Scientific Program of ICCCI2018

(Final Program)

2018/6/13

PROGRAM OVERVIEW

<table>
<tr><th>Date</th><th>Time</th><th colspan="4">Program</th></tr>
<tr><td rowspan="3">July 9
(Mon)</td><td>14:00 – 18:00</td><td colspan="4">Registration</td></tr>
<tr><td>18:30 –</td><td colspan="4">Welcome reception</td></tr>
<tr><td>19:30 –</td><td colspan="4">Dinner</td></tr>
<tr><td rowspan="5">July 10
(Tue)</td><td>8:00 – 12:00</td><td>Session A
< Room I ></td><td>Session C
< Room II ></td><td>Session E
< Room III ></td><td rowspan="6">Exhibition Session
< Room E1 >
< Room E2 >

Ladies Program
10:00 – 17:00</td></tr>
<tr><td>12:00 – 13:20</td><td colspan="3">Photo and Lunch</td></tr>
<tr><td>13:20 – 17:00</td><td>Session A
< Room I ></td><td>Session B
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<tr><td>17:10 – 19:00</td><td colspan="3">Poster session (Core time)
< Room P1 >
< Room P2 ></td></tr>
<tr><td>19:00 –</td><td colspan="3">Dinner</td></tr>
<tr><td rowspan="3">July 11
(Wed)</td><td>8:00 – 11:50</td><td>Session A
< Room I ></td><td>Session B
< Room II ></td><td>Session D
< Room III ></td></tr>
<tr><td>12:30 – 18:00</td><td colspan="3">Excursion (including lunch)</td></tr>
<tr><td>19:00 –</td><td colspan="3">Banquet</td></tr>
<tr><td rowspan="2">July 12
(Thu)</td><td>8:00 – 12:10</td><td>Session A
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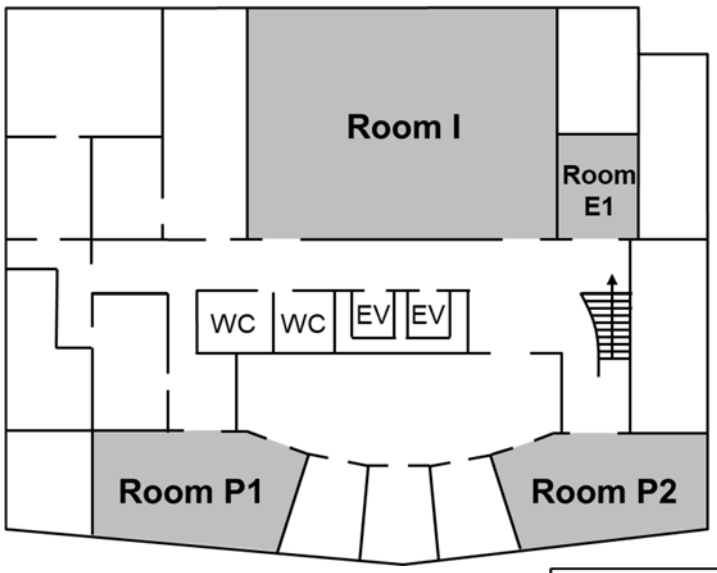
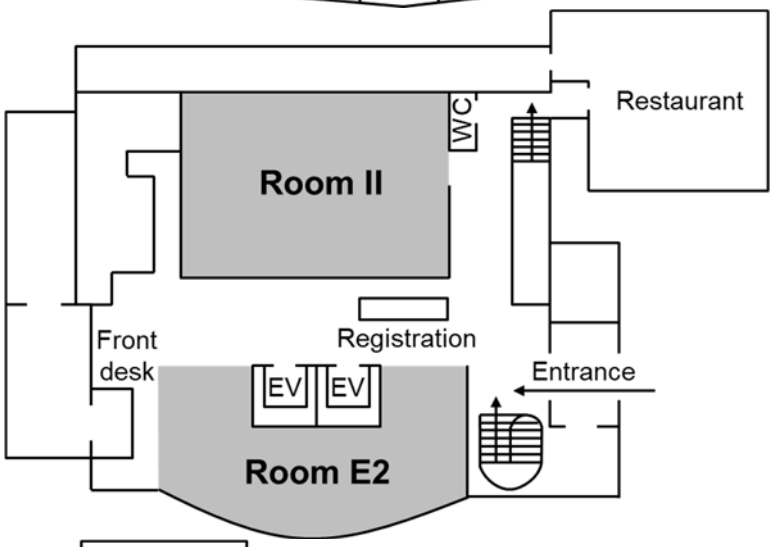
< Room III ></td></tr>
<tr><td>12:30 – 14:00</td><td colspan="3">Lunch</td></tr>
</table>

CONFERENCE FLOOR PLANS

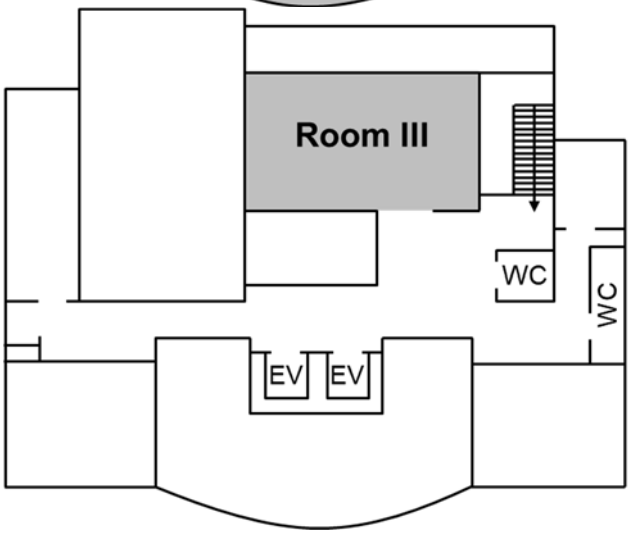
B1



1F



2F



NOTE TO PRESENTERS

For Oral Presentation:

The organizing committee will provide a laptop computer, LCD projector, screen, laser pointer and microphone in each technical session room. The operating system of the laptop computer is Windows 10, and Microsoft PowerPoint 2016 will be installed. Presentation times as shown in the session program for invited and contributed speakers are including discussion (contributed speakers: 15 min presentation and 5 min discussion, invited speakers: 25 min presentation and 5 min discussion). Please bring your presentation data on a USB memory or CD-ROM to be loaded to the laptop prior to the start of the session. Speakers can also use own computers to make presentations. Speakers are requested to check that their laptops work well with the projector before their presentations. No presentation may be loaded while the session is in progress, so please arrive early in your session room.

For Poster Presentation:

Poster session will be held from July 10, 2018, at 10:00 to July 11, 2018, at 11:00 in Room P1 and P2. Authors should plan on arriving in the morning of July 10, 2018 to set up. Core time of the poster session will run for 110 minutes from 17:10 to 19:00 on July 10, 2018. The poster number will help you in locating your space at the poster session. At a minimum, one author of a paper should be present to provide details and answer questions during the core time of the poster session. Authors are responsible for removing all materials after closing the poster session until 18:00 of July 11, 2018. The conference will provide a display board. Printed poster dimensions are regulated as 180 cm in tall and 90 cm in wide. Posters are attached to the display boards with thumbtacks, which will be provided. The boards are rented and may not be written on or defaced in any way. There are no provisions for making posters at the meeting or for receiving, storing, or returning posters to authors.

Student Poster Awards

The Student Poster Awards recognize student poster presentations characterized by excellence in research, clarity in presentation, and personal knowledge in a discussion. The Student Poster Award winners will receive a certificate of commendation and a supplementary prize. The award ceremony will be held at the banquet on July 11, 2018.

Oral Presentation

July 10, 2018 ~ July 12, 2018

July 10, 2018

Room I

Session A: Interface Characterization and Control for Nanoparticles and Powders (54th Summer Symposium on Powder Technology)

08:00–10:00 Chair : Yoshiyuki Shirakawa

08:00–08:30 1-I-A-01 INVITED
Thermal properties of polycrystalline alumina and mullite
Y. Hirata
Kagoshima University, Japan

08:30–09:00 1-I-A-02 INVITED
Ceramic with crack healing capability and its mechanism
W.-H. Tuan[1], H.-Y. Chang[1], Y.-C. Chen[1], H.-C. Hsu[1], M. Naito[2], P.-L. Lai[3]
[1]National Taiwan University, Taiwan, [2]Osaka University, Japan, [3]Chang Gung University, Taiwan

09:00–09:30 1-I-A-03 INVITED
Dry deposition of carbon nanotube thin films for flexible electronics applications
E.I. Kauppinen
Aalto University School of Science, Finland

09:30–10:00 1-I-A-04 INVITED
Interface modification for the adsorption of viruses on porous ceramics structures and nanofibers
T. Graule[1], M. Schabikowski[1], B. Michen[1], J. Traber[2], W. Pronk[2], G.P. Szekeres[3], Z. Németh[3], K. Schrantz[3], K. Németh[3], K. Hernádi[3]
[1]Empa, Switzerland, [2]Eawag, Switzerland, [3]University of Szeged, Hungary

10:00–10:20
Coffee break

10:20–12:00 Chair : Yuji Hotta

10:20–10:50 1-I-A-05 INVITED
Particle surface characterization – a key to the design and processing of advanced materials
W. Peukert
Friedrich-Alexander University Erlangen, Germany

10:50–11:20 1-I-A-06 INVITED
Interfacial design: Engineering biomolecule-materials interactions
C. Tamerler[1,2]
[1]University of Kansas, USA, [2]University of Washington, USA

11:20–11:40 1-I-A-07
Characterization of spherical SiO_2 porous particles treated by mechanical processing under high shear condition: in comparison with heating process
M. Iijima, M. Hayakawa, J. Tatami
Yokohama National University, Japan

11:40–12:00 1-I-A-08
Analysis of gelation characteristics of concentrated suspension by capillary force
T. Ishigami, K. Anzai, C. Tokishige, T. Fukasawa, K. Fukui, S. Kihara
Hiroshima University, Japan

12:00–13:20
Photo and Lunch

13:20–15:00 Chair : Motoyuki Iijima

13:20–13:50 1-I-A-11 INVITED
Oxidation behavior in wet oxygen environment of SiC_f/Si-B-C composites modified by Al_2O_3
D. Jiang[1], Q. Shan[1,2,3], J. Hu[1], J. Yang[1], X. Zhang[1], S. Dong[1]
[1]Shanghai Institute of Ceramics, China, [2]ShanghaiTech University, China, [3]University of Chinese Academy of Sciences, China

13:50–14:20 1-I-A-12 INVITED
Control factors on fine structure and surface roughness
T. Ishikawa, R. Usukawa
Tokyo University of Science, Japan

14:20–14:40 1-I-A-13
Removal of zinc and cadmium from wastewater by leaf mold: mechanism investigation and surface complexation modeling
R. Fukushima[1], G. Granata[1], K. Sato[2], S. Yamagata[3], C. Tokoro[1]
[1]Waseda University, Japan, [2]MITSUBISHI MATERIALS TECHNO CORPORATION, Japan, [3]MITSUBISHI MATERIALS TECHNO CORPORATION, Japan

14:40–15:00 1-I-A-14
Mechanochemical production of rare earth ore hydroxide: quantitative evaluation by XAFS analysis
T. Kato[1], G. Granata[1], C. Tokoro[1], Y. Tsunazawa[2], T. Takagi[2]
[1]Waseda University, Japan, [2]National Institute of Advanced Industrial Science and Technology, Japan

15:00–15:20
Coffee break

15:20–17:00 Chair : Chiharu Tokoro

15:20–15:50 1-I-A-15 INVITED
Hydrogen economy and systematic material design for fuel cells
T. Yamaguchi
Tokyo Institute of Technology, Japan

15:50–16:20 1-I-A-16 INVITED
Interface control synthesis and functionalization of nanostructured particle
T. Ogi, A.F. Arif
Hiroshima University, Japan

16:20–16:40 1-I-A-17
Fabrications of Si_3N_4 whiskers and coatings on the surface of carbon fibers for the material recycling of carbon fibers
Y. Sugimoto, Y. Tominaga, Y. Hotta
National Institute of Advanced Industrial Science and Technology, Japan

16:40–17:00 1-I-A-18
Highly electrically conductive SiC-BN composites
R. Malik, Y.-W. Kim
The University of Seoul, Korea

17:10–19:00
Poster session (core time)

Room II

Session C: International Symposium in Honor of Prof. Olivera Milosevic

08:00–10:00 Chair: Kevin G. Ewsuk

08:00–08:30 1-II-C-01 INVITED
Design and processing of photoresponsive hierarchical nanomaterials using innovative synthesis routes
O. Milosevic
Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia

08:30–09:00 1-II-C-02 INVITED
Interfaces in electronic packaging: metallurgical challenges in miniaturization
F. Hodaj
Grenoble Institute of Technology, France

09:00–09:30 1-II-C-03 INVITED
Synthesis and characterization of functional ceramic materials at the nano- and microscale with enhanced properties
G. Flores-Carrasco[1,2], A. Urbieta[3], P. Fernández[3], O. Milosevic[4], M.E. Rabanal[1]
[1]Carlos III University, Spain, [2]Meritorious Autonomous University of Puebla, Mexico, [3]Complutense University of Madrid, Spain, [4]Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia

09:30–10:00 1-II-C-04 INVITED
Characterization of defects in ceramics
K. Uematsu
Uematsu Consulting for Ceramic Technology, Japan

10:00–10:20
Coffee break

10:20–12:00 Chair: Olivera Milosevic

10:20–10:50 1-II-C-05 INVITED
Synthesis of nanocarbons and ilmenites nanoparticles using super-high-energy ball milling
S. Ohara
Osaka University, Japan

10:50–11:10 1-II-C-06 INVITED
Photocatalytic efficiency of TiO_2/Ag nanoparticles modified cotton fabric
M. Milošević, M. Radoičić, Z. Šaponjić
University of Belgrade, Serbia

11:10–11:30 1-II-C-07 INVITED

Magnetically recoverable photocatalysts based on metal oxide nanostructures (Fe and Zn)

L. González[1,2], L. Muñoz-Fernandez[1], G. Flores-Carrasco[1,3], O. Milosevic[4], G. Salas[2], M.E. Rabanal[1]

[1]Carlos III University, Spain, [2]IMDEA Nanociencia, Spain, [3]Meritorious Autonomous University of Puebla, Mexico, [4]Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia

12:00–13:20
Photo and Lunch

Session B: Smart Processing Technology

13:20–15:00 Chair: Takahiro Kozawa

13:20–13:50 1-II-B-11 INVITED
Synthesis of super-hard osmium boride based ceramic powders by mechanochemical method
H.-T. Lin, Y. Long, C. Zou, J. Zhang
Guangdong University of Technology, China

13:50–14:20 1-II-B-12 INVITED
Application of high-energy X-rays in material and powder optimizations
D. Singh
Argonne National Lab, USA

14:20–14:40 1-II-B-13
Preparation of aqueous core PLGA microcapsules for biological applications
T. Nomura[1], A.F. Routh[2]
[1]Osaka Prefecture University, Japan, [2]University of Cambridge, UK

14:40–15:00 1-II-B-14
Reusable Ag/Fe_3O_4-TiO_2 NFs for photocatalytic reduction of hexavalent chromium
Y.-H. Chang[1], M.-C. Wu[1,2]
[1]Chang Gung University, Taiwan, [2]Chang Gung Memorial Hospital, Taiwan

15:00–15:20
Coffee break

15:20–17:00 Chair: Toshiyuki Nomura

15:20–15:40 1-II-B-15
Ozone assisted synthesis of magnetite nanoparticles
K. Iimura, T. Kikuchi, H. Satone
University of Hyogo, Japan

15:40–16:00 1-II-B-16
One-pot preparation of micron-sized monodisperse polymer particles with carboxyl groups on their surface
N. Yamauchi[1], S. Obinata[2], H. Iino[1], Y. Kobayashi[1], K. Kurumada[2]
[1]Ibaraki University, Japan, [2]National Institute of Technology, Fukushima College, Japan

16:00–16:20 1-II-B-17
A detailed characterization of aluminum nitride powders made with dicyanamide and melamine as the nitrogen source
Y. Cheng, X. Huang, H. Lin
Guangdong University of Technology, China

16:20–16:40 1-II-B-18

Fabrication of silica/platinum core-shell particles by electroless metal plating

Y. Ishii[1], Y. Kobayashi[1], K. Watanabe[2], H Koda[2], H Kunigami[2], H. Kunigami[2]
[1]Ibaraki University, Japan, [2]K. K. Shinko Kagaku Kogyosho, Japan

16:40–17:00 1-II-B-19

Preparation and photocatalytic performance of TiO_2/cellulose nanofibers composite film

Y.-H. Liao[1], T.-H. Lin[1], K.-P. Chiang[1], M.-C. Wu[1,2]
[1]Chang Gung University, Taiwan, [1]Chang Gung Memorial Hospital, Taiwan

17:10–19:00
Poster session (core time)

Room III

Session E: Material Design and Evaluation

08:00–10:00 Chair: Makio Naito

08:00–08:30 1-III-E-01 INVITED
Fourth industrial revolution and its impact on sustainable societal development
M. Singh[1,2,3]
[1]President, Global Alliance for Technology and Society, USA, [2]President, The American Ceramic Society (2015-16), [3]Governor, Acta Materialia, Inc.

08:30–09:00 1-III-E-02 INVITED
Predictive approach for property enhancement of fine cohesive powder blends through particle engineering
R. Davé, K. Kunnath, L. Chen, K. Zheng
New Jersey Institute of Technology, USA

09:00–09:30 1-III-E-03 INVITED
Niobium carbide, a new cermet material with excellent properties.
R. Wäsche, M. Woydt
BAM, Germany

09:30–10:00 1-III-E-04 INVITED
Mechanical and thermal behavior of liquid wood
D. Nedelcu, S. Mazurchevici
Gheorghe Asachi Technical University of Iasi, Romania

10:00–10:20
Coffee break

10:20–12:00 Chair: Wei-Hsing Tuan

10:20–10:40 1-III-E-05
Sequential observation of coarse pore evolution during sintering in alumina ceramics formed from spray-dried granules
S. Tanaka[1], Tsuyoshi Hondo[1], K. Yasuda[2], F. Wakai[2]
[1]Nagaoka University of Technology, Japan, [2]Tokyo Institute of Technology, Japan

10:40–11:00 1-III-E-06

Application of weibull statistics to strength data for porous fine ceramics

K. Yasuda[1], N. Okabe[2], M. Takahashiu[2], S. Honda[3], H. Kita[4], S. Tanaka[5], T. Akatsu[6], S. Taruta[7], H. Muto[8], H. Miyazaki[9], N. Shinohara[10], S. Yamamoto[11], T. Ono[12], H. Ohnishi[13], Y.e Takahashi[14], T. Mitsuoka[15], M. Takanashi[16], I. Kawashima[17], A. Sugai[18], M. Asayama[19]
[1]Tokyo Institute of Technology, Japan, [2]Ehime University, Japan, [3]Nagoya Institute of Technology, Japan, [4]Nagoya University, Japan, [5]Nagaoka University of Technology, Japan, [6]Saga University, Japan, [7]Shinshu University, Japan, [8]Toyohashi University of Technology, Japan, [9]The National Institute of Advanced Industrial Science and Technology, Japan, [10]AGC Asahi Glass, Japan, [11]ASUZUC INC., Japan, [12]Kyocera Corp., Japan, [13]NIKKATO Corporation, Japan, [14]Noritake Co., Limited, Japan, [15]NGK Spark Plug Co., Ltd, Japan, [16]IHI Corp., Japan, [17]Kobe Steel, Ltd., Japan, [18]KUBOTA Corporation, Japan, [19]Toshiba Corp., Japan

11:00–11:20 1-III-E-07 INVITED

The design and preparation of injectable, porous and biodegradable biocomposites based on calcium sulfates

P.-Y. Hsu[1], W.-H. Tuan[1], P.-L. Lai[2], L.-K. Chang[1]
[1]National Taiwan University, Taiwan, [2]Chang Gung Memorial Hospital, Taiwan

11:20–11:40 1-III-E-08

DEM simulation for the analysis of ball behavior in wet ball milling

S. Ishihara[1], A. Kondo[2], K. Kushimoto[1], T. Kozawa[2], J. Kano[1], M. Naito[2]
[1]Tohoku University, Japan, [2]Osaka University, Japan

11:40–12:00 1-III-E-09

Powder identification—total characterization of metal-oxide powders by energy-resolved distribution of electron traps

B. Ohtani[1], A. Nitta[1], M. Takase[2], M. Takashima[1]
[1]Hokkaido University, Japan, [2]Muroran Institute of Technology, Japan

12:00–13:20
Photo and Lunch

13:20–15:00 Chair: Satoshi Tanaka

13:20–13:50 1-III-E-11 INVITED

Texture developing and some properties of feeble magnetic ceramics

Y. Sakka[1], C. Hu[2], T.S. Suzuki[1], G.-J. Zhang[3]
[1]National Institute for Materials Science, Japan, [2]Southwest Jiaotong University, China, [3]Donghua University, China

13:50–14:20 1-III-E-12 INVITED

Role of grain boundary chemistry in silicon nitride based ceramics – experimental and theoretical approach

P. Šajgalík, Z. Lenčéš
Slovak Academy of Sciences, Slovakia

14:20–14:40 1-III-E-13
Mechanical properties of CNTs reinforced ceramic composites
B.-K. Jang[1], Y.-H. Han[2]
[1]Kyushu University, Japan, [2]Wuhan University of Technology, China

14:40–15:00 1-III-E-14
Mechanical properties of carbon nanotube/polymeric fiber prepared by using wet-jet milling
D. Shimamoto[1], T. Irisawa[2], Y. Hotta[1], K. Takeshige[2], G. Doi[2], Y. Tanabe[2]
[1]National Institute of Advanced Industrial Science and Technology, Japan, [2]Nagoya University, Japan

15:00–15:20
Coffee break

15:20–16:30 Chair : Mitsuaki Matsuoka

15:20–15:50 1-III-E-15 INVITED
Influence of BN nano tubes on the mechanical behavior of SiCf/SiC composites
S. Dong[1,2], G. Zhu[1,2], J. Hu[1]
[1]Shanghai Institute of Ceramics, China, [2]University of Chinese Academy of Sciences, China

15:50–16:10 1-III-E-16
Influence of surface condition of recycled carbon fiber and curing state of epoxy resin on interfacial adhesion of CFRP by microwave irradiation
Y. Tominaga, D. Shimamoto, Y. Hotta
National Institute of Advanced Industrial Science and Technology, Japan

16:10–16:30 1-III-E-17
The coffee drunk powder creates the environmental sensing technology
M. Kamitani[1], A. Nakahira[2]
[1]Makino Corporation, Japan, [2]Osaka Prefectue University, Japan

17:10–19:00
Poster session (core time)

July 11, 2018

Room I

Session A: Interface Characterization and Control for Nanoparticles and Powders (54th Summer Symposium on Powder Technology)

08:00–09:40 Chair : Toru Ishigami

08:00–8:30 2-I-A-01 INVITED
Circadian additive and post-production modifications of proteins define enamel boundaries for improved biomechanical properties
M.L. Snead
University of Southern California, USA

08:30–09:00 2-I-A-02 INVITED
Environmental catalysts for complete oxidation of volatile organic compounds and toxic carbon monoxide
N. Imanaka
Osaka University, Japan

09:00–9:20 2-I-A-03
Synthesis and shell thickness control of TiO_2 hollow particles with enhanced photocatalytic activity
W. Shao, C. Takai, H. Razavi-Khosroshahi, M. Fuji
Nagoya Institute of Technology, Japan

09:20–09:40 2-I-A-04
Application of extended random pore model to the char gasification reactivity catalyzed by inherent mineral matter in coal
A. Ikeda, S. Kajitani, S. Umemoto, K. Tanno, T. Yamamoto, H. Makino
Central Research Institute of Electric Power Industry, Japan

09:40–10:00
Coffee break

10:00–11:50 Chair : Hadi Razavi Khosroshahi

10:00–10:30 2-I-A-05 INVITED
Production of nanoparticles by nano-coating fragmentation
F. Quadrini, D. Bellisario, L. Santo
University of Tor Vergata, Italy

10:30–10:50 2-I-A-06
Synthesis of copper nanoparticles by D-glucose and PVP: optimization of operating conditions
G. Granata, A. Onoguchi, C. Tokoro
Waseda University, Japan

10:50–11:10 2-I-A-07
Pt/TiO_x nanoparticles and their enhanced performance for organic dye degradation
F.G. Rinaldi, A.F. Arif, T. Ogi
Hiroshima University, Japan

11:10–11:30 2-I-A-08
Unprecedented rapid synthesis of $REPO_4$ monospheres (RE=La-Lu lanthanide and Y)
J.-G. Li[1], Z. Wang[2]
[1]National Institute for Materials Science, Japan, [2]Northeastern University, China

11:30–11:50 2-I-A-09
Sonochemical synthesis of metal nanoparticles onto $LiFePO_4$/C for lithium ion battery
H. Okawa[1], Y. Ono[1], Y. Tanaka[1], T. Kato[1], K. Sugawara[1], M. Sato[2]
[1]Akita University, Japan, [2]Niigata University, Japan

12:30–18:00
Excursion (including Lunch)

Room II

Session B: Smart Processing Technology

08:00–10:00 Chair: Rolf Waesche

08:00–08:30 2-II-B-01 INVITED
ED-machinable zirconia toughened alumina – titanium carbide composite ceramics – materials and process development for wear resistant precision tools with high geometrical complexity
R. Gadow, F. Kern, R. Landfried, U. Schmitt-Radloff
University of Stuttgart, Germany

08:30–09:00 2-II-B-02 INVITED
Synthesis and additive manufacturing of KNN and related piezoelectric ceramic
D. Kata, P. Rutkowski, J. Huebner
AGH University of Science and Technology, Poland

09:00–09:20 2-II-B-03
Defect in iron doped 3YSZ: through the impedance measurement
C.-T. Kao, W.-H. Tuan
National Taiwan University, Taiwan

09:20–09:40 2-II-B-04
Thermoelectric properties of Nd and Dy doped $SrTiO_3$ ceramics by solid state reaction
J.-H. Lin, C.-S. Hwang
National Cheng Kung University, Taiwan

09:40–10:00
Coffee break

10:00–11:30 Chair: Norifumi Isu

10:00–10:30 2-II-B-05 INVITED
Bioinspired materials templates by nature species
D. Zhang, J. Gu, W. Zhang, Q. Liu, S. Zhu, H. Su
Shanghai Jiao Tong University, China

10:30–10:50 2-II-B-06
Investigation on three-dimensional graphene scaffolds obtained by additive manufacturing
J. Yang[1], K. Huang[1,2], S. Dong[1], X. Zhang[1], Y. Ding[1], H. Zhou[1], J. Hu[1]
[1]Shanghai Institute of Ceramics, China, [2]University of Chinese Academy of Sciences, China

10:50–11:10 2-II-B-07
Bioinspired design and fabrication of nano-carbon reinforced bulk aluminum composites
Z. Li, Z. Tan, G. Fan, D.-B. Xiong, Q. Guo, Y. Su, D. Zhang
Shanghai Jiao Tong University, China

11:10–11:30 2-II-B-08 INVITED
Optical functional materials inspired from butterfly wing scales
W. Zhang, J. Gu, Q. Liu, D. Zhang
Shanghai Jiao Tong University, China

12:30–18:00
Excursion (including Lunch)

Room III

Session D: Energy and Environment

08:00–09:40 Chair: Hidehiro Kamiya

08:00–08:30 2-III-D-01 INVITED
Observation of the detailed structure of a turbulent pulverized coal combustion flame
F. Akamatsu
Osaka University, Japan

08:30–09:00 2-III-D-02 INVITED
Next generation separation technology in the field of resources recycling
S. Owada
Waseda University, Japan

09:00–09:20 2-III-D-03
Preparation of biocoke from agricultural wastes
J. Chaichanawong
Thai-Nichi Institute of Technology, Thailand

09:20–09:40 2-III-D-04
$Gd_{0.1}Ce_{0.9}O_{2-\delta}$ (GDC) embedded $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ (BSCF) nanofibers via electrospinning as a cathode for solid oxide fuel cells
C. Kim, I. Jang, S. Kim, H. Yoon, T. Song
Hanyang University, Korea

09:40–10:00
Coffee break

10:00–11:50 Chair: Tetsuo Uchikoshi

10:00–10:30 2-III-D-05 INVITED
Innovative sorbent materials for the recovery of critical elements from process streams
S. Mullens[1], K. Wyns[1], B. Michielsen[1], J. Roosen[2], K. Binnemans[2]
[1]Flemish Institute for Technological Research, Belgium, [2]KU Leuven, Belgium

10:30–10:50 2-III-D-06
Tailor-made TiO_2 for enhanced photocatalytic performance
Z. Tan, X. Song, X. Kang
Dalian University of Technology, China

10:50–11:10 2-III-D-07
High power conversion efficiency of perovskite solar cells using mesoscopic Zn-doped TiO_2 as electron transport layer
S.-H. Chan[1], S.-H. Chen[1], K.-M. Lee[1], Wei-Fang Su[2], Ming-Chung Wu[1,3]
[1]Chang Gung University, Taiwan, [2]National Taiwan University, Taiwan, Chang Gung University, Taiwan

11:10–11:30 2-III-D-08

Three-dimensional porous TiO_2-Si core-shell nano-scaffolds as anodes for high volume capacity lithium ion microbatteries

W.-Y. Ko, K.-J. Lin
National Chung-Hsing University, Taiwan

11:30–11:50 2-III-D-09

SiC-reduction processing for oxide and oxynitride phosphors synthesis

Qian Liu[1], J. Wan[1,2], J. Ni[1,2], G. Liu[1], Z.Z. Zhou[1]
[1]Shanghai Institute of Ceramics, China, [2]University of Chinese Academy of Sciences, China

12:30–18:00
Excursion (including Lunch)

July 12, 2018

Room I

Session A: Interface Characterization and Control for Nanoparticles and Powders (54th Summer Symposium on Powder Technology)

08:00–10:10 Chair : Mikio Sakai

08:00–08:30 3-I-A-01 INVITED
Realization, control and utilization of particle segregation
H.-P. Kuo[1,2], A.-N. Huang[1]
[1]Chang Gung University, Taiwan, [2]Linkou Chang Gung Memorial Hospital, Taiwan

08:30–09:00 3-I-A-02 INVITED
Re-partitioning of grain boundary segregation to initiate abnormal grain growth in ceramics
H. Gu
Shanghai University, China

09:00–09:30 3-I-A-03 INVITED
The evolution of the application of the master sintering curve
K.G. Ewsuk
Retired - Sandia National Laboratories, USA

09:30–09:50 3-I-A-04
Considerations on the chemical composition of metallic parts protected locally with special paints against the effects of plasma nitriding
M. Bibu, L.G. Popescu, C. Deac
"Lucian Blaga" Uiversity of Sibiu, Romania

09:50–10:10 3-I-A-05
Water vapor-assisted solid-state synthesis of $LiNi_{0.5}Mn_{1.5}O_4$ high-voltage cathode for Li-ion batteries
T. Kozawa, D. Hirobe, K. Uehara, M. Naito
Osaka University, Japan

10:10–10:30
Coffee break

10:30–12:10 Chair : Hisao Makino

10:30–10:50 3-I-A-06
Effect of ultrasound agglomeration on size of scorodite particles
Y. Kitamura, H. Okawa, T. Kato, K. Sugawara
Akita University, Japan

10:50–11:10 3-I-A-07
Preparation of bioactive glass-containing Ti6Al4V pedicle screws using 3D printing
S.-J. Shih, H.-H. Shih
National Taiwan University of Science and Technology, Taiwan

11:10–11:30 3-I-A-08
Preparation of BN interphase and its effect on the properties of SiC/SiC composites
L. Gao[1], L. Ma[1,2], J. Hu[1], S. Dong[1,2]
[1]Shanghai Institute of Ceramics, China, [2]University of Chinese Academy of Sciences, China

11:30–11:50 3-I-A-09
Effect of fine particle addition on the media ball motion in wet ball milling apparatus
A. Kondo[1], S. Ishihara[2], K. Kushimoto[2], T. Kozawa[1], J. Kano[2], M. Naito[1]
[1]Osaka University, Japan, [2]Tohoku University, Japan

11:50–12:10 3-I-A-10
Plastic mechanism of ceramic paste, and extruded ceramics prepared by its mechanism
Y. Hotta, K. Sato
National Institute of Advanced Industrial Science and Technology, Japan

12:10–14:00
Lunch

Room II

Session B: Smart Processing Technology

08:00–10:10 Chair: Kouichi Yasuda

08:00–08:30 3-II-B-01 INVITED
Optimization of processing route for transparent ceramics
H.-D. Kim
Korea Institute of Materials Science, Korea

08:30–09:00 3-II-B-02 INVITED
Control of interfaces and characterization for super-strong ceramics at temperatures exceeding 1800°C
G.-J. Zhang[1], J. Zou[2], H.-B. Ma[1]
[1]Donghua University, China, [2]University of Birmingham, UK

09:00–09:30 3-II-B-03 INVITED
Understanding and controlling flash sintering: from a case study of ZnO to other ceramic materials
J. Luo
University of California, USA

09:30–09:50 3-II-B-04
The simulation of heterostructures behavior from ceramic materials at the impact with micro meteorites
T. Chereches[1], P. Lixandru[1], D. Nedelcu[2], D. Dragnea[1], D.M. Chereches[3]
[1]SC UPS-PILOT ARM SRL, Romania, [2]Gheorghe Asachi Technical University of Iasi, Romania, [3]Politehnica University of Bucharest, Romania

09:50–10:10 3-II-B-05
Preparation and characterization of silica-cellulose ceramics using emulsion induced phase separation
W. Suthabanditpong, C. Takai, H. Razavi-Khosroshahi, M. Fuji
Nagoya Institute of Technology, Japan

10:10–10:30
Coffee break

10:30–12:10 Chair: Junya Kano

10:30–10:50 3-II-B-06
Design and preparation of porous SiC based ceramics with gradient structure
H. Li[1], G. Wang[1], B. Yuang[1], Y. Liu[2], J. Shen[3]
[1]Sinosteel Luoyang Institute of Refractories Research Co., Ltd., China, [2]Northwestern Polytechnical University, China, [3]Stockholm University, Sweden

10:50–11:10 3-II-B-07
Enhancement of interfacial interaction and dispersibility in CNTs/silica composite by silane coupling agent
B. Peng, C. Takai, H. Razavi-Khosroshahi, M. Fuji
Nagoya Institute of Technology, Japan

11:10–11:30 3-II-B-08
Tape casting and low temperature sintering of Si_3N_4 ceramics
J. Zhang, Y. Duan, D. Jiang
Shanghai Institute of Ceramics,China

11:30–11:50 3-II-B-09
Densification behavior and properties of AlN ceramics containing coarse AlN particles
R. Kobayashi[1], K. Abe[1], H. Okazaki[1], K. Harata[2], T. Goto[2]
[1]Tokyo City University, Japan, [2]Tohoku University, Japan

11:50–12:10 3-II-B-10
Internal structure observation in Al_2O_3 ceramics using optical coherence tomography
T. Takahashi[1], Junichi Tatami[1,2], H. Ito[1], Y. Taguchi[1]
[1]Kanagawa Institute of Industrial Science and Technology, Japan, [2]Yokohama National University, Japan

12:10–14:00
Lunch

Room III

Session E: Material Design and Evaluation

08:00–10:10 Chair: Yoshio Sakka

08:00–8:30 3-III-E-01 INVITED
In-situ fabrication of fine Ti-dispersed alumina composites and their mechanical and electrical multifunctionality
S. Shi, T. Goto, S.H. Cho, T. Sekino
Osaka University, Japan

08:30–9:00 3-III-E-02 INVITED
Lead-free $BaTiO_3$–based piezoelectric ceramics sintered under controlled low oxygen partial pressure and their properties
W. Sakamoto[1], K. Noritake[1], I. Yuitoo[2], T. Takeuchi[2], K. Hayashi[1], T. Yogo[2]
[1]Nagoya University, Japan, [2]Waseda University, Japan

09:00–09:20 3-III-E-03
In-situ observation of slurry, green body and sintered body using OCT
J. Tatami[1,2], T. Takahashi[2], M. Iijima[1,2]
[1]Yokohama National University, Japan, [2]Kanagawa Institute of Industrial Science and Technology, Japan

09:20–09:40 3-III-E-04
A highly sensitive nonenzymatic sensor based on porous nanohexagons Co_3O_4/C for electrochemical detection of nitrite
W. Qiu[1,2], H. Tanaka[1], F. Gao[2], Q. Wang[2]
[1]Shimane University, Japan, [2]Minnan Normal University, China

09:40–10:10 3-III-E-05 INVITED
Microstructure-property correlations of radiation tolerant nanoporous and nanostructured materials
R. Dingreville[1], K. Hattar[1], S. Briggs[1], K. Ewsuk[1], J. Stewart[1], J. Balk[2], N. Briot[2], M. Kosmidou[2]
[1]Sandia National Laboratories, USA, [2]University of Kentucky, USA

10:10–10:30
Coffee break

10:30–12:10 Chair: Junichi Tatami

10:30–10:50 3-III-E-06
Low operating temperature with bismuth-lead positive electrode for liquid metal battery
J. Kwon, D. Lee, D. Shin, T. Song
Hanyang University, Korea

10:50–11:10 3-III-E-07
Transparent spinel ceramics for white LED applications
M. Radwan, Z. Lenčéš, J. Sedláček, P. Šajgalík
Slovak Academy of Sciences, Slovaki

11:10–11:30 3-III-E-08
Visible-light-active high-pressure rocksalt ZnO photocatalyst
H. Razavi-Khosroshahi[1], K. Edalati[2], Z. Horita[2], M. Fuji[1]
[1]Nagoya Institute of Technology, Japan, [2]Kyushu University, Japan

11:30–11:50 3-III-E-09
Controlled crystallization of layered hydroxyl sulfate for green synthesis of $Ln_2O_2SO_4$ and Ln_2O_2S
X. Wang[1,2], J.-G. Li[2]
[1]Bohai University, China, [2]National Institute for Materials Science, Japan

11:50–12:10 3-III-E-10
Thermal control effects of nano clay powder on water and energy saving in Kingdom of Saudi Arabia
R. El-Sheikhy, M. Al-Shamrani, A. Al-Shaikh
King Saud University, Saudi Arabia

12:10–14:00
Lunch

July 10–12 Exhibition Session

Room E1 and E2

F-1 TOKUJU CORPORATION

F-2 OHKAWARA KAKOHKI CO., LTD.

F-3 MAKINO CORPORATION

F-4 HOSOKAWA MICRON CORPORATION

F-5 KANEKA CORPORATION

F-6 KURIMOTO, LTD.

F-7 MicrotracBEL Corp.

F-8 NIPPON COKE & ENGINEERING CO., LTD.

F-9 KOZO KEIKAKU ENGINEERING Inc.

F-10 Ashizawa Finetech Ltd.

F-11 SANTEC CORPORATION

F-12 Anton Paar Japan K.K.

F-13 Spectris Co., Ltd.

F-14 Prometech Software, Inc.

F-15 LIXIL CORPORATION

F-16 Micro Support Co., Ltd

F-17 YONEKURA MFG. Co., LTD.

F-18 Hosokawa Powder Technology Foundation

Poster session

July 10, 2018, at 10:00 ~ July 11, 2018, at 11:00
Core time : July 10, 2018, 17:10–19:00

Room P1 and P2

P-A-01
Synthesis and characterization of nano/microstructured polyaniline
C.-H. Chen, J.-X. Wang
Southern Taiwan University of Science and Technology, Taiwan

P-A-02
Investigation of mixed micelle formation between transglycosylated stevia and cationic surfactants with different carbon chain length
M. Fujimori, H. Uchiyama, K. Kadota, Y. Tozuka
Osaka University of Pharmaceutical Sciences, Japan

P-A-03
Mechanism investigation of zinc removal by leaf mold for passive treatment of AMD
R. Fukushima[1], G. Granata[1], K. Sato[2], S. Yamagata[3], C. Tokoro[1]
[1]Waseda University, Japan, [2]MITSUBISHI MATERIALS TECHNO CORPORATION, Japan, [3]MITSUBISHI MATERIALS CORPORATION, Japan

P-A-04
Synthesis and characterization of $Ce_{1-\sigma}Cr_{\sigma}O_2$ nanoparticles for chemical mechanical planarization application
K. Lee, K. Kim, T. Song
Hanyang University, Korea

P-A-05
Synthesis of Ce-doped yttrium aluminum garnet phosphor powders using spray drying
Z.-M. Wang[1], D. Galusek[2], W.-H. Tuan[3], S.-J. Shih[1]
National Taiwan University of Science and Technology, Taiwan, [2]Joint Glass Centre of the IIC SAS, Slovakia, [3]National Taiwan University, Taiwan

P-A-06
Consolidation behavior of spherical SiO_2 fine particles adsorbed with polyethyleneimine complexed with different fatty acids
N. Taki, M. Iijima, J. Tatami
Yokohama National University, Japan

P-A-07
Bead milling process of SiO_2 nanoparticles in non-aqueous solvent using various polyethyleneimine-oleic acid complex as dispersants
M. Saito, M. Iijima, J. Tatami
Yokohama National University, Japan

P-A-08
Photocurable transparent dense slurry designed by refractive index tuning of mixed solvent
R. Arita, M. Iijima, J. Tatami
Yokohama National University, Japan

P-A-09
Synthesis of Cu-Ce-Zr oxide catalyst nanoparticle by microwave denitration method
A.D. Karisma, R. Nakamura, T. Fukasawa, T. Ishigami, K. Fukui
Hiroshima University, Japan

P-A-10
The enhancement mechanism investigation of rare earth elements dissolution from weathered residual rare earth ores by planetary ball milling with addition of solid sodium hydroxide
T. Kato[1], G. Granata[1], C. Tokoro[1], Y. Tsunazawa[2], T. Takagi[2]
[1]Waseda University, Japan, [2]National Institute of Advanced Industrial Science and Technology, Japan

P-A-11
Mechanical properties of single crystal silicon measured using microcantilever beam specimens
H. Yamaguchi[1], J. Tatami[1], M. Iijima[1], T. Yahagi[2], T. Takahashi[2]
[1]Yokohama National University, Japan, [2]Kanagawa Institute of Industrial Science and Technology, Japan

P-A-12
Influence of sintering aid on translucency of AlN ceramics
H. Akimoto[1], J. Tatami[1], M. Iijima[1], T. Takahashi[2]
[1]Yokohama National University, Japan, [2]Kanagawa Institute of Industrial Science and Technology, Japan

P-A-13
Direct synthesis of single-phase hexagonal tungsten oxide nanorods by spray pyrolysis method
S. Nakakura, F.G. Rinaldi, T. Hirano, R. Balgis, T. Ogi
Hiroshima University, Japan

P-A-14
Effect of BaF_2, YF_3 and $Al(OH)_3$ powders addition on the synthesis of YAG : Ce^{3+} phosphor by mechanical method
K. Kanai[1],Y. Fukui[1], S. Ozawa[1], T. Kozawa[2], A. Kondo[2], M. Naito[2]
[1]Kaneka Corporation, Japan, [2]Osaka University, Japan

P-A-15
Synthesis of $Cs_{0.32}WO_3$ nanoparticles via flame-assisted spray pyrolysis
T. Hirano, S. Nakakura, F.G. Rinaldi, T. Ogi
Hiroshima University, Japan

P-A-16
Influence of dissolved oxygen in AlN grains on corrosion of AlN ceramics by CF_4/O_2 plasma
M. Kato[1], J. Tatami[1], M. Iijima[1], A. Mikumo[2], R. Fujimi[2]
[1]Yokohama National University, Japan, [2]Sumitomo Electric Industries, Ltd., Japan

P-A-17
Cocrystal engineering for dry powder inhalation using spray freeze drying technology
R. Tanaka, Y. Saida, Y. Hattori, K. Ashizawa, M. Otsuka
Musashino University, Japan

P-A-18
Preparation of geopolymeric materials from coal fly ash and elution properties of coal fly ash in alkaline solution
M. Matsuoka, N. Murayama
Kansai University, Japan

P-A-19
Tailoring carbon nanotube/matrix interface to optimize mechanical properties of multiscale composites
J. Hu, X. Zhang, Y. Ding, S. Dong
Shanghai Institute of Ceramics, China

P-A-20
Particle interparticle force characterization by monitoring the fluidized bed pressure drop
W.-Y. Hsu[1], H.-P. Kuo[1,2]
[1]Chang Gung University, Taiwan, [2]Linkou Chang Gung Memorial Hospital, Taiwan

P-A-21
Evaluation of glycine crystal nucleation rate in multi-solute aqueous solutions by measurement of its induction time
S. Tatsukawa, M. Yoshida, A. Shimosaka, Y. Shirakawa
Doshisha university, Japan

P-A-22
Dispersion and aggregation behavior of titanium carbide nanoparticles (TiC-NPs) in an organic solvent
D. Itabashi[1,2], K. Mizukami[1], H. Kamiya[2]
[1]Nippon Steel & Sumitomo Metal Corporation, Japan, [2]Tokyo University of Agriculture and Technology, Japan

P-A-23
Ordering molecular bindings at the surface enabled by phase transfer of nanoparticles via ligand exchange processes
H. Asama, S. Yamashita, Y. Okada, H. Kamiya
Tokyo University of Agriculture and Technology, Japan

P-A-24
Flow microreactor synthesis of silica-silver core-shell particles
S.S. Maw, S. Watanabe, K. Mae, M.T. Miyahara
Kyoto University, Japan

P-A-25
On the role of nanofluid in convective self-assembly of colloidal particles
N. Arai, S. Watanabe, M. Miyahara
Kyoto University, Japan

P-A-26
Unique adsorption behavior induced by interfaces in core-shell soft MOF particles
A. Fujiwara, S. Watanabe, M. Miyahara
Kyoto University, Japan

P-A-27
Efficient recovery process of precious metals from E-waste
K. Sakusabe, T. Kato, H. Okawa, K. Sugawara
Akita University, Japan

P-A-28
Prediction of the $BaTiO_3$ green sheet density by using hydrostatic pressure measurement
N. Iwata[1], M. Morisono[1], T. Mori[1,2]
[1]Hosei University, Japan, [2]Hosei University Research Institute for Slurry Engineering, Japan

P-B-01
The synthesis of super-hydrophobic coatings based on silica nanoparticle by micro-atmospheric pressure plasma
C. Huang, H.-H. Lin, W.-L. Li, L.-K. Huang, Y.-A. Chen
Yuan Ze University, Taiwan

P-B-02
Formation of bi-continuous hydrophobic Nylon-12 membranes via cold solvent induced phase separation (CIPS) for membrane distillation applications
C.-H. Tsai, L.-P. Cheng
Tamkang University, Taiwan

P-B-03
Preparation of highly asymmetric and bicontinuous poly(ether sulfone) membranes for ultrafiltration applications
L.-K. Chang, S.-T. Yu, L.-P. Cheng
Tamkang University, Taiwan

P-B-04
Effect of atmosphere on the brazing AlN to graphite
T.-T. Chou, W.-H. Tuan
National Taiwan University, Taiwan

P-B-05
Synthesis and mechanical properties of graphene/SiO_2 layered nanocomposites prepared by intercalation method
Y. Huang[1,2], C. Wan[1], K. Yasuda[2]
[1]Tsinghua University, China, [2]Tokyo Institute of Technology, Japan

P-B-06
Effect of nitriding conditions on microstructures of hierarchical TiN porous body prepared from PMMA templates and TiO_2 colloids
A. Uga, I. Motoyuki, T. Junichi
Yokohama National University, Japan

P-B-07
Processing Si_3N_4 ceramics having complicated structure from multi-component non-aqueous dense slurry using novel in-situ solidification process
K. Hasegawa, M. Iijima, J. Tatami
Yokohama National University, Japan

P-B-08
Tailored microstructure with aligned pores in B_4C prepared by slip casting in rotating magnetic field
S. Azuma[1], T. Uchikoshi[1], K. Yoshida[2], T.S. Suzuki[1]
[1]National Institute for Materials Science, Japan, [2]Tokyo Institute of Technology, Japan

P-B-09
Synthesis of potassium-type zeolite by reverse-micelle microwave method
T. Fukasawa, A. Horigome, A.D. Karisma, T. Ishigami, K. Fukui
Hiroshima University, Japan

P-B-10
Measurement of grain boundary strengths of porous SiC by microcantilever beam technique
Y. Imoto[1], J. Tatami[1,2], M. Iijima[1,2], T. Takahashi[2], T. Yahagi[2], T. Horiuchi[2], M. Yokouchi[2],T. Kondo[2]
[1]Yokohama National University, Japan, [2]Kanagawa Institute of Industrial Science and Technology, Japan

P-B-11
Physical modelling of the coating behavior in dry particulate coating using mild vibration field with beads media
T. Yasunaga[1], M. Yoshida[2], A. Shimosaka[2], Y. Shirakawa[2], H. Ichikawa[1]
[1]Kobe Gakuin University, Japan, [2]Doshisha University, Japan

P-B-12
Microstructure and physical properties of barium titanate ceramic-portland cement-polyvinylidene fluoride composites
A. Chaipanich, T. Wittinanon, R. Rianyoi, A. Ngamjarurojana
Chiang Mai University, Thailand

P-B-13
Effect of drying process for preparation of carbon aerogel microsphere using supercritical carbon dioxide drying
S. Areerat[1], S. Ruenros1, J. Chaichanawong[2]
[1]King Mongkut's Institute of Technology Ladkrabang, Thailand, [2]Thai-Nichi Institute of Technology, Thailand

P-B-14
Enhanced sunlight photocatalytic activity of silver-doped titanium dioxide nanofiber
K.-P. Chiang[1], P.-Y. Wu[1], Y.-H. Chang[1], T.-H. Lin[1], M.-C. Wu[1,2]
[1]Chang Gung University, Taiwan, [2]Chang Gung Memorial Hospital, Taiwan

P-B-15
Fabrication and characterization of octahedral molybdenum cluster films by electrophoretic deposition
T.K.N. Nguyen[1], B. Dierre[1], F. Grasset[1], S. Cordier[2], N. Ohashi[1], T. Uchikoshi[1,2]
[1]National Institute for Materials Science, Japan, Japan, [2]CNRS-University of Rennes 1, France

P-B-16
Fabrication and characterization of BSCF-based mixed ionic-electronic conducting (MIEC) membrane by electrophoretic deposition (EPD)
K. Ishii[1,2], C. Matsunaga[1], A.J. Stevenson[3], C. Tardivat[3], T. Uchikoshi[1,2]
[1]Hokkaido University, Japan, [1]National Institute for Materials Science, Japan, [3]Saint-Gobain SA, France

P-B-17
Hydrothermal formation and characteristics of complex oxide co-doped with Er^{3+}/Yb^{3+} in the Gd_2O_3-TiO_2-Nb_2O_5 system
M. Hirano, M. Hara
Aichi Institute of Technology, Japan

P-B-18
DEM simulation analysis for effects of packing structures in a low density particle bed on cooperative falling disk behaviors
D. Kawabata, A. Shimosaka, M. Yoshida, Y. Shirakawa
Doshisha University, Japan

P-B-19
Evaluation for specific heat capacity of thermal insulation material by differential scanning calorimeter
H. Abe[1], M. Akoshima[1], T.-W. Lian[2], A. Kondo[2], M. Naito[2]
[1]National Institute of Advanced Industrial Science and Technology, Japan, [2]Osaka University, Japan

P-B-20
Measurement of specific heat capacity for powder and nanomaterials
H. Abe
National Institute of Advanced Industrial Science and Technology, Japan

P-B-21
A newly-developed device for emulsification and dispersion of particles
T. Tanaka, G. Nemoto, M. Matsushita
Ohkawara Kakohki Co., Ltd., Japan

P-D-01
Study of influences of Gd infiltration on NiO-CeO_2 composite anode support substrate for intermediate-temperature solid oxide fuel cells
I. Jang, C. Kim, S. Kim, H. Yoon, T. Song
Hanyang University, Japan

P-D-02
Preparation of $LiMn_2O_4$@$LiMnPO_4$ core@shell cathodes with improved thermostability for Li-ion batteries
T. Harata, T. Kozawa, M. Naito
Osaka University, Japan

P-D-03
Different heat treatments effects on the microstructure and densification of $CuIn_{0.7}Ga_{0.3}Se_2$ precursor films prepared by doctor blade technology
M.-T. Sun, H.-I. Hsiang, C.-T. Yang, Y.-C. Wu
National Cheng Kung University, Taiwan

P-D-04
Metal doping effects on TiO_2 electron transport layer of planar perovskite-structured solar cells
Y.-H. Liao[1], S.-H. Chan[1], M.-C. Wu[1,2], W.-F. Su[3]
[1]Chang Gung University, Taiwan, [2]Chang Gung Memorial Hospital, Taiwan, [3]National Taiwan University, Taiwan

P-E-01
Application of the DEM-CFD method on die filling for fine particles
H. Yao, M. Sakai
The University of Tokyo, Japan

P-E-02
Gelcasting of porous ceramics
H.-Y. Chang, W.-H. Tuan
National Taiwan University, Taiwan

P-E-03
Sintering behavior and dielectric properties of $SrTiO_3$ with different Sr/Ti ratio
Y.-T. Su, W.-H. Tuan
National Taiwan University, Taiwan

P-E-04
Influence of inhalation patterns on behavior or deposition of inhaled particles in an actual respiratory system by numerical analysis
K. Kadota, N. Inoue, H. Uchiyama, Y. Tozuka
Osaka University of Pharmaceutical Sciences, Japan

P-E-05
Sintering behavior and microstructure of strontium doped calcium sulfate
Y.-C. Chen, W.-H. Tuan
National Taiwan University, Taiwan

P-E-06
Preparation of translucent polycrystalline alumina by hot isostatic pressing
B.-T. Lu[1], W.-H. Tuan[1], D. Galusek[2], M. Naito[3]
[1]National Taiwan University, Taiwan, [2]Joint Glass Centre of the IIC SAS, Slovakia, [3]Osaka University, Japan

P-E-07
Preparation for Eu^{3+}-doped transparent YAG through solid-state reaction sintering process
T.-Y. Lin[1], W.-H. Tuan[1], D. Galusek[2]
[1]National Taiwan University, [2]Trenčianska Univerzita Alexandra Dubčeka v Trenčíne, Slovakia

P-E-08
Focusing and defocusing dynamics of particles flowing in inertial microfluidic flows
H. Udono, M. Sakai
The University of Tokyo, Japan

P-E-09
Fracture toughness measurement on anorthite ceramics by ball on three balls method
D. Yunitasari, K. Yasuda
Tokyo Institute of Technology, Japan

P-E-10
Synthesis of core-shell structured $Au@Bi_2S_3$ nanorods and its application in electrochemical sensing material for DNA detection
F. Gao[1], B. Zhang[1], Q. Wang[1], W. Qiu[1,2], H. Tanaka[2]
[1]Minnan Normal University, China, [2]Shimane University, Japan

P-E-11
MnO_2-doped $(Ba,Ca)(Ti,Sn,Hf)O_3$ lead-free ceramics with high temperature stability and their applications on the piezoelectric ultrasonic motors
C.-C. Tsai[1], J.-S. Jiang[1], S.-Y. Chu[2], W.-H. Chao[2]
[1]TungFang Design University, Taiwan, [2]National Cheng Kung University, Taiwan

P-E-12
Influence of ionomer adhesion ratio of catalyst layer on electrode characteristics of polymer electrolyte fuel cell
M. Kishi[1,2], T. Mori[1,3]
[1]Hosei University, Japan, [2]Nissan Motor Co.Ltd., Japan, [3]Hosei University Research Institute for Slurry Engineering, Japan

P-E-13
Synthesis and characterization of spray dried bioactive glass
T.-A. Lin, C.-W. Hsiao, S.-J. Shih
National Taiwan University of Science and Technology, Taiwan

P-E-14
Validity and reliability of thermal diffusivity measurement by the flash method for thermal insulation materials
M. Akoshima[1], H. Abe[1], T.-W. Lian[2], A. Kondo[2], M. Naito[2]
[1]National Institute of Advanced Industrial Science and Technology, Japan, [2]Osaka University, Japan

P-E-15
High-performance of Co/ZnCo oxide core-shell structure pseudocapacitor prepared by two-step hydrothermal process
E.-S. Lin, C.-Y. Chen
Feng Chia University, Taiwan

P-E-16
Solid-state synthesis of cobalt blue core-shell pigment and estimation of its reaction process
M. Yoneda[1], Y. Tatsumi[2], K. Nakaso[2], K. Gotoh[2], M. Nakanishi[2], T. Fujii[2], T. Nomura[1]
[1]Osaka Prefecture University, Japan, [2]Okayama University, Japan

P-E-17
Calcium phosphate precipitation on cellulose nanofiber intending for improvement in thermal stability
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P-E-18
Fabrication of uniform hydroxyapatite coating on cellulose fiber by one-pot precipitation method
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P-E-19
Effect of La(III) on the formation of artificial steel rust particles from aqueous $FeCl_2$ solutions
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P-E-20
Three-dimensional observation of internal structure for Al_2O_3 ceramics by optical coherence tomography
F. Sakamoto[1], T. Takahashi[2], J. Tatami[1,2], M. Iijima[1,2]
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P-E-21
Effect of polymer concentration on particle size of the HAp/PLA core-shell particles
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P-E-22
Operation window monitoring and migration from single to binary excipient in a high shear granulator
C.-Y. Lin, Y.-X. Lee, A.-N. Huang
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P-E-23
Sinter forging and X-ray microtomography methods for determining sintering stress and bulk viscosity
G. Okuma[1], F. Wakai[1], J. Gonzalez-Julian[2], O. Guillon[2]
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P-E-24
3D microstructure analysis of the second phase formed in rare earth oxide doped β-Si_3N_4 ceramics by FIB/SEM tomography
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P-E-25
Synthesis of Y-Ti-Zr-O complex system nanoparticles by an experimental method at room temperatures and its evaluation on the mechanical properties of ODS steels
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P-E-26
Effective dielectric coefficient and conductivity induced by guiding center approximation
J.-S. Jiang, C.-C. Tsai
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