

The 26th SCEJ Symposium on Fluidization & Particle Processing and
The 15th Symposium on Advanced Reaction & Chemical Process in Gifu (online)

Program on (Thu.) 26th Nov. 2020

9:40	9:50	Opening Remarks	Executive Committee Chairman: N. Kobayashi (Gifu University)
Invited Lecture 1 Chair: N. Kobayashi (Gifu University)			
9:50	10:30	K1	Fluidized bed and me H. Moritomi (Moritomi Environmental Engineering Laboratory)
Invited Lecture 2 Chair: Y. Tatemoto (Shizuoka University)			
10:30	11:10	K2	Development of green fluidized bed granulation and new particle characterization method E. Yonemochi (Hoshi University)
11:10	11:20	Break	
Student's Session (on the attached form)			
11:20	12:10	S1-S5	Student's Session 1 Chair: T. Yamamoto (Nagoya University)
12:10	13:00	Lunch break	
13:00	13:50	S6-S10	Student's Session 2 Chair: K. Ogata (National Institute of Technology, Oita College)
13:50	14:00	Break	
14:00	14:50	S11-S15	Student's Session 3 Chair: K. Arima (National Institute for Environmental Studies)
14:50	15:00	Break	
15:00	16:00	S16-S20	Student's Session 4 Chair: Y. Mawatari (Kyushu Institute of Technology)
15:50	16:00	Break	
Invited Lecture 3 Chair: R. Noda (Gunma University)			
16:00	16:40	K3	Rotating Spiral, a Novel Gas-Solid Contacting Reactor T. Shimizu (Niigata University)
Student Award Ceremony and Banquet			
16:50	18:30		

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Student's Session 1 Chair: T. Yamamoto (Nagoya University)			
11:20	11:30	S1	Improvement of powder properties for active pharmaceutical ingredients by continuous dry nano-coating method OD. Yamada, T. Ito K. Tahara (Gifu Pharmaceutical University)
11:30	11:40	S2	Synthesis of calcium carbonate template aiming at synthesis of hollow silica particles OR. Nojiri ¹ , M. Hori ¹ , C. Takai ² , K. Fujimoto ¹ , M. Fuji ¹ (1 Nagoya Institute of Technology, 2 Gifu University)
11:40	11:50	S3	Sedimentation velocity measurements of TiO ₂ nanoparticles in aqueous solution with analytical centrifuge OK. Nakamura, H. Guo (Tohoku University)
11:50	12:00	S4	Optimization of Slurry Condition to Prevent Crack Formation of Ceramics Green Sheet ON. Iwata, T. Mori (Hosei University)
12:00	12:10	S5	Effect of pressure to thermal dehydration of waste gypsum powder using rotating and heating for a constant volume vessel OK. Arimura ¹ , K. Ogata ¹ , H. Kawahara ² , H. Sano ³ (1 National Institute of Technology, Oita College, 2 National Institute of Technology, Oshima College, 3 National Defense Academy)
12:10	13:00	Lunch Break	
Student's Session 2 Chair: K. Ogata (National Institute of Technology, Oita College)			
13:00	13:10	S6	Heat Transfer in Internally Circulating Fluidized Bed Lab-Scale and Pilot Scale Facilities OT. Oishi ¹ , H. Takeuchi ¹ , Y. Nagahashi ¹ , J. Grace ² , T. Takeuchi ³ , H. Kajiwara ³ , M. Watanabe ³ (1 National Institute of Technology, Kochi College, 2 University of British Columbia, 3 Ebara Environmental Plant Co. Ltd.)
13:10	13:20	S7	Fluidization characteristics for binary density difference powders under mechanical vibration Y. Mawatari ¹ , ON. Iwamura ¹ , J. Oshitani ² (1 Kyushu Institute of Technology, 2 Okayama University of Science)
13:20	13:30	S8	Effect of mechanical bed vibration on bubble flow pattern and dense phase void fraction in a gas-solid fluidized bed Y. Mawatari, OT. Omori (Kyushu Institute of Technology)
13:30	13:40	S9	Effect of air velocity on powder density segregation in a vibro-fluidized bed OM. Hino ¹ , J. Oshitani ¹ , T. Tsuji ² (1 Okayama University of Science, 2 Osaka University)
13:40	13:50	S10	Separation of organic materials such as woodchips from construction waste residue using a vibro-fluidized bed OT. Matsuoka ¹ , T. Yokouchi ¹ , J. Oshitani ¹ , Y. Mawatari ² (1 Okayama University of Science, 2 Kyushu Institute of Technology)
13:50	14:00	Break	
Student's Session 3 Chair: K. Arima (National Institute for Environmental Studies)			
14:00	14:10	S11	Drying of frozen material in fluidized bed under reduced pressure at low temperature OK. Takahashi, Y. Tatemoto (Shizuoka University)
14:10	14:20	S12	Dry methane reforming under lower temperature using plasma OR. Yoshimi, N. Kobayashi, K. Kamiya, Y. Itaya, A. Suami (Gifu University)
14:20	14:30	S13	Research on particle surface static electricity control using fluidized bed plasma reactor OY. Tonobe, N. Kobayashi, K. Kamiya, Y. Itaya, A. Suami (Gifu University)
14:30	14:40	S14	Char combustion in carbonator of Ca-Looping process OM. Takebuchi, T. Shimizu, H. Kim, L. Li (Niigata University)
14:40	14:50	S15	N ₂ O reduction and NO _x reaction in carbonator of Ca-Looping process ON. Hinokimoto, T. Shimizu, H. Kim, L. Li (Niigata University)
14:50	15:00	Break	
Student's Session 4 Chair: Y. Mawatari (Kyushu Institute of Technology)			
15:00	15:10	S16	Dynamic model of a fluidized bed reactor for thermochemical heat storage of the electricity from variable renewable energy OT. Uchino, C. Fushimi (Tokyo University of Agriculture and Technology)
15:10	15:20	S17	Numerical Simulation of Gas Velocity Distribution in a Coil-Shaped Rotating Spiral Gas-Solid Contacting Device OD. Tanaka, S. Bellan, T. Shimizu (Niigata University)
15:20	15:30	S18	Development and validation of the FELMI for the numerical simulation of the gas-solid flow systems OY. Mori, M. Sakai (University of Tokyo)
15:30	15:40	S19	A study on powder filling mechanism of rotary tablet press machine using DEM-CFD OY. Tsugeno, M. Sakai (University of Tokyo)
15:40	15:50	S20	Numerical Simulation on Fluidized Bed with Heat Exchange Using CFD-DEM: Model Validation OY. Ono, Y. Numazawa, Y. Matsukawa, Y. Matsushita, H. Aoki (Tohoku University)
15:50	16:00	Break	

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Program on (Fri.) 27th Nov. 2020

General Lecture Session 1 Chair: C. Fushimi (Tokyo University of Agriculture and Technology)			
10:00	10:20	G1	Development of acoustic operation of loop seal to improve particle circulation performance in a circulating fluidized bed OH. Sato, R. Noda (Gunma University)
10:20	10:40	G2	Development of thermal spray alloy optimized to Internally Circulating Fluidized-bed Boiler OE. Tanaka ¹ , E. Ishikawa ¹ , S. Muramatsu ¹ , M. Noguchi ² (1 Ebara Environmental Plant Co. Ltd, 2 Ebara Co. Ltd)
10:40	11:00	G3	Biomass CFB boiler power plant OT. Satake (JFE Engineering Corporation)
11:00	11:10	Break	
General Lecture Session 2 Chair: T. Shimizu (Niigata University)			
11:10	11:30	G4	About life extension work of existing fluidized bed boiler in Minoo city environmental clean center OT. Takeuchi, T. Inoue, H. Kajiwara (Ebara Environmental Plant Co. Ltd)
11:30	11:50	G5	Comparison of 5 cases of volume reduction process for incineration residue contaminated by radioactive materials from the accident of Fukushima Daiichi Nuclear Power Plant K. Arima ¹ , M. Osako ¹ , T. Yasutaka ² , T. Shinozaki ³ (1 NIES, 2 AIST, 3 Mitsubishi Research Institute Inc.)
11:50	13:00	Lunch Break	
General Lecture Session 3 Chair: T. Tsuji (Osaka University)			
13:00	13:20	G6	Improvement of fluidization quality for mixtures of two types of fluidized catalysts OT. Kai, H. Odaka, Y. Honda (Kagoshima University)
13:20	13:40	G7	Convective Particle Flow under Mechanical Bed Vibration for Fine Cohesive Powders OY. Mawatari, R. Nakamura, K. Sonoda (Kyushu Institute of Technology)
13:40	14:00	G8	Effect of particle characteristics to evaluation of flowability and cohesiveness of powder using a test of spouting powder by air pressure OK. Ogata, D. Ariga, S. Tsukuma (National Institute of Technology, Oita College)
14:00	14:10	Break	
General Lecture Session 4 Chair: H. Ishii (National Institute of Technology, Kitakyushu College)			
14:10	14:30	G9	Improvement of Scaled-up Particle Model for Discrete Element Method OK. Washino, Y. Hu, L.E. Chan (Osaka University)
14:30	14:50	G10	Density Segregation of Equal-sized Binary Particles in Vibrated Fluidized Bed OZ. Jiang ¹ , T. Tsuji ¹ , K. Washino ¹ , T. Tanaka ¹ , J. Oshitani ² (1 Osaka University, 2 Okayama University of Science)
14:50	15:10	G11	Dry separation of fine particulate mixture based on density-segregation in a vibro-fluidized bed OJ. Oshitani ¹ , R. Sugo ¹ , G.V. Franks ² (1 Okayama University of Science, 2 University of Melbourne)
15:10	15:20	Break	
Invited Lecture 4 Chair: J. Oshitani (Okayama University of Science)			
15:20	16:00	K4	Effect of Gas-Particle Interaction on Roller Spreading Process in Additive Manufacturing W. Nan ^{1,2} , M. Pasha ¹ , OM. Ghadiri ¹ (1 University of Leeds, 2 Nanjing Tech University)
16:00	16:10	Closing Remarks	Executive Committee Chairman of the 27th SCEJ Symposium on Fluidization & Particle Processing: T. Shimizu (Niigata University)