

# SurfCoat Korea 2017 Preliminary Program

29 - 31 March , 2017 | Seoul, Republic of Korea

**March 29<sup>th</sup>, 2017**

**Session I: Surface treatments and coatings deposition processes**

**Conference Room 113/114**

**Session Chairs:**

**Prof. Marcela Bilek, Applied and Plasma Physics Research Group, University of Sydney, Australia**  
**Prof. Suil In, Department of Energy Systems Engineering (DGIST), Rep. of Korea**

**08:00-10:00 Registration + Welcoming coffee**

<b>10:00-10:40</b>	Nanocrystalline Diamond Coating – Challenges and Applications <b>D-S. Lim</b>	<b>Prof. Dae-Soon Lim</b> , Korea University-Seoul, <b>Rep. of Korea</b>
<b>10:40-11:20</b>	Innovative development of thin film structures and their possible applications <b>J-H. Hsieh</b>	<b>Prof. Jang-Hsing Hsieh</b> , Ming Chi University of Technology, <b>Taiwan</b>
<b>11:20-12:00</b>	Experimental characterization of dimensionality-based functional polymer films <b>J. Fraxedas</b>	<b>Prof. Jordi Fraxedas</b> , ICN2, CSIC and Barcelona Institute of Science and Technology, <b>Spain</b>
<b>12:00-12:30</b>	MAPLE (matrix assisted pulsed laser evaporation), LIFT (Laser induced forward transfer) and LDW-2PP (Laser direct writing-two photon polymerization): laser based techniques for “soft” thin films processing A.Palla-Papavlu, M. Filipescu, V.C. Dinca, I. A. Paun and <b>M.Dinescu</b>	<b>Dr. Maria Dinescu</b> , National Institute for Lasers Plasma Radiation Physics, <b>Romania</b>
<b>12:30-12:45</b>	EnviroESCA – the Beginning of a New Era <b>L. Socaciu-Siebert</b> , M. Meyer, S. Bahr, T. Kampen, O. Schaff and A. Thissen	<b>Dr. Liana Socaciu-Siebert</b> , SPECS Surface Nano Analysis GmbH, Berlin, <b>Germany</b>

**12:30-14:00 Lunch Break / Posters Session I**

**Session I.A: Multi-functional, composite/ hybrid, graded and multilayers coatings**

**Conference Room 113**

**Session Chairs:**

**Prof. Jordi Fraxedas, ICN2, CSIC and Barcelona Institute of Science and Technology, Spain**  
**Prof. Maude Jimenez, University Lille1, France**

<b>14:00-14:30</b>	Synthesis of multifunctional coatings from Al microspheres <b>F. Pedraza</b>	<b>Prof. Fernando Pedraza</b> , La Rochelle University, <b>France</b>
<b>14:30-15:00</b>	Improving durability of intumescent coatings <b>M.Jimenez</b> , G. Fontaine, S. Duquesne and S. Bourbigot	<b>Prof. Maude Jimenez</b> , University Lille1, <b>France</b>
<b>15:00-15:15</b>	Temperature- and Load Dependency on High Friction Poly(Styrene-co-Butyl Methacrylate) Coated Paper <b>C. Bjerremand</b> , J. Larsen and M. Hinge	<b>Mr. Christoffer Bjerremand</b> , Aarhus University, <b>Denmark</b>
<b>15:15-15:30</b>	Properties of hydrophobic SiO <sub>2</sub> -organic composite thin film on glass by ultrasonic spray process <b>C-C. Lin</b> , J-J. Huang, D-S. Wu, Y-H. Wu and P-C. Lai	<b>Mr. Che-Chun Lin</b> , National Chung Hsing University, <b>Taiwan</b>
<b>15:30-15:45</b>	Fabrication of Hydrophobic Mesh by NR/SiO <sub>2</sub> -encapsulated Fluoroalkylsilane Coating for Oil/Water Separation <b>J. Saengkaew</b> , C. Samart, H. Sawada and S. Kongparakul	<b>Ms. Jittraporn Saengkaew</b> , Thammasat University, <b>Thailand</b>
<b>15:45-16:00</b>	Microstructure and Mechanical properties of Cr-Si-Al-N coatings with compositional variations S.A. Choi, S.W. Kim, S.M. Lee, H.T. Kim, H. S. Kim and <b>Y.S. Oh</b>	<b>Dr. Yoonsuk Oh</b> , Korea Institute of Ceramic Engineering & Technology, <b>Rep. of Korea</b>
<b>16:00-16:15</b>	Design of Flame Retardant Self-stratifying Coatings for Plastics <b>A. Beaugendre</b> , S. Degoutin, S. Bellayer, C. Pierlot, S. Duquesne, M. Casetta and M. Jimenez	<b>Ms. Agnes Beaugendre</b> , University Lille 1, <b>France</b>

## Session I.B: Carbon and Graphene Coatings and surfaces

## Session Chairs:

Prof. Dae-Soon Lim, Korea University-Seoul, Rep. of Korea

Prof. Auezhan Amanov, Sun Moon University, Rep. of Korea, Korea

16:30-17:00	Improvement in Tribological and Adhesion of Thermal Spray Coatings Sprayed onto Graphite for Molding Applications A. Amanov, B. Urmanov and Y.S. Pyun	Prof. Auezhan Amanov, Sun Moon University, Rep. of Korea
17:00-17:15	Development of carbon particles embedded diamond-like carbon coatings and the effect of particle density on structure, mechanical and wear properties A.W. Zia, Z.F. Zhou and K.Y. Li Lawrence	Mr. Abdul Wasy Zia, City University of Hong Kong, Hong Kong
17:15-17:30	Electrical properties of FCVA deposited nano-crystalline graphitic carbon thin films with in-situ treatment techniques C.W. Tan and B.K. Tay	Dr. Chong Wei Tan, Nanyang Technological University, Singapore
17:30-17:45	Effective phase-change cooling for LED via graphene-nanoplatelet coatings K. Keong Lay, B.M. Yew Cheong, M. Kwang Tan and Y. Mun Hung	Mr. Kok Keong Lay, Monash University, Malaysia
17:45-18:00	Boiling enhancement in LED cooling via graphene coatings M.L. Ng, B.T. Tan and Y.M. Hung	Mr. Ming Leong Ng, Monash University, Malaysia
18:00-18:15	Why Graphene Growth on Dielectrics is Fascinating S. Karamat and A. Oral	Dr. Shumaila Karamat, COMSATS Institute of Information Technology, Pakistan
18:15-18:30	Defect-free graphene direct growth on stainless steel substrate (304) by atmospheric pressure chemical vapor deposition M. Kovendhan and K.-J. Jeon	Dr. Kovendhan Manavalan, Inha University, Rep. of Korea
18:30-18:45	Improving tribological performance of diamond-like carbon (DLC) coatings by carbon/carbon multilayer architecture Y. Lin, Z. Zhou and K.Y. Li	Ms. Yanyan Lin, City University of Hong Kong, Hong Kong

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## Session I.C: Plasma deposition and processing

## Conference Room 114

## Session Chairs:

Dr. Maria Dinescu, National Institute for Lasers Plasma Radiation Physics, Romania

Prof. Jang-Hsing Hsieh, Ming Chi University of Technology, Taiwan

14:00-14:30	Cold Atmospheric Pressure Plasma-Polymerized WFexOyCz for Flexible Electrochromic Devices Y.-S. Lin, T.-H. Tsai and M.-H. Hsieh	Prof. Yung-Sen Lin, Feng Chia University, Taiwan
14:30-14:45	Coating growth behavior of plasma electrolytic oxidation on lightweight metal by considering the initial grain size S. Fatimah, M.P. Kamil and Y.G. Ko	Ms. Siti Fatimah, Yeungnam University, Rep. of Korea
14:45-15:00	Flexible reduced graphene oxide supercapacitors processed using an atmospheric-pressure plasma jet C-H. Yang, F-H. Kuok, C-Y. Liao, T-H. Wan, C-W. Chen, C-C. Hsu, I-C. Cheng and J-Z. Chen	Mr. Cheng-Han Yang, National Taiwan University, Taiwan
15:00-15:15	Atmospheric-Pressure Plasma Jet Processed Pt-Decorated Reduced Graphene Oxide Counter Electrodes for Dye-sensitized Solar Cells T-H. Wan, Y-F. Chiu, C-W. Chen, C-C. Hsu, I-C. Cheng and J-Z. Chen	Mr Ting-Hao Wan, National Taiwan University, Taiwan
15:15-15:45	Enhanced field emission characteristics of Carbon Nanotubes film via surface modification technique Y. D. Lim, Q. Kong, B. K. Tay and S. Aditya	Prof. Beng Kang Tay, Nanyang Technological University, Singapore
15:45-16:00	An electrochemical response of Al-Mg-Si Alloy processed by plasma electrolytic oxidation followed by sealing post treatment J.H. Min, M. Kaseem and Y.G. Ko	Mr. Ji Hoon Min, Yeungnam University, Rep. of Korea

## Session I.D: Nano-coatings and Ultra-Thin Films

## Session Chairs:

Dr. Maria Dinescu, National Institute for Lasers Plasma Radiation Physics, Romania

Prof. Jang-Hsing Hsieh, Ming Chi University of Technology, Taiwan

16:30-16:45	Effect of Different Media used During Nitro-carburizing of Hot Work Tool Steel <b>V. Bhavar</b> , P. Kattire, D. Sheed, J. Sherkar and R. Singh	<b>Mr. Valmik Bhawar</b> , KCTI, Bharat Forge Ltd, India.
16:45-17:00	Ultrathin Magnetite in Fe <sub>3</sub> O <sub>4</sub> /MgO super lattices – resolving the origin of an enhanced, thin film magnetic moment <b>O. Mauit</b> , K. Fleischer, C.Ó Coileáin, B. Bulfin, D.S. Fox, C.M. Smith, D. Mullarkey, H. Zhang, O. Toktarbaiuly, G. Sugurbekova, and I.V. Shvets	<b>Dr. Ozhet Mauit</b> , Nazarbayev University, Kazakhstan
17:00-17:15	Duplex surface treatment (DST-Cr) of DIN 1.2714 hot work tool steel V. Bhavar, P. Kattire, <b>D. Sheed</b> , J. Sherkar and R. Singh	<b>Mr. Digvijay Sheed</b> , KCTI, Bharat Forge Ltd, India.
17:15-17:30	Fe <sub>2</sub> O <sub>3</sub> -doped TiO <sub>2</sub> Nanoparticulate Films Prepared by Sparking off Fe Electroplated Ti Tips <b>A. Hankhantod</b> , E. Kantarak, W. Sroila, T. Kumpika, P. Singjai and W. Thongsuwan	<b>Ms. Apinya Hankhantod</b> , Chiang Mai University, Thailand
17:30-17:45	Ethylenediamine improves layer-by-layer growth of Cu prepared on cobalt-based substrate via electrochemical atomic layer deposition J.S. Fang and <b>C.L. Wu</b>	<b>Ms. Jia Lin Wu</b> , National Formosa University, Taiwan
17:45-18:00	Design and fabrication of thin special targets for intense ion beams in NUMEN experiment <b>F. Pinna</b> , S. Bianco, F. Iazzi, R. Introzzi, A. Lavagno, F. Pirri, D. Calvo, C. Agodi, F. Cappuzzello, D. Carbone and M. Cavallaro	<b>Mr. Federico Pinna</b> , Torino Polytechnic Institute, Italy
18:00-18:15	Step bunching on metal and oxide vicinal surfaces under electric fields <b>O. Toktarbaiuly</b> , V. Usov, C. Ó Coileáin, E. Norton, S. I. Bozhko, V. N. Semenov, A. N. Chaika, S. A. Krasnikov, O. Lübben, B. E. Murphy, O. Mauit, G. K. Sugurbekova, V. Tonchev and I. V. Shvets	<b>Dr. Olzat Toktarbaiuly</b> , Nazarbayev University, Kazakhstan
18:15-18:30	Recent Development of Large Area Nanocrystalline Diamond and Silicon Carbide Coatings at Low Temperature <b>P. Ashcheulov</b> , A. Taylor and V. Mortet	<b>Dr. Petr Ashcheulov</b> , Institute of Physics ASCR, Czech Republic
18:30-18:45	Prediction of temperature during surface melting of microalloyed steel using TIG technique with different shielding gases <b>P. Muñoz-Escalona</b> , A. Walker, S. Mridha, T.N. Baker and A. Ogwu	<b>Dr. Patricia Muñoz-Escalona</b> , University of the West of Scotland, UK

March 30<sup>th</sup>, 2017

## Session II: Bio-interfaces/ Biomedical/ Bioactive surfaces and coatings

Conference Room 113/114

## Session Chairs:

Prof. Abraham Atta Ogwu, West of Scotland University, UK

Prof. Suil In, Department of Energy Systems Engineering (DGIST), Rep. of Korea

09:00-09:45	Applications of Biointerface Control to Bioelectronics and Nanomedicine <b>T. Ogino</b> , K. Ito, N. Sakaguchi, T. Minamisawa, S. Matsumura, K. Suga, K. Shiba, Y. Kimura and A. Hirano-Iwata	<b>Prof. Toshio Ogino</b> , Yokohama National University, Japan
09:45-10:30	Plasma processes for one step biological functionalisation of surfaces and interfaces <b>M. Bilek</b> , E. Kosobrodova, EA. Wakelin, A. Kondyurin, CT. Tran, B.Akhavan, DW. Hutmacher, AS. Weiss and DR. McKenzie	<b>Prof. Marcela Bilek</b> , Applied and Plasma Physics Research Group, University of Sydney, Australia

10:30-11:00 Coffee Break / Posters Session II

11:00-11:40	Delayed hepatic uptake of multi-phosphonic acid poly(ethylene glycol) coated iron oxide measured by real-time MRI G. Ramniceanu, B.-T. Doan, A. Graillet, C. Loubat, N. Mignet and	<b>Prof. Jean-Francois Berret</b> , Paris-Diderot University/CNRS, France
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	<b>J.-F. Berret</b>	
<b>11:40-12:20</b>	Evaluating the ion release, corrosion and immune cell activation behaviour of chromium nitride and oxide coatings with the potential for eliminating the risk of chromium ion release in orthopaedic implants. <b>A.A. Ogwu, S. Ur-Rahman, A.M. Oje and A. Crilly</b>	<b>Prof. Abraham Atta Ogwu, University of the West of Scotland, United Kingdom</b>
<b>12:30-14:00 Lunch Break / Posters Session II</b>		
<b>Session chairs:</b> <b>Prof. Marcela Bilek, Applied and Plasma Physics Research Group, University of Sydney, Australia</b> <b>Prof. Jean-Francois Berret, Paris-Diderot University/CNRS, France</b>		
<b>14:00-14:30</b>	Evaluation of the Toxicity and Biocompatibility of Novel Porous Acupuncture Needles <b>S. Sorcar and S-I. In</b>	<b>Prof. Suil In, Department of Energy Systems Engineering-DGIST, Rep. of Korea</b>
<b>14:30-15:00</b>	Preparation of platelet resistant PAMAM-g-diazirine bioadhesives for blood contacting applications <b>H.S. Nanda, G. Feng, I. Djordjevic and T.W. J. Steele</b>	<b>Prof. Terry Steele, Nanyang Technological University, Singapore</b>
<b>15:00-15:15</b>	Low Adhesive, Biologically Active Surfaces in the Non-Toxic Marine Biofouling Prevention <b>T. Vladkova, D. Akuzov, F. Bruemmer and I. Grunvald</b>	<b>Prof. Todorka Vladkova, University of Chemical Technology and Metallurgy, Bulgaria</b>
<b>15:15-15:30</b>	Screen Printing Technique for the Deposition of ZnO Nano-particles on PVA-Gelatin Surface for Anti-microbial Activity <b>J.V. Meshram and S.H. Pawar</b>	<b>Ms. Jagruti Meshram, D.Y. Patil University-Kolhapur, India</b>
<b>15:30-15:45</b>	Improving the biostability of flexible electrical active implants by passivating the electrode side openings with thin ALD layers <b>M. Westerhausen and B. Hofmann</b>	<b>Mr. Markus Westerhausen, Eberhard Karls University, Germany</b>
<b>15:45-16:00</b>	Metal-ceramic implants with "trap-killing" antibacterial effect <b>I.V. Sukhorukova, A.N. Sheveyko, S.G. Ignatov and D.V. Shtansky</b>	<b>Dr. Irina Sukhorukova, National University of Science and Technology- MISIS, Russia</b>
<b>16:00-16:30 Coffee Break / Posters Session II</b>		
<b>16:30-16:45</b>	Performance of Anti-Biofouling Barriers on Nano-Engineered Metal Surfaces <b>K. Song, J. Shim, J-Y. Jung, C. Lee and Y. Nam</b>	<b>Mr. Kyoungwan Song, Kyung-Hee University, Rep. of Korea</b>
<b>16:45-17:00</b>	Surface Modification of Polymeric Membranes for Biofouling Reduction <b>V. Kochkodan and M. A. Hussein</b>	<b>Dr. Viktor Kochkodan, Hamad Bin Khalifa University, Qatar</b>
<b>17:00-17:15</b>	Antifouling silane-based coatings on stainless steel for dairy products processing. <b>S. Zouaghi, T. Six, N. Nuns, A. Beaugendre, S. Bellayer, C. André, G. Delaplace and M. Jimenez</b>	<b>Ms. Sawsen Zouaghi, University Lille 1, France</b>
<b>17:15-17:30</b>	Thermal stability and corrosion resistance of CeO <sub>2</sub> -x coatings prepared by magnetron sputtering <b>Z. Shi, P. Shum, Z.Zhou and L. Kwok-Yan Li</b>	<b>Mr. Zhen Shi, City University of Hong Kong, Hong Kong</b>

**March 31<sup>st</sup>, 2017**

**Session III.A: Coatings for environmental and energy applications**

**Conference Room 113/114**

**09:30-10:00 Coffee Break**

**Session chairs:**

**Prof. Abraham Atta Ogwu, West of Scotland University, UK/ Dr. Patricia Muñoz-Escalona, University of the West of Scotland, UK/ Dr. Maria Dinescu, National Institute for Lasers Plasma Radiation Physics, Romania**

<b>10:00-10:30</b>	Surface Treatment of AlN Particles for High Thermal Conductivity Polymer Composites <b>S-L. Chung and J-S. Lin</b>	<b>Prof. Shyan-Lung Chung, National Cheng Kung University, Taiwan</b>
<b>10:30-10:45</b>	Surface modification of Membranes by Fluorographite Coating for	<b>Mr. Muhammad Irfan Siyal,</b>

	Application in Membrane Distillation. <b>M. Irfan Siyal</b> , A.A. Khan, C-K. Lee, C. Park, D. Shin and J-O. Kim	Hanyang University, <b>Rep. of Korea</b>
<b>10:45-11:00</b>	Growth and Characterization of N-type and P-type Aluminum Atimonides for Radiation Detections <b>K. Cheewajaroen</b> , P. Saengkaew, S. Sanorpim, V. Yordsri, C. Thanachayanont, N. Nuntawong and W. Rathanasakulthong	<b>Mr. Kulthawat Cheewajaroen</b> , Chulalongkorn University, <b>Thailand</b>
<b>11:00-11:15</b>	Band Structure Modulation and Great Nanocrystallization of BiFeO <sub>3</sub> in BiFeO <sub>3</sub> -Graphene Nanocomposites for Visible Photocatalytic Degradation of Bisphenol A from Aqueous Solution <b>T. Soltani</b> and B- K. Lee	<b>Mrs. Tayyebah Soltani</b> , University of Ulsan, <b>Rep. of Korea</b>
<b>11:15-11:30</b>	Rapid water permeation in graphene coated two-phase closed thermosyphons W.L. Tong, M.K. Tan and <b>Y.M. Hung</b>	<b>Dr. Yew Mun Hung</b> , Monash University, <b>Malaysia</b>
<b>11:30-11:45</b>	Surface Modification Effects of B4C Tile on the Wettability, Interfacial Bonding, and Impact Resistance of B4C Tile/Aluminum Hybrid Composites <b>T.G. Lee</b> , J. Park, J. Lee, I.Jo, S.K. Lee, S.H. Hong and H.J. Ryu	<b>Mr. Tae Gyu Lee</b> , Department of Nuclear and Quantum Engineering Advanced Institute of Science and Technology (KAIST), <b>Rep. of Korea</b>
<b>11:45-12:00</b>	Effects of current density on the anodizing behavior and electrical properties of ZrO <sub>2</sub> -coated Al foils <b>K. Zhang</b> and S.S. Park	<b>Mr Kaiqiang Zhang</b> Kyungpook National University, <b>Rep. of Korea</b>
<b>12:00-12:15</b>	Active carbon doped with different diameter silver nanowire as thin film electrode by ultrasonic spray process for high performance supercapacitor J-J. Huang, J-Y. Lin , <b>Y-L. Hsueh</b> and Y-X. Zhang	<b>Mr. Yu-Lee Hsueh</b> , Da-Yeh University, <b>Taiwan</b>
<b>12:15-12:30</b>	Co-sputtering of Cu <sub>2</sub> ZnTiS <sub>4</sub> Thin Films for Solar Cells S. Adiguzel, D. Kaya, <b>Y.S. Ocak</b> , M.F. Genisel, O. Celik and A. Tombak	<b>Dr. Mustafa Fatih Genişel</b> , Dicle University, <b>Turkey</b>
<b>12:30-12:45</b>	The effect of boric acid concentration on the TiO <sub>2</sub> compact layer for dye-sensitized solar cell J-J. Huang, M-J. Wu, C-N. Chen, Y-R. Ho and <b>C-F. Hsu</b>	<b>Mr. Chun-Fa Hsu</b> , National Changhua University of Education, <b>Taiwan</b>

## Posters Sessions

**March 29<sup>th</sup>, 2017**

### Session I: Surface treatments and coatings deposition processes

#### Conference Room 115

N.	Poster Title	Author/Affiliation/Country
1	Surface modification of coarse ceramic powders by a microwave plasma torch: Their mobility improvement and desification <b>S.M. Chun</b> and Y.C. Hong	<b>Mr. Semin Chun</b> , National Fusion Research Institute, <b>Rep. of Korea</b>
2	Surface treatment of expanded polystyrene foam by atmospheric non-thermal plasma and its wettability C.H. Cho and <b>Y.C. Hong</b>	<b>Mr. Chang Hyun Cho</b> , National Fusion Research Institute, <b>Rep. of Korea</b>
3	Down-sizing of iron particles via evaporation in a microwave plasma torch <b>D.H. Shin</b> , S.M. Chun and Y.C. Hong	<b>Dr. Dong Hun Shin</b> , National Fusion Research Institute, <b>Rep. of Korea</b>
4	The surface modification characteristic of Polydimethylsiloxane (PDMS) using inductively coupled plasma for transfer material Y. G. Kim, <b>N. Lim</b> , J. Kim, C. Kim and K-H. Kwon	<b>Mr. Nomin Lim</b> , Korea University, <b>Rep. of Korea</b>
5	Intrinsic Stresses in CrN and TiN Coatings Deposited by Vacuum Arc Method A.I. Kalinichenko, S.S. Perepelkin and <b>V.E. Strelnytskiy</b>	<b>Prof. Volodymyr Strelnytskiy</b> , Kharkov Institute of Physics and Technology, <b>Ukraine</b>
6	Composition, structure and properties of electroless deposited rhenium-rich Re-Co thin films. <b>A. Inberg</b> , A. Duhin, N. Eliaz and E. Gileadi	<b>Prof. Alexandra Inberg</b> , Tel Aviv University, <b>Israel</b>
7	Effect and surface morphology of nanostructure superhydrophobic fabricated by ion beam irradiation <b>D.H. Kim</b> , H.H. Kang and D-H. Lee	<b>Mr. Donghyeon Kim</b> , Uiduk University, <b>Rep. of Korea</b>
8	Control of Au Nanoparticles Size and Concentration on Glass Substrate by Nd:YAG Laser Radiation A. Medvids, A. Mychko, P. Onufrijevs, <b>R. Suzuki</b> and J. Kondoh	<b>Mr. Ryutaro Suzuki</b> , Shizuoka University, <b>Japan</b>
9	Synthesis of fluorinated silica capsules and their functionalization with double-layer structure of coating: water-oil repellent and surface properties <b>Y.S. Kim</b> , J-W. Kook, K.S. Hwang, J.h. Ahn and J-Y. Lee	<b>Mr. Yong Soo Kim</b> , Korea Institute of Industrial Technology, <b>Rep. of Korea</b>
10	Influence of Modulation Ratios on the Microstructure and Mechanical Properties of VN/ZrB <sub>2</sub> Multilayers <b>Y.Y. Nie</b> , Y.Z. Shi, L. Dong and D.J. Li	<b>Mr. Yuyao Nie</b> , Tianjin Normal University, <b>China</b> .
11	2D Honeycomb Structured VO <sub>2</sub> Thin Films for Smart Window Application with Selective NIR Transmittance Control J-H. Yu, S-H. Nam, J.W. Lee, D.I. Kim, H.J. Seo, <b>K-H. Hwang</b> , H. Yang and J-H. Boo	<b>Mr. Ki-Hwan Hwang</b> , Sungkyunkwan University, <b>Rep. of Korea</b>
12	Shape-controlled Synthesis of Hydrophilic/hydrophobic Aluminum Films on Pyramid-textured Silicon Wafer <b>H-R. Lim</b> , N.S.A. Eom, Y-T. Kwon, H-B. Cho and Y-H, Choa	<b>Ms. Hyo-Ryoung Lim</b> , Hanyang University, <b>Rep. of Korea</b>
13	Various synthesis of graphene oxide as a anti-corrosion film coating on steel substrate <b>C. Y. Ho</b> and S. M. Huang	<b>Prof. Ching-Yuan Ho</b> Chung-Yuan Christian University, <b>Taiwan</b>
14	Poly(glycidyl methacrylate) Coated Carbonyl Iron/Silicone Rubber Magnetic Composite Elastomer and Its Magnetorheology <b>S. H. Kwon</b> , J. S. An, S. Y. Choi, K. H. Chung and H. J. Choi	<b>Mr. Seung Hyuk Kwon</b> , Inha University, <b>Rep. of Korea</b>
15	Effect of oxide surface layer on the joining strength of Carbon Fiber Reinforced Plastic to AZ31 Mg Alloy by Hot Metal Pressing Joining. <b>B. Arkhurst</b> and J.H. Kim	<b>Mr. Barton Arkhurst</b> , Hanbat National University, <b>Rep. of Korea</b>
16	Fabrication of Bi <sub>2</sub> Te <sub>3</sub> -based thermoelectric module using thermocompression bonding <b>J.C. Yoon</b> , H-S. Sohn, I. Son, K. Park, S. Cho and K.T. Kim	<b>Mr. JongChan Yoon</b> , Kyungpook National University, <b>Rep. of Korea</b>
17	Microstructural Improvement of nanocrystals-processed Cu <sub>2</sub> ZnSnSe <sub>4</sub> absorber layers via facile wet-milling process <b>B.-I. Park</b> , J. M. Lee, S. Y. Lee and D.-K. Lee	<b>Mr. Bo-In Park</b> , Korea Institute of Science and Technology, <b>Rep. of Korea</b>
18	Effect of Holding Time on Mechanical Properties of Gradient-Hardened	<b>Ms. ChangLim Kim</b> , Sunchon

	Pure Titanium <b>C.L. Kim</b> , D-G. Lee and Y. Lee	National University, <b>Rep. of Korea</b>
19	Caviatation characteristics of gray cast iron treated by plasma ion nitriding in seawater <b>I. C. Park</b> and S. J. Kim	<b>Mr. Il-Cho Park</b> , Mokpo Maritime University, <b>Rep. of Korea</b>
20	Comparing Graphene-ZnO Nanorod and Graphene-ZnO Nanoparticles <b>A. Tayyebi</b> and B. K. Lee	<b>Dr. Ahmad Tayyebi</b> , University of Ulsan, <b>Rep. of Korea</b>
21	Selective hydrophilization of ABS/PC and HIPS in electrical and electronic shredder residue by ZnO coating assisted microwave process and its separation using froth flotation <b>N.T.T.Truc</b> and B-K. Lee	<b>Ms. Nguyen T.T.Truc</b> , University of Ulsan, <b>Rep. of Korea</b>
22	Formation and Characterization of Cu <sub>2</sub> ZnTi(S:Se) <sub>4</sub> Thin Films D. Kaya, Y.S. Ocak, S. Adiguzel, <b>M.F. Genisel</b> , O. Celik and A. Tombak	<b>Dr. Yusuf Selim Ocak</b> , Dicle University, <b>Turkey</b>
23	n-type conductivity of CuO thin films by metal doping A. Tombak, S. Baturay, D. Kaya and <b>Y.S. Ocak</b>	<b>Dr. Yusuf Selim Ocak</b> , Dicle University, <b>Turkey</b>
24	Different Temperature Dependence of H <sub>2</sub> O and O <sub>3</sub> Reactivity and Residual Carbon Impurities in Atomic-Layer-Deposited Al <sub>2</sub> O <sub>3</sub> film <b>H.S. Jin</b> , T.J. Seok, T.J. Park and J. Kim	<b>Mr. Hyun Soo Jin</b> , Hanyang University, <b>Rep. of Korea</b>
25	Binding properties of gaseous wet iodine in silver nanoparticle (Ag) and ion (Ag <sup>+</sup> ) anchored organic-inorganic silica gel <b>H-J. Im</b> , K-S. Choi and J-W.Yeon	<b>Dr. Hee-Jung Im</b> , Korea Atomic Energy Research Institute, <b>Rep. of Korea</b>

**March 30<sup>th</sup>, 2017**

**Session II: Surfaces and Coatings applications**

**Conference Room 115**

N.	Poster Title	Author/Affiliation/Country
1	Targeted Delivery of Small Interfering RNA (siRNA) by Using pH Sensitive Carbonate Apatite with Proteins coating <b>N. I. Kamaruzman</b> and E. H. Chowdhury	<b>Ms. Nur Izyani Kamruzman</b> , Monash University, <b>Malaysia</b>
2	Surface-modification of carbonate apatite nanoparticles enhances delivery and cytotoxicity of gemcitabine and anastrozole in breast cancer cells <b>F.S. Mozar</b> and E.H. Chowdhury	<b>Ms. Fitya Syarifa Mozar</b> , Monash University, <b>Malaysia</b>
3	Ag <sup>+</sup> Implantation Fluence Induced the Structural, Mechanical, Osteoblasts and Antibacterial Property of TiN/Ag Multilayers <b>X.H. Sun</b> , H.H. Gong, L. Dong, M.L.Zhao, R. X. Wan, H. Q. Gu and D.J. Li	<b>Ms. Xiuhua Sun</b> , Tianjin Normal University, <b>China</b>
4	Synthesis, Characterization, and Biomedical Application of Poly-acrylic Acid Coated Gadolinium Oxide Nanoparticles <b>X. Miao</b> , W. Xu, H. Cha, Y. Chang, I. Taek Oh, K.S. Chae and G.H. Lee	<b>Ms. Miao Xu</b> , Kyungpook national university, <b>Rep. of Korea</b>
5	Bio-funtionalized Titanium Substrate via Initiated Chemical Vapor Deposition System for Bone Tissue Regeneration <b>Y.H. Youn</b> , S.J. Lee, S.G. Im, B.S. Kim and I.K. Kwon	<b>Ms. Yun Hee Youn</b> , Seoul National University, <b>Rep. of Korea</b>
6	Evaluation of Bone Formation on the Ultrafine-structure in Simulated Body Fluid J-M. Jang and <b>H-C. Choe</b>	<b>Prof. Han Cheol Choe</b> , Chosun University, <b>Rep. of Korea</b>
7	Bone-like Apatite Formation on Si-Zn-Mn-hydroxyapatite Coating on Ti-6Al-4V Alloy by Plasma Electrolytic Oxidation <b>M-G. Park</b> and H-C. Choe	<b>Mr. Min Gyu Park</b> , Chosun University, <b>Rep. of Korea</b>
8	Corrosion Phenomena of Plasma Electrolytic Oxidized Films Formed in Solution Containing Mn, Mg and Si ions <b>S-G. Lim</b> and H-C. Choe	<b>Mr. Sang-Gyu Lim</b> , Chosun University, <b>Rep. of Korea</b>
9	Effect of TiO <sub>2</sub> Particle Size and Layer Thickness in Mesoscopic Perovskite Solar Cells <b>D.G. Lee</b> , M-C. Kim, B.J. Kim, S.M. Lee, M. Choi, S. Lee and H.S. Jung	<b>Mr. Dong Geon Lee</b> , Sungkyunkwan University, <b>Rep. of Korea</b>
10	Electrochemical Degradation of PEO-treated Ti-6Al-4V Alloy in Solution Containing Si and Mg ions	<b>Ms. Seon-Yeong Park</b> , Chosun University, <b>Rep. of Korea</b>

	<b>S-Y. Park</b> and H-C. Choe	
11	Effects of Zn and Si Ions on the Corrosion Behaviors of PEO-treated Ti-6Al-4V Alloy <b>I-J. Hwang</b> and H-C. Choe	<b>Ms. InJo Hwang</b> , Chosun University, Rep. of Korea
12	Electrochemically Released Characteristics of Ca, P, Sr, and Si Ions from PEO-treated Ti-6Al-4V Alloy Surface <b>J-M. Yu</b> and H-C. Choe	<b>Ms. JiMin Yu</b> , Chosun University, Rep. of Korea
13	Liquid Marbles with Superhydrophobic Sands <b>A. Gallo Jr</b> and H. Mishra	<b>Mr. Adair Gallo Junior</b> , King Abdullah University of Science and Technology, Saudi Arabia
14	Synthesis of RGO-Decorated Nanograined ZnO Nanorods and Their Excellent Gas Sensing Properties G.-J. Sun, J.K. Lee, S.K. Hyun and <b>C. Lee</b>	<b>Mr. Woo Seok Lee</b> , Inha University, Rep. of Korea
15	Ultraintense Short-Wavelength Emission from ZnO-Sheathed ZnS Nanorods G.-J. Sun, <b>J.K. Lee</b> , W.S. Lee, S. Lee and C. Lee	<b>Ms. Jae Kyung Lee</b> , Inha University, Rep. of Korea
16	Synthesis of the carbon-moss on the carbon micro coil and their electromagnetic-wave shielding <b>G-H. Kang</b> and S-H. Kim	<b>Mr. Gi-Hwan Kang</b> , Silla University, Rep. of Korea
17	UV Sensing Properties of ZnO Nanowires/Nanorods C. Rodwihok, S. Choopan, P. Ruankham, A. Gardchareon, S. Phadungthitidhada and <b>D. Wongratanaphisan</b>	<b>Ms. Duangmanee Wongratanaphisan</b> , Chiang Mai University, Thailand
18	Opposite behavior of multilayer graphene/ITO p-electrode for GaN based-light emitting diodes depending on thickness of ITO layer T. K. Kim, S. K. Oh, Y-J. Cha and <b>J.S. Kwak</b>	<b>Prof. Joon Seop Kwak</b> , Sunchon National University, Rep. of Korea
19	AlN/ITO Hybrid Electrodes with Various Buffer Layers: Its Application to AlGaN-Based Ultraviolet Light-Emitting Diodes K. H. Kim, <b>T. H. Lee</b> and T. G. Kim	<b>Mr. Tae Ho Lee</b> , Korea University, Rep. of Korea
20	Feasibility of icephobicity induced by self-propelling dropwise condensate <b>K-H. Hwang</b> , J-H. Boo, G.H. Lee, P.M. Claesson and S.H. Yun	<b>Mr. Ki-Hwan Hwang</b> , Sungkyunkwan University, Rep. of Korea
21	Performance Improvement in Poly-Silicon Channel of 3D NAND Flash Memory under D2/H2 Annealing <b>S. B. Hong</b> , T. H. Lee, J. H. Park and T. G. Kim	<b>Mr. Seok Bum Hong</b> , Korea University, Rep. of Korea
22	Cavitation Damage Characteristics of Electroless Nickel Coating in Sea Water <b>I. C. Park</b> and S. J. Kim	<b>Mr. Il-Cho Park</b> , Mokpo Maritime University, Rep. of Korea
23	Phenol degradation using an anodized graphene-doped TiO <sub>2</sub> nanotube composite under visible light S-R. Kim, <b>I. Ali</b> , K. Park and J-O. Kim	<b>Mr. Imran Ali</b> , Hanyang University, Rep. of Korea
24	Effect of Dispersion Stability of CuS Nanoparticles on Localized Surface Plasmon Resonance <b>Y-T.Kwon</b> , G-D. Lim, and Y-H. Choa	<b>Mr. Young-Tae Kwon</b> , Hanyang University, Rep. of Korea
25	Hollow Nanostructures Composed of Carbon-coated Ti <sup>3+</sup> Self-doped TiO <sub>2</sub> -Reduced Graphene Oxide Supported Pt electrocatalysts for PEMFC <b>C.H. Sung</b> , B.M. Moon and J.Y. Kim	<b>Mr. Chang Hyun Sung</b> , Korea Institute of Science and Technology, Rep. of Korea
26	Hierarchical porous cobalt oxide-carbon composite as bifunctional catalyst for oxygen reduction and evolution reaction K.J.Lee, <b>S.H.Jo</b> , K-Y. Lee, S.W. Nam and J.Y.Kim	<b>Ms. Sun Hee Jo</b> , Korea Institute of Science and Technology, Rep. of Korea