

Poster List

Aerosols

- PA-1 Numerical Analysis on Inhaled Powder of Fluticasone in the Geometric Airways
[Kazunori Kadota](#), [Hiromasa Uchiyama](#), [Yuichi Tozuka](#) (Osaka University of Pharmaceutical Sciences, Japan)

Adhesion and Contact Mechanics

- PB-2 Formulation Improvement of Bio-based Powders in Binder-Jet 3D Printing
[Ting-Yu Cheng](#), [Ying-Chih Liao](#) (Department of Chemical Engineering, National Taiwan University, Taiwan)

Biological, Biomedical and Pharmaceutical Applications

- PC-01 Preparation of Nano-composite Coating Agents for Binder-less Dry Particulate Coating using Vibration Field
[Toshiya Yasunaga](#)¹, [Tooru Andoh](#)², [Yoshinobu Fukumori](#)², [Hideki Ichikawa](#)^{1,2} (¹Graduate School of Pharmaceutical Sciences, Kobe Gakuin University; ²Faculty of Pharmaceutical Sciences, Kobe Gakuin University, Japan)
- PC-02 Recrystallization and Micronization of Warfarin Using Supercritical Anti-solvent Process
[Jheng-Ming Ciou](#), [Chie-Shaan Su](#) (National Taipei University of Technology, Taiwan)
- PC-03 Direct Measurement of Interaction Forces Between Microorganism and Microbubble Using Atomic Force Microscopy
[Shohei Yumiyama](#), [Yasuhiro Konishi](#), [Toshiyuki Nomura](#) (Osaka Prefecture University, Japan)
- PC-04 Delivery of Carrier Nanoparticles into Tobacco BY-2 Cells
[Yuki Yuasa](#), [Yasuhiro Konishi](#), [Toshiyuki Nomura](#) (Osaka Prefecture University, Japan)
- PC-05 Disease Control of Phytophthora Infestans using Cyazofamid Loaded PLGA Nanoparticles
[Kazuto Fukamachi](#), [Shunji Tani](#), [Yasuhiro Konishi](#), [Toshiyuki Nomura](#) (Osaka Prefecture University, Japan)
- PC-06 Eco-Toxicity of Polystyrene Nanoparticles on the Growth of Methanogen
[Rong Chen](#), [Yasuhiro Konishi](#), [Toshiyuki Nomura](#) (Osaka Prefecture University, Japan)
- PC-07 MD Simulation Study of Permeation of Nanoparticle across Cell Membrane by Applying Electric Fields: Effect of Particle Size
[Kyohei Sezawa](#) (Osaka Prefecture University, Japan)
- PC-08 Synthesis, Biocompatibility, and Antibacterial Properties of Graphene Oxide-Doped Bioactive Glass
[Ting-An Lin](#)¹, [Jia-Yu Lin](#)¹, [Henni Setia Ningsih](#)¹, [Meng-Huang Wu](#)², [Shao-Ju Shih](#)¹ (¹Department of Materials Science and Engineering, National Taiwan University of Science and Technology; ²Department of Orthopedic Surgery, Taipei Medical University Hospital, Taipei, Taiwan)

- PC-09 Functionalized Magnetic Nanoparticles for Bioseparation of Proteins
Hira Fatima¹, Kyo-Seon Kim¹, Pil Jo Lyoo² (¹Kangwon National University; ²Semyung University, Korea)
- PC-10 Composite Polymer Coating for the Controlled Release Particles
Chih-Chiang Yang, Ko-Chiang Chen, Wen-Che Wang, Tzu-Yu, Chien (Department of Pharmaceuticals Medical and Pharmaceutical Industry Technology and Development Center, Taiwan)

Catalysts and Composites

- PD-1 Application of Zeolite-Coated QCM to Water Contents Measurement
Young Han Kim (Dong-A University, Korea)
- PD-2 Hydrogen Storage Properties of Metal Nano-particles with a Hybrid Computer Simulation
Yoshiyuki Shirakawa, Yoshihisa Maeyama, Mikio Yoshida, Atsuko Shimosaka (Doshisha University, Japan)
- PD-3 Preparation of CaRuO₃ Nano-Particles for Bi-functional Catalyst of Metal-air Batteries by Chemical Solution Deposition
Tomoya Ohno¹, Shigeto Hirai¹, Kentaroh Fukumitsu¹, Takeshi Matsuda¹, Hisao Suzuki² (¹Kitami Institute of Technology; ²Shizuoka University, Japan)
- PD-4 Highly Selective Synthesis of Large Aromatic Molecules with Nano-zeolite: beyond the Shape Selectivity Effect
Yilin Hou, Weizhong Qian (Department of chemical engineering, Tsinghua University, China)
- PD-5 Preparation of Amine Modified Bimodal Mesoporous Silica Particles for CO₂ Separation
Younghee Lee¹, Tatsushi Matsuyama², Junichi Ida² (¹Department of Environmental Engineering for Symbiosis, Faculty of Engineering, Soka University; ²Science and Engineering for Sustainable Innovation, Faculty of Science and Engineering, Soka University, Japan)
- PD-6 Synthesis and Characterization of N-doped Sr₄Ta₂O₉
Yang Hong¹, Tatsushi Matsuyama², Junichi Ida² (¹Department of Environmental Engineering for Symbiosis, Faculty of Engineering, Soka University; ²Science and Engineering for Sustainable Innovation, Faculty of Science and Engineering, Soka University, Japan)
- PD-7 Utilization of SBA-15 and Silica Gel as Templates to Enhance Photocatalytic Activity of TiO₂ Nanoparticles
Tzong-Horn Liou, Ming-Hui Lin, Pie-Ying Wang, Liang Chu (Ming Chi University of Technology, Taiwan)
- PD-8 Green Synthesis of Carbon-Supported Nanoparticle Catalysts by Physical Vapour Deposition on Soluble Powder Substrate
Sung Jong Yoo (Korea Institute of Science and Technology, Korea)

Ceramics

- PE-1 Preparation of Porous Titania and Ta-Ti Porous Oxide Particles by Partial Dissolution of Hydrous Oxide
Akiko Takeda, Takashi Kojima, Shunsuke Kobayashi, Naofumi Uekawa (Graduate School of Engineering, Chiba University, Japan)
- PE-2 Preparation of Metal Zirconate Particles by Hydrothermal Conversion of Hydrous Zirconia
Misa Inagaki, Takashi Kojima, Naohumi Uekawa (Graduate School of Engineering, Chiba University, Japan)
- PE-3 Effect of Particle Dispersion State on Properties of Sprayed Coating for Suspension Spraying
Naoya Iwata, Takamasa Mori (Hosei university, Japan)

Dispersion, Mixing and Separation

- PF-01 Effect of Conical Angle on the Particle Separation in the Conical Fluidized Beds with Ternary Particle Mixture
Taek-Woon Hong¹, Jong Hun Lim¹, Eun Jin Jung², Dong Hyun Lee¹ (¹Department of Chemical Engineering, Sungkyunkwan University; ²Research Institute of Industrial Science & Technology, Korea)
- PF-02 Determination of Cathode Electrode Making Process for Secondary Lithium Ion Batteries
Tatsuya Hashimoto, Satoru Watano (Department of Chemical Engineering, Osaka Prefecture University, Osaka, Japan)
- PF-03 Dry Separation of Particulate Construction Waste Residue Using Density-Segregation in a Vibro-Fluidized Bed
Takamasa Yokouchi¹, Jun Oshitani¹, Akinori Hirata², Takuya Okamoto² (¹Okayama University of Science; ²Taiyo Machinery CO., LTD., Japan)
- PF-04 Dry Separation of Particulate Ore Using Density-Segregation in a Vibro-Fluidized Bed
Ryo Suqo, Jun Oshitani (Okayama University of Science, Japan)
- PF-05 Stability of Float-Sink of Spheres in a Fluidized Bed at Higher Air Velocity
Shunsuke Kato¹, Jun Oshitani¹, Kyohei Higashida², Takuya Tsuji², Shusaku Harada³, Hirokazu Kajiwara⁴, Kei Matsuoka⁵ (¹Okayama University of Science; ²Osaka University; ³Hokkaido University; ⁴Ebara Environmental Plant Co., LTD.; ⁵Ebara Corporation, Japan)
- PF-06 Preparation of the Functional Oral Jelly Formulation Improved the Dissolution Properties of Curcumin
Satoshi Nogami, Uchiyama Hiromasa, Kazunori Kadota, Yuichi Tozuka (Osaka University of Pharmaceutical Sciences, Japan)

- PF-07 The development of a Shaker fluidized-bed atomizer (SFA) for Nanopowder Dispersion in Long-Term Stable Concentrations
[Chi-Yu Tien](#), [Chuen-Jinn Tsai](#) (Institute of Environmental Engineering, Nation Chiao Tung University, Taiwan)
- PF-08 Continuous Feeding of Dispersed Particles by Vibration and External Electric Field
[Takumu Kawata](#), [Masatoshi Yasuda](#), [Shuji Matsusaka](#) (Department of Chemical Engineering, Kyoto University, Japan)
- PF-09 Separation of p-Dibromobenzene from Isomer Mixtures by Crystal Packed-bed Crystallizer
[Lei He](#)^{1,2}, [Kun Hong](#)^{1,2} (¹Department of Chemical Engineering, Huaiyin Institute of Technology; ²Jiangsu Provincial Engineering Laboratory for Advanced Materials of Salt Chemical Industry, Huaian, China)
- PF-10 Grinding and Dispersing Technologies Research of High Concentration Titanium Dioxide in Aqueous System
[Chi-Shen Tuan](#) (Material and Chemical Research Laboratories, Industrial Technology Research Institute, Taiwan)
- PF-11 Chemical Recycling of Used Foundry Sand using Inorganic Binder
[Kyeong Ho Kim](#)¹, [Bu Yoon Kang](#)^{1,2}, [Jeong-Wook Park](#)³, [Hung-Suck Ark](#)⁴, [Man Sig Lee](#)¹ (¹Korea Institute of Industrial Technology, Ulsan; ²Department of Applied Chemistry, Faculty of Engineering, Pusan National University, Busan; ³R&D center, DR AXION Co. Ltd, Ulsan; ⁴Department of Civil and Environmental Engineering, University of Ulsan, Ulsan, Korea)

Filtration

- PG-1 Microfiltration Properties of Alcohol-Containing Yeast Suspension
[Keisuke Tomimatsu](#), [Nobuyuki Katagiri](#), [Eiji Iritani](#) (Nagoya University, Japan)
- PG-2 Dynamic Behaviors in Consolidation of Bentonite Cake Evaluated by Combined Filtration and Stepped Cake Compression Test
[Tomotaka Yoshida](#), [Nobuyuki Katagiri](#), [Eiji Iritani](#) (Nagoya University, Japan)
- PG-3 Acid Gas Removal Characteristics by High Reactive Sorbents in the Pilot Scale Air Pollution Control System
[Kwang-Duek Kim](#), [Young-Ok Park](#) (Korea Institute of Energy Research, Korea)
- PG-4 Applications of membrane hydrocyclone-Recovery of silicon carbide powder
[Yen-Cheng Tsai](#), [Chen-Yang Hsu](#), [Rome-Ming Wu](#) (Department of Chemical and Materials Engineering ,Tamkang University, Taiwan)

Granular Flow and Multiphase Flow

- PH-1 Experimental and Numerical Studies on Rice Husk Fluidized Bed Pyrolysis
[Shih-Yang Huang](#), [Yu-An Chen](#), [Hsiu-Po Kuo](#) (Chang Gung University, Taiwan)

- PH-2 Particle Size Effect on Desiccation Fracture of Starch-Water Mixture
[Yuri Akiba](#), [Hiroyuki Shima](#) (University of Yamanashi, Japan)
- PH-3 Effect of Mechanical Bed Vibration on Granulation Behavior with a Fluidized Bed
[Yoshihide Mawatari](#), [Hikaru Katamune](#), [Ryusei Tanaka](#) (Kyushu Institute of Technology, Japan)
- PH-4 Numerical Analysis of Continuous Twin Extrusion Wet Granulation
[Sanae Nara](#) (Osaka Prefecture University, Japan)
- PH-5 Effects of Adding a Small Amount of Micro-Sized Powder on the Dynamic Properties in a Rotating Drum
[Chun-Chung Liao](#), [Shan-Lung Chen](#) (National Kaohsiung University of Applied Sciences, Taiwan)

Modeling and Simulation

- PI-1 Simple model for effective thermal conductivity with thermal radiation in packed bed
[Yusuke Asakuma](#) (University of Hyogo, Japan)
- PI-2 Coarse Grained Model for DEM Simulation of a Drum Mixer
[Hiroharu Takimoto](#), [Hideya Nakamura](#), [Satoru Watano](#) (Osaka Prefecture University, Japan)
- PI-3 Numerical Analysis of Tableting Process by a Finite Element Method
[Yu Matsuda](#), [Hideya Nakamura](#), [Satoru Watano](#) (Department of Chemical Engineering, Osaka Prefecture University, Japan)
- PI-4 Numerical Analysis of Dry Powder Inhalation in Human Lung by Using a CFD-DEM Coupling Model
[Saki Fujiwara](#) (Osaka Prefecture University, Japan)

Nanotechnology

- PJ-1 Stabilization Mechanism of Nanocrystal Suspension Prepared by Wet Beads Milling
[Hiroyuki Fujii](#), [Satoru Watano](#) (Department of Chemical Engineering, Osaka Prefecture University, Japan)
- PJ-2 Catalysis of Hybrid Iron Oxide–Noble Metal Nanoparticles for Organic Reactions
[Eun Ji Kim](#), [Soo Hee Kim](#), [Kang Hyun Park](#) (Department of Chemistry and Chemistry Institute for Functional Materials, Pusan National University, Korea)
- PJ-3 Fabricating Perovskite Layer in Solar Cells via Aerosol Spray-Deposition Technique
[Po Hsiang Huang](#)¹, [Ta-Chih Hsiao](#)¹, [Peter Chen](#)² (¹National Central University; ²National Cheng Kung University, Taiwan)
- PJ-4 Novel Fabrication of Silicon-Graphene Composite from Silicon Sludge Waste for Anode Material of Lithium Ion Batteries
[Hankwon Chang](#)^{1,2}, [Sun Kyun Kim](#)¹, [Ji-Hyukchoi](#)¹, [Dae Supkiil](#)¹, [Hee Dong Jang](#)^{1,2} (¹Korea Institute of Geoscience & Mineral Resources; ²University of Science & Technology, Korea)

- PJ-5 Size-Controlled and Continuous Formation of ZnO Nanoparticles in Quenching Chemical Vapor Synthesis Reactor
Jia Feng (Institute of Environmental Engineering, National Chiao Tung University, Taiwan)
- PJ-6 Control of Tungsten Oxide Thin Film Nanostructures by Precursor Feed Rate Change in Flame Vapor Deposition Method
Sang-Hyeok Yoon, Kyo-Seon Kim (Kangwon National University, Korea)
- PJ-7 Growth of Nanostructured MoO_x via Flame Vapor Deposition Process
Jinrui Ding, Kyo-Seon Kim (Kangwon National University, Korea)
- PJ-8 Luminescence Property of Dolomite Phosphors by Sonochemical Synthesis
Shinnosuke Kamei¹, Masakazu Matsumoto², Shigeki Furukawa¹ (¹Department of Sustainable Engineering, College of Industrial Technology, Nihon University; ²Department of Liberal Arts and Basic Sciences, College of Industrial Technology, Nihon University, Japan)

Others

- PK-1 Physical Property of Food Bolus Produced by Human Mastication
Naoki Kobayashi (College of Industrial Technology, Nihon University, Japan)

Particle Characterization

- PL-1 Dispersibility Evaluation and Aspect Ratio Calculation of the Rod-like Particles by Light Scattering Method
Shoichi Nakamura¹, Katsushi Sasa¹, Yen-Cheng Lai² (¹Otsuka Electronics Co.,Ltd, Japan; ²Otsuka Tech Electronics Co.,Ltd, Taiwan)
- PL-2 Activation and Hydration Behaviors of Dolomite Powder after Calcination
Jeng-Ywan Shih (Ming Chi University of Technology, Taiwan)
- PL-3 Synthesis of Mesoporous MCM-48 Materials Using Cationic/Nonionic Surfactants as Template
Tzong-Hong Liou, Ming-Hui Lin, Yuan Hao Liou, Liang Chu (Ming Chi University of Technology, Taiwan)

Particle Formation (Primary and Secondary)

- PM-1 Mechanism for bubble formation by non-equilibrium local heating of microwave
Shunsuke Nishijima, Shungo Matsumura, Yusuke Asakuma (University of Hyogo, Japan)
- PM-2 Preparation of Inhalable Powder Containing Betamethasone with a Bio-Surfactant via Spray-Drying
Maki Hosokawa, Hiromasa Uchiyama, Kazunori Kadota, Yuichi Tozuka (Osaka University of Pharmaceutical Sciences, Japan)

- PM-3 Influence of preparation method on amorphous composite particles of ursodeoxycholic acid with nifedipine.
[Miyabi Yoshida](#), [Aika Yoshimoto](#), [Hiromasa Uchiyama](#), [Kazunori Kadota](#), [Yuichi Tozuka](#) (Osaka University of Pharmaceutical Sciences, Japan)
- PM-4 Solubility Enhancement of Insoluble Compounds with Mixed Micelle System between Transglycosylated Stevia and Ionic Surfactant
[Hiromasa Uchiyama](#), [Miki Fujimori](#), [Kazunori Kadota](#), [Yuichi Tozuka](#) (Osaka University of Pharmaceutical Science, Japan)
- PM-5 The Improvement of Dissolution Property of Curcumin with PVP and Cyclodextrin
[Yui Kitaura](#), [Hiromasa Uchiyama](#), [Kazunori Kadota](#), [Yuichi Tozuka](#) (Osaka University of Pharmaceutical Sciences, Japan)
- PM-6 Enhanced Production of α -form and β -form Glycine Using Antisolvent Crystallization Method Assisted by N₂ Fine Bubbles
[Masakazu Matsumoto](#), [Shota Maesawa](#), [Yoshinari Wada](#), [Toshiyuki Sato](#), [Masaki Okada](#), [Toshihiko Hiaki](#) (College of Industrial Technology, Nihon University, Japan)
- PM-7 Fine Particle Production by Combined Method of Atmospheric Pressure Plasma and Minute Droplet-Application to Double Salt Synthesis
[Yoshinari Wada](#)^{1}, [Takumi Kobayashi](#)², [Masakazu Matsumoto](#)¹, [Kaoru Onoe](#)² (¹College of Industrial Technology, Nihon University, Narashino; ²Faculty of Engineering, Chiba Institute of Technology, Narashino, Japan)*

Powder Metallurgy and Mineral Processing

- PN-1 Preparation of Mixed Hydrous Oxides Adsorbent from Coal Fly Ash and Lime for Removal of Pb²⁺, NH⁴⁺ and PO₄³⁻ from Aqueous Solution
[Takaaki Wajima](#) (Chiba University, Japan)
- PN-2 Effect of Sulfur Immersion on Heavy Material of Sulfur-Impregnated Carbonaceous Adsorbent derived from Biomass
[Masaya Iguchi](#), [Takaaki Wajima](#) (Chiba University, Japan)
- PN-3 Production of Highly Pure Nickel in the Hydrogen Reduction Fluidized Bed Reactors
[Young-Ok Park](#)¹, [Pil-Jo Lyoo](#)² (¹Korea Institute of Energy Research; ²Semyung University, Korea)

- PN-4 Surface Coating Characteristics on the Metal Powder by Two Kinds of Ball Milling Machine with DEM Simulation
[Amgalan Bor](#)^{1,2}, [Ichinkhorloo Batchuulun](#)^{1,2}, [Uyanga Batjargal](#)^{1,2}, [Battsetseg Jargalsaikhan](#)^{1,2}, [Jehyun Lee](#)^{1,2}, [Seongsoo Kim](#)³, [Ochirkhuyag Bayanjargal](#)⁴, [Heekyu Choi](#)^{2,3} (¹Engineering Research Center (ERC) for Integrated Mechatronics Materials and Components, Changwon National University, Changwon; ²Graduate School of Material Science Engineering, Changwon National University, Changwon; ³Department of Mechanics Convergence, College of Engineering, Changwon National University, Changwon, Korea; ⁴Department of Environmental Sciences and Chemical Engineering, School of Engineering and Applied Sciences, National University of Mongolia, Ulaanbaatar, Mongolia)

Surface Modification

- PO-1 Surface Tension of Nanofluids with Different Size of PEG by Microwave Irradiation
[Kenya Tanaka](#)¹, [Nobuhiro Ishida](#)¹, [Yusuke Asakuma](#)¹, [Chi Phan](#)² (¹University of Hyogo, Japan; ²Curtin University, Australia)
- PO-2 Modification of Activated Carbon for Cationic or Anionic Dye Adsorption
[Narandalai Byamba-Ochir](#)¹, [Seong-Chul Ryu](#)², [Wang-Geun Shim](#)², [Enkhtuul Surenjav](#)¹, [Temuujin Jadambaa](#)¹, [Hee Moon](#)² (¹Institute of Chemistry and Chemical Technology, MAS, Ulaanbaatar, Mongolia; ²Department of Advanced Chemicals & Center for Functional Nano Fine Chemicals Chonnam National University, Gwangju, Korea)
- PO-3 Influence of Guest Particle Size on Dry Coating of Electrode Particles
[Tomoyuki Masuyama](#), [Hideya Nakamura](#), [Satoru Watano](#) (Osaka Prefecture University, Japan)
- PO-4 Adsorption and Desorption Kinetics of Carbon Dioxide on Functionalized Activated Carbon Fiber Fabrics
[Yu-Chun Chiang](#), [Yu-Jen Chen](#), [Cheng-Yen Wu](#) (Department of Mechanical Engineering, Yuan Ze University, Taiwan)
- PO-5 The Research of Inorganic Surface Modification of TiO₂ Particles
[Bo LV](#) (Pangang Group Research Institute co.,LTD, China)