

Scientific Programme

Sunday, 14th September

18:00 **Welcome reception and dinner** (Hotel POLONEZ – Reymonta street 15)

Monday, 15th September

Opening ceremony (Lecture Room 0.10B, Building B-8)

9:00-9:10 **Kazimierz Przybylski**

Welcome

9:10-9:20 **Jerzy Lis (DEAN)**

Opening Remarks

9:20-9:30 **Yuukou Horita (DEAN)**

Opening Comments

Session 1 (Lecture Room 0.10B, Building B-8)

Chairs: Kenji Matsuda, Kazimierz Przybylski

9:30-10:00 **Yuukou Horita**

Special lecture: Introduction of Faculty, and Information Technology

10:00-10:30 **Jerzy Lis, R. Chlubny, C. Kapusta**

Processing and Properties of Max Phases – Based Materials Using SHS

Technique..... 14

10:30-10:50 Masahiro Kawasaki, Masateru Nose, **Makoto Shiojiri**

Analytical STEM and Its Application to Thin Film Characterization..... 15

10:50-11:10 *Coffee break*

Session 2 (Lecture Room 0.10B, Building B-8)

Chairs: Zbigniew Grzesik, Torranin Chairuangri

11:10-11:30 **Kenji Matsuda, Susumu Ikeno**

Hexagonal Equilibrium Phase in Al-Mg₂Si alloys with Novel elements..... 16

11:30-11:50 **Yong Zou, Guanlin Zhao, Jie Chen**

The effect of evaluation of microstructure on corrosion resistance of annealed Ni–P amorphous alloys..... 17

11:50-12:10 **Marek Szczerba, S. Kopacz, M.J. Szczerba**

The discovery of the reverse FCC deformation twinning..... 18

12:10-12:30 **Seiji Saikawa, Goshi Aoshima, Susumu Ikeno, Keisuke Morita, Noboru Sunayama, Koichi Komai**

Microstructure and Mechanical Properties of an Al-Zn-Mg-Cu Alloy Produced by Gravity Casting Process..... 19

12:30-12:50 Izabela Kalemba, Carter Hamilton, **Stanislaw Dymek**

Natural Aging in a Friction Stir Welded Heat Treatable Aluminum Alloy..... 20

12:50-13:10 **Amporn Wiengmoon**, Piyaporn Sukchot, John T.H. Pearce, Torranin Chairuang斯里
Effects of Double Solution Treatment and Age Hardening on Microstructure,
Hardness and Corrosion Resistance of Cast Al-Si-Cu Alloy..... 21

13:10-15:00 *Lunch*

Session 3 (Lecture Room 0.10B, Building B-8)

Chairs: Satoshi Sunada, Stanislaw Dymek

15:00-15:20 **Zbigniew Pedzich**
Cavitation Wear of Structural Ceramics and Their Composites..... 22

15:20-15:40 **Chaiyasit Banjongprasert**, Chonlada Domrong, Toranin Chairuang斯里
EBSD of Equal Channel Angular Pressed Al-Zn-In Sacrificial Anode..... 23

15:40-16:00 **Kento Ejiri**, Jyunichi Hirabayashi, Satoshi Matuoka, Yuichi Yamamoto, Masahico
Hatakeyama, Satoshi Sunada
The Effect of σ Phase on Corrosion Behavior of Duplex Stainless Steel F55..... 24

16:00-16:20 **Toshiya Shibayanagi**, Kenshi Takahata, Makoto Takahashi, Kenji Ikeuchi
Friction Stir Welding of Disimilar Aluminum Alloy Sheets under Temperature
Gradient..... 25

16:20-16:40 *Coffee break*

Session 4: Poster Session 1 (Building B-8)

Chairs: Mieczyslaw Rekas, Amporn Wiengmoon

16:40-17:40

20:00 *Conference Banquet*

Tuesday, 16th September

Session 5 (Lecture Room 0.10B, Building B-8)

Chairs: Atsushi Saiki, Mieczyslaw Rekas

9:00-9:20 **Masateru Nose**
Recent Studies by Surface Coating Group in University of Toyama..... 26

9:20-9:40 **Shixun Cao**
Optical Floating Zone Method Crystal Growth and Novel Properties of Rare Earth
Orthoferrites RFeO₃..... 27

9:40-10:00 Theerapong Santhaveesuk, Duangmanee Wongratanaphisan, **Supab Choopun**
ZnO Nanowires with TiO₂ Additive as Ethanol Nanosensors..... 28

10:00-10:20 Mohamed A. Osman, **Aly A. Othman**, Waleed A. El-Said, A. A. Abu-Shely,
Ahmed G. Abdel Rahim
Structural and Optical Properties of Heat Treated and UV Irradiated CdS
Nanoparticles..... 29

10:20-10:40	Wei Wang, Jungheum Yun, Gunhwan Lee, Guanghui Min Preparation and Properties of ZnO/AgO _x /ZnO Transparent Conducting Electrode on Flexible PET Substrate.....	30
10:40-11:00	Mieczyslaw Rekas Electrolytes for IT-SOFC.....	31
11:00-11:20	<i>Coffee break</i>	

Session 6 (Lecture Room 0.10B, Building B-8)

Chairs: Shixun Cao, Katarzyna Zakrzewska

11:20-11:40	Lin Zhang , Guoqing Zhao, Huihui Liu, Guanghui Min, Huashun Yu Tuning the Crystallographic Structure and Morphology of Nanocrystalline CaB ₆ Films Deposited by DC Magnetron Sputtering.....	32
11:40-12:00	A. Gaber, M. A. Abdel-Rahim, Atta Y. Abdel-Latief , M. N. Abd-Elsalam Iso-conversional Kinetic Study of Non-isothermal Crystallization in Se ₈₉ In ₆ Pb ₅ Chalcogenide Glasses.....	33
12:00-12:20	Dorota Dulińska, Wojciech Pawlak, Zbigniew Grzesik The Prospects in Designing New Generation of High Temperature Coatings in Automobile Engines.....	34
12:20-12:40	Marta Janus , Stanisława Kluska, Karol Kyziol, Stanisława Jonas Plasma Assisted Chemical Vapour Deposition – Technical Design of Functional Coatings.....	35
12:40-13:00	Daisuke Iwashima , Sayaka Hirata, Naoki Nagase, Masahiko Hatakeyama, Satoshi Sunada Study of Rust Preventive Characteristics of Rust Preventive Oil from Polarization Curve Measurement.....	36
13:00-14:00	<i>Lunch</i>	

Session 7 (Lecture Room 0.10B, Building B-8)

Chairs: Zbigniew Pedzich, Supab Choopun

14:00-14:20	Mingtao Li, Zhengjie Feng, Dongmei Deng, Baojuan Kang, Bo Lu, Shixun Cao, Jincang Zhang Enhancement of Phase Separation and Anisotropy Superconductivity in Mn doped K _{0.8} Fe _{2-y} Se ₂ Single Crystals.....	37
14:20-14:40	Nagih Shaalan , M. Bekri, Ahmed Saleh Ahmed Preparation of Tungsten Oxide Nanodots via Thermal Evaporation Method and their Application to NO ₂ Gas Sensing.....	38
14:40-15:00	Wei Ren Nanodots of Multiferroic Perovskite BiFeO ₃ from the First Principles.....	39
15:00-15:20	Gaibe Song , Shixun Cao, Wei Ren, Baojuan Kang, Jincang Zhang Selective Excitation and Polarization Trajectory of Terahertz Magnetic Dipole Radiation in Orthoferrite PrFeO ₃ with Impulsive Polarized Terahertz Radiation.....	40

15:20-15:40	Hailong Wu , Shixun Cao, Ming Liu, Baojuan Kang, Jincang Zhang Twofold Spin Reorientation and Field Induced Incomplete Phase Transition in Single-crystal $Dy_{0.5}Pr_{0.5}FeO_3$	41
15:40-16:00	Weiyao Zhao , Shixun Cao, Ruoxiang Huang, Baojuan Kang, Jincang Zhang Doping Controlled Spin Reorientation in Dysprosium Samarium Orthoferrite Single Crystals.....	42
16:00-16:20	Yiming Cao , Shixun Cao, Wei Ren, Zhenjie Feng, Bo Lu, Jincang Zhang Magnetization Switchings of Rare Earth Orthochromite $CeCrO_3$	43
16:20-16:40	<i>Coffee break</i>	

Session 8: Poster Session 2 (Building B-8)

Chairs: Lin Zhang, Sigurd Wenner

16:40-17:40

19:30 *Dinner*

Wednesday, 17th September

Session 9 (Lecture Room 0.10B, Building B-8)

Chairs: Marek Szczerba, Ilona Mullerova

9:00-9:20	Torranin Chairuangstri , Suttawan Imurai, John T.H. Pearce Electron Microscopy of Carbides in High Chromium Cast Irons with 0-10wt% Addition of Molybdenum or Tungsten.....	44
9:20-9:40	Katsuhiko Nishimura , Kenji Matsuda, Ryota Komaki, Norio Nunomura, Sigurd Wenner, Randi Holmestad, Teiichiro Matsuzaki Solute-Vacancy Clustering in Al-Mg-Si Alloys Studied by Muon Spin Relaxation Technique.....	45
9:40-10:00	Ilona Mullerova , Zuzana Pokorna, Jakub Pinos, Ivo Konvalina Role of Back Scattered Electrons in the Scanning Electron Microscope at Low Energies of the Primary Beam.....	46
10:00-10:20	Norio Nunomura , Satoshi Sunada Density Functional Theory Study of the Interaction of Hydroxyl Groups with Iron Surface.....	47
10:20-10:30	Kazimierz Przybylski, Satoshi Sunada and Torranin Chairuangstri Closing Remarks	
11:45-12:45	<i>Lunch</i>	
13:00-18:00	<i>Technical Tour to Salt Mine Museum in Wieliczka</i>	
18:30	<i>Dinner</i>	