Presentation Program

(1) The total allotted time for each paper is 20 minutes of which 15 minutes are for presentation and remaining 5 minutes are for discussion.

(2) In the case of multiple authors from the same institution, the affiliation of the first author from each institution is mentioned. The affiliation(s) of author(s) is same as the preceding author.

------------------------------- Monday 22 October -----------------------------

Room A (L0016)  Monday 22

Organized Session OS-4
Development of Innovative Stirling Refrigeration Systems
Organizer: Noboru Kagawa (National Defence Academy), Takeshi Hoshino (JAXA), Toshio Otaka (Kokushikan Univ.)

13:00—14:40 OS-4  Chairperson: Noboru Kagawa (National Defence Academy)

A101  Study on a Small Size Stirling Refrigerator Used Active-Type Regenerator
Toshio Otaka (Kokushikan Univ.), Masahiro Ota (Tokyo Met. Univ.)

A102  Field Test of Liquid Cooling System for CCD Camera using Stirling Cooler
Hirohisa Karosaki (JAXA), Atsushi Nakajima, Takeshi Hoshino

A103  Development of a Low Temperature Transportation Container “COOL CARGO FZ”, SC-JS05
Takeshi Suzuki (Twinbird Corp.), Ryosuke Saito, Toshikatsu Nomizu

A104  A study of the effect for living tissue by Cryosurgery-hyperthermia operation system utilizing Peltier device and Stirling refrigerator, Daishi Takahashi (Nagaoka Univ. of Tech.), Tomoya Takahashi, Kazuya Sone (Twinbird Corp.), Ichiro Fukumoto (Nagaoka Univ. of Tech.)

A105  Highly Efficient Free Piston Stirling Heat Pump-Direct connection with CO2 Compressor,
Nobutoshi Tsuchiya (Global Cooling Japan).

Refrigeration Technology Experts Seminar SN-1

15:20—17:30 SN-1  Chairperson: Susumu Ikeda (DAPS)

A106  The Trend of the Energy Saving that Applied IT in the Field of Air Conditioning
Masahiro Inoue (Shibaura Institute of Technology), Yoshiho Ozawa (SANVO Electric), Tetsuyuki Kondou (DAIKIN INDUSTRIES)

A107  AIB Food Safety
Yoshifumi Inoue (Japan Institute of Baking)

A108  Facilities Management in order to Ensure Food Safety
Keiichi Washizu (Yamazaki Baking Co., Ltd)

A109  A World Maximum Grade Ammonia Absorption Refrigerator Delivery Example Shigeki Kashiwara (DAIKIN APPLIED SYSTEMS)

Room B (L0017)  Monday 22 October

Organized Session OS-3
Absorption Refrigeration and Heat Pump Systems
Organizer: Atsushi Tsuchimori (Kanto Gakuin Univ), Kiyoishi Saito (Waseda Univ.)

13:00—14:40 OS-3 (1)  Chairperson: Kiyoshi Saito (Waseda Univ.)

B101  Development of Waste Heat Recovery Heat Pump System  (System that collects rejection heat and manufactures steam and warm water)
Tooru Ninomiya (Toyo Engineering Works), Isao Hiranu, Yutaka Aoki, Shinichi Watabe

B102  Development of Absorption Heat Pump Steam Generator
Keisuke Kajiyama (TOKYO GAS CO., LTD), Masahiro Oka, Yukihiro Fukusumi (EBARA CORPORATION), Kichi Irie, Sunao Kawai (Waseda Univ.), Kiyoshi Saito

B103  (Canceled)

B104  Prediction for Cycle Performance of Absorption Refrigeration Cycle without Solution Pump Effect of Refrigerant Concentration
Konkouse Kajiyama (Kanto-gakuin Univ.), Atsushi Tsuchimori, Masashi Sonoda, Kazushige Nakao (Mitsubishi Electric Co.)

B105  Experimental Study on Gas Engine-Driven Compression / Absorption Heat Pump System
Tsutomu Wakabayashi (Osaka gas CO., LTD), Hirokazu Fujimoto, Shingo Yashiro, Koji Mori

Tatsuya Fukuda (Osaka City Univ.), Nobuya Nishimura, Hirokazu Iyo, Ryuichiro Kawakami (Osaka Gas Company), Kuniaki Honda

15:20—17:20 OS-3 (2)  Chairperson: Masahito Kato (Mayekawa MFG.)

B107  Influence of Lithium Bromide Concentration on the Performances of a Vertical Flat Plate-type Generator and a Horizontal Tube-type Absorber
Ryoji Suehiro (Ehime University), Akemi Kajani, Kenji Kawasaki, Akira Matsuda, Katsuyoshi Honda (Kyushu University)

B108  Visualization of LiBr Solution Flow for Falling Film Absorption Heat Transfer on Smooth and Enhanced Finned Tube
Hiroki Takahashi (Kobelco & Materials Copper Tube, LTD.), Shigeru Koyama (Kyushu Univ.)

B109  Vapor Absorption Promotion of an Aqueous Lithium Bromide Solution by the Surfactant Quantity of Vapor Absorption and Critical Micelle Concentration
Daisuke Hoshino (Tokyo Metropol. Univ.), Satoshi Kato, Kazuhiko Murakami, Masahiro Ota

B110  Simulation of Heat Energy Transportation by Solution Transportation Type Absorption Cycle using Ammonia-water System
Satoru Matsuo (Tokyo University of Agriculture and Technology), Atsushi Akisawa, Takao Kashiwagi (Tokyo Institute Technology)
13:00~ 15:00  OS-10 (2)  Chairperson: Koji Yamashita (Mitsubishi Electric Co.)

D107  Development of Snow-Melting System Driven by Waste Heat of Fuel Cell
Akira Akahira (Aomori Industrial Research Center), Seiji Inoue, Toshinobu Kondo, Hiroshi Onuma, Hiroaki Ogawa (Hokkaido Electric Power Co.), Shinobu Ikegawa, Naoki Morishita, Sakan Inaba

D108  Development of the Heat Pump Type Snow Melting Machine for Small Road Heating
Tetsuo Yamashita (Mitsubishi Electric Co.), Seiji Inoue, Toshinobu Kondo, Hiroshi Onuma, Hiroaki Ogawa (Hokkaido Electric Power Co.), Shinobu Ikegawa, Naoki Morishita, Sakan Inaba

D109  Study on Functionally Thermal Fluid using Urea-Water Mixture

D110  Heat Transfer and Ice Making Characteristics in Continuous Ice Making process of Organic Solution in a Circular Tube
Akihiko Horibe (Okayama Univ.), Hideo Inaba, Naoto Haruki, Takeshi Matsubara

D111  Study of the Function Ice Making using the Low-temperature Plasma
Masahisa Nakagawa (Gunma Univ.), Shigeaki Inada, Hisanobu Kawashima, Ryuta Syoogi, YoshitakaIde, Toru Ymaguchi

D112  Empirical Study of Snow and Ice Fire Extinguishing System with Adherent Ice
Kazuya Matsuo (TOYO ENGINEERING WORKS), Hideaki Obana

Organized Session OS-2
Adsorption and Desiccant Cooling Systems
Organizer: Akio Kodama (Kanazawa Univ.), Noriyuki Kobayashi (Nagoya Univ.)

15:20~ 17:00  OS-2 (1)  Chairperson: Yoshihori Hamamoto (Kyushu Univ.)

D113  Performance Improvement of Single-stage Adsorption Chillers by the Optimal Operation Condition
Akito Moriyama (Tokyo University of Agriculture and Technology), Takahiko Miyazaki, Akisawa Atsushi, Kashiwagi Takao (Tokyo Institute of Technology)

D114  The Evaluation of the Adsorption Heat Pump Furnished Heat Exchanger with both Performances of Evaporator and Condenser
Hiroki Tanaka (Nagoya University), Ikki Ando, Yasuki Hirota, Tadayoshi Sumiya, Noriyuki Kobayashi, Masanobu Hasatani (Aichi Institute of Technology)

D115  Development of High Performance Heat Exchanger to Enhance the Cooling Power of Adsorption Refrigerators Improvements of the Adsorption Characteristics and Heat Transfer Performances by the Adsorbent Coated Heat-Transfer Plate
Kohsi Osato (TUAT), Atsushi Akisawa, Takao Kashiwagi

D116  Preparation of Noble Adsorbent by Impregnating Silica into Active Carbon for Adsorption Heat Pump
Toshinari Ohike (Aichi Institute of Technology), Fujio Watanabe, Naoki Kato, Yuji Takamatsu, Hisanobu Kawashima, Noriyuki Kobayashi (Nagoya Univ.)

D117  Performance Investigation of Maisotsenko Cycle on the Psychrometric Chart
Makoto Akiyama (Tokyo Univ. of Agriculture & Technology), Takahiko Miyazaki, Isao Nikai (NIK), Akisawa Atsushi (Tokyo Univ. of Agriculture & Technology)

Room E (BASE 1)  Monday 22 October
Organized Session OS-7
Present Status and Future Development of Heat Exchangers
Organizer: Shigeru Koyama (Kyushu Univ.), Akio Miyara (Saga Univ.), Hideo Mori (Kyushu Univ.)

9:10~ 10:40  OS-7 (1)  Chairperson: Hideo Mori (Kyushu Univ.)

E101  [Keynote] Natural Convective Heat Transfer of Carbon Dioxide in the Supercritical Pressure Region
Isao Ishihara (Kansai Univ.)

E102  Effect of the Lubrication Oil on Cooling Heat Transfer and Pressure Drop Characteristics of Supercritical Carbon Dioxide inside a Micro-fin Tube
Ryuji Kishi, Yasuhiro Hasegawa, Noriyuki Miyachi

E103  The Evaporating Heat Transfer Characteristics on Refrigeration Cycle of CO2 in the Refrigerator Oil Mixture State
Masaomi Matsuda (Kanazawa Univ.), Shinobu Ikegawa, Naoki Morishita, Noriyuki Miyachi

E104  An Experimental Study on Void Fraction of CO2 in a Horizontal Micro Fin Tube
Shigeru Koyama (Kyushu Univ.), Chieko Kondo (Hitachi AP), Shinya Higashi (Kyushu Univ.), Ken Kawahara (Kyushu Univ.)

11:00~ 12:00  OS-7 (2)  Chairperson: Shigeru Koyama (Kyushu Univ.)

E105  Experiment for Pressure Drop of Water-ammonia Mixtures Evaporating inside a Horizontal Spirally Grooved Tube
Satoru Momoki (Nagasaki Univ.), Hirokuni Arima (Saga Univ.), Yuuki Isozaki (Nagasaki Univ.), Keisuke Kitajima, Tomohiko Yamaguchi, Toru Shigechi

E106  Experimental Heat Transfer and Pressure Drop of CO2/ DME Mixture Refrigerant inside Horizontal Smooth Tube
Hasan M.M. Afroz (Saga Univ.), Akio Miyara, Atsushi Baba, Konitro Tsubaki

E107  Boiling Heat Transfer and Pressure Drop of a Refrigerant Flowing Vertically Downward in a Small Diameter Rectangular Tube
Kazuo Matsu (Kyushu Univ.), Hideo Mori, Katsunori Ohishi, Yoshihori Hamamoto
Organized Session OS-7
Present Status and Future Development of Heat Exchangers
Organizer: Shigeru Koyama (Kyushu Univ.), Akio Miyara (Saga Univ.), Hideo Mori (Kyushu Univ.)

Room A (L0016) Tuesday 23 October

9:00~10:20 OS-7 (3) Chairperson: Akio Miyara (Saga Univ.)
A201 Two-phase Flow Distribution in T-junction
Ryo Hachisuka (Nagoya Univ.), Yasuhiro Mizuno (DENSO), Ryota Isobe (Nagoya Univ.), Masafumi Hirota

A202 Two-Phase Flow Distribution in T-junction with Vertical Upward Main Pipe Comparison of R410A and Air-Water
Daisuke Nomura (Waseda Univ.), Manabu Watanabe (Tokyo University of Fisheries), Daisuke Ikaura (Waseda Univ.) Masafumi Katsuta

A203 The Advanced Performance of Refrigeration Cycle with an Ejector for Recirculation Distribution and Evaporating Heat Transfer of Refrigerant in the Plate-type Evaporator
Tatsunori Mano (Takasago Thermal Eng.), Masayuki Tanino, Takashi Okazaki (Mitsubishi Electric Co.), Shigeru Koyama (Kyushu Univ.)

A204 The Advanced Performance of Refrigeration Cycle with an Ejector for Recirculation-The Evaporating Heat transfer in the Vapor/Liquid Re-circulated Plate-type Evaporator
Daigo Kittaka (Takasago Thermal Eng.), Tatsunori MAN'O, Masayuki Tanino

10:40~12:00 OS-7 (4) Chairperson: Tatsunori Mano (Takasago Thermal Eng.).
A205 Study on Improvement in the Compact Performance of Counter-flow Heat Exchanger
Kaijian Wang (Fujitsu General Institute of Air-Conditioning Technology LTD), Takao Kojima, Masaharu Fukaya, Akira Okuyama, Keiko Shiromoto

A206 Effect of Thermal Contact Resistance on Fin-tube Heat Exchanger Performance
Hirokazu Fujino (Daikin ACC&E Lab.), Toshimitsu Kamada, Shun Yoshioka, Kazushige Kasai (Daikin Industries)

A207 Condensation Heat Transfer of HFC Refrigerants for Plate Type Heat Exchangers II. Evaluation of System with R410A Refrigerants
Takahiro Usukijima (Mitsubishi Electric Corporation), Kazuki Okada, Hirokuni Siba, Taro Hattori, Yasunori Sida

A208 Investigation of Heat Transfer Characteristics of Oblique-wave Surface
Kentaro Fukuda (Tokyo Univ.), Naoki Shikazono

13:00~14:20 OS-7 (5) Chairperson: Satoru Momoki (Nagasaki Univ.)
A209 A New Method for Measuring Cooling Capacity of Unit Coolers-Measurement Considering Latent Heat Load
Guang Yang (Tokyo University of Marine Science and Technology), Manabu Watanabe, Masakazu Hara (Japan Coolers Association), Toru Suzuki (Tokyo University of Marine Science and Technology)

A210 Study of Evaluation Method of Heat Pump Water Heaters
Kazuki Shikichi (The Japan Refrigeration and Air Conditioning Industry Association Residential Heat Pump Water Heaters Technological Committee)

A211 Performance Evaluation on Water-electrolysis Fuel Cell Unitized Reversible Cell (URC) -Evaluation of fuel cell performance by mass transfer
Atsushi Kato (Takasago Thermal Engineering), Masaou Masuda, Atsushi Takahashi, Tetsuya Yoshida (Daiki Ataka), Hiroshi Ito (AIST), Tsutomu Ioroi (AIST)

A212 Enhancement of Heat Transfer in Metal Hydride Heat-Exchanger using Copper Plate
Nobuo Shimomura (Niihama N.C.T)

Organized Session OS-2
Adsorption and Desiccant Cooling Systems
Organizer: Akio Kodama (Kanazawa Univ.), Noriyuki Kobayashi (Nagoya Univ.)

14:40~15:40 OS-2 (2) Chairperson: Akihiko Horibe (Okayama Univ.)
A213 Pressure Drop and Heat and Mass Transfer in Structured Packing of Absorption-type Dehumidifier
Seiichi Yamaguchi (Waseda University), Kiyoshi Saito, Sunao Kawai

A214 Performance Evaluation of Absorption-type Dehumidifier by Simulation and Experiment
Jun Iade (Waseda University), Seiichi Yamaguchi, Kiyoshi Saito, Sunao Kawai

A215 Investigation of Operation/Design Concept for Achieving a High Efficiency Desiccant Cooling Process
Takuya Tsujiguchi (Kanazawa Univ.), Akio Kodama
A216 Enhancement of Heat Transfer in Metal Hydride Heat-Exchanger using Copper Plate
Nobuo Shimomura (Niihama N.C.T)

Room B (L0017) Tuesday 23 October

Organized Session OS-1
Next Generation High Performance Refrigeration Systems
Organizer: Fumio Matsuoka (Mitsubishi Electric)

13:00~14:40 OS-1 (1) Chairperson: Fumio Matsuok (Mitsubishi Electric)
B201 Study on COP Improvement of Room Temperature Magnetic Refrigerator
Yoji Mori (Tokyo Tech.), Tetsuji Okamura, Naoki Hiran (Chubu Electric Power Co. Inc.), Shigeyo Nagaya

B202 Effect of Magnetic Field Strength on Cooling Performance of Room Temperature Magnetic Refrigerator
Ko Nakamura (Hokkaido Univ.), Tsuyoshi Kawanami, Masahiro Igawa, Naoki Hiran (Chubu Electric Power Co., Inc.), Shigeyo Nagaya

B203 Development of Aircycle Refrigeration for Containers
Nobuyuki Suzuki (NTN Corporation), Hiroyuki Yamada, Kenichi Suzuki, Masanori Hanawa (Earthship K.K.)

B204 Performance Analysis on Heat Pump Cycle of CO2/DME Mixture Refrigerant
Yoji Onaka (Saga Univ.), Akio Miyara, Koutaro Tsubaki, Koyama Shigeru (Kyushu Univ.)

B205 Development of Traveling-Wave Thermoacoustic Refrigerator
Satoshi Shimokawa (Tokyo Univ. of A. & T), Yuki Ueda, Assushi Akisawa
Room D (L0026)  Tuesday 23 October

Workshop WS-2
Front Runner Plan for Energy Conservation and Effective Utilization of Biomass Energy

13:00–15:15 WS-2
Chairperson: Masaaki Bannai (Hitachi)

D201 Research and Development Status of Heat Storage Technology
Satoshi Horano (Advanced Industrial Science and Technology)

D202 Energy Network Technology-Efficient Energy Usage of Heat, Chemistry and Electricity
Hiroshi Yamaguchi (Advanced Industrial Science and Technology)

D203 Biomass energy utilization for reducing GHG emissions
Masayuki Horio (Tokyo Univ. of A&T)

16:30–17:30 Special Lecture
Chairperson: Takao Kashiwagi (Tokyo Institute of Technology)

SL - Expectation to the field of refrigeration/air conditioning for the achievement of Kyoto Protocol
Tsutomu Sakamoto (Ministry of Land, Infrastructure and Transport Government of Japan)

Room F (BASE Meeting Room)  Tuesday 23 October : A. M.

International Session  IS
10:00–12:00 IS
Chairperson: Bidyut Saha (Kyushu Univ.)

F201 A comparative study between desorption and volumetric methods for activated carbon-methane isotherms,
Habib, Khairul, Saha, Bidyut, Chakraborty, Amutosh, El-Sharkawy, Ibrahim, Koyama, Shigeru (Kyushu University)

F202 Binary Nanofluids for Absorption Performance Enhancement,
Yong-Tae Kang, Jung-Ha Park, Jin-Ki Lee (Kyung Hee University)

F203 Single stage adsorption chiller employing CaCl2-in-silica gel composite sorbent - water pair,
Chakraborty, Amutosh, Saha, Bidyut, Koyama, Shigeru (Kyushu University), Yu, Aristov (Russian Academy of Sciences)

F204 Capacity control of multi-type heat pump system using multi-input multi-output scheme,
Il Hwan Lee, Min Soo Kim (Seoul National University)

F205 Rib Effect on the Performance of a High Temperature Generator,
Keumnam Cho, Insong Lee (Sungkyunkwan University)

F206 Two-phase distribution of R-134a in a brazed aluminum heat exchanger,
N.-H. Kim, J.-H. Ham, D.-Y. Kim (University of Incheon)

Room F (L0035)  Tuesday 23 October : P. M.

Organized Session OS-6
Present Status and Future Development of Compressors
Organizer: Mitsuhiro Fukuta (Shizuoka Univ.), Kenji Tojo (Hitachi Appliances, Inc.)

13:00–14:00 OS-6 (1)
Chairperson: Kenji Tojo (Hitachi Appliances, Inc.)

F207 (Canceled)

F208 Compressor Modeling for CO2 Cycle Simulation
Tadashi Yamagawa (Shizuoka Univ.), Mitsuhiro Fukuta, Takashi Muramatsu

Lei Gao (Fukuoka Univ.), Yukio Matusaka, Tomohiro Honda, Ryusuke Takigawa (CHINO corp.), Takao Shimizu

Ryusuke Takigawa (CHINO corp.), Takao Shimizu, Tomohiro Honda (Fukuoka Univ.), Lei Gao, Yukio Matusaka

Compressor Technology Related Seminar SN-3

14:40–16:00 SN-3
Chairperson: Mitsuhiro Fukuta (Shizuoka Univ.),

F211 History of Reciprocating Compressor Technology for Refrigerator
Ikstomo Umeoka (Matsushita Refrigeration Company)

F212 Slanted Drum-type Washer Dryer using Heat Pump Drying Method
Shigebaru Nakamoto (Matsushita)

F213 Development of Packaged Air Conditioners for Cold Regions with Injection Compressor
Masanori Aoki (Mitsubishi Electric Corporation), Makoto Saito, Masato Tosimaya

F214 The Trend of Rare Earth Magnets
Kazuo Tamura (Shin-Etsu Chemical Co. Ltd.)

Room G (L0032)  Tuesday 23 October

Organized Session OS-9
New Chilling and Refrigeration Techniques of Food and Organic Materials
Organizer: Toru Suzuki (Tokyo University of Marine Science and Technology), Manabu Watanabe (Tokyo University of Marine Science and Technology)

9:00–10:20 OS-9 (1)
Chairperson: Ken-ichi Kudoh (The University of Tokyo)

G201 Relationship between pH and ATP-related Compounds in Frozen Meat of Minke Whale Caught in the Antarctic Ocean
Hitoshi Funahashi (Kyodo Senpaku Kaisha, Ltd.), Mitsuhito Ogihara, Yoshihiro Fujise (The Institute of Cetacean Research), Yuka Murata (National Research Institute of Fisheries Science), Emiko Okazaki, Hideto Fukushima (National Fisheries University), Ritsuko Wada, Yutaka Fukuda

G202 Relationship between Thaw-rigor and Some Components of Frozen Bigeye Tuna Meat
10:40~12:00 OS-9 (2) Chairperson: Yutaka Fukuda (National Fisheries University),

A303 Influence of NaCl on the Thawing of Frozen Tuna Meat

Hisayoshi Otaki (SONY), Koji Matsumoto (Chuo University), Taku Kato (National Fisheries University), Kentarou Ishiki, Hideto Fukushima, Yutaka Fukuda

G204 Effect of Thawing Rate on Denaturation of Myofibrillar Protein in Fish Frozen Meat

Yutaka Fukuda (National Fisheries University), Ritsuko Wada, Hideto Fukushima

13:00~14:20 SN-2 Chairperson: Kiyoshi Takai (JSRAE Scientific Adviser)

G209 Experimental inspection of the effect of magnetic field on freezing of food materials

Tori Suzuki (Tokyo University of Marine Science and Technology)

14:40~16:00 OS-9 (3) Chairperson: Manabu Watanabe (Tokyo University of Marine Science and Technology)

G210 Development of Cryogenic Micro-Slicer Spectral Imaging System

Takahiro Sagiyama (The Univ. of Tokyo), Yasuyuki Sagara, Tetsuya Araki, Ken-ichi Kudo, Ryo Shirakashi, Gah-Soo Do (Nihon Univ.), Junichi Sagiyama (NFRI), Misaki Tsuta

G211 Measuring Technique of Moisture Distribution in Cooked Rice Grain

Yoosuke Imati (Nihon University), Kazuki Amiya, Rui HOSINO (Tokyo University), Gah-Soo Do (Nihon University), Bae Yeong-Hwan (Sunchon National University, Korea), Yasuyuki Sagara (Tokyo University), Hirofumi Kawashima (Nihon University)

G212 Study of the Low Temperature Storage Method of Vegetables by Making the Water Structures using Nonpolar Gas

Hiroko Ando (The Tokyo Univ.), Toru Suzuki (Tokyo Univ. Marine Science and Technology), Yoshihira Kawagoe (The Tokyo Univ.), Yoshio Makino, Seiji Osita

G213 Detection of Eutectic Solidification during Freezing of Electrolyte Solution by Electric Impedance Measurement

Kenji Adachi (Kyushu Univ.), Takashi Yoshimori, Keisuke Yoshida, Satoru Uchida, Hiroshi Takamatsu

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Room A (BASE 2/3) Wednesday 24 October

Organized Session OS-8
Heat and Mass Transfer with Solid-Liquid Phase Transformation
Organizer: Koji Matsumoto (Chuo University), Masashi Okada (Aoyamagakuin Univ.)

9:00~10:40 OS-8 (1) Chairperson: Koji Matsumoto (Chuo University)

A301 [Keynote] Ice Formation Phenomena with Indirect Cooling

Tetsuo Hirata (Shinshu Univ.)

A302 Freezing Characteristics of Molding Sand with Water by Cold Air Flow for Freeze Mold

Akihiro Horiike (Okayama Univ.), Hideo Inaba, Nasto Haruki, Yasunori Miyagawa

A303 Study on Effects of Polymer Additives on Supercooling Phenomena of Water

Hiroshi Takazawa (Tokyo Tech), Hiroyuki Kumano (Shinshu Univ.), Akio Saito, Seiji Okawa

A304 Control of Crystal Orientation of Ice Crystal Utilizing the Capillary

Hirokazu Tanaka (Aoyamagakuin Univ.), Yoshikazu Teraoka, Masashi Okada

11:00~12:20 OS-8 (2) Chairperson: Masahsi Okada (Aoyamagakuin Univ.)

A305 Study on Melting Behavior of Ice/Water Mixture

Koji Watanabe (Tokyo Tech.), Seiji Okawa, Akio Saito, Mitsuru Kasaka (TEPCO), Tsutomu Hozumi (Tokyo Tech.)

A306 Development and Performance Evaluation of a Plate Type Salt-contained Ice Making Machine

Kenji Yoshimura (Fukuoka Ind. Tech. Cent.), Tomoaki Akiyama (Icecam Co., Ltd.), Shigeru Koyama (Kyushu Univ.)

A307 Performance of Vacuum Freezing Type Ice Producing System-Effect of Sublimation of Ice Produced in Solution

Tatsuhiro Asaoka (Tokyo Institute of Technology), Akio Saito, Seiji Okawa, Naoki Izumi, Yoshihiro Uji (The Kansui Electric Power CCO., INC.)

A308 Influence of the Magnetic Field on Droplet Freezing

Toshiaki Watanabe (Tokyo University of Marine Science and Technology), Manabu Watanabe, Toru Suzuki

13:20~14:40 OS-8 (3) Chairperson: Hiroyuki Kumano (Shinshu Univ.)

A309 Characteristics of Ice Formation and Melting for Latent Heat Thermal Energy Storage Cell using Resin Tube-mat

Yoshio Hiratsuka (Univ. Toyama), Akio Kosaka, Kazuyuki Kitano


Yoshio Hiratsuka (Univ. Toyama), Kazuyuki Kitano, Akio Kosaka

A311 Study on Suppression of Ice Adhesion Force to Cooling Wall due to Voltage Application

Hisayoshi Otsuki (SONY), Koji Matsumoto (Chuo University)

A312 Characteristics of Phase Change Heat Transfer around Horizontal Tubes Immersed in Water

Masayuki Jidaisha (Iwate University), Yuaki Takahas h (Fujitsu Limited), Kouichi Hirose (Iwate University)
Room B (L1321) Wednesday 24 October
Organized Session OS-2
Adsorption and Desiccant Cooling Systems
Organizer: Akio Kodama (Kanazawa Univ.), Noriyuki Kobayashi (Nagoya Univ.)

9:00~10:20 OS-2 (3) Chairperson: Masashi Ohkura (Tokyo University of Science), Atsushi Akisawa (Tokyo University of Agriculture and Technology)

B301 [Keynote] Comfortable Temperature and Humidity for the Human Body
Hiroyuki Kitahara (Total System Laboratory)

B302 Quantitative Evaluation of Microbe Removal Performance for Desiccant Air-Conditioning
Naoki Onda (Tokyo Gas), Hirofumi Sasaki

B303 (Canceled)

B304 The Air Conditioning System which Separates from Latent Heat and the Sensible Heat which Use High Efficiency Compact Desiccant
Shuji Ikegami (Daikin Industries, Ltd.), Nobuki Matsumi, Yoshie Togano (Osaka Univ.), Yoshiyuki Shimoda

11:00~12:20 OS-2 (4) Chairperson: Akio Kodama (Kanazawa Univ.), noriyuki Kobayashi (Nagoya Univ.)

B305 Study on Energy Saving Air-Conditioning System using Compact Desiccant Ventilation Unit (Part 16: Evaluation of Adsorption and Desorption Performance with Some Honeycomb Type Adsorbents)
Masahiro Kondo (Tokyo University of Agriculture and Technology), Atsushi Akisawa, Masazumi Godo (Shin Nippon Air Technologies), Kunitsu Miura, Yutaka Watanabe, Toshihiko Ishizawa, Norimichi Okazaki, Takeshi Takatsuka

B306 Optimum Design Method to Minimize Size of Desiccant Wheel
Seichi Yamaguchi (Waseda University), Kiyozi Saito, Sunao Kawai, Hiroyuki Sasaki (Tokyo Gas Co., Ltd.), Naoki Onda

B307 Effect of Microwave Irradiation on Water Desorption from Honeycomb Rotor
Mitsuhana Kobata (Nagoya Univ.), Satoshi Yabe, Hitoki Matsuda

B308 Air Conditioning System by using the Organic Sorbent Desiccant Rotor and Compression Refrigerating Machine
Akiko Horibe (Okayama Univ.), Sadao Takagi, Hideo Inaba, Naoto Haruki, Kei Nagai


B309 Study on Energy Saving Air-Conditioning System using Compact Desiccant Ventilation Units (Part 15: Experimental Study on Practical Desiccant Process)
Yutaka Watanabe (Shin Nippon Air Technologies), Kunitsu Miura, Toshihiko Ishizawa, Masazumi Godo, Takeshi Takatsuka

Takeshi Takatsuka (Shin Nippon Air Technologies), Konichi Hirose (Iwate Univ.), Yutaka Watanabe (Shin Nippon Air Technologies), Toshihiko Ishizawa, Masazumi Godo, Kunitsu Miura

B311 Influence of Change of Solar Irradiation and Cooling Load on the Performance of Solar Assisted Desiccant Cooling System
Masashi Ohkura (Tokyo University of Science), Akito Kodama (Kanazawa Univ.), Shunsuke Mori (Tokyo University of Science)

General Session GS-2 Refrigeration System

14:40~16:00 GS-2 Chairperson: Norio Sawada (SANYO)

B312 Thermal Fluid Flow Analysis of Air Curtain in a Flat Type Refrigerator Showcase
Yasuichi Minayama (GAC-corp), Shoushichi Ito (Shinshu University), Masato Yoshino, Toshihiko Ikeda

B313 Development of a Low Environmental Load Direct Driven Refrigeration Unit for Transportation
Takashi Tanaka (Mitsubishi Heavy Industries, Ltd.), Mitsutoshi Sudoh, Masakazu Kai, Kazumi Osada, Yasushi Watanabe

B314 A Study on Energy-saving in Vending Machine Operation
Ryota Tsunouchi (Waseda Univ.), Isao Hasegawa, Hiroshi Onoda, Katsuya Nagata

B315 Flow boiling heat transfer characteristics of propane in horizontal smooth microchannel, Choi, Kwang-II, Ardiyansyah, Ardiyansyah, Oh, Jong-Taek (Chonnam National University), Oh, Hoo-Kyu (Pukyong National University)

Room E (BASE 1) Wednesday 24 October
Organized Session OS-1
Next Generation High Performance Refrigeration Systems
Organizer: Fumio Matsuoka (Mitsubishi Electric)

9:00~10:00 OS-1 (2) Chairperson: Hiroo Nakamura (Waseda Univ.)

E301 Fine Particle and Bacteria Collection System by Negative Ions and Ozone with Mist Formation
Akira Takimoto (Kanazawa Univ.), Yukio Tada, Hajime Onishi, Kazuyoshi Nagaura

E302 (Canceled)

E303 (Canceled)

Yoshinori Hamamoto (Kyushu Univ.), Hideko Mori, Fumio Matsuoka (MELCO)

Tsuneko Imagawa (Matsushita Electric Industrial Co., Ltd.), Teruo Yamamoto, Koji Murazono, Toshimoto Kajitani, Shigeaki Matsubayashi
Organized Session OS-9
New Chilling and Refrigeration Techniques of Food and Organic Materials
Organizer: Toru Suzuki (Tokyo University of Marine Science and Technology), Manabu Watanabe (Tokyo University of Marine Science and Technology)

11:00~ 12:20 OS-9 (4) Chairperson: Takaharu Tsutara (Kyushu Inst. of Tech.)
E306 Development of the New Micromanipulation System for Frozen Organisms (2nd report Development of the micro drilling system) Jun Ninomiya (The University of Tokyo), Ryoichi Sagimoto, Ken-ichi Kudoh, Toshiro Hisaguchi
E307 Relationship of Ice Crystal’s Growth Rate and Grain Boundary’s Area in One Dimension Freeze-concentration Atsushi Watanabe (Tokyo University of Marine Science and Technology), Toru Suzuki, Manabu Watanabe, Osato Miyawaki (Ishikawa Prefectural University)
E308 Influence of Stabilizers on the Shape of Ice Crystal Generated in Ice Cream Mix Xin Wang (Tokyo University of Marine Science and Tech.), Toru Suzuki, Manabu Watanabe
E309 Factors Affecting Freeze-Preservation Process of Lactobacillus Bulgaricus Tomoe Nakamura (Tokyo University of Marine Science and Technology), Toru Suzuki, Manabu Watanabe

Organized Session OS-6
Present Status and Future Development of Compressors
Organizer: Mitsuhiro Fukuta (Shizuoka Univ.), Kenji Tojo (Hitachi Appliances, Inc.)

13:20~ 14:20 OS-6 (2) Chairperson: Takahide Itoh (Mitsubishi Heavy Industries, Ltd.)
E310 Development of PVE Refrigeration Lubricant for Energy Saving Takeo Toki (Idemitsu Kosan Co., Ltd.), Masato Kaneko
E311 Measurement of Lubrication Conditions between Swashplate and Shoe in the Swashplate Compressor under Actual Operating Conditions Hisashi Suzuki (Sanden Corporation), Fumikazu Nagaoka (Shizuoka University), Mitsuhiro Fukuta, Tadashi Yangayisawa
E312 An Optimal Performance Design on Lubrication Mechanism at Thrust Slide-Bearing of Scroll Compressors Tatsuya Oka (Mayekawa MFG.), Noriaki Ishii (OECU), Keiko Anami (AIT), Kiyoshi Sawai (Panasonic), Noboru Iida, Takashi Morimoto, Shota Ueda (OECU)

14:40~ 15:40 OS-6 (3) Chairperson: Matsuo Koichi (Mayekawa MFG.)
E313 Development of Single Screw Compressor using New Tooth Profile Takanori Murono (DAIKIN)
E314 Efficiency Simulation of High-Pressure Type Scroll Compressors for Ammonia Refrigerator Noriaki Ishii (OECU), Tatsuya Oka (Mayekawa MFG.), Keiko Anami (AIT), Shota Ueda (OECU), Shohei Uchida (OECU), Akira Matsui (Mayekawa MFG.)
E315 Development of Environment-friendly Scroll Compressor for Truck Refrigerator Makoto Fujitani (Mitsubishi Heavy Industries, Ltd.), Hiroyuki Kobayashi, Hisao Mizuno, Takahide Itoh, Yasuharu Maruiwa, Toshiyuki Shikanai (Churyo Engineering Co., Ltd.), Takashi Gotoh, Shinya Matsumoku

Room H (L0111) Wednesday 24 October

Workshop WS-3
Overview of CO2 Emission Trading -Trends of Policies and Business-
10:00~ 12:00 WS-3 Chairperson: Kazumichi Ito (Mitsubishi Research Institute Inc.)
H301 [Keynote] Policy Making for Global Warming Issue Hideomi Nakamura (Mitsubishi Research Institute Inc.)
H302 Overview of a New Post-Kyoto Framework and CDM/I Hiroyasu Sugihara (Development Bank of Japan)
H303 Emission Trading in Western Countries Satoshi Hashimoto (Mitsubishi Research Institute Inc.)
H304 GHG policy in Japan (Energy Conservation Law Reforming) Akihiro Shimizu (Mitsubishi Research Institute Inc.)
H305 Emission Trading Business Kazumichi Ito (Mitsubishi Research Institute Inc.)

Open Seminar
The Role of Refrigeration for the Freshness of Agricultural Products in Distribution System
14:00~ 16:30 Chairperson: Atsushi Akisawa (Tokyo University of Agriculture and Technology)
Lecture 1 Storage and Freshness keeping of Rice Kengo Watanabe (Tokyo Univ. of A&T)
Lecture 2 Fruit Quality and Postharvest Technology of Strawberry Isao Ogiwara (Tokyo Univ. of A&T)
Lecture 3 Traceability Management in Food Chain Sakae Shibusawa (Tokyo Univ. of A&T)