i>Tsinghua University, China</i></p>
10:50-11:10	<p>[O3A1.5] Large-scale fabrication of hydrophobic PFA/nano-Ag coatings by suspension flame spraying and its synergistic effect on the antifouling and drag reduction M.J. Zhai*, X.Y. Chen, Y.F. Gong, H. Li, <i>Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, China</i></p>	<p>[O3B1.5] Impact-sliding tribology performance of TC17 titanium alloy effected by laser shock peening treatment M-G. Yin*¹, Z-B. Cai¹, S-B. Wu¹, W-F. He², C. Song³, J-F. Zheng³, M-H. Zhu¹, ¹<i>Southwest Jiaotong University, China</i>, ²<i>Air Force Engineering University, China</i>, ³<i>China Aviation Industry Chengdu Engine, China</i></p>	<p>[O3C1.5] Preparation and characterization of leaf-like polyaniline synthesized by using a soft template C.H. Chen*, S.Y. Huang, C.H. Chuang, C.F. Mao, W.T. Liao <i>Southern Taiwan University of Science and Technology, Taiwan</i></p>	<p>[O3D1.3] Enhanced photocatalytic property of BiFeO₃/S-doped graphene composites L.S. Miao*, P. Li., Q. Chen, Y.B. He <i>Hubei University, China</i></p>
11:10-11:30	<p>[O3A1.6] The influence of the metal phase on the compressive and tensile stresses reduction in the superhard nanostructured ceramic coatings A.O. Volkhonskii*, I.V. Blinkov, V.S. Sergevnin, D.S. Belov <i>National University of Science</i></p>	<p>[O3B1.6] Fabrication and characterization of magnetic nanocomposites by magnetic and electric fields assisted electrospinning Y.H. Song*, F.F. Wang, L. Xu <i>Soochow University, China</i></p>	<p>[O3C1.6] Modification of rubbers with carbon nanotubes V. Trachevskiy*^{1,2}, M. Kartel^{1,3}, Y. Sementsov^{1,3}, K. Ilina⁴, W. Bo¹, Y. Jiang⁵, ¹<i>Ningbo University of Technology, China</i>, ²<i>National Aviation University, Ukraine</i>, ³<i>O. Chuiko Institute of Surface</i></p>	<p>[O3D1.4] Selective catalytic reduction of NO_x with H₂ over hollow ZSM-5 zeolite supported Pt catalyst Z. Hong*, Z. Wang, X.B. Li <i>Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy</i></p>

	<i>and Technology MISIS, Russia</i>		<i>Chemistry, NASU, Ukraine, ⁴State Enterprise "Scientific Research Institute "Elastic", Ukraine, ⁵Rubber of Ningbo Fubon group, China</i>	<i>of Sciences, China</i>
11:30-11:50	<p>[O3A1.7] Study of the microstructure, tribology, and corrosion behaviour of 304H stainless steel under high temperature water oxidation treatment</p> <p>Z-Y. Li*¹, Z-B. Cai¹, W-J. Yang¹, X-Y. Shen², G-H. Xue², Y-C. Xie², M-H. Zhu¹, ¹Southwest Jiaotong University, China, ²Shanghai Nuclear Engineering Research and Design Institute, China</p>	<p>[O3B1.7] Atomic and electronic structures of β-Si₃N₄/diamond interface in the process of detachment: A first-principles study</p> <p>N.C. Chen*, J. Ai, Y.C. Chen, P. He, J.X. Ren Shanghai University of Electric Power, China</p>	<p>[O3C1.7] Synthesis of graphene-based nanostructures by surface assisted polymerization of brominated aromatic precursors</p> <p>A. Lusuan*^{1,5}, M. Smerieri¹, I. Píř^{2,3}, L. Ferrighi⁴, C. Di Valentin⁴, L. Savio⁵, F. Bondino³, A. Papagni⁴, E. Magnano^{3,7}, S. Agnoli⁶ et al ¹IMEM-CNR, UOS Genova, Italy, ²Elettra-Sincrotrone Trieste S.C.p.A, Italy, ³IOM-CNR, Laboratorio, Italy, ⁴Università di Milano-Bicocca, Italy, ⁵Università di Genova, Italy, ⁶University of Padova, Italy, ⁷University of Johannesburg, South Africa</p>	<p>[O3D1.5] Improved photovoltaic performance of dye-sensitized solar cells by TiO₂ nanotube/nanoparticle with CeO₂ nanoparticles</p> <p>M.A. Hossain*, C. Son, S. Lee Yonsei University, Republic of Korea</p>
11:50-12:10			<p>[O3C1.8] Surface chemistry and interface reactivity of TiAlN coatings deposited by means of high power pulsed magnetron sputtering</p> <p>G. Grundmeier, M. Wiesing, T. de los Arcos, University of Paderborn, Germany</p>	<p>[O3D1.6] Using fundamental surface science measurements on lab grown thin films to understand the behavior of barrier layers in TRISO fuels</p> <p>J. Terry, Illinois Institute of Technology, USA</p>
12:10-13:30	Lunch Room: Grand Ballroom and Reception Hall			
13:30-14:30	Award and Closing Ceremony Room: Grand Ballroom			
14:30-15:30	Author and Reviewer Workshop Room: Grand Ballroom			