2013 JSRAE Annual Conference Technical Program

1) Time allotted each presentation is 20 minutes including 5 minutes discussion except the Keynote Lecture.
2) Time allotted to the Keynote Lecture is 30 minutes including 5 minutes discussion
3) Asterisks "*" and crosshatch "#" shows speakers and nominates for the Best Presentations Awards, respectively

DAY1 September 10, 2013, Tuesday

ROOM A

Organized Session OS-6 "Various Phenomena and Applied Technology of Frost, Snow, and Ice"
Organizers: KAMADA Toshimitsu (Daikin Industries, LTD.), OHIRA Akiyoshi (Hitachi, Ltd.)

A11 13:00-14:20 OS-6 (1) [Chairperson: KAMADA Toshimitsu (Daikin Industries, LTD.)]

A111 Development of a No-Frost Heat Pump System and Cycle Simulation
#FUJINAWA Takeshi (Central Research Institute of Power Industry), ZHANG Li, SAIKAWA Michiyuki

A112 Quantitative Evaluation of Frosting Phenomena by Using Neutron Radiography
Estimation on Finned-tube Heat Exchanger of 5mm Fin-pitch
*MATSUMOTO Ryosuke (Kansai University), YOSHIMURA Tomoya (Graduate School of Kansai University), UMEKAWA Hisashi (Kansai University), ,AMI Takeyuki, SAITO Yasushi (Research Reactor Institute, Kyoto University)

A113 Effect of Flow Channel Geometry on Frost Formaition on Cryogenically-cooled Cylinder
#SONOBE Nobuki (Shizuoka Univ.), FUKIBA Katsuyoshi, YAMADA Yuta

A114 Suppression of Frost Formation on a Cooling Surface of a Cylinder and Improvement of the Jet Defrosting by Grooves
#YAMADA Yuta (Shizuoka Univ.), FUKIBA Katsuyoshi, SONOBE Nobuki, OHKUBO Hidetoshi (Tamagawa Univ.)

A12 14:40-16:20 OS-6 (2) [Chairperson: OHIRA Akiyoshi (Hitachi, Ltd.)]

A121 Study on Control of Crystal Growth of Frost
*OHKUBO Hidetoshi (Tamagawa Univ.), MATSUSHITA Sho

A122 Effects of Surface Micro Fabrication on Frosting Phenomena
#INOUE Sho (Ichinoseki National College of Technology), SUZUKI Yuji (Graduate School of Engineering Tamagawa University), OHKUBO Hidetoshi, KAMEGAYA Hiroshi (Tamagawa University)

A123 Influence of the fin surface treatment on frost and defrost characteristics of the heat exchangers for the room air conditioners
*MIZUTA Yoshihiko (Sumitomo Light Metal Ind., Ltd.), ISOMURA Norihisa

A124 Study on development of frost and defrost performance by coating
*KAMADA Toshimitsu (Daikin Industries, LTD.)

A125 Energy-saving technologies of the domestic refrigerator by the surface treatment of an evaporator
*NISHIHATA Hideo (Panasonic Corporation), HORII Katsunori, HAMADA Kazuyuki, SUNADA Masaki

ROOM B

Organized Session OS-3 "Desiccant and Humidity Control/Adsorption and Chemical Heat Pump"
Organizers: AKISAWA Atsushi (Tokyo University of Agriculture and Technology), KOBAYASHI Noriyuki (Nagoya Univ.), HAMAMOTO Yoshinori (Kyushu Univ.), Bidyut B. Saha (Kyushu Univ.), SHIMIZU Naoki (Mitsubishi Plastics, Inc.),KODAMA Akio (Kanazawa Univ.), SAITO Kiyoshi (Waseda Univ.), HORIBE Akihiko (Okayama Univ.), KUBOTA Mitsuhiro (Nagoya Univ.), MIYAZAKI Takahiko (Kyushu Univ.)

B11 13:00-14:40 OS-3 (1) [Chairperson: KUBOTA Mitsuhiro (Nagoya Univ.)]

B111 Measurement of adsorption characteristics of R32 onto activated carbon and performance evaluation of adsorption heat pump system
#MATSUMOTO Hayato (Kyushu Univ.), MIYAZAKI Takahiko, KOYAMA Shigeru, ASKALANY Ahmed, SAHA Bidyut Baran, EL-SHARKAWY Ibrahim I.

B112 Adsorption isotherms of R410A onto activated carbon
*ASKALANY Ahmed A (Kyushu Univ.), SAHA Bidyut B., ISMAIL Ibrahim M. (Assiut Univ.), MIYAZAKI Takahiko (Kyushu Univ.), KOYAMA Shigeru

B113 Adsorption kinetics of ethanol onto hydrogen treated activated carbon
*UDDIN Kutub (Kyushu University), MIYAZAKI Takahiko, KOYAMA Shigeru, SAHA Bidyut Baran, KIL Hyun Sig, MIYAWAKI Jin, YOON Seong Ho

B114 Formation of Thick Silica Films on an Aluminum Sheet
#OYA Takumi (Kanazawa Univ.), MATSUI Koich, SUWA Yuzi, KUMITA Mikio

B115 Influence of Flow Rate on Performance of Heat Pump driven by waste heat of low temperature at 50 degree C
#AIDA Ryoji (Nagoya Univ.), ITO Shun, KOBAYASHI Noriyuki, ASO Noriyasu (Fujitsu lab), YOSHIDA Hiroaki, MANABE Toshio

B12 15:00-16:40 OS-3 (2) [Chairperson: KUMITA Mikio (Kanazawa Univ.)]

B121 Partial Load Operation of 17 kW-class Adsorption Chiller
Operation of 20 deg C Chilled Water Output for Air Conditioning System of Latent and Sensible Heat Separated Type
#SUN Faming (Kyushu Univ.), OUCHI Takafumi (Graduate School of Kyushu Univ.), HAMAMOTO Yoshinori (Kyushu Univ.), YANAGI Kenichi, SUMI Takenori, MORI Hideo

B122 Small adsorption refrigerating machine using AQSOA adsorbent
#SUZUKI Masahiro (Mitsubishi Plastics,Inc.), KUBOKAWA Seiichi

B123 Evaluation of reaction rate of Heat Upgrading Operation with Hydration Chemical Heat pump
#ESAKI Takehiro (Nagoya Univ.), KITO Tsuyoshi, KOBAYASHI Noriyuki, HUANG Hongyu

B124 Improvement of Hydration Rate of LiOH/LiOH・H_2O Reaction for Low-temperature Thermal Energy Storage
*KUBOTA Mitsuhiro (Nagoya Univ.), HORIE Nayuta, TOGARI Hiroki, MATSUDA Hitoki

B125 Reaction characteristics of $CaO/H_2O/Ca(OH)_2$ system for carbonaseous porous solid supported chemical storage material
#TOMOHISA Suzuki (Aichi institute of technology), FUJIO Watanabe, MASANOBU Hasatani, NORIYUKI Kobayashi (Nagoya Univ.), OSAMU Tsubouchi (Aisin Seiki Co., Ltd.), NIRO Shiomi (AIR WATER INC.)

ROOM C

Workshop WS-3
Symposium by Association for the Development and Promotion of Advanced Cold Chain
Moderators: SHIRAISHI Masato (Tokyo Univ. Marine Sci. & Tech.), SUZUKI Toru (Tokyo Univ. Marine Sci. & Tech.)

C11 13:00-15:30 WS-3 [Chairperson: OKAZAKI Emiko (Tokyo Univ. Marine Sci. & Tech.)]

C111 Optimization of Cold Chain Considering Food Quality, Energy and Consumer Satisfaction
*WATANABE Manabu (Tokyo Univ. Marine Sci. & Tech.)
C112 Current Status and Issues of cold chain as seen from intellectual property
*TOSHIMA Takashi (Chibachikusan kogyo Corporation)
C113 Cold chain using Ice Battery® system
*GARG Pankaj (Innovation Thru Energy Co.Ltd)
C114 Recent trend of a refrigerated display in a retail facility
*ASADA Tadashi (Fuji Electric Co., Ltd.), SAKAI Kazuhiro, KOBAYASHI Tatsuya, SUDO Haruhiko
C115 Supply Chain Management for the Consumer Satisfaction in General Merchandising Store
*FUJII Shigeo (AEON CO., LTD.)
C116 Outline of governmental policy for fisheries processing industries and marketing
*YAMAGUCHI Takuma (Fisheries Agency)
C117 Discussion
*SUZUKI Toru (Tokyo Univ. Marine Sci. & Tech.)

Organized Session OS-9 "Latest Refrigeration Technology for Food and Biology"
Organizers: ARAKI Tetsuya (The Univ. of Tokyo), KUDOH Ken-ichi (Aomori Prefectural Industrial Technology Research Center)

C12 16:00-17:00 OS-9 (1) [Chairperson: FUKUDA Yutaka (Tokyo Univ. Marine Sci. & Tech.)]

C122 Dual character of the hydration water in food accompanied with three dimensional mobility and self-organization derived at the freezing temperature
Dual character of the hydration water in food accompanied with the three dimensional mobility
*KONISHI Yasuyuki (HITEC), KIDOGUCHI Etsuko, MIURA Koichi (Kitami Inst. of Tech.), MATSUDA Hiroki, KOBAYASHI Masayoshi (ADTEC)
C123 Measurement of moisture migration in composite food in sub-zero temperature
#MATSUDA Satomi (Kaiyo Univ.), WATANABE Manabu, SUZUKI Toru
C124 Analysis of Flow Turbulence in Propeller Fan and Heat Transfer Enhancement in Food Cooling
#SUZUKI Sho (TUMSAT), SUZUKI Toru, WATANABE Manabu

ROOM D

General Session GS

D11 13:00-14:20 GS (1) [Chairperson: YOSHIDA Atsumasa (Osaka Prefecture Univ.)]

D111 Study of liquid recirculation applied to OFC (Organic Flash Cycle)
#KISHIMOTO Akira (KOBE STEEL, LTD.), FUJISAWA Ryo, NISHIMURA Makoto

D112 Energy-saving Effect with an Air-to-Water High Temperature Water Circulation Type Heat Pump for a Food Factory
*NAKAYAMA Hiroshi (Chubu Electric Power Co.,Inc.), MIYAOKA Yoichi, IBA Isao (Toshiba Carrier Corporation), FUJITA Yoshinobu

D113 Energy-saving technologies of the refrigerator with storage-detection sensor
The development of new 'ECONAVI' technology
*MORI Kiyoshi (Panasonic Corporation), KAMISAKO Toyoshi, NAKAGAWA Masashi, KAKITA Kenichi

D114 About the future of MOT
#MOGI Keisuke (The Society of Knowledge Management)

D12 14:40-16:20 GS (2) [Chairperson:YAMAGUCHI Seiichi (Waseda univ.)]

D121 Growth Experiment and Simulation for Optimal Design of Air-Conditioning System in Plant Factory
#KOMATSU Sayoko (Seiken,Co.,Ltd.), OKAMURA Nobuya (Daiwa House Industry Co.,Ltd.), UEDA Yasushi (Seiken,Co.,Ltd.), INOU Toshirou (Daikin Industries,Ltd.), YOSHIDA Atsumasa (Osaka Prefecture University), KINOSHITA Shinichi

D122 Examination about Construction of the Operation System of the Vending Machine for Drinks
The Verification of the Effect of Best Available Allocation Supporting Tool and the Advancement of the Tool in Waseda University
#IMADA Sosuke (Waseda Univ.), KUWAHARA Takeki, NAKAJIMA Takafumi (Waseda Environmental Institute), ONODA Hiroshi (Waseda Univ.), NAGATA Katsuya

D123 Investigation of simulation software for renewable energy
introduction and valuation of Investigation of simulation software
#CHO Orai (Waseda Univ.), NAKAMURA Takuya, KOIZUMI Takayuki, NAGATA Katsuya, ONODA Hiroshi, NAKAJIMA Takafumi (Waseda Environmental Institute)

D124 Evaluation of energy saving of air-conditioning and lighting by a simulation
-It is for an example about the university campus-
#ENAI Yuki (Waseda Univ.), NAGATA Katsuya, ONODA Hiroshi (Waseda University environmental research institute), IMADA Sousuke (Waseda Univ.)

D125 Study on energy balance of Low Energy House in extreme cold region,
#KAZUKI Aiba (Hokkaido Univ.), KATSUNORI Nagano, MAKOTO Nakamura, TAKAFUMI Terashima (Hokkaido Electric Power Co., Inc.)

ROOM E

Organized Session OS-8 "Low-GWP Refrigerants, Their Thermophysical Properties and Applications"
Organizers: KAYUKAWA Yohei (National Institute of Advanced Industrial Science and Technology), AKASAKA Ryo (Kyushu Sangyo University)

E11 13:00-14:20 OS-8 (1) [Chairperson: KAYUKAWA Yohei (National Institute of Advanced Industrial Science and Technology)]

E111 A Thermodynamic Property Model for the R-32/1234ze(E) mixture
*AKASAKA Ryo (Kyushu Sangyo University)

E112 Thermal conductivity and viscosity measurements in liquid conditions of HFOs
#KURIYAMA Takuya (Saga Univ.), FUKUDA Ryota, MIYARA Akio (Saga Univ.)

E113 Composition Dependence of Critical Parameters for HFO + HC Refrigerant Mixtures
*HIGASHI Yukihiro (Iwaki Meisei Univ.)

E114 Thermophysical Properties of R 245fa at saturation condition
#MARUKO Kohei (Nihon Univ.), TANAKA Katsuyuki, TANAKA Makoto

E12 14:40-15:40 OS-8 (2) [Chairperson: HIGASHI Yukihiro (Iwaki Meisei Univ.)]

E121 Measurement of viscosity coefficient of New Refrigerant by torsionally-vibrating quartz crystal viscometer
#OOTA Yosuke (National Defense Acad.), TANAKA Yuji, MATSUGUCHI Atsushi, KAGAWA Noboru
E122 Chemical/Thermal Stability and Safety of Low GWP Refrigerant HFO-1234ze(Z)
#OSAFUNE Kanako (Central Glass Co., Ltd.), NISHIGUCHI Yoshio, OKAMOTO Satoru, SAKYU Fuyuhiko, KOYAMA Shigeru (Kyushu University)
E123 A study of drop-in-test for HC refrigerant mixtures
#MORI Keita (Kanagawa Institute of Technology), YADA Naoyuki

DAY2 September 11, 2013, Wednesday

ROOM A

Workshop WS-1 "Current Trends and Cases on Development of Heat Exchangers"
Moderators: FUJINO Hirokazu (Daikin Industries, LTD.), NISHIDA Kosaku (MAYEKAWA MFG. CO., LTD.), MIYARA Akio (Saga Univ.)

A21 10:00-12:00 WS-1 [Chairperson: FUJINO Hirokazu (Daikin Industries, LTD.),NISHIDA Kosaku (MAYEKAWA MFG. CO., LTD.), MIYARA Akio (Saga Univ.)]

A211 Development of the all aluminum heat exchanger for the air conditioners
*WATANABE Takamichi (Sumitomo Light Metal Industries, LTD.), MIZUTA Yoshihiko, TOYAMA Tomoaki
A212 Study of the aluminum heat exchanger for vending machines
*MATSUBARA Takeshi (Fuji Electric Co.,Ltd.), AJIMA Masaaki, TSUCHIYA Toshiaki, KITAIDE Yujirou
A213 "Stable Power Inverter Air-conditioner" for emerging nations
*KODANI Koichi (TOSHIBA CARRIER), NAKANO Hidekazu, SUZUKI Akihiro, TAJIMA Yusuke
A214 Technical trend of hydrophilic surface treatment for heat exchanger
*OSAKO Tomohiro (NIHON PARKERIZING Co., Ltd), NAKAYAMA Takaomi
A215 A novel design of compact brazed plate heat exchanger for CO_2 transcritical
*FELGENHAUER Björn (SWEP)
A216 The New Generation of Heat Exchanger for Natural Refrigerant
*SAKAI Masafumi (Alfa Laval)

Organized Session OS-5 "Technological Development in Heat Exchangers"
Organizers: INOUE Norihiro (Tokyo Univ. Marine Sci. & Tech.), ASANO Hitoshi (Kobe Univ.), MIYARA Akio (Saga Univ.)

A22 13:00-14:30 OS-5 (1) [Chairperson: INOUE Norihiro (Tokyo Univ. Marine Sci. & Tech.)]

A221 Basic Characteristics on Marangoni Condensation
*UTAKA Yoshio (Yokohama National Univ.)

A222 Condensation Heat Transfer Performance by Using HFO-1234yf Refrigerant in Flat-tube
The Effect of Projection on Flat-tube inner wall and Lubrication Oil on Heat Transfer
KATSUTA Masafumi (Waseda Univ.), #SATO Ryo (Graduate School, Waseda Univ.), YAMASHITA Akira, KUROIWA Toru

A223 Experimental Study on Condensation and Evaporation of Alternative Refrigerant R1234ze(Z) in a Horizontal Micro-fin Tube
#MISHIMA Fumiya (Kyushu Univ.), LIU Jinfan, KONDOU Chieko, KOYAMA Shigeru

A224 Condensation heat transfer characteristics of humidified air in mini channel for high performance heat exchanger for Latent heat recovery
#YAMASHITA Junpei (Yokohama National Univ.), UTAKA Yoshio

A23 14:40-15:40 OS-5 (2) [Chairperson: MOMOKI Satoru (Nagasaki Univ.)]

A231 Characteristics of Flow Boiling Heat Transfer in Rectangular Minichannels
#TANAKA Chitose (Univ. of Tokyo), DANG Chaobin, HIHARA Eiji

A232 An Experimental Study on Flow Boiling Mixture R32/R1234ze(E) in Multi-Port Tube
*JIGE Daisuke (Tokyo University of Marine Science and Technology), KOMIYA Yuta (Kyushu Univ.), KONDO Chieko, KOYAMA Shigeru

A233 Study on Flashing Flow of CO_2 through a Capillary Tube
*ASANO Hitoshi (Kobe Univ.), KOBAYASHI Kenta, ABO-ELFADL Saleh (Assiut Univ.), TSUCHIYA Toshiaki (Fuji Electric), ISHIDA Shin, TAKIGUCHI Koji

ROOM B

Organized Session OS-3 "Desiccant and Humidity Control/Adsorption and Chemical Heat Pump"
Organizers: AKISAWA Atsushi (Tokyo University of Agriculture and Technology), KOBAYASHI Noriyuki (Nagoya Univ.), HAMAMOTO Yoshinori (Kyushu Univ.), Bidyut B. Saha (Kyushu Univ.), SHIMIZU Naoki (Mitsubishi Plastics, Inc.),KODAMA Akio (Kanazawa Univ.), SAITO Kiyoshi (Waseda Univ.), HORIBE Akihiko (Okayama Univ.), KUBOTA Mitsuhiro (Nagoya Univ.), MIYAZAKI Takahiko (Kyushu Univ.)

B21 9:00-10:20 OS-3 (3) [Chairperson: HAMAMOTO Yoshinori (Kyushu Univ.)]

B211 Development of Desiccant Air Conditioning System using Wakkanai Siliceous Shale
12th Report: Measurement Test of An Integrated Heat Pump with Desiccant Unit.
*NAGANO Katsunori (Hokkaido Univ.), NABESHIMA Yuki, SUGIYAMA Daichi, NAKAMURA Makoto, OMOTEYAMA Chiemi, TOGAWA Junya (Wakkanai Green Factory, Co. Ltd), NIKI Kousuke (Sunpot, CO. Ltd), FURUKAWA Osamu, ISHII Yukio (Chofu, CO. Ltd), ITOH Yasuo (Asahikasei, CO. Ltd)

B212 Development of Desiccant Air Conditioning System using Wakkanai Siliceous Shale
13th Report: Performance Prediction of Desiccant System Combined with Total Heat Exchanger
#NABESHIMA Yuki (Hokkaido Univ.), SUGIYAMA Daichi, NAKAMURA Makoto, OMOTEYAMA Chiemi, NAGANO Katsunori, TOGAWA Junya (Wakkanai Green Factory, Co. Ltd.)

B213 Development of Desiccant Air Conditioning System using Wakkanai Siliceous Shale
14th Report : Optimization of Desiccant Rotor Unit for Desiccant System Combined with Total Heat Exchanger
*SUGIYAMA Daichi (Hokkaido Univ.), NABESHIMA Yuki, OMOTEYAMA Chiemi, NAKAMURA Makoto, NAGANO Katsunori, TOGAWA Junya (Wakkanai Green Factory Co. Ltd.)

B214 Development of vapor-compression heat pump systems hybridized with desiccant
Part 1: A study of adsorption and desorption performance of desiccant rotor
*NAKAGAWA Naoki (The University of Tokyo), KOYANO Takehiro, DANG Chao Bin, HIHARA Eiji, GODO Masazumi (Shin Nippon Air Technologies Co.,Ltd.), KURODA Naonori, AYAME Hisao

B22 10:40-12:00 OS-3 (4) [Chairperson: MIYAZAKI Takahiko (Kyushu Univ.)]

B221 Development of Vapor-compression Heat Pump Systems Hybridized with Desiccant
Part2: Drain-free Operation of Air Conditioning in Summer
AYAME Hisao (Shin Nippon Air Technologies Co.,Ltd.,), *GODO Masazumi, KURODA Naonori, KOYANO Takehiro (Tokyo Univ.), NAKAGAWA Naoki, DANG Chao Bin, HIHARA Eiji

B222 Development of Vapor-compression Heat Pump Systems Hybridized with Desiccant
Part 3:Frost-free Operation of Air conditioning in Winter
#KOYANO Takehiro (The University of Tokyo), NAKAGAWA Naoki, DANG Chaobin, GODO Masazumi (Shin Nippon Air Technologies Co.Ltd.), KURODA Naoki (Shin Nippon Air Technologies), AYAME Hisao, HIHARA Eiji (The University of Tokyo)

B223 Development of vapor-compression heat pump systems hybridized with desiccant
Proposal of APF evaluation method of development system
*KURODA Naonori (Shin Nippon Air Technologies), AYAME Hisao, GODO Masazumi, KOYANO Takehiro (The University of Tokyo), DANG Chao Bin, HIHARA Eiji

B224 Development of vapor-compression heat pump systems hybridized with desiccant
Part3: Study of frost-free at water heating
*IINO Koji (Tokyo electric power company), NISHIKAWA Tomoshi, KATSUBE Yasuhiko, DANG Chaobin (Tokyo Univ.), HIHARA Eiji

Seminar for Refrigeration Engineer SN-2
Moderators: IRIE Kiichi (Ebara Refrigeration Equipment & Syatems Co., ltd.),OISHI Satoshi (Nichirei Foods Inc.)

B23 13:30-15:30 SN-2 [Chairperson: IRIE Kiichi (Ebara Refrigeration Equipment & Syatems Co., ltd.)

B231 Structure and Function of Antifreeze Protein
*HAGIWARA Tomoaki (Tokyo University of Marine Science and Tecnology)

B232 Possible Uses of Antifreeze Protein in Frozen Foods
*ISHII Hirotaka (Nichirei foods inc.)

B233 Applications of Antifreeze Proteins in Refrigeration and Air Conditioning Technologies
*INADA Takaaki (National Institute of Advanced Industrial Science and Technology (AIST))

ROOM C

Organized Session OS-9 "Latest Refrigeration Technology for Food and Biology"
Organizers: ARAKI Tetsuya (The Univ. of Tokyo), KUDOU Kenichi (Aomori Prefectural Industrial Technology Research Center)

C21 9:20-10:40 OS-9 (2) [Chairperson: KUDOU Kenichi (Aomori Prefectural Industrial Technology Research Center))]

C211 Edible film from horse mackerel scale gelatin
#LE Thi Minh Thuy (TUMSAT), OKAZAKI Emiko, KAZUFUMI Osako

C212 Influence of Denaturation of Fish Myofibrillar Protein on Freezing at Very Low Temperatures
*NAKAZAWA Naho (Tokyo Univ. of Marine Sci. and Tech.), YAMAGUCHI Takanori (National Fisheries Univ.), WADA Ritsuko, TANAKA Ryusuke (Faculty of Agric., Miyazaki Univ.), FUKUSHIMA Hideto (National Fisheries Univ.), MAEDA Toshimichi, OKAZAKI Emiko (Tokyo Univ. of Marine Sci. and Tech.), FUKUDA Yutaka

C213 Effects of Killing Procedures on the Ice Crystal Morphorogy in the Frozen Muscle Tissue of Horse Mackerel
*KOMINAMI Yuri (Tokyo University of Marine Science and Technology), WATANABE Manabu, SUZUKI Toru

C214 Influence of Frozen Rate and Storage Temperature on Ice Crystal Size in Frozen Fish Meat
NAKAZAWA Naho (Tokyo Univ. of Marine Sci. and Tech.), FUKUSHIMA Hideto (National Fisheries Univ.), WADA Ritsuko, TANAKA Ryusuke (Faculty of Agric., Miyazaki Univ.), MAEDA Toshimichi (National Fisheries Univ.), OKAZAKI Emiko (Tokyo Univ. of Marine Sci. and Tech.), *FUKUDA Yutaka

C22 11:00-12:00 OS-9 (3) [Chairperson: TAKAHASHI Tadashi (Aomori Prefectural Industrial Technology Research Center)]

C221 Effect of freezing process on salmon-color of the salted coho salmon fillet
*KONO Shinji (Mayekawa Mfg. Co.,LTD), KON Madoka, USAMI Hayato

C222 Preprocessing before frozen of the cod roe
#UCHIUMI Yu (Tokyo Univ. of Marine Science and Technology), WATANABE Manabu, SUZUKI Toru

C224 Effect of freezing methods on the color quality of blood clams
*THANATUKSORN Pariya (Tokyo University of Marine Science and Technology), WATANABE Manabu, SUZUKI Toru

C23 13:00-14:20 OS-9 (4) [Chairperson: ARAKI Tetsuya (The Univ. of Tokyo)]

C231 Changes during storage of the antioxidant activity and deliciousness of lettuce that was produced in Osaka Prefectural University Plant Factory
#MYOJIN Chiho (Kinki Univ.), KAWANISHI Masako, OFUSA Ken (IDEA Co., Ltd.), KODAMA Kazuya, KINOSHITA Shinichi (Osaka Prefecture Univ.), YOSHIDA Atsumasa

C232 Effect of freezing and thawing rate on the quality of edible wild plants
*TAKAHASHI Tadashi (Aomori Prefectural Industrial Technology Research Center), TAKEUCHI Megumi, MATSUBARA Hisashi, KUDOU Ken-ichi

C233 The main factors on sensory evaluation of frozen mackerel
*WADA Ritsuko (National Fisheries Univ.), MIZUGUCHI Shotaro, NAKAZAWA Naho (Tokyo Univ. of Marine Sci. and Tech.), TANAKA Ryusuke (Faculty of Agric., Miyazaki Univ.), OKANO Toshiyuki (Fishing boat and system engineering association), YAMAUCHI Kazuo, NAGASHIMA Norio, TANAKA Kenso (Nishinihon Uoichi Corp.), FUKUSHIMA Hideto (National Fisheries Univ.), MAEDA Toshimichi, HARADA Kazuki, FUKUDA Yutaka (Tokyo Univ. of Marine Sci. and Tech.)

C234 Influence of Freshness on the Quality of Frozen Mackerel
*NAKAZAWA Naho (Tokyo Univ. of Marine Sci. and Tech.), YAMAGUCHI Takanori (National Fisheries Univ.), WADA Ritsuko, TANAKA Ryusuke (Faculty of Agric., Miyazaki Univ.), OKANO Toshiyuki (Fishing boat and system engineering association), YAMAUCHI Kazuo, NAGASHIMA Norio, TANAKA Kensou (Nishinihon Uoichi Corp.), FUKUSHIMA Hideto (National Fisheries Univ.), MAEDA Toshimichi, OKAZAKI Emiko (Tokyo Univ. of Marine Sci. and Tech.), FUKUDA Yutaka

C24 14:40-15:40 OS-9 (5) [Chairperson: UENO Shigeaki (Saitama Univ.)]

C241 Effect of the thawing condition for high fresh frozen mackerel made on ships.
#TAKEUCHI Megumi (Aomori Prefectural Industrial Technology Research Center), KIMURA Gou, TAKAHASHI Tadashi, MATSUBARA Hisashi, KUDOH Ken-ichi

C242 Postmortem changes of club mackerel chilled by using slurry ice
*MAEDA Toshimichi (National Fisheries Univ.), MURAKAMI Haruki, FUKUSHIMA Hideto, YAGUCHI Shigenori, HARADA Kazuki, FUKUDA Yutaka (Tokyo Univ. of Marine Sci. and Tech.)

C243 Effect of the treatment for the freshness on high fresh frozen Mackerel made on ships or land.
*MATSUBARA Hisashi (Aomori Prefectural Industrial Technology Center), KIMURA Gou, TAKEUCHI Megumi, TAKAHASHI Tadashi, KUDOH Ken-ichi

ROOM D

Seminar on Compressors SN-1
Moderators: TOJYO Kenji (former Hitachi Appliances, Inc.), KATO Taro (Mitsubishi Electric Corp.)

D21 10:20-12:00 SN-1 [Chairperson: TOJYO Kenji (former Hitachi Appliances, Inc.), KATO Taro (Mitsubishi Electric Corp.)]

D211 History of Single Screw Compressors
*UENO Hiromichi (DAIKIN Industries, Ltd.)

D212 Development of High Efficiency CO_2 2-stage Compressor and Application to Cold Chain
*ISHII Takeshi (Panasonic Corp.), SATO Takashi, YANASHIMA Toshihito, TAKEZAWA Masaaki, MATSUZAKI Akira, MIHARA Kazuhiko, KUWABARA Osamu

D213 Development of Showcase Equipped with Inverter Compressor
*ISHIKAWA Tomotaka (Mitsubishi Electric Corp.), KATO Mutsumi (Mitsubishi Electric Applied Refrigeration Systems Co. Ltd.), MAEYAMA Hideaki (Mitsubishi Electric Corp.), ARISAWA Koichi, KATO Yasuaki, TASHIRO Yusuke

D214 Energy-saving technology of Vending machine
*ISHIDA Shin (Fuji Electric)

D215 Rack-Type Air-Conditioning System for Data Center
*YOSHII Ari (NTT FACILITIES, INC.), SEKIGUCHI Keisuke, UDAGAWA Yosuke, YANAGI Masahide, NAITO Yasuhiro (Hitachi Appliances, Inc.)

Organized Session OS-4 "Present Status and Future Development of Compressors"
Organizers: FUKUTA Mitsuhiro (Shizuoka Univ.), NOZAKI Tsutomu (Hitachi, Ltd)

D22 13:00-14:20 OS-4 (1) [Chairperson: MOROMOTO Takashi (Panasonic Corp.)]

D221 A Study on PWM Bypass Capacity Control of Scroll Compressors
#IIJIMA Ryota (Hitachi, Ltd.), KOYAMA Masaki

D222 Study on pressure pulsation of Vane compressor in case with chattering
#KONDO Shunjiro (Graduate School of Shizuoka Univ.), FUKUTA Mitsuhiro (Shizuoka Univ.)

D223 Reducing Discharge Energy Loss of a Screw Compressor
#CHIBA Kohtaro (Hitachi, Ltd.), TSUCHIYA Takeshi, OHTA Hiroshi (Hitachi Industrial Equipment Systems Co.,Ltd.), TAKANO Masahiko

D224 Performance of radial piston expander for CO_2 refrigeration cycle
#ANZAI Fumiya (Graduate school of Engineering, Shizuoka University), FUKUTA Mitsuhiro (Shizuoka University), OGI Yasuhiro

D23 14:40-15:20 OS-4 (2) [Chairperson: NOZAKI Tsutomu (Hitachi, Ltd)]

D232 Development of PVE Refrigeration Lubricants for R32
#MATSUMOTO Tomoya (Idemitsu Kosan Co.,Ltd), KANEKO Masato, KAWAGUCHI Yasuhiro

D233 Analysis of Contact Force between Wraps in Scroll Compressor
The case of considering the deflection of the shaft and the oil film thickness between wraps
#KIMURA Kota (Graduate School of Shizuoka University), FUKUTA Mitsuhiro (Shizuoka University), YANAGISAWA Tadashi

ROOM E

Organized Session OS-11 "Performance Evaluation of Air-conditioners, Chillers and Heat Pump Water Heaters"
Organizers: NISHIMURA Nobuya (Osaka City Univ.), SAITO Kiyoshi (Waseda Univ.),WATANABE Choyu (Chubu Electric Power Co., Inc.)

E21 10:40-12:00 OS-11 (1) [Chairperson: HIHARA Eiji (The Univ. of Tokyo)]

E211 Study on Evaluation of Annual Energy Consumption of Multi-split type GHP Air-conditioner for Buildings
1st report: Evaluation of energy-saving performance based on partial load performance tests
*ONISHI Manabu (Mie University), HIROTA Masafumi, MIYAOKA Yoichi (Chubu Electric Power)

E212 Study on Evaluation of Annual Energy Consumption of Multi-split type GHP Air-conditioner for Buildings
2nd report: Examination of new evaluation method of energy consumption
ONISHI Manabu (Mie University), *HIROTA Masafumi, MIYAOKA Yoichi (Chubu Electric Power)

E213 Development of large capacity heat pump performance evaluating apparatus
1st Report: Study on specifications of experimental apparatus
HASEGAWA Hiromi (CRIEPI), WATANABE Choyu, HASHIMOTO Katsumi, FUJINAWA Takeshi,*KAIDA Takenobu

E214 Development of large capacity heat pump performance evaluating apparatus
2nd Report: Study on Validity and soundness of experimental apparatus
WATANABE Choyu (CRIEPI), HASEGAWA Hiromi, HASHIMOTO Katsumi, FUJINAWA Takeshi, *KAIDA Takenobu

E22 13:00-14:00 OS-11 (2) [Chairperson: SAITO Kiyoshi (Waseda Univ.)]

E221 Research and Development of Innovative Energy-saving Controls of Next-generation Multi-Split type Air-conditioning Systems for Buildings
4th report - Evaluation of energy-saving performance of developed controller and Equipment Characteristics of BEST Energy Simulation
*SHINAGAWA Koichi (Nihon Sekkei, Inc.）,KATSURAGI Hiromasa, HOSHINO Hideaki, HIROTA Masafumi (Mie University), KASAHARA Shinichi (Daikin Industries, Ltd), YABU Tomohiro, OKA Masahiro, IWATA Yoshinari (Chubu Electric Power Co., Inc.)

E222 Energy-saving Performance of Commercial Air-conditioner with Spraying Apparatus Attached to the Outdoor Unit
*MIYAOKA Yoichi (Chubu Electric Power Co.,Inc.), SAKURABA Ichiro, NAGAMATSU Katsuaki, ITO Shinji

E223 Air-Conditioning Systems in Urban Area Concerning Heat Island Problem
Investigation of performance improvement methods in cooling load peak
*NISHIMURA Nobuya (Osaka City Univ.), UEDA Noboru, HATANO Yusuke, IYOTA Hiroyuki

E23 14:20-15:20 OS-11 (3) [Chairperson: WATANABE Choyu (Chubu Electric Power Co., Inc.)]

E231 Performance of heat pump cycle using refrigerant mixture R744/R32/R1234ze(E)
FUKUDA Sho (Kyushu Univ.), #YAMAMOTO Shotaro, KONDOU Chieko, TAKATA Nobuo, KOYAMA Shigeru

E232 Evaluation of Energy Performance for Hybrid heating system
Evaluation Experiment Modeling on Hybrid heating system
*SOBUE Tsutomu (Rinnai Corporation), MIURA Hisashi (National Institute for Land and Infrastructure Management), AKAMINE Yoshihiko, NAKASHIMA Chuji (Rinnai Corporation)

E233 Trial Use and Comfort Evaluation of Personal Air Conditioner for Car with using Peltier Device
KATSUTA Masafumi (Waseda Univ.), #ISHIMINE Shoutarou (Graduate School, Waseda Univ.), ANAMIZU Tomohiro, TOKOROZAWA Keisuke

DAY3 September 12, 2013, Thursday

ROOM A

Organized Session OS-5 "Technological Development in Heat Exchangers"
Organizers: INOUE Norihiro (Tokyo Univ. of Marine Science and Technology), ASANO Hitoshi (Kobe Univ.), MIYARA Akio (Saga Univ.)

A31 9:00-10:20 OS-5 (3) [Chairperson: ASANO Hitoshi (Kobe Univ.)]

A311 Study on Forming Conditions of the Separated, Annular and Mist Flows in Flow Boiling inside a Horizontally Internally Spirally Grooved Tube
*TAKASHIBA Yasuto (Nagasaki Univ.), MOMOKI Satoru, KAMITO Takanori, SASAKI Souichi

A312 Flow patterns of the vapor-liquid two-phase flow in a small triangular channel
*MATSUSE Yudai (Kyushu Univ.), NAKATSURU Takuya, ENOKI Koji, MORI Hideo, KARIYA Keishi, HAMAMOTO Yoshinori

A313 Effect of geometries on water side heat transfer and pressure drop for CO_2-water heat exchangers of heat pump water heater
#KATAOKA Keisuke (Kyushu Univ.), MATSUO Yoshimi, KOYAMA Shigeru

A314 Heat Transfer and Pressure Drop on Single-Phase Flow inside Corrugated Tubes for Hot-Water Supply Systems
#WATANABE Kazuhide (Tokyo University of Marine Science and Technology), SHINGAI Jumpei, JIGE Daisuke, INOUE Norihiro, TAKAHASHI Hiroyuki (Kobelco & Materials Copper Tubes Co. LTD.)

A32 10:40- 12:00 OS-5 (4) [Chairperson: KIDO Nagao (Panasonic Corp.)]

A321 An experimental study of two phase flow in plate heat exchangers
#ESHIMA Yamato (Saga Univ.), MUH. Anis Mustaghfirin, MIYARA Akio (Saga Univ.)

A322 Study on the heat transfer and flow characteristics in a single channel plate-fin evaporator
#MARUYAMA Kazuhisa (Kobe Univ.), ASANO Hitoshi, SHIKICHI Kazuaki (KEPCO)

A323 Evaluation of heat transfer performance of high heat transfer titanium plate for heat exchanger
*TAMURA Keitaro (KOBE STEEL, LTD.), ITSUMI Yoshio, OHYAMA Hideto, OKAMOTO Akio, ARIMA Hirofumi (Institute of Ocean Energy, Saga University), IKEGAMI Yasuyuki

A324 Study on the heat transfer enhancement of stacked microchannel heat exchanger
*DANG Chaobin (The University of Tokyo), HIHARA Eiji

A33 13:00-14:20 OS-5 (5) [Chairperson: YOKOZEKI Atsuhiko (Hitachi Appliances, Inc.)]

A331 Influence of the fin surface pollution on the mist of the heat exchangers for the room air conditioners
*MIZUTA Yoshihiko (Sumitomo Light Metal Ind., Ltd. Research and development center), ISOMURA Norihisa

A332 Study on the Frosting Phenomena Between Concavity and Convexity Plate under Forced Convection
The Effect of Air Conditions on the Hydraulic and Heat Transfer Performance
#TAKANO Yusuke (Waseda Univ.), KATSUTA Masafumi, KANEKO Akira, HAMANO Yuki

A333 Considerations of the fin shape of the thin thickness fin for heat exchanger
#FUKADA Sayo (Sumitomo Light Metal Ind., Ltd. Research and development center), SATO Yoshio, KIDO Takaaki

A334 Influence of the fin surface property on performances of the heat exchanger for room-air-conditioner
*SASAZAKI Mikine (Sumitomo Light Metal Ind., Ltd. Research and development center), KAKIYAMA Shiro, MIZUTA Yoshihiko, SATO Yoshio

A34 14:40-16:00 OS-5 (6) [Chairperson: MIYARA Akio (Saga Univ.)]

A341 Study of improvement in performance of heat exchanger with micro channel for air conditioner
Improvement of refrigerant distribution properties in the evaporation condition
*HAYASE Gaku (Samsung Electronics Co.,LTD), SEO Kangtae, CHO Hyunchul

A342 Development of a high performance heat exchanger by airfoil-shaped tubes having extended leading and trailing edge sections with slits
#YAMAMOTO Akihiro (Kanazawa Univ.), ONISHI Hajime, TADA Yukio, TAKIMOTO Akira

A343 The Influence of Tube Expansion Ratio on Cross-Fin-Tube type Heat Exchanger Performance
*KAKIYAMA Shiro (Sumitomo Light Metal Ind., Ltd. Research and development center)

A344 Development of the Inner Gooved Aluminum Tube for the Cross Fin Tube Heat Exchanger
*SATO Yoshio (Sumitomo Light Metal Ind., Ltd. Research and development center), KAKIYAMA Shiro, TORIKAI Gaku

ROOM B

Organized Session OS-3 "Desiccant and Humidity Control/Adsorption and Chemical Heat Pump"
Organizers: AKISAWA Atsushi (Tokyo University of Agriculture and Technology), KOBAYASHI Noriyuki (Nagoya Univ.), HAMAMOTO Yoshinori (Kyushu Univ.), Bidyut B. Saha (Kyushu Univ.), SHIMIZU Naoki (Mitsubishi Plastics, Inc.),KODAMA Akio (Kanazawa Univ.), SAITO Kiyoshi (Waseda Univ.), HORIBE Akihiko (Okayama Univ.), KUBOTA Mitsuhiro (Nagoya Univ.), MIYAZAKI Takahiko (Kyushu Univ.)

B31 9:00-10:20 OS-3 (5) [Chairperson: DANG Chaobin (The Univ. of Tokyo)]

B311 Heat and Mass Transfer of Desiccant Wheel
#YAMAGUCHI Seiichi (Waseda Univ.), SAITO Kiyoshi

B312 Evaluation of the adsorption / desorption kinetics of water vapor in silicagel layer by using volumetric method
#OSAKA Yugo (Kanazawa Univ.), NARUMIYA Kazuya, TSUJIGUCHI Takuya, KODAMA Akio

B313 Study on Enhancement of Heat Transfer in Adsorption Fixed Bed for Desiccant Air Conditioning.
#ISHIHARA Kento (Kogakuin Univ.), KIMURA Ryouhei, KOBAYASI Jun

B314 Effects of Cooling/Heating Tubes on the Dehumidification Characteristics of Two Connected Fluidized Beds with Organic Sorption Powder
*HORIBE Akihiko (Okayama Uinv.), HARUKI Naoto, SANO Yoshihiko

B32 10:40-12:00 OS-3 (6) [Chairperson: SAITO Kiyoshi (Waseda Univ.)]

B321 Effect of Velocity Amplitude and Pressure Amplitude of Sound Wave to Enhance Moisture Adsorption Rate
#OKUBO Kenichi (Tokyo University of Agriculture and Technology), UEDA Yuki, AKISAWA Atushi

B322 Dehumidification Performance of Organic Sorbent Desiccant Rotors Coated Various Sorbent Amount

HORIBE Akihiko (Okayama Univ.), HARUKI Naoto, SANO Yoshihiko, #TANAKA Shun

B323 Development of Desiccant Air Conditioning System using Wakkanai Siliceous Shale

15th Report: Improvement and Dehumidification Ability of Chloride Supported Desiccant Rotor.

*TOGAWA Junya (Wakkanai Green Factory, Co. Ltd), OMOTEYAMA Chiemi (Hokkaido Univ.), NABESHIMA Yuki, SUGIYAMA Daichi, NAKAMURA Makoto, NAGANO Katsunori, OKADA Makoto (Frontier Industrial CO.,LTD)

B324 Potentiality of desiccant rotors-Passive desiccant air conditioning

*KURODA Masao (Environmental research Institute (YAMATO Inc.)), KIMURA Kazuya (YAMATO Inc.), KOMORI Masahito

B33 13:00-14:20 OS-3 (7) [Chairperson: HORIBE Akihiko (Okayama Univ.)]

B331 Continuous Dehumidification by using Finned-tube type Heat Exchangers coated with Adsorptive Desiccant Material

Consideration of dehumidification behavior and step-change

#SAEKI Masakazu (Kanazawa Univ.), KODAMA Akio, OSAKA Yugo, TSUJIGUCHI Takuya, OKAMOTO Kumiko (Mitsubishi Plastics)

B332 Evaluation of a Cooling-Drying Air Conditioner Using Hexagonal Heat Exchanger with a Water Spray

#GOTO Minoru (Osaka Univ.), PARK Chanyong, ASAI Takeyuki, HORI Tsukasa, KEGASA Akeshi, HISAZUMI Yoshinori, KISHIMOTO Akira (Osaka gas CO.)

B333 High-performance study of low temperature regeneration desiccant dehumidifier used to low dew point dry room

*KAKIHARA Asami (Seibu Giken Co.,LTD.), JIN Weili

B334 Dehumidifying Behavior and Performance Prediction of Adsorbent Desiccant

Part2 : Verification of Simulation Accuracy and Optimization of Operating Parameters

#AYAME Hisao (Shin Nippon Air Technologies Co.,Ltd.,), NAGASAKA Shigeyuki, GODO Masazumi,TSUJIGUCHI Takuya (Kanazawa Univ.), KODAMA Akio

B34 14:40-16:20 OS-3 (8) [Chairperson: KODAMA Akio (Kanazawa Univ.)]

B341 Development of Test Hybrid Dryer

PARK Seungtae (Air-Tech Engineering Co.,Ltd.), *LEE Hyunju, HONG Kyoungsu, KIM Youngil (SEOUL TECH)

B342 Energy efficiency study of direct gas combustion regeneration low dew point desiccant dehumidifier

#EJIMA Hiroaki (SEIBU GIKEN CO., LTD.), JIN Weili, FURUKI Keimei

B343 Design optimization of the desiccant air conditioning system for data center

#MIHARA Daisuke (Osaka Prefecture University), OHKURA Masashi, YOKOYAMA Ryohei, WAKUI Tetsuya

B344 Minimization of Consumption Energy of Desiccant Wheel

#MIYAUCHI Minoru (Waseda Univ.), YAMAGUCHI Seiichi, SAITO Kiyoshi

B345 PERFORMANCE ANALYSIS OF SOLAR DESICCANT AIR CONDITIONING

*FENG Shiyu (The University of Tokyo), KOYANO Takehiro, DANG Chaobin, HIHARA Eiji

ROOM C

Organized Session OS-9 "Latest Refrigeration Technology for Food and Biology"
Organizers: ARAKI Tetsuya (The Univ. of Tokyo), KUDOU Ken-ichi (Aomori Prefectural Industrial Technology Research Center)

C31 9:00-10:20 OS-9 (6) [Chairperson: ARAKI Tetsuya (The Univ. of Tokyo)]

C311 Agricultural Products Drying by Hybrid Dryer
*PARK Seungtae (Air-Tech Engineering Co.,Ltd.), HONG Seokgyun, JEONG Mooncheol (Korea Food Research Institute), LEE Hojoon

C312 A measuring method for the concentration of NaCl within salted foods
#NAGANUMA Yu（College of Bioresource Sciences, Nihon University）, DO Gabsoo, BAE Yeonghwan（Sunchon National University, Korea）

C313 The difference in browning degree among the homogenates from 3 kinds of squid during air-drying
The browning of squid meat homogenates during air-drying
#GENG Jieting (TUMSAT), KAIDOU Toshiki (Natori Co., Ltd), KASUKAWA Masaru, OKAZAKI Emiko (TUMSAT), OSAKO Kazufumi

C314 Effect of row material properties on the progress of salting in the manufacturing process of the dried and salted fish product
#MIYAMOTO Yuki (Tokyo University of Marine Science and Technology), SAKANISHI Natsuki, NAKAZAWA Naho, OSAKO Kazufumi, OKAZAKI Emiko

C32 10:40-12:20 OS-9 (7) [Chairperson: OKAZAKI Emiko (Tokyo Univ. Marine Sci. & Tech.)]

C321 Novel refrigeration technique to realize high quality frozen marine products in Tohoku district.
#MIZUKOSHI Chiho (Tokyo University of Marine Science and Technology), THANATUKSORN Pariya, HARNKARNSUJARIT Nathdanai, KOBAYASHI Rika, WATANABE Manabu, SUZUKI Toru

C322 Structural analysis of ice crystals in foods frozen with supercooling by using X-ray 3D micro CT
#KOBAYASHI Rika (Tokyo University of Marine Science and Technology), KIMIZUKA Michifumi (Miyagi Univ.), WATANABE Manabu (Tokyo University of Marine Science and Technology), SUZUKI Toru

C323 X-ray Micro-computed Tomographic Imaging of Ice Crystal Formations in Frozen Solid Gels
#HARNKARNSUJARIT Nathdanai (Tokyo University of Marine Science and Technology), WATANABE Manabu, SUZUKI Toru

C324 Study of Controlling Conditions of Supercooling
#NISHIO Sayaka (TAIYO NIPPON SANSO.Co), MAEDA Masanori, MAKINO Kouji, TAKEUCHI Masahiro, WATANABE Manabu (Tokyo Univ. Marine Sci. & Tech.), SUZUKI Toru

C325 Effects of Freezing and Thawing on the Absorbance Spectra of Water-soluble Fractions from Fish Skeletal Muscles
SAKATA Masashi (Tokai University), YAMASHITA Rin,*OCHIAI Yoshihiro

C33 13:00-14:00 OS-9 (8) [Chairperson: KUDOH Ken-ichi (Aomori Prefectural Industrial Technology Research Center)]

C331 Influence of leaching process on the properties of lizardfish surimi
*FUKUSHIMA Hideto (National Fisheries Univ.), KUROKAWA Shinya, ISHIGAMI Shou, KUWATA Tomoyo, YAMAUCHI Haruna, FUKUDA Yutaka (Tokyo Univ. of Marine Sci. and Tech.)

C332 The effects of ovalbumin on the protease activity
The effects of ovalbumin on the protease activity
#TAKENAWA Toshihiko (TUMSAT), TAKAHASHI Kigen, SUN Le-chang, ABE Shuji, AMEMIYA Hirokazu, OKAZAKI Emiko, OSAKO Kazufumi

C333 Effect of moisture content on the change of ice crystal formation and the water holding capacity of heat-induced surimi gel during frozen storage
#EGUCHI Mami (Tokyo University of Marine Science and Technology), KANDA Maki, JIA Ru, NAKAZAWA Naho, OSAKO Kazufumi, OKAZAKI Emiko

Organized Session OS-2 "Absorption Refrigerator, Heat Pump"
Organizers: NISHIMURA Nobuya (Osaka City Univ.), SAITO Kiyoshi (Waseda Univ.)

C34 14:20-15:40 OS-2 (1) [Chairperson: NISHIMURA Nobuya (Osaka City Univ.)]

C341 Development of General-purpose energy system analysis simulator -ENEGY FLOW +M-
Simulation of double effect absorption type heat pump
#OHNO Keisuke (Waseda Univ.), SAITO Kiyoshi

C342 Study of Heat Transfer of Falling Film Absorber in Long Range
#NAKANISHI Yuichi (Waseda University), SAITO Kiyoshi, INOUE Naoyuki, HUKUSUMI Yukihiro (EBARA Refrigeration Equipment & systems CO.,LTD.)

C343 Development of a steam generation heat pump using a natural refrigerant.
#FUCHIKAMI Hideki (Mayekawa Mfg. Co., Ltd), MACHIDA Akito, ITO Kazutoshi, MUGABI Nelson

C344 Examination of the efficiency driving of the absorption-style refrigerator in connection with CGS
Example in RIKEN "K" computer institution
*SEKIGUCHI Yoshihiro (RIKEN), TAKITSUKA Hiroyuki

C35 16:00-17:00 OS-2 (2) [Chairperson: SAITO Kiyoshi (Waseda Univ.)]

C351 Characteristic Analysis of Solar-assisted Absorption Air-conditioning System
Peak performance in midsummer season
#SHIRAYANAGI Yousuke (Osaka City Univ.), NISHIMURA Nobuya (Osaka City Univ.), MATSUBARA Tametoshi (Osaka Gas Co.Ltd), YAMAGA Yuma (Osaka City Univ.)

C352 Experimental investigation of solution transportation absorption cycle with 500m distance
#WATANABE Fumi (Tokyo University of Agriculture and Technology), TANAKA Seigo, AKISAWA Atsushi, UEDA Yuki, ARAKI Kazumichi, TAKEI Toshitaka

C353 Performance simulation of steady operation in long-distance transport by solution transportation absorption cycle experimental apparatus
*TANAKA Seigo (Tokyo University of Agriculture and Technology), WATANABE Fumi, AKISAWA Atushi, UEDA Yuki, ARAKI Kazumichi, TAKEI Toshitaka

ROOM D

Organized Session OS-7 “Heat and Mass Transport Phenomena with Solid-Liquid Phase Change”
Organizers: MATSUMOTO Koji (Chuo Univ.), KUMANO Hiroyuki (Aoyama Gakuin Univ.)

D31 9:00-10:20 OS-7 (1) [Chairperson: KUMANO Hiroyuki (Aoyama Gakuin Univ.)]

D311 The Effects of Vessel Shapes on Water Freezing Characteristics around Horizontal Elliptical Tubes
#MURAKAMI Motoi (Iwate Univ.), HIROSE Koichi, FUKUE Takashi, SATO Masaaki, ZHANG Qing-ming

D312 Freeze-Concentration by ice making system using metallic belt
#WAKABAYASHI Fumiya (Kanazawa Univ.), TERAOKA Yoshikazu, ISHIDA Tetsuya

D313 Investigation on control of supercooling degree due to surfactant addition in coexisting system of solid-liquid and gas-liquid interfaces
Clarification of governing factor
#SHIRAI Daisuke (Chuo Univ.), MATSUMOTO Koji, MATSUNAGA Kazuyoshi (Chuo Univ.), HONDA Masato, IKEYA Takahiro

D314 Effect of the Shape of a Pinhole Treated on an Elasticized Membrane on Propagation of Freezing and the Concentration of Water in the Capsule
#SAMEJIMA Saburou (Tokyo Tech.), OKAWA Seiji, HOZUMI Tsutomu

D32 10:30-12:20 OS-7 (2) [Chairperson: MATSUMOTO Koji (Chuo Univ.)]

D321 Study of the Ice Slurry System for the industrial use
*SEKI Mitsuo (NATOMICS)

D322 Ice slurry formation with absorption refrigerator using ethanol solution as refrigerant
*ASAOKA Tatsunori (Shinshu Univ.), KUMANO Hiroyuki (Aoyama Gakuin Univ.), NAGAI Shunsuke, YAMAUCHI Yuki, OKADA Masashi

D323 Study on Ice Slurry Generation Using Pressure Shift Freezing
*FUMOTO Koji (Hirosaki Univ.), SATO Toshiki, KAWANAMI Tsuyoshi (Kobe Univ.), INAMURA Takao (Hirosaki Univ.), SHIROTA Minori

D324 Forced-convectional Heat Transfer of Phase-change Nanoemulsion
#TOGASHI Kenichi (Kobe Univ.), ANDERSON Ryan (CCNY), KAWAJI Masahiro, KAWANAMI Tsuyoshi (Kobe Univ.)

D325 Freezing Initiation of Super-cooled Water Droplet Colliding with Electrode Plate for Applying Electric Field in Oil
Effect of Electrode Material
KAWASAKI Naoto (KAWASAKI SETSUBI), *TOCHITANI Yoshiro (Kanazawa Institute of Technology)

Organized Session OS-1 “Simulation Techniques for Refrigeration and Air-Conditioning Systems”
Organizers: SAITO Kiyoshi (Waseda Univ.), NONAKA Masayuki (Hitachi Appliances, Inc.)

D33 13:00-14:20 OS-1 (1) [Chairperson: SAITO Kiyoshi (Waseda Univ.)]

D331 Performance Analysis of a Multi-split Type Air-conditioning System for Buildings by Numerical Simulation
Performance Analysis of a System with Multiple Outdoor Units
KANEKO Takashi (Samsung R&D Institute Japan), #INOUE Hiroaki (Osaka Prefecture University), WAKUI Tetsuya, YOKOYAMA Ryohei, MIYABA Yasuaki (Samsung R&D Institute Japan)

D332 Performance Analysis of a Multi-split Type Air-conditioning System for Buildings by Numerical Simulation
Control Conditions Suitable for Height Difference and Pipe Length
*KANEKO Takashi (Samsung R&D Institute Japan), WAKUI Tetsuya (Osaka Prefecture University), INOUE Hiroaki, YOKOYAMA Ryohei, MIYABA Yasuaki (Samsung R&D Institute Japan)

D334 Gas-liquid Flow Simulation of Refrigerant Distributor using OpenFOAM
*ISHIKAWA Masanori (Hitachi, Ltd.), ISHII Eiji,YOSHIMURA Kazuki

D335 Noise Reduction of Propeller Fan for Outdoor Unit of Packaged Air Conditioner
#TADOKORO Takahide (Living Environment Systems Laboratory, Mitsubishi Electric), KATO Yasuaki, KONO Atsushi

D34 14:40-16:40 OS-1 (2) [Chairperson: NONAKA Masayuki (Hitachi Appliances, Inc.)]

D341 Unsteady state simulation of compression type heat pump
Parameter study for control design
#OHNO Keisuke (Waseda Univ.), SAITO Kiyoshi

D342 Development of General-purpose energy system analysis simulator -ENEGY FLOW +M-
Simulation of single effect absorption type heat pump
#OHNO Keisuke (Waseda Univ.), SAITO Kiyoshi

D343 Minimization of Occupied Volume of Desiccant Wheel
#OHTA Nobuki (Waseda Univ.), YAMAGUCHI Seiichi, SAITO Kiyoshi

D344 Study on Packaged Air Conditioners with refrigerant pump for Data Centers
Part3 : Validity examination of the simulation model about dynamic characteristic
#UDAGAWA Yosuke (NTT Facilities), SEKIGUCHI Keisuke, YANAGI Masahide, SAITO Kiyoshi (Waseda University), OHNO Keisuke

D345 Transient Analysis for Predicting Air-Conditioning Performance of Housing Environment by CFD co-Cycle Simulation
#HONG Soon-cheol (Samsung Electronics), KIM Tae-hun, KIM Jung-ho, LEE Chang-seon, YOUN Baek, PARK Hyun-yeon (CI Soft), AHN Jung-hyeon (CD-Adapco Korea)

D346 One-Dimensional Modeling of Multifunctional Hot Water Storage Tank Based on Thermal Flow Analysis
Modeling During Reheating Bathwater
WAKUI Tetsuya (Osaka Prefecture Univ.), #NAKAMATA Takuya, YOKOYAMA Ryohei, TAIRA Shigeharu (Daikin Industries), ANDOU Takeharu

ROOM E

Organized Session OS-10 “Next Generation Refrigeration Technology”
Organizers: SEKIYA Sachio (Hitachi, Ltd.), KITAZUME Michio (SANDEN Co.Ltd.)

E31 9:00-10:20 OS-10 (1) [Chairperson: SEKIYA Sachio (Hitachi, Ltd.)]

E311 A study of ejector vapor-compression refrigeration cycle harnessing solar energy
#SHIMIZU Akihiko (Tokyo Univ.), FENG Shiyu, DANG Chaobin, HIHARA Eiji

E312 Development of Optimal Cooperation Control Method for Multiple Packaged Air Conditioners
*HASHIMOTO Hiroyuki (Mitsubishi Electric Corp.), TOMITA Masafumi, AOKI Masanori, SHIBA Hirokuni, KOJIMA Yasuhiro

E313 Experimental and theoretical study of heat and mass transfer characteristics in a desiccant-coated fin-tube heat exchanger

*ZHANG Li (Central Research Institute of Electric Power Industry), SAIKAWA Michiyuki, FUJINAWA Takeshi

E314 Characteristic of kW-class Magnetic refrigerator system

*MIYAZAKI Yoshiki (Railway Technical Research Institute), IKEDA Kazuya, ARAI Yuuki, MIZUNO Katsutoshi, YOSHIZAWA Keisuke, NAGASHIMA Ken, HIRANO Naoki (Chubu Electric Power Co), OKAMURA Tetsuji (Tokyo Institute of Technology), TAKATA Hiroaki (Santoku Corporation)

E32 10:40-12:00 OS-10 (2) [Chairperson: KITAZUME Michio (Sanden Co.ltd.)]

E321 Development of Fresh Air Cooling System for IT equipments
Report of Power Usage Efficiency in real operation at Tokyo

*KOYANO Koichi (Hitachi, Ltd.), TSUBAKI Shigeyasu, SUZUKI Kazuaki, TOYODA Hiroyuki, NAKAJIMA Kenichi, KASHIRAJIMA Yasuhiro

E322 Study of Indirect Outdoor Air Cooling for Datacenters

*TAKAHASHI Masaki (Fuji Electric Co.,Ltd), OHGA Shunsuke, MORI Taiji, KOIKE Takuto

E323 Cooperation energy-saving technology of Outdoor-Air Processing Unit and Multi-Split Type Air-Conditioning System for Buildings

*HAMADA Mamoru (Mitsubishi Electric Co.), TAMURA Naomichi, ARAI Hidemoto

E324 A Heat Pump System That Improves Annual Efficiency by Fitting the Actual Air-conditioning Load

*YOSHIDA Yasutaka (Hitachi, Ltd.), TOKUSA Kenji (Hitachi Appliances, Inc.), KOYAMA Masaki (Hitachi, Ltd.), NAGANO Katsunori (HOKKAIDO UNIVERSITY)

Workshop WS-2 "Overview of Next Refrigeration Systems"

Moderators: HIRAO Toyotaka (Mitsubishi Heavy Industries, Ltd.), TANI Syuichi (Mitsubishi Electric Corp.)

E33 13:10-14:20 WS-2 (1) [Chairperson: HIRAO Toyotaka (Mitsubishi Heavy Industries, Ltd.)]

E331 Controlled relaxation of photovoltaics output by EcoCute and EV

*BABA Jumpei (The University of Tokyo)

E332 The next-generation energy management system for Smart House

*NAGATOMO Hideaki (MITSUBISHI ELECTRIC CORPORATION)

E333 Optimal Operation of Thermal energy for CO_2 emissions reduction of supermarket and restaurant With Environment-friendly Distributed Generation Units

BAE Sangchul (Waseda Univ.), KATSUTA Masafumi, *TAJIMA Saori, MORI Tomihiko

E34 14:40-15:40 WS-2 (2) [Chairperson: TANI Syuichi (Mitsubishi Electric Corp.)]

E341 Introduction of Energy Saving Cooling Technology to Support Cloud Computing
Study on Spot Cooling System and International Standardization of Air Conditioning System for Data Center

*KASHIRAJIMA Yasuhiro (Hitachi, Ltd.), OONUKI Toshiuki, FUJIMOTO Takayuki

E342 Latest refrigerant regulations and alternate refrigerant of Next-generation refrigeration and air-conditioning systems

#MATSUDA Kenji (The Japan Refrigeration and Air Conditioning Industry Association)

E343 Suitable Refrigeration Oil for Low GWP Refrigerants

*SAITO Rei (Japan Sun Oil Company, Ltd.), TANAKA Shuichiro, SUZUKI Yoshinori, SHIMODA Akihiro