P-A-01

Wet mechanical route to synthesize morphology-controlled $\rm NH_4ZnPO_4$ and its application for ammonia gas absorption

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P-A-02

Evolution of inhomogeneous internal structure in ceramic slurry during drying

~ Approach from operand observation by OCT-TG combined system ~

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P-A-03

Simple and rapid synthesis of metal-organic framework CALF-20 via mechanochemical route for CO₂ capture and separation

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P-A-04

Synthesis of PHI type zeolite showing the structural flexibility for CO₂ adsorption Yuto Higuchi *¹, Shunsuke Tanaka ^{1, 2, 3}

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P-A-05

Enhancement of photoluminescence intensity of Li-M-Ti-O:Mn⁴⁺ (M = Ta or Nb) phosphors Fumiaki Shirakawa^{*1}, Kai Kameyama¹, Hiromi Nakano²

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P-A-06

Influence of crystal structure on the photoluminescence property of Ca₂ (Si, P)O₄:Ce³⁺ phosphor Atsushi Higashide^{*1}, Shota Ando¹, Hiromi Nakano²

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P-A-08

Design of interparticle photo-cross-linkable SiO₂ suspensions having long term stability Kengo Nishiyama^{*1}, Junichi Tatami², Motoyuki Iijima²

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P-A-09

Rheological properties of concentrated TiO₂ aqueous slurries stabilized by comb-like polymer dispersants with different structures

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P-A-10

Design of highly stabilized interparticle photo-cross-linkable o/w Pickering emulsions for shaping porous ceramic materials

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P-A-11

Aqueous based interparticle photo-cross-linkable suspensions for fabricating complex structured transparent SiO₂ glass components

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P-A-12

Predictive simulation of oiling-out in anti-solvent crystallization using a phase-field model Yuhei Tsugawa*, Mikio Yoshida, Yoshiyuki Shirakawa Graduate School of Science and Engineering, Doshisha University, Japan

P-A-13

Effect of debinding process on the microstructure and mechanical properties of SiO₂ green bodies prepared from interparticle photo-cross-linkable suspension Sayaka Yamada*, Junichi Tatami, Motoyuki Iijima *Yokohama National University, Japan*

P-A-14

Effects of charged nanoparticles and weak electric field on nanoparticle translocation across cell membranes

Takumi Okamura^{* 1}, Hideya Nakamura¹, Ryuji Kawano², Mahiro Suzuki², Shuji Ohsaki¹, Satoru Watano¹ 1 Osaka Metropolitan University, Japan 2 Tokyo University of Agriculture and Technology, Japan

P-A-15

Development of a bonding process of photo-cured SiO₂ green bodies using interparticle photo-crosslinkable suspension Yuki Hiroshige*, Junichi Tatami, Motoyuki Iijima Yokohama National University, Japan

P-A-16

Evaluation of dewaxing behavior of alumina green body by a combined OCT/TG/FT-IR system and thermomechanical analysis Mariko Minami*, Junichi Tatami, Motoyuki Iijima

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3-dimensional visualization of inhomogeneous structure by in-situ OCT observation during sintering of Al₂O₃ ceramics Mizuki Izawa*, Junichi Tatami, Motoyuki Iijima

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P-A-18

Transparency and photoluminescence of gas-pressure sintered Lu-α-SiAlON:Ce³⁺ ceramics Kohei Aminaka^{*1}, Junichi Tatami², Motoyuki Iijima², Takuma Takahashi³ 1)Graduate School of Engineering Science, Yokohama National University, Japan 2)Graduate School of Environment and Information Sciences, Yokohama National University, Japan 3) Kanagawa Institute of Industrial Science and Technology, Japan

P-A-19

Amorphization of metal-organic frameworks ZIF-8 and its application to fabrication of gas separation membranes

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P-A-20

Simultaneous in-situ observation of changes in internal structure and rheological properties of alumina slurry with increasing temperature using an OCT-rheometer combined system Miu Nakamura*, Junichi Tatami, Motoyuki Iijima *Yokohama National University, Japan*

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Investigation of internal structural changes of alumina slurry droplets during freezing through OCT insitu observation

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P-A-22

Size effect of pesticide microparticles on control of Botrytis cinerea Ichikatsu Matsumoto*, Mikito Tokumaru, Toshiyuki Nomura Osaka Metropolitan University, Japan

P-A-23

Particle recovery of palladium ions by bioreduction using Escherichia coli Tohko Asada*, Toshiyuki Nomura Osaka Metropolitan University, Japan

P-A-24

Dry particle coating process using twin-screw continuous kneader for pharmaceutically-engineered controlled-release microparticles with multi-layer structure Hideki Ichikawa^{* 1}, Toshinobu Uemura², Tooru Andoh¹, Yoshinobu Fukumori¹ *I Kobe Gakuin University, Japan, 2 Pharma Poly Tech, Inc., Japan*

P-A-25

Volume resistivity of AlN ceramics with sintering aid powders having various particle size distributions

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P-B-01

Effect of characteristics of raw powders on crystal orientation of hydroxyapatite by molding under a magnetic field

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P-B-02

Types of ball-milling induced deformation in iron particles Syunsuke Fujita*¹,Satoshi Motozuka¹,Hisashi Sato² 1 Graduate School of Materials Science and Engineering, Kyushu Institute of Technology, Japan 2 Graduate School of Engineering, Nagoya Institute of Technology, Japan

P-B-03

Effect of solvent dipole on drug-loading capacity of metal-organic frameworks Kazuki Ohshima*, Shuji Ohsaki, Hideya Nakamura, Satoru Watano Department of Chemical Engineering, Osaka Metropolitan University, Japan

P-B-04

Hot-melt kneading process for producing composite particles of all-solid-state lithium sulfur batteries Motoshi Iwao*, Hiromi Miyamoto, Hideya Nakamura, Eiji Hayakawa, Shuji Ohsaki, Satoru Watano Osaka Metropolitan University, Japan

P-B-05

High piezo response in undoped KNN sintered at low temperature Lucile Vaschalde^{*1,2}, Encarnación G. Víllora¹, Kiyoshi Shimamura^{1,2} I National Institute for Materials Science (NIMS), Tsukuba, Japan 2 Graduate School of Advanced Science and Engineering, Waseda University, Japan

P-B-06

Luminescence properties of translucent Ca-α-SiAlON:Eu²⁺ ceramics Taichi Ito^{*1}, Junichi Tatami¹, Motoyuki Iijima¹, Takuma takahashi², Masahiro Yokouchi² 1 Yokohama National University, Japan 2 Kanagawa Institute of Industrial Science and Technology, Japan

P-B-07

Strength and deformation of single crystal 8YSZ at particulate scale Mayuko Muramoto^{*1}, Junichi Tatami¹, Takuma Takahashi^{1,2}, Tsukaho Yahagi², Hiromi Nakano³, Tatsuki Ohji¹, Motoyuki Iijima¹

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P-B-08

Denitration characteristics of aqueous metal nitrate solution by microwave heating with carbon nanotube-containing alumina composite ceramic jacket

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P-D-01

Fundamental study of separation of different resin plates bonded by solvent using wire explosion by pulsed discharge

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P-D-02

Improved photocatalytic performance of visible light-driven BiVO₄ nanoparticles via W and Mo doping

Chien-Yie Tsay *¹, Ching-Yu Chung ¹, Chin-Yi Chen ¹, Yu-Cheng Chang ¹, Jerry J. Wu ²

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P-D-03

Understanding high temperature adhesion induced by calcium compounds using model particles Tsuyoshi Fujimoto^{*1}, Genki Horiguchi², Yohei Okada³, Hidehiro Kamiya¹

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P-D-04

One-step solvothermal synthesis of NiCo-LDH@rGO nanosheets on carbon cloth as an electrode material for supercapacitor applications

Shi-Hao Huang, Chin-Yi Chen*

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P-D-05

Silver recovery from spent photovoltaic panel sheets using high voltage pulse crushing Yuto Imaizumi *¹, Yutaro Takaya ² Taketoshi Koita ³, Soowon Lim ³, Takao Namihira ⁴, Chiharu Tokoro ^{2 3}

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P-D-06

Controlling particle adhesion at high temperatures: The use of nanoparticles as additives Genki Horiguchi^{*1}, Yohei Okada², Hidehiro Kamiya² 1 National Institute of Advanced Industrial Science and Technology (AIST), Japan 2 Tokyo University of Agriculture and Technology, Japan

P-D-07

In-situ solvothermal deposition of a NiCo-LDH@ZnFe-LDH nanostructure on carbon cloth as a supercapacitor electrode

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P-D-08

Kinetic analysis of mechanical degradation of TBBPA with a planetary ball mill

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P-D-10

Boosting oxygen evolution reaction of nickel-iron borophosphate by amorphization Jiseok Kwon*, Seunggun Choi, Myeungwoo Ryu, Taeseup Song, and Ungyu Paik Department of Energy Engineering Hanyang University, Seoul, Republic of Korea

P-D-11

Nickel oxide nanoparticle-decorated BaCo_{0.4}Fe_{0.4}Zr_{0.1}Y_{0.1}O_{3-δ} composite cathode for high performance protonic ceramic fuel cells Hyungjun Lee*, Sungmin Kim, Minsung Kim, Taeseup Song, and Ungyu Paik Department of Energy Engineering, Hanyang University, Seoul, Republic of Korea

P-D-12

The role of al-based additives to control ash adhesion at high temperatures

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P-D-13

Carbon fiber cloth@BiOBr/CuO as immobilized membrane-shaped photocatalyst with enhanced H₂ production activity

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P-D-14

Effect of tellurite glass addition on microstructure and ionic conductivity of garnet-type solid electrolytes

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P-D-15

Study of the application of pulsed discharge to separation and recovery of carbon fiber from laminated CFRP

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P-D-16

Fabrication of g-C₃N₄/TiO₂ layer on ITO glass by electrophoretic deposition Preyaphat Wongchaiya* ^{1,2}, Thi Kim Ngan Nguyen ³, Kento Ishii ⁴, Pornapa Sujaridworakun ¹, Siriporn Larpkiattaworn ², Tohru S. Suzuki ⁴, Tetsuo Uchikoshi ⁴

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P-E-01

A new analytical method for polydisperse system of submicron-sized particles

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P-E-02

Specific heat capacity measurement of composite materials for thermal insulation by differential scanning calorimeter

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P-E-03

Research of structural phase transition of SiO₂ particles by differential scanning calorimeter Haruka Abe*

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P-E-04

Preparation and optical properties of zinc oxide-octahedral molybdenum metal cluster nanocomposite coatings

Irem Nur Gamze Ozbilgin^{*1,2}, Thi Kim Ngan Nguyen^{2,3}, Tetsuo Uchikoshi^{1,2}, Noée Dumait⁴, Fabien Grasset^{2,4}, Stéphane Cordier⁴

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P-E-05

Gadolinium neutron capture therapy as a new treatment for head and neck cancer: tumor-killing effects on a masseter muscle invasion model

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P-E-06

Dielectric properties of SiO₂-Al₂O₃-Na₂O-CaO-K₂O glass system in the millimeter-wave frequency range of 20-60 GHz

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P-E-07

Crystal orientation dependence of mechanical properties of β -Si₃N₄ grains in high thermal conductive silicon nitride ceramics measured using microcantilever beam specimens

Mami Tanabe*¹, Junichi Tatami¹, Motoyuki Iijima¹, Tatsuki Ohji¹, Tsukaho Yahagi², Takuma Takahashi², Daichi Minami², Hiromi Nakano³

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P-E-08

Al/Cu Interface analysis of ceramic nanoparticle reinforced Al brazing filler Sri Harini Rajendran^{*1}, Do Hyun Jung^{1, 2}, Jae Pil Jung¹

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P-E-09

Microstructure and mechanical properties of Sn-Bi solder reinforced with SnO₂ nanoparticles Jiwan Kang¹, Heeyoung Maeng¹, Sri Harini Rajendran², Jae Pil Jung^{*2} I Department of Mechanical Design and Robot Engineering, Seoul National University of Science and Technology, Rep. of Korea

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P-F-01

Microstructure optimization for the face mask performance by CFD-DPM model Ika Y. Rachmawati*, Kodai Hada, Mohammadreza Shirzadi, Tomonori Fukasawa, Kunihiro Fukui, Toru Ishigami *Hiroshima University, Japan*

P-F-02

A novel coarse grain modeling for the adhesion force based on the liquid bridge force and the JKR theory in the discrete element method

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P-F-03

Nanoparticle translocation across lipid bilayer containing cholesterols Masaya Tajima*, Hideya Nakamura, Shuji Ohsaki, Satoru Watano Department of Chemical Engineering, Osaka Metropolitan University, Japan

P-F-04

Shear thickening mechanism analysis of concentrated slurry by Coupled DEM and CFD simulation Daiki Hiruta *¹, Kizuku Kushimoto ², Shingo Ishihara ², Junya Kano ² 1 Graduate School of Environmental Studies, Tohoku University, Japan 2 Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Japan

P-F-05

Prediction of the milling speed under highly viscous condition with DEM simulation Takuya Suzuki^{*1}, Kizuku Kushimoto², Shingo Ishihara², Junya Kano² 1 Graduate School of Environmental Studies, Tohoku University, Japan 2 Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University, Japan

P-F-06

Nanoparticle translocation across cell membrane by applying electric field: Effect of particle size Akane Mizooku*, Hideya Nakamura, Shuji Ohsaki, Satoru Watano *Department of Chemical Engineering, Osaka Metropolitan University, Japan*

P-F-07

Quantitative analysis of powder mixing mechanisms in dem simulations by a POD-ANOVA-based approach

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P-F-08

Validation study on a coarse grained DEM-CFD for a three phase flow system Rui Li^{*1}, Daisuke Yamada², Mikio Sakai^{1,2} 1 Department of Nuclear Engineering and Management, The University of Tokyo, Japan

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P-F-09

DEM study on powder mixing for non-spherical particles in a container blender Keita Kyoya^{*1}, Guangtao Duan², Mikio Sakai³

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P-F-10

Boosting a large-scale SPH particle methods using many GPUs, including inter-node communications Haruki Osaki^{*1}, Daniel Morikawa², Mitsuteru Asai¹

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P-F-11

High-order SPH method with spatial second-order accuracy for derivative operator Shujiro Fujioka*, Kumpei Tsuji, Mitsuteru Asai *Graduate School of Civil Engineering, Kyushu University, Japan*

P-F-12

Modified gradient and Laplacian models in the SPH method to improve accuracy including negative pressure regions Yusuke Saeki*, Kumpei Tsuji, Mitsuteru Asai *Kyushu University, Japan*

P-F-13

DEM-CFD Study for the Density-Segregation in Vibrated-Fluidized Bed close to the Minimum Fluidization Velocity

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