IMPRES2019
Time Table & Program

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Day 0 (Sunday) 2019.10.20	
15:00 - 18:00	**Registration @** ANA Holiday Inn Kanazawa Sky, 18 F Top of Kanazawa
	Welcome reception

Day 1 (Monday) 2019.10.21, Morning session				
8:30	**Registration**			
9:00 - 9:10	**Opening addresses, Prof. Akio Kodama (Room A)**			
9:10 - 10:00	**Welcome address Prof. Tadafumi Adschiri (Room A)**			
10:00 - 10:20	**Coffee break**			
10:20 - 12:00	**Parallel sessions**			
	Session A1 (Room A) Chair : M. Kubota	Session B1 (Room B) Chair : Y. Osaka	Session C1 (Room C) Chair : H. Ishitobi	Session D1 (Room D) Chair : H. Higashi
10:20 - 10:40	A101 (Keynote)	B101(keynote)	C101(Keynote)	D101(Keynote)
10:40 - 11:00	A102	B102	C102	D102
11:00 -11:20	A103	B103	C103	D103
11:20 - 11:40	A104	B104	C104	D104
11:40 - 12:00	A105	B105		D105
12:00 - 13:30	**Lunch**			

Day 1 (Monday) 2019.10.21, Afternoon session				
13:30 - 14:20	**Plenary lecture1 (Room A), Prof. Ryoji Kanno** **Reseach development of all-solid-battery for practice use** **Chair : Prof. Yukitaka Kato**			
14:20 - 14:30	**Coffee break**			
14:30-16:10	Session A2 (Room A) Chair : J. Ryu	Session B2 (Room B) Chair : M. Bahrami	Session C2 (Room C) Chair : A. Nishimura	Session D2 (Room D) Chair : R. Kikuchi
14:30-14:50	A106 (Keynote)	B106 (Keynote)	C106	D106 (Keynote)
14:50-15:10	A107	B107	C107	D107
15:10-15:30	A108	B108	C108	D108
15:30-15:50	A109	B109	C109	D109
15:50-16:10	A110	B110		D110
16:10 - 16:30	**Coffee break**			
16:30 - 18:10	**Parallel sessions**			
	Session A3 (Room A) Chair : L.G. Gordeeva	Session B3 (Room B) Chair : Z. He	Session C3 (Room C) Chair : S. Freni	Session D3 (Room D) Chair : H. Enomoto
16:30 - 16:50	A111 (Keynote)	B111 (Keynote)	C111 (Keynote)	D111
16:50 - 17:10	A112 (Keynote)	B112 (Keynote)	C112	D112
17:10 - 17:30	A113	B113	C113	D113
17:30 - 17:50	A114	B114	C114	
17:50 - 18:10	A115	B115	C115	

Day 2 (Tuesday) 2019.10.22				
8:30	**Registration**			
9:00 - 10:40	**Parallel sessions**			
	Session A4 (Room A) Chair : N. Kobayashi	Session B4 (Room B) Chair : A. Freni	Session C4 (Room C) Chair : H. Fukunaga	Session D4 (Room D) Chair : Y. Shimoyama
9:00 - 9:20	A201	B201 (Keynote)	C201 (Keynote)	D201 (Keynote)
9:20 - 9:40	A202	B202	C202	D202 (Keynote)
9:40 - 10:00	A203	B203	C203	D203
10:00 - 10:20	A204	B204	C204	D204
10:20 - 10:40	A205		C205	D205
10:40 - 11:00	**Coffee break**			
11:00 - 11:50	**Plenary lecture 2 (Room A), Prof. André Thess** **Carnot batteries for terawatt hour electricity storage** **Chair: Prof. Yukitaka Kato**			
11:50 - 14:50	**Lunch and poster session (Poster Hall)**			
15:00 - 18:00	**Conference tour**			
19:00 - 21:00	**Conference dinner @ Kanazawa Tokyu Hotel**			

Day 3 (Wednesday) 2019.10.23				
8:30	**Registration**			
9:00 - 10:40	**Parallel sessions**			
	Session A5 (Room A) Chair : M. Kumita	Session B5 (Room B) Chair : B. Dawoud	Session C5 (Room C) Chair : G. Inoue	Session D5 (Room D) Chair : S. Hashimoto
9:00 - 9:20	A301 (Keynote)	B301	C301 (Keynote)	D301 (Keynote)
9:20 - 9:40	A302	B302	C302 (Keynote)	D302
9:40 - 10:00	A303	B303	C303	D303
10:00 - 10:20	A304	B304		D304
10:20 - 10:40	A305			D305
10:40 - 11:00	**Coffee break**			
11:00 - 11:50	**Plenary lecture 3 (Room A), Prof. Xing Zhang** **Study on thermophysical properties at nanoscale** **Chair : Dr. Keiko Fujioka**			
11:50 - 13:30	**Lunch**			
13:30-15:10	**Parallel sessions**			
	(Room A)	Session B6 (Room B) Chair : M. Haruki	Session C6 (Room C) Chair : T.Tsujiguchi	Session D6 (Room D) Chair : L.G. Calabrese
13:30 - 13:50		B306	C306	D306 (Keynote)
13:50 - 14:10		B307	C307	D307
14:10 - 14:30		B308	C308	D308
14:30 - 14:50		B309	C309	D309
14:50 - 15:10		B310	C310	D310
15:10 - 15:30	**Coffee break**			
15:30 - 16:00	**Awards (Room A)**			
16:00 - 16:10	**Final remarks (Room A)**			

ROOM A, Day 1(2019.10.21)

Session A1: Heat storage 1 (10:20-12:00)
Chair: Mitsuhiro Kubota, Nagoya University

A101 KEYNOTE
$CaMn_{1-x}Fe_xO_{3-\delta 0}$ (x=0.1, 0.3) for thermochemical heat storage
E. Mastronardo, X. Qian, J. M. Coronado, S. Haile

A102
Effect of Li compounds addition on reactivity and crystal structure of $Mg(OH)_2$ for chemical heat storage
R. Kurosawa, J. Ryu

A103
Dehydration / hydration reactivity and crystal structure of Li-compound added $Ca(OH)_2$
A. Maruyama, R. Kurosawa, J. Ryu

A104
Flow characteristics of erythritol slurry for low/ medium temperature applications
S. Abe, K. Inatsu, T. Asaoka

A105
Comprehensive analysis of dehydration-hydration reaction cycle of rare earth compounds as potential thermochemical heat storage materials.
K. Shizume, N. Hatada, K. Toyoura, H. Tai, S. Yasui, T. Uda

Session A2: Heat storage 2 (14:30~16:10)
Chair: Jyunichi Ryu, Chiba University

A106 KEYNOTE
Synthesis and characterization of cementitious composite materials for thermal storage applications
D. Burlon, R. Nisticò, L. Lavagna, M. Pavese, V. Brancato, A. Frazzica, E. Chiavazzo

A107
Effect of ad/desorption characteristics on techno-economic aspects of thermochemical energy storage and transport system
S. Fujiii, N. Horie, Y. Kanematsu, Y. Kikuchi, T. Nakagaki

A108
Thermal performance analysis of a packed bed cold storage unit with RBC-shaped PCM capsule
X. Cheng, J. Bao, Y. Chen, X. Zhai, P. Lin

A109
Thermochemical storage performance analysis of a packed bed reactor using calcium oxide/calcium hydroxide/water reaction system
S. Funayama, H. Takasu, K. Fujioka, Y. Kato

A110
New multilayered microencapsulated phase change material produced with green chemistry
S. Emir, G. B. Göktepe, Ö. Güngör, M. Ekinci, G. Kardaş, H. Paksoy

Session A3: Heat storage 3 (16:30~18:10)
Chair: L.G. Gordeeva, Boreskov Institute of Catalysis

A111 KEYNOTE
Development of the high-energy density thermochemical storage system
T. Yamauchi, M. Mochizuki, H. Itahara, H. Kamiya, Y. Ito, T. Shimazu

A112 KEYNOTE
Factory verification of $CaO/Ca(OH)_2$ thermochemical storage system
H. Kamiya, Y. Ito, T. Yamauchi, T. Shimazu

A113
Development of nano-modified material for thermochemical energy storage
R. Guo, S. Funayama, H. Takasu, Y. Kato

A114
Study of additive effect on lithium orthosilicate and carbon dioxide reaction
H. Takasu, S. T. Kim, Y. Kato

A115
Possibility of calcium oxide from Ofunato limestone including impurities for chemical heat pump/storage
L. Lai, T. Imai, M. Umezu, M. Ishii, H. Ogura

ROOM B, Day 1(2019.10.21)

Session B1: Sorption heat pump1 (10:20-12:00) **Chair: Yugo Osaka, Kanazawa University**	
B101 KEYNOTE	Development of silica gel/LiCl composite consolidated adsorbent in the adsorption refrigeration *Z. He, Y. Lin, L. Deng, X. Li, H. Huang, M. Kubota*
B102	New performing SAPO-34 based zeolite coatings for adsorption heat pumps *L. Calabrese, P. Bruzzaniti, A. Freni, E. Proverbio*
B103	Absorption refrigeration cycle using a separable ionic liquid with reverse osmosis process *T. Karatsu, A. Akisawa, M. Nakayama, H. Ohno*
B104	Experimentation and analysis of ammonia-salt reactions for resorption cycles *S. Hinmers, R. E. Critoph*
B105	Ammonia - carbon adsorption domestic gas heat pump *R. Critoph, S. Metcalf, A. R.-Pacho*
Session B2: Sorption heat pump2 (14:30~16:10) **Chair: Majid Bahrami, Simon Fraser University**	
B106 KEYNOTE	Investigation of an Innovative adsorber plate heat exchanger for adsorption heat transformation processes *M. Mikhaeil, B. Dawoud, M. Gaderer*
B107	Microfibre textiles of adsorbing materials for heat transformations *L. Bonaccorsi, P. Frontera, A. Malara, A. Freni, L. Calabrese*
B108	Composites “LiCl inside porous matrix” for adsorption heat transformation: methanol sorption dynamics *L. G. Gordeeva, S. V. Strelova, A. D. Grekova, Y. I. Aristov*
B109	Development of 20kW adsorption heat pump made by FRP using natural mesoporous adsorbent with LiCl *J. Togawa, S. Oomae, H. Kuroishi, K. Ochi, K. Nagano*
B110	Novel water adsorbent SAPO-AEI and Fe-Sn-AFI for an adsorption heat pump *T. Takewaki, H. Shima*
Session B3: Sorption heat pumps 3 (16:30~18:10) **Chair: Zhaohong He, Chinese Academy of Sciences**	
B111 KEYNOTE	Water adsorption on MOFs studied by NMR relaxometry *S. Pizzanelli, A. Freni, L. Goordeva, C. Forte*
B112 KEYNOTE	An industrial approach for the optimization of a new performing coated adsorber for adsorption heat pumps *W. Mittelbach, L. Calabrese, L. Bonaccorsi, A. Freni*
B113	Experimental investigation of ionic liquids as substitute for lithium bromide in water absorption chillers *R. Kühn, T. Meyer, M. Winker, F. Ziegler*
B114	Performance analysis of a combined evaporator condenser for sorption cycles *G. B. Abadi, M. Bahrami*
B115	Dynamics of adsorptive heat conversion systems: recent advances *Y. Aristov*

ROOM C, Day 1(2019.10.21)

Session C1: Electoricity generation & storage 1 (10:20-12:00)
Chair: Hirokazu Ishitobi, Gunma University

C101 KEYNOTE	Preparation of nano-fibrous porous carbons from SiC/CNF nanocomposite via Cl_2 treatment *S. Iwamura, S. Kusunoki, S. R. Mukai*
C102	Equivalent circuit model construction and dynamic flow optimization based on zinc-nickel single-flow battery *S. Yao, X. Sun, M. Xiao, J. Cheng, Y. Shen*
C103	A drying model for lithium-ion ferrous phosphate (LFP) slurry in vacuum condition *F. Zhao, F. Han, S.-w. Zhang, Z.-j. Zhang*
C104	Synthesis of scalable MoS_2 films via LPCVD and in-depth characterization by AFM for energy storage applications *S. Ghosh, S. S. Withanage, B. Chamlagain, S. I. Khondaker, K. Thu, B. B. Saha*

Session C2: Electoricity generation & storage 2 (14:30~16:10)
Chair: Akira Nishimura , Mie University

C106	Enhancement of electrochemical activity of vanadium redox flow battery by electron-beam Irradiation *H. Ishitobi, S. Yamamoto, T. Ishii, K. Oba, H. Doki, N. Nakagawa*
C107	Identifying parameters from discharging and relaxation curves of Lithium-ion batteries using porous electrode theory *H. Mashioka, Y. Tsuge, G. Inoue*
C108	A Fermi estimate of economic rationality: long-term energy storage systems for intermittent renewable energies *T. Hasegawa, M. Koyama, T. Haneda*
C109	Organophotocatalyst -photoenergy conversion by the use of organic semiconductiors- *K. Nagai*

Session C3: Electoricity generation & storage 3 (16:30~18:10)
Chair: Salvatore Freni, CNR ITAE

C111 KEYNOTE	Integrated simulation approach to understand the relationship between fabrication process and cell performance in polymer electrolyte fuel cells *G. Inoue, T. Ohnishi, M. Ono, K. Park, M. So, Y. Tsuge*
C112	Analysis on impact of component's thickness on temperature distribution in single cell of PEFC at high temperature operation than usual *A. Nishimura, Y. Sato, K. Yamamoto, S. Kamiya, T. Okado, M. Hirota*
C113	Optimization of solid oxide fuel cell cathode microstructure with adjoint method *A. He, J. Onishi, N. Shikazono*
C114	Study on electrochemical characteristics of high temperature proton exchange membrane fuel cell (HT-PEMFC) based on the electrode fin model *C. Han, Z. Chen*
C115	A study on rheological and dielectric properties of carbon/ionomer dispersions prepared by different mixing processes *S. Kitamura, T. Suzuki, S. Tsushima*

ROOM D, Day 1(2019.10.21)

Session D1: Hydrogen production & storage 1 (10:20-12:00) Chair: Hidenori Higashi, Kanazawa University	
D101 KEYNOTE	Gadolinium-doped titanium dioxide nanorods array photoanodes for photoelectrochemical water splitting *A. Ahmad, G. Yerlikaya, H. Paksoy, G. Kardaş*
D102	Sustainable mobility: A suitable opportunity for hydrogen produced by thermo-chemical processes *S. Freni, S. Maisano, A. Nicita, G. Squadrito, A. P. F. Andaloro, F. Freni, G. Maggio*
D103	Experimental investigation of the kinetics of the redox reactions of iron oxide pellets for a thermochemical hydrogen storage *B. Gamisch, B. Dawoud, M. Gaderer*
D104	Dry reforming of methane over Ni catalysts supported on $LaGaO_3$-based oxides *R. Kikuchi, J. Lee, S. Tada*
D105	Electrochemical synthesis of organic chemical hydrides at Pt-based electrocatalysts in microemulsion system *M. Wakisaka, M. Inoue, T. Abe*
Session D2: Hydrogen production & storage 2 (14:30~16:10) Chair: Ryuji Kikuchi, The University of Tokyo	
D106 KEYNOTE	Chemically doped graphenes for electrochemical hydrogen production *Y. Ito*
D107	Self-assembling electrocatalyst for alkaline water electrolyzers connected with renewable energy *Y. Kuroda, T. Nishimoto, S. Mitsushima*
D108	Nanostructured catalysts for the use of formic acid as hydrogen carrier *K. Mori, S. Masuda, H. Yamashita*
D109	Reduction of precious metal as anode catalyst for high performance polymer electrolyte membrane electrolyzer *H. Ishihara, S. Ohtsuka, T. Oyama, T. Take*
D110	Effect of AC and DC sources of dielectric barrier discharge system on removal of chemical oxygen demand using palm oil mill effluent (POME) *A. Hazmi, P. Emeraldi, R. Desmiarti*
Session D3: Hydrogen production & storage 3 (16:30~18:10) Chair: Hiroshi Enomoto, Kanazawa University	
D111	Sunlight-driven synthesis of hydrogen and methylcyclohexane via photoelectrochemical water decomposition *T. Minegishi*
D112	Hydrogen ion penetration through graphene layers *K. Hu, T. Ohto, Y. Nagata, M. Wakisaka, Y. Ito*
D113	Turbulent flame propagation limit of NH_3/CH_4/air mixture in a fan-stirred closed vessel *N. Hashimoto, G. Hashimoto, R. Ichimura, K. Hadi, Y. Xia, A. Hayakawa, H. Kobayashi, O. Fujita*

ROOM A, Day 2 (2019.10.22)

Session A4: Heat storage 4 (9:00~10:40)

Chair: Noriyuki Kobayashi, Nagoya University, Yugo Osaka, Kanazawa University

A201 DEM-CFD simulation of packed bed for thermal energy storage

P. Hu, S. Wang, J. Wang, S. Jiang, T. Zhang, Z. Ma

A202 Characterization of “salt in porous matrix” absorbent composites for sorption thermal storage

V. Brancato, L. Gordeeva, A. Frazzica, Y. Aristov

A203 Thermochemical behavior of synthetic α-$Al(OH)_3$ based materials for thermal energy storage applications

F. Alvaro, E. Piperopoulos, M. Lanza, C. Milone

A204 Heat releasing experiment and simulation of chemical heat storage module using $CaCl_2$ powder packed in SiC honeycomb

A. Ichinose, J. Li, K. Noriyuki, H. Huang

A205 Heat output performance of LiOH/LiOH·H_2O reversible reaction for low temperature chemical heat storage

M. Kubota, S. Ohashi, S. Yamashita, H. Kita

ROOM B, Day 2 (2019.10.22)

Session B4: Sorption heat pumps 4 (9:00~10:40) Chair: Angelo Freni, CNR-ICCOM	
B201 KEYNOTE	A method for the treatment of inactive thermal mass in thermally driven heat pump systems *K. R. Gluesenkamp, Z. Yang, C. Blackman, C. Zhu*
B202	Vapor Equilibrium database for sorption materials *Z. Yang, K. R. Gluesenkamp, A. Frazzica*
B203	Hygroscopic salts in porous matrices: Thermophysical properties and lab-scale testing for air conditioning applications *C. McCague, S. Shokoya, M. Bahrami*
B204	Sorption-based desalination systems: A comparison *A. Elsafi, M. Bahrami*

ROOM C, Day 2 (2019.10.22)

Session C4: Electoricity generation & storage 4 (9:00~10:40) Chair: Hiroshi Fukunaga, Shinshu University	
C201 KEYNOTE	Effect of current density on the temperature of gas diffusion layer in a proton exchange membrane fuel cell with baffles in flow channels *C. R. Qiao, H. Guo, F. Ye, C. F. Ma*
C202	Numerical analysis of silica coating effect on Pt cathode catalyst in polymer electrolyte fuel cells *T. Ohnishi, M. Goto, S. Takenaka, K. Park, M. So, Y. Tsuge, G. Inoue*
C203	Simulation of a fuel cell catalyst layer using discrete element method *M. So, T. Ohnishi, K. Park, M. Ono, Y. Tsuge, G. Inoue*
C204	Improved catalytic activity of PtRu/CECNF by the ion-beam irradiation to the CECNF support *N. Nakagawa, H. Ishitobi, S. Abe, M. Kakinuma, H. Koshikawa, S. Yamamoto, T. Yamaki*
C205	Fabrication of patterned interface between Nafion membrane and cathode catalyst layer using centrifugal molding *M. Tomizawa, K. Nagato, M. Nakao*

ROOM D, Day 2 (2019.10.22)

Session D4: Biomass (9:00~10:40) Chair: Yusuke Shimoyama, Tokyo Institute of Technology	
D201 KEYNOTE	A novel system for biodiesel production from waste cooking oil using ionexchange resin catalyst: Case of introduction to a remote island in Japan *K. Hiromori, M. Kato, Y. Fukushima, N. S.-Kitakawa*
D202 KEYNOTE	Simulation models for woody biomass-based district heating, cooling and power system integrated with local forest management *Y. Kanematsu, K. Oosawa, T. Okubo, Y. Kikuchi*
D203	Water extraction from the atmosphere employing MOFs as adsorbents *M. Solovyeva, L. Gordeeva, Y. Aristov*
D204	Hydrogen production from catalytic pyrolysis of wood waste on alumina *P. Liu, Z. Zhou, H. Yuan, T. Zheng, H. Taoli*
D205	Bio-syngas composition effects on stability of small reciprocated internal combustion engine *H. Enomoto, K. Fukadu, S. Iwai, R. Noda*

ROOM A, Day 3 (2019.10.23)

Session A5: Heat storage 5 (9:00~10:40)
Chair: Mikio Kumita, Kanazawa University

A301 KEYNOTE	Commercialization of lithium chloride-modified magnesium hydroxide for chemical heat storage *Y. Ootsuka, M. Nakanishi, K. Tsutsumi, T. Konishi, S. Fukushima, J. Ryu*
A302	Novel composite materials based on TMPS-4A mesoporous silica for adsorption thermal energy storage *F. Mikšík, T. Mizayaki*
A303	The Effects of 3D Graphene on $LiOH \cdot H_2O$ based composite materials for low temperature thermochemical heat storage *L. Deng, H. Huang, Z. He, X. Li, L. Li, S. Li, M. Kubota*
A304	Tuning thermochemical behaviour of $Mg(OH)_2$ for TES applications *E. Piperopoulos, E. Mastronardo, M. Fazio, C. Milone*
A305	Kinetic study on the lithium hydroxide hydration / dehydration behavior by volumetric method *Y. Osaka, T. Tsujiguchi, A. Kodama*

ROOM B, Day 3 (2019.10.23)

Session B5: Dessiccant system (9:00~10:40)
Chair: Belal Dawoud, OTH Regensburg Technical University of Applied Sciences

B301 Adsorption method for moisture and heat regeneration in buildings: the optimal and real adsorbents of water vapour
L. Gordeeva, A. Grekova, Y. Aristov

B302 Effect of fluctuating heat input for the regeneration process on a rotary desiccant wheel performance
D. A. Saputra, K. Saito, Y. Osaka, T. Tsujiguchi, A. Kodama

B303 Heat and mass transfer within an internally-heated finned-tube contactor for liquid desiccant systems
S. Yamaguchi, K. Saito, X.-M. Wang, H. Nakayama

B304 Numerical investigation of effects of channel shape on mass transfer characteristics for the desiccant-coated dehumidification wheel
L. Liu, Y. Bai, Z. He, L. Deng, X. Li, J. Li, M. Kubota, N. Kobayashi, H. Huang

Session B6: Separation, reactor, mass transport (13:30~15:10)
Chair: Masashi Haruki, Kanazawa University

B306 Highly selective adsorptivities of porous carbons for water and oxygen isotopes
Y. Ono, S. Kumar, R. Futamura, F. V.-Burgos, K. Sagisaka, Y. Hattori, Y. Gogotsi, K. Kaneko

B307 Tubular Silicalite-1 membrane for light cycle oil separation
M. Sakai, M. Matsukata

B308 Sorption hysteresis of composite multi-halide under equilibrium and non-equilibrium conditions
G. An, L. Wang

B309 Membrane contactor for MTO reactions
M. Nomura, S. Tanizume, T. Yoshimura, K. Ishii, T. Okuno, H. Tawarayama, S. Ishikawa

B310 Mass transfer analysis on supercritical fluid extraction of emulsion using high-pressure view-cell and image analysis
Y. Murakami, Y. Torita, Y. Shimoyama

ROOM C, Day 3 (2019.10.23)

Session C5: Electoricity generation & storage 5 (9:00~10:40)
Chair: Gen Inoue, Kyushu University

C301 KEYNOTE	Effect of Pt solution concentration in novel preparation method of low-Pt PEFC cathode performing core-shell reaction directly in catalyst layer *H. Fukunaga, M. Tsuji, I. Shimada, M. Osada, N. Takahashi, D. Takimoto, W. Sugimoto*
C302 KEYNOTE	Ex-situ and in-situ gas diffusivities of PEM fuel cell catalyst layers *S. Salari, M. Tam, C. McCague, J. Stumper, M. Bahrami*
C303	Electronic structure and phase stability of Pt_3M (M = Co, Ni, and Cu) bimetallic nanoparticles for polymer electrolyte fuel cells *D. S. Rivera, Y. Nanba, M. Koyama*

Session C6: CCU (13:30~15:10)
Chair: Takuya Tsujiguchi, Kanazawa University

C306	Enrichment of CO_2 in exhaust gas by temperature swing adsorption supported with indirect heating *S. Masuda, A. Kodama*
C307	Porous carbons derived from beached Posidonia oceanica to CO_2 capture performance *S. Maisano, F. Urbani, F. Cipitì, V. Chiodo*
C308	Theoretical considerations on breakthrough of CO_2 concentration and recovery with a honeycomb rotor *K. Shimono, K. Inoue, H. Okano*
C309	Highly porous carbon electrode with ionic liquid-polymer gel binder toward CO_2 fixation to energy conversion in Li-O_2/CO_2 battery *N. Kunanusont, Y. Shimoyama*
C310	Improvement of energy efficiency in carbon dioxide capture by phase separation solvent *V. B. K. Tran, H. Nishio, T. Yamaguchi, H. Machida, K. Norinaga*

ROOM D, Day 3 (2019.10.23)

Session D5: Thermophysical properties, heat and mass transfer 1 (9:00~10:40)
Chair: Shunsuke Hashimoto, Toyota Central R&D Labs., Inc.

D301 KEYNOTE	Dynamic optimization of adsorption heat transformers: experimental comparison of different ways of ad-/desorption initiation *I. Girnik, W. Lombardo, A. Sapienza, Y. Aristov*
D302	Experimental investigation on heat and mass transfer characteristics of desiccant dehumidification system driven by low-grade temperature *I. Yaningsih, A. T. Wijayanta, T. Miyazaki*
D303	Longevity of membrane for energy recovery ventilation: thermal, humidity, and oxygen stability *M. Khajehpour, F. Wong, R. Huizing, M. Bahrami*
D304	Dual-wavelength flash Raman mapping method for measuring thermophysical properties of the supported 2D nanomaterial *A. Fan, Y. Hu, H. Wang, W. Ma, X. Zhang*
D305	A switched vibrating-hot-wire method for measuring the viscosity and thermal conductivity of liquids *F. Li, S. Shi, W. Ma, X. Zhang*

Session D6: Thermophysical properties, heat and mass transfer 2 (13:30~15:10)
Chair: L.G. Calabrese, University of Messina

D306 KEYNOTE	Dual-wavelength laser flash Raman spectroscopy method for measuring the Kapitza resistance at the liquid-solid interface *H. Liu, H. Wang, X. Zhang*
D307	Cooling ability of a novel heat sink made of polyvinyl alcohol hydrogel *M. Zamengo, J. Morikawa*
D308	Numerical simulation of finned-tube heat exchangers with arbitrary connectivity and flexible set of input conditions *J. C. Garcia, N. Giannetti, H. Ariyadi, D. A. Varela, S. Yamaguchi, K. Saito*
D309	Analysis on enhancement of thermal conductivity in nanofluids *S. Hashimoto, K. Kurazono, K. Yano, T. Yamauchi, K. Shibata, T. Yamada, K. Nakajima, T. Kikuchi, K. Kamazawa*
D310	A solar powered hybrid ejector-VCR system *I. W. Eames, J. H. Gutiérrez*

POSTER SESSION, Day 2 (2019.10.22)

P101 Ammonia sorption behavior of $CaBr_2$ pellet with sodium alginate

J. Ryu, M. Suzuki

P102 Evaluation of in-situ coated foam structures for adsorption heat storage and heat pumping

V. Palomba, A. Große, R. Herrmann, B. Nitsch, A. Strehlow, R. Bastian, A. Sapienza, W. Lombardo, A. Frazzica

P103 Hydration reactivity of lanthanum sulfate and expanded graphite composite material as a chemical heat storage material

M. Fujita, M. Haruki, H. Onishi, Y. Tada

P104 Study of the salt-doped MgO for thermochemical energy storage by reacting with CO_2

H. Miura, S. T. Kim, H. Takasu, Y. Aristov, A. Shkatulov, Y. Kato

P105 Adsorption behavior of HFO-1234yf simultaneously working as heat exchanging fluid in activated carbon packed bed

S. Okuda, A. Ichinose, N. Kobayashi

P106 Development of thermochemical energy storage system by using metal chloride / ammonia system

J. Kaneko, H. Takasu, K. Fujioka, Y. Kato

P107 Acceleration of heat storage rate in latent heat storage bath by rotating heat transfer tube

N. Maruoka, A. Ito, M. Hayasaka, H. Nogami

P108 Fabrication of pellet-type latent heat storage composite for high-temperature applications

H. Sakai, N. Sheng, T. Akiyama, T. Nomura

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