Program

August 29 (Wednesday)

15:00 – 18:00 Registration

16:30 – 17:00 Organizer meeting

17:30 – 19:30 Welcome reception @ Kyushu University Nishijin Plaza

August 30 (Thursday)

9:20 – 9:30 Opening

9:30 – 10:35 Severe deformation

(Chair: Marek Faryna & Satoshi Hata)

9:30 – 9:55 J. Dutkiewicz, W. Maziarz, S. Rusz, O. Hilser, T. A.Tański, W. Borek, M. Łagoda, P. Ostachowski, D. Kuc, T. Mikuszewski
Effect of various severe plastic deformation techniques on grain refinement and phase composition β or α + β MgLiAl alloy **(invited)**

9:55 – 10:15 S. W. Lee, Y. Haizuka, T. Tsuchiya, S. Saikawa, K. Matsuda, Z. Horita, S. Hirosawa
Precipitation hardening of Al-Li(-Cu) alloys deformed by high-pressure torsion (HPT) process

10:15 – 10:35 K. Bryła, J. Horky, M. Krystian, B. Mingler, L. Lityńska-Dobrzyńska
Microstructure, mechanical properties and degradation of Mg-Ag alloy after equal channel angular pressing

10:45 – 12:00 Deformation, stress, and dislocation

(Chair: Jan Dutkiewicz & Yasukazu Murakami)

10:45 – 11:10 S. Hata
Development of electron tomography observation methods for deformed materials: from static to dynamic 3D imaging **(invited)**

11:10 – 11:35 M. Faryna, B. Kania, J. Kusiński
Evaluation of residual stresses by use of dual beam SEM **(invited)**

11:35 – 12:00 K. Sato, Y. Yamashita, H. Yasuda, H. Mori
Evaluation of the maximum usable thickness of semiconductor specimens in high-voltage scanning transmission electron microscopy **(invited)**

12:00 – 13:20 Lunch

13:20 – 16:00 Relationship between structure and functionality

(Chair: Lidia Lityńska-Dobrzyńska & Syo Matsumura)

13:20 – 13:45 Y.-C. Zou, Z.-G. Chen, S. Matsumura, J. Zou
Understanding the structural characteristics of transition metal chalcogenides by advanced electron microscopy **(invited)**

13:45 – 14:10 Y. Murakami
Electron holography studies on the grain boundary magnetism in Ga-doped Nd-Fe-B permanent magnet **(invited)**

14:10 – 14:35 Y. Horibe, F.-T. Huang, S.-W. Cheong
Topology in structural domains of transition-metal compounds **(invited)**

14:35 – 15:00 K. Matsuda, Seungwon Lee, C. D. Marioara, S. Wenner, K. Nishimura, T. Matsuzaki, N. Nunomura, T. Sato, R. Holmestad, S. Ikeno
Formation of universal cluster in Al-Mg-Si, Al-Zn-Mg and Al-Mg-Ge alloys containing Cu and Al-Cu-Mg alloy **(invited)**

15:00 – 15:20 V. Yordsri, C. Thanachayanont, M. Kawasaki, S. Asahina, M. Shiojiri
Structure and carbonization of green culms of *Bambusa multiplex* **(invited)**

15:20 – 15:40 A. Łaszcz, P. Janus, D. Szmigiel, M. Zaborowski, M. Wzorek, A. Czerwinski
Focused ion beam used for fabrication of devices allowing high-resolution thermal imaging **(invited)**

15:40 – 16:00 M. Stygar, J. Dąbrowa, M. Danielewski, M. Martin
Synthesis and properties of the novel oxide materials stabilized by high configurational entropy **(invited)**

16:00 – 16:15 Coffee break

16:15 – 17:30 Poster session

1. K. Nishimura, K. Matsuda, N. Nunomura, T. Shimano, A. Bendo, K. Watanabe, S. W. Lee, T. Tsuchiya, T. Namiki
   Time Dependent Enhanced Diamagnetism of Zn-Mg clusters in Al-2.6%Zn-3.2%Mg alloy

2. T. Tsuchiya, Y. Makita, S. W. Lee, S. Saikawa, S. Ikeno, K. Matsuda
   Effect of excess Si content on microstructure in cast Al-Mg_2Si alloy aged at 473K

3. E. Tanabe, M. Nishijima
   STEM-EDX tomography of supported noble metal catalysts, Pd, Pt/Al_2O_3

4. N. Nakamura, T. Tuchiya, S. W. Lee, K. Nishimura, S. Ikeno, K. Matsuda

Fabrication and property evaluation of Mg based composite including magnetcaloric material

5. T. Hiragi, T. Tsuchiya, S. W. Lee, S. Ikeno, K. Matsuda
   Analysis of precipitates of Mg-Y-Sc alloy aged at 473K

6. Y. Kono, T. Yamamoto, M. Auchi, K. Kusada, H. Kitagawa, S. Matsumura
   In situ STEM analysis on thermal stability of PdRu-Rh alloy nanoparticles

7. K. Aso, J. Maebe, T. Yamamoto, S. Matsumura
   High-precision detection of lattice strain in gold nanoparticles

8. M. Higashiyama, M. Ishimaru, M. Okugawa, R. Nakamura
   Crystallization processes of amorphous GeSn on thermal annealing

9. X. Q. Tran, M. Hong, H. Maeno, Y. Kawami, T. Toriyama, K. Jack, Z.-G. Chen, J. Zou, S. Matsumura, M. S. Dargusch
   Real-time observation of the temperature-induced phase transformation in GeTe and its thermal expansion properties

10. H. Sosiati, I. D. Septiaji, A. W. Nugroho
    Use of an electrospinning technique for manufacturing blended chitosan nano-emulsion (CSNe)_PVA nanofiber mats

11. W. H. Yang, T. Yamamoto, K. Aso, F. Somidin, K. Nogita, S. Matsumura
    STEM-XEDS probing the atomic positions of dopants in the η-Cu_6Sn_5 intermetallic compound

17:40 – 18:40 Young scientist session

(Chair: Tomasz Goryczka & Katsuhiko Nishimura)

17:40 – 17:55 A. Kaleta, S. Kret, J. Sadowski, K. Morawiec, P. Dłużewski, B. Kurowska
In-Situ TEM Annealing Experiment of Core-Shell Semiconductor Nanowires

17:55 – 18:10 D. Stróż, P. Świec, M. Zubko
Multiscale studies of NiTi shape memory alloy severely cold-rolled in martensitic state

18:10 – 18:25 K. Morawiec, P. Dłużewski, M. Barańska, D. Derewnicka
Development of electron holography for investigation of nano-object magnetization

18:25 – 18:40 K. Matus, M. Pawlyta, K. Gołombek, B. Tomiczek, G. Matula
Investigation of metal/ceramic interface structure in aluminium/corundum composite obtained by gas pressure infiltration

August 31 (Friday)

9:20 – 11:20 Nanowire, interface, and low-dimensional materials

(Chair: Jin Zou & Yoichi Horibe)

9:20 – 9:45 I.-T. Bae
Compressive biaxial stress effects on epitaxially grown $BiFeO_3$ thin films **(invited)**

9:45 – 10:10 T. Goryczka, K. Dudek, P. Salwa, J. Lelątko, T. Wierzchoń
Structure and properties of multifunctional layers deposited on NiTi shape memory alloy **(invited)**

10:10 – 10:35 S. Kret, A. Kaleta, S. Kryvyi, B. Kurowska, D. Janaszko, M. Bilska, E. Janik, J. Płachta, P. Wojnar, J. Sadowski
Strain fields and structural defects in hetero-nanowires based on compounds semiconductors **(invited)**

10:35 – 11:00 S. Matsumura, K. Aso, T. Yamamoto, K. Shigematsu
Recent advancement in three-dimensional imaging of metallic nanoparticles by electron tomography **(invited)**

11:00 – 11:20 M. Zubko, P. Świec, K. Glowka, M. Kapkowski
Ni nanowires studied using electron beam precession methods **(invited)**

11:30 – 17:30 Excursion to DAZAIFU

18:30 – 21:00 Banquet

September 1 (Saturday)

9:20 – 10:10 Spectroscopy

(Chair: Sławomir Kret)

9:20 – 9:45 EELS mapping of chemical information
M. Haruta, H. Higuchi, T. Nemoto, H. Kurata **(invited)**

9:45 – 10:10 N. Sakaguchi, S. Matsumoto, Y. Kunisada
STEM-EELS of Ag nano-dimer in glass **(invited)**

10:15 – 12:15 Processing

(Chair: Jerzy Morgiel & Kazuhisa Sato)

10:15 – 10:40 L. Lityńska-Dobrzyńska, K. Stan-Głowińska, P. Bobrowski, Ł. Rogal
Microstructure of magnesium alloy matrix composite reinforced by nano-SiC prepared by semi-solid processing **(invited)**

10:40 – 11:05 T. Shibayama, Y. Nakagawa, S. Watanabe
In-situ observation of photo induced phenomena on nano materials by Multi-Quantum Beam-HVEM **(invited)**

11:05 – 11:30 W. Maziarz, P. Bobrowski, A. Wójcik, A. Bigos, Ł. Szymański, P. Kurtyka, E. Olejnik
SEM, TEM studies of in-situ cast Al-based composites strengthened with ceramic nanoparticles **(invited)**

11:30 – 11:55 J. Morgiel, K. Szymkiewicz, T. Wierzchoń
TEM studies of cathode plasma nitrided Ti6Al7Nb alloy **(invited)**

11:55 – 12:15 H. Sasaki, H. Takahashi, G. Saito, N. Sakaguchi
Crystalline evaluation of size controlled Si and SiO_x nanoparticles produced by means of solution-plasma-discharged method **(invited)**

12:20 – 12:30 Closing remarks