ICPMAT 2018

The 13th International Conference on the Physical Properties and Application of Advanced Materials

CONFERENCE SCHEDULE

Tuesday, September 4th

REGISTRATION: University Library, 1st floor 15:00 – 18:00

Wednesday, September 5th

REGISTRATION: University Library, 10th floor 8:00

OPENING CEREMONY: University Library, 10th floor 9:00 – 9:30

09:30 – 9h45 **COFFEE BREAK**

PLENARY LECTURE: University Library, 10th floor, 9:45 – 12:00

09:45 – 10:30 Chair session: Prof. Tibor Kvackaj

PL01 – 207 Reciprocal Space Map Measurement for Unequal Lattice Change of Ceramics Thin Films at High Temperature
Atsushi Saiki, Shogo Miwa, Takashi Hashizume

10:30 – 11:15 Chair session: Prof. Atsushi Saiki

PL02 – 144 Carbon Nanotube Reinforced Metal Matrix Composites Prepared by Powder Metallurgy and Plastic Deformation
Doan Dinh Phuong

11:15 – 12:00 Chair session: Prof. Kenji Matsuda

PL03 – 228 Improvement of Mechanical Properties by Plastic Deformations Combination in CuCrZr alloy
Tibor Kvackaj, Robert Kocisko, Jana Bidulska, Andrea Kovacova, Dusan Simcak, Patrik Petrousek, Alica Fedorikova

12:00 – 13:30 **LUNCH**: University Library Canteen, 10th floor

PLENARY LECTURE: University Library, 10th floor13:30 – 16:00

13:30 – 14:15 Chair session: Prof. Pengchao Si

PL05 – 237 Nanojunctions Based on Metal Oxide Nanowires for Low Temperature and Ultralow Power Consumption Gas Sensors
Nguyen Van Hieu

14:15 – 15:00 Chair session: Prof. Nguyen Van Hieu

PL06 – 216 Candlelight OLED for Lighting Renaissance
Jwo-Huei Jou

15:00 – 15:45 Chair session: Prof. Jow-Huei Jou

PL07 – 344 Time Dependence of Muon Spin Relaxation Rate in Al-Mg-Si Alloys
Katsuhiko Nishimura

15:45 – 16:00 **COFFEE BREAK**

POSTER SESSION: University Library, 10th floor, 16:00 – 17:00

WELCOME RECEPTION AND BANQUET: University Library Canteen, 10th floor, 18:00 – 21:00

Scientific.Net
Materials Science and Engineering

The 13th International Conference on the Physical Properties and Application of Advanced Materials 2018

CONFERENCE SCHEDULE

Thursday, September 6th

ORAL PRESENTATION: University Library, 9:00 – 12:15

	Room: 303 **Topic 1: Metallurgical Engineering** *Chair session:* *Prof. Piotr Zabinski* *Prof. Toshiya Shibayanagi*	Room: 923 **Topic 2: Function Materials** *Chair session:* *Prof. Katsuhiko Nishimura* *Prof. Yong Zou*	Room: 702 **Topic 3: Structural Materials** *Chair session:* *Prof. Robert Bidulsky* *Prof. Sengo Kobayashi*	Room: 902 **Topic 4: Computational Materials Science** *Chair session:* *Prof. Dinh Van Hai* *Dr. Tao Hu*
09:00 – 9:30	IT01 - 101 Microstructural Changes and Melting Behaviour of Al-Si/AlN Nanomultilayer Systems with Different Si Concentrations *J. Lipecka, M. Lewandowska, J. Janczak-Rusch, G. Richter, L.P.H. Jeurgens*	IT02 - 212 Fabrication of Nanoporous Metals and its Electrochemical Applications *Pengchao Si, Bing Luo, Fangyuan Diao*	IT03 - 318 Machinability and Physical Properties of Ti-Al-C MAX phase Ceramics Produced by Using Pulsed Electric Current Sintering *Makoto Nanko, Kazuki Iihara, Shunsuke Okumura, Naoya Yamaguchi*	IT04 - 401 Computational Materials Science of Perovskite Oxides from First Principles *Wei Ren*
09:30 – 9:50	O102 Effect of Ni-W-P Plating on Bonding Strength of Bi-Te Thermoelectric Module *Sunghwa Bae, Seungsub Yoon, Injoon Son*	O201 In Vitro Biocompatibility of Magnesium Matrix Composites In-situ Fabricated by Spark Plasma Sintering *Dinh Ngoc Pham, Nam Viet Nguyen, Nguyen Quang Cao, Sachiko Hiromoto, Equo Kobayashi*	O302 Effect of Natural Aging on Two Step Aging Behavior of Al-Mg-Si Alloys *Trinh Van Ba, Taiki Tsuchiya, Seungwon Lee, Susume Ikeno, Kenji Matsuda*	O403 Dislocation Dynamics Simulations of Dislocation-Particle Bypass Mechanisms *Jianbin Liu, Shinji Muraishi*
09:50 – 10:10	O103 The Effect of an Artificial Li3PO4 Layer on Lithium Anode for Enhanced Cycling Performance of Li-O2 Battery *Huanhuan Guo, Pengchao Si, Lijie Ci*	O202 Rapid Synthesis of MXene at Room Temperature *Yingwen Cao, Yong Zou*	O304 TEM Observation with and without Homogenization in Extruded Al-Mg-Si Alloys *Takara Umezawa, Taiki Tsuchiya, Seungwon Lee, Susumu Ikeno, Kenji Matsuda*	O404 System Analysis of Nonequilibrium Crystallization of Nonperitectic Iron-based Alloys *Valeri Mikhailovich Golod, Le Cao Dang*
10:10 – 10:30	O129 Microstructure characterization unveiled the preparation techniques of old Japanese swords *Anh Hoang Pham, Takuya Ohba, Shigekazu Morito, Taisuke Hayashi*	O210 In-plane c-axis Oriented BaM Hexaferrite Films with Self-biased Properties *Xiaozhi Zhang, Zhenxing Yue, Qianying Yu, Jincang Zhang*	O312 Microstructures and Mechanical Properties of Novel 2297 Al–Cu–Li Alloy after T6 Heat Treatment *Shuwei Duan, Tao Wang, Kenji Matsuda, Yong Zou*	
10:30 – 10:45	**COFFEE BREAK**			

	Topic 1: Metallurgical Engineering *Chair session:* *Prof. Malgorzata Lewandowska* *Prof. Bui Anh Hoa*	**Topic 2: Function Materials** *Chair session:* *Prof. Ken Hirota* *Prof. Yong Zou*	**Topic 3: Structural Materials** *Chair session:* *Prof. Shinji Muraishi* *Prof. Krzysztof Zaba*	**Topic 4: Computational Materials Science** *Chair session:* *Prof. Wei Ren*
10:45 – 11:15	IT05 - 104 Removal of Tramp Elements in Steel for Recycling Ferrous Scraps *Hideki Ono*	IT13 - 235 Defect Driven photo-generated Carrier Relaxation in the Binary Alloys of Si-Ge Nanocrystals *Ngo Ngoc Ha*	IT11 - 348 New Low Density High Ductility Age Hardenable Magnesium Mg-Li-Sc Alloys *Jan Dutkiewicz, Lukasz Rogal, Damian Kalita, Przemysław Fima*	IT08 - 405 Adaptive Time-Stepping Phase Field Model for Ferroelectrics based on the Ginzburg-Landau Theory *Le Van Lich, Dinh Van Hai*
11:15 – 11:35	O108 Mechanical and Tribological Properties of Nanostructured TiAlVN Coatings Deposited by Magnetron Sputtering Process *Duong Van Luong, Doan Dinh Phuong, Kyoung Il Moon, Phan Ngoc Minh*	O218 Effect of Ti-15Zr-4Nb-4Ta Alloy Nanotube on Osteoblast Behavior in Vitro *Satoshi Okano, Masayuki Mori, Sengo Kobayashi, Takeaki Okamoto*	O313 Effect of High-Pressure Torsion (HPT) and Subsequent Aging on Microstructure and Mechanical Properties of Al-Li (-Cu, -Mg) Alloys *Seungwon Lee, Yuhei Haizuka, Taiki Tsuchiya, Seiji Saikawa, Kenji Matsuda, Zenji Horita, Shoichi Hirosawa, Susumu Ikeno*	O406 Intrinsic and Anisotropic Rashba Spin Splitting in Janus Transition Metal Dichalcogenide monolayers *Tao Hu, Fanhao Jia, Guodong Zhao, Jiongyao Wu, Alessandro Stroppa, Wei Ren*
11:35 – 11:55	O127 Applicability of Wiedemann-Franz Law to Thermal Conductivity of Molten Field's Metal *Nobuyuki Mizuno, Shoki Kosai, Eiji Yamasue*	O219 Microstructure Observation of Nb_3Sn Superconducting Multi Wire using Cu-Sn-Zn Ternary Bronze *Daichi Kawamukai, Taiki Tsuchiya, Seungwon Lee, Kenji Matsuda, Yoshimitsu Hishinuma*	O315 Age-Hardening Behavior in Al-0.5mol%Mg_2Si-Xmol%Si (X=0.2, 0.4, 0.8, 1.6) Alloys Aged at 473K *Taiki Tsuchiya, Yuki Makita, Seungwon Lee, Seiji Saikawa, Susumu Ikeno, Kenji Matsuda*	
11:55 – 12:15		O208 Synthesis of KOH-activated Glucose-based Carbon with High Electrochemical Performance for Use in Supercapacitor Materials *Sangeun Chun, Jay F. Whitacre*	O317 Microstructure and Catalytic Activity of Melt Spun Al-Cu-Fe Ribbons *Lidia Litynska-Dobrzynska, Katarzyna Stan-Głowińska, Ewa M. Serwicka*	
12:30 – 13:30	**LUNCH:** University Library Canteen, 10th floor			

CONFERENCE SCHEDULE

ORAL PRESENTATION: University Library, 13:30 – 16:30

	Room: 303	Room: 923	Room: 702	Room: 902
	Topic 1: Metallurgical Engineering *Chair session:* *Prof. Guanghui Min* *Prof. Tibor Kavackaj*	**Topic 2: Function Materials** *Chair session:* *Prof. Makoto Nanko* *Prof. Do Minh Nghiep*	**Topic 3: Structural Materials** *Chair session:* *Prof. Kenji Matsuda* *Prof. Jana Bidulska*	**Topic 2: Function Materials** *Chair session:* *Prof. Equo Kobayashi* *Prof. Tran Duc Huy*
13:30 – 14:00	IT09 - 110 Magnetoelectrochemistry - New Way to Control Morphology of Cathodic Deposit *Piotr Zabinski*	IT07 - 239 Self-Centering Capacity of Superelastic SMA Fibers Considering Various Diameter and Spearhead Length *Eunsoo Choi, Behzad Mohammadzadeh, Doohyun Kim, Sang-yong Lee, Eunsol Kwon, Seung-Wook Chae, Hoan Duong Nguyen, Woo Jim Kim*	IT12 - 308 Effects of Oxygen and Nitrogen Addition on Phase Transformation in Ti-10at%V *Sengo Kobayashi, Ryohei Fukushima, Shiki GoYoshi, Satoshi Okano*	IT14 - 225 Nanoscale Assembly of Superconducting Vortices with STM Tip *Junyi Ge, Valadimir N. Gadilin , Jacques Tempere, Cun Xue, Youhe Zhou, Jozef T. Devreese, Victor V. Moshchalkov*
14:00 – 14:20	O123 Wetting Behavior of Liquid Iron-Carbon Sample on Graphite Substrate in the Initial Contact Period *Son Cao Nguyen, Koichiro Ohno, Takayuki Maeda, Kazuya Kunitomo*	O222 $ZnFe_2O_4$ Nanofibers Fabricated on Chip by Electrospinning for NH_3 Gas Sensors *Hoang Van Nguyen, Phuoc Hong Phan, Hung Manh Chu, Le Thanh Thi Dang, Duy Van Nguyen, Hoa Duc Nguyen, Hieu Van Nguyen*	O345 Synthesis and Properties of the High Entropy Oxides Characterized by Rocksalt and Spinel Structures *Mirosław Stygar, Juliusz Dąbrowa, Marek Danielewski, Manfred Martin*	O255 Enhance Piezoelectric Properties By Growing of $0.8(Na_{0.5}Bi_{0.5})TiO_3$-$0.2Sr_{0.7}Ca_{0.3}TiO_3$ Single Crystal by Solid State Crystal technique *Phan Gia Le, Jong Sook Lee, Thuy Linh Pham, John G. FISHER Hwang-Pil Kim, Wook Jo*
14:20 – 14:40	O137 Study of Friction Stir Welding and Heat Treatment Process on 7075 Aluminum Alloy *Yuan Zhang, Yong Zou*	O238 Enhancement of Electrical Properties in Compositionally Graded xBiFeO3-(1-x)$PbTiO_3$ Thin Films on Stainless Steel Substrates *Susu Wang, Jianguo Chen, Jinrong Cheng*	O320 Effect of Low Temperature Heat Treatment on Fatigue Properties of 6005A Aluminum Alloy Friction Stir Welding Joints *Yong Zou, Tao Wang, Dongting Wu, Kenji Matsuda*	O256 Influence of Ball-Milling Time on Electric Properties of $BiFeO_3$-$PbTiO_3$-$BaZrO_3$ Piezoceramics *Jie Jian, Rui Peng, Jianguo Chen, Jinrong Cheng*
14:40 – 15:00	O113 Study of Microstructure Distribution and Properties of Cu/TiB2 Composite Coating on H13 Steel Surface Prepared by Laser Cladding *Tran Van Nghia, Yang Sen*		O321 High Efficiency Wear-Resistant Surfacing Layer Preparated by Twin-Wire Indirect Arc Welding *Dongting Wu, Yong Zou, Chuanwei Shi, Guanlin Zhao*	O258 Surfactant Dependent Nanostructured Co_3S_4/$Zn_{0.76}Co_{0.24}S$: High Performance Electrode Material for Asymmetric Supercapacitors *Yuan Yang, Pengchao Si*
15:00 – 15:15	**COFFEE BREAK**			

	Topic 2: Function Materials *Chair session:* *Prof. Hideki Ono* *Dr. Ngo Ngoc Ha*	**Topic 2: Function Materials** *Chair session:* *Prof. Junyi Ge* *Prof. Hisayuki Suematsu*	**Topic 3: Structural Materials** *Chair session:* *Prof. Nguyen Hong Hai* *Prof. Seungwon Lee*	**Topic 3: Structural Materials** *Chair session:* *Prof. Atsushi Saiki* *Prof. Injoon Son*
15:15 – 15:45	IT17 - 231 Water Molecule Absorption in $Sr_2Ca_2Cu_3O_y$ Superconductors and Enhancement of Critical Current Density Properties *H. Suematsu, T. Nagumo, A. Sklyarova, T. Aoba, G.Thorogood, A. Fujimoto, T. M. D. Do, T. Nakayama, K. Niihara*	IT10 - 220 Simultaneous Synthesis and Densification of Carbon Nano-Materials Dispersed Boron Carbide Composites Using Pulsed Electric-Current Pressure Sintering (PECPS) *Ken Hirota, Hironobu Hirahara, Masaki Kato, Toshiyuki Nishimura*	IT15 - 310 Microstructure Evolution of AM30 Mg Alloys by Homogenizing and Sequentially Rolling *Guang-hui Min, Sik-Bong Kang, Jae-hyung Cho, Yi Sun, Qian Wang*	IT16 - 307 Micromechanical Analysis of Dislocation and Precipitate Interactions in Aluminum Alloys *Shinji Muraishi, Liu Jianbin*
15:45 – 16:05	O241 Nanoengineering Silicon Nanocomposite for High Energy Density Lithium-ion Battery Application *Lijie Ci, Wei Zhai, Xiaoyan Xu, Qing Ai*	O223 Transmission Electron Microscopy Study on The Microstructure of GeTe-based Thermoelectric Materials *Hyunho Kim, Hyerin Jeong, Jaeik Kwak, Hyunji Kim, Ho Seong Lee*	O322 Microstructure and Mechanical Properties of In-situ Cast Aluminum Based Composites Reinforced with TiC Nano-Particles *W. Maziarz, P. Bobrowski, A. Wojcik, A. Bigos, L. Szymański, P. Kurtyka, E. Olejnik*	O329 Pore Structure in a Commercial Ready-to-Press Aluminium based Powder Metallurgy Alloy *Jana Bidulska, Robert Bidulsky, Tibor Kvackaj, Marco Actis Grande*
16:05 – 16:25	O251 The Microstructure And Electrical Properties of Low Temperature Sintered $0.57(Bi_{0.8}La_{0.2})(Fe_{0.95}Ga_{0.05})$-$0.43PbTiO_3$ Ceramics *Feng Luo, Shujin Shen, Jianguo Chen, Jinrong Cheng*	O250 Development of Temperature-stable Dielectric Properties of Barium Strontium Titanate *Xiaoxiao Guo, Dengren Jin, Kai Xu, Jinrong Cheng, Jianguo Chen*	O323 Process Design for Superalloys Sheet Rotary Forming *Krzysztof Zaba, Sandra Puchlerska, Tomasz Pieja, Jaroslaw Pyzik*	O332 Development of Disc Friction Joining and its Application to Similar and Dissimilar Joining *Toshiya Shibayanagi, Shyuhei Hirose, Norihiro Tajiri, Kyosuke Ito, Koshiro Sugimori, Satoru Ishihara*
16:25 – 16:45	O254 Dielectric and Piezoelectric Properties of $0.65BiFeO_3$-$0.25(Pb_{1-x}Sm_x)TiO_3$-$0.1BaTiO_3$ Adding Sm Near the Morphotropic Phase Boundary *Zhenhai Ning, Jianguo Chen, Dongyan Fu, Jinrong Cheng*	O221 Electronic Structure of FeS Superconductor *J. Miao, X. H. Niu, D. F. Xu, Q. Yao, Q. Y. Chen, T. P. Ying, S. Y. Li, Y. F. Fang, J. C. Zhang, S. Ideta, K. Tanaka, B. P. Xie, D. L. Feng, Fei Chen*	O324 Effect of Mg Content on Mechanical Properties in Al-10mass%Si-0.05～0.80 mass%Mg Alloy Die Casting *Seiji Saikawa, Masahiko Iijima, Arisa Osugi, Yiyang Zhao, Hisao Kazuta, Susume Ikeno*	O342 Synthesis of High Purity Yttrium Diborocarbides Powder from Y_2O_3, B_4C, and Carbon Powder Mixtures by High- Energy Ball-Milling and Reactive Spark Plasma *Van-Quyet Nguyen, Jun-Seop Kim, Hee-Jung Lee, Jian Gu, Zhao Lin, Sea-Hoon Lee*
18:00 – 20:00	**FAREWELL PARTY:** University Library Canteen, 10th floor			

Friday, September 7th

TECHNICAL TOUR

7:00	HUST square (Hotel): Departure to Hoa Phat Steel Company, Hai Duong, Vietnam
12:30	Lunch at Ha Long Bay, Quang Ninh, Vietnam
12:00-16:00	Ha Long Bay sightseeing tour
19:30	End the trip, Arrive at HUST (Hotel)