

# Program

## December 2 (Mon) Day 1st

8:30-9:10 **Registration**

9:10-9:20 **Opening**

**Session 1** Chair : Ruri HIDEWA (Kobe University)

9:20-9:40 \*氷スラリーの脱水と含水率制御  
Control of water content of dehydrated ice slurry

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稲田孝明 (産総研), 小山寿恵, 輪嶋史 (ニッコー),  
吉岡武也 (道工技セ), 永石博志 (産総研)  
Takaaki INADA (AIST), Toshie KOYAMA, Fubito WAJIMA (Nikko Co. Ltd.),  
Takeya YOSHIOKA (Hokkaido Industrial Technology Center) and Hiroshi NAGAISHI (AIST)

9:40-10:00 微細加工面上での霜結晶の生成・成長 — 第 2 報 —  
Frost crystal formation and growth onto micro machined surface - Part II -

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安喰 春華 (玉川大院), 大久保 英敏, 米澤翔 (京都工繊大),  
小栗 直樹 (玉川大), 萩原良道 (京都工繊大)  
Haruka AGUI (Tamagawa University), Hidetoshi OHKUBO,  
Sho YONEZAWA (Kyoto Institute of Technology),  
Naoki OGURI (Tamagawa University) and  
Yoshimichi HAGIWARA (Kyoto Institute of Technology)

10:00-10:20 アルギン酸ナトリウム水溶液の濃度と相転移温度の関係  
Relationship between concentration and phase change temperature of aqueous solutions of  
sodium alginates

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岩元大希郎 (明治大), 石黒巧, 川南剛  
Taikiro IWAMOTO (Meiji University), Takumi ISHIGURO and Tsuyoshi KAWANAMI

10:20-10:40 Crystallization characteristics of tetra-n-butylammonium bromide aqueous solution for  
fabricating CO<sub>2</sub> gas hydrate

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Rika OGO (Kobe University), Ruri HIDEWA and Hiroshi SUZUKI

10:40-10:50 **Coffee Break**

<b>Session 2</b>	Chair : Junichi RYU (Chiba University)	
10:50-11:10	*Supercooling characteristics of phase change material particles within emulsion type latent heat storage material	..... 9
	Takashi MORIMOTO (Aoyama Gakuin University) and Hiroyuki KUMANO	
11:10-11:30	非イオン性界面活性剤-純水混合液にイオン性界面活性剤-純水混合液を滴下した場合の過冷度に及ぼす影響の検討 (印可電圧無しの場合) Influence of dropping cationic surfactant-pure water mixture to nonionic surfactant-pure water mixture on supercooling degree (In case no applied voltage)	..... 11
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11:30-11:50	*Water vapor adsorption behavior of thermosensitive polymer gels	..... 13
	Mitsuhiro KUBOTA (Nagoya University), Ryosuke NAKAI, Seiji YAMASHITA, Hideki KITA and Hideaki TOKUYAMA (Tokyo University of Agriculture and Technology)	
11:50-12:10	*Synthesis of ZIF-8 film over outer surface of spherical silica	..... 15
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12:10-13:10	<b>Lunch</b>	
<b>Session 3</b>	Chair : Hiroshi SUZUKI (Kobe University)	
13:10-13:50	【Invited Lecture 1】 *Fluid-thermal performance of microencapsulated phase change material slurry in modified helical coils	..... 17
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13:50-14:30	【Invited Lecture 2】 *Latent heat storage technologies for high power applications	..... 19
	Anastasia STAMATIOU (Lucerne University of Applied Sciences and Arts), William DELGADO-DIAZ, Stefan KRIMMEL, Remo WASER, Simon MARANDA, Ludger FISCHER and Joerg WORLITSCHKEK	
14:30-14:40	<b>Coffee Break</b>	

<b>Session 4</b>	Chair : Akihiko HORIBE (Okayama University)	
14:40-15:00	*Power density characteristics of calcium chloride / microcapsule composite cell	..... 21
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15:00-15:20	化学修飾した硫酸マグネシウム七水和物の蓄熱性能評価 Chemical modification on magnesium sulfate heptahydrate for thermo-chemical energy storage	..... 23
	齋藤鴻輝 (千葉大), 黒沢諒, 劉醇一 Kouki SAITOU (Chiba University), Ryo KUROSAWA and Junichi RYU	
15:20-15:40	絶縁体-金属相転移材料の潜熱および熱輸送特性 Latent heat and heat transport characteristics of metal-insulator transition materials	..... 25
	中林玲音 (明治大), 川南剛 (明治大・産総研), 杵鞭義明 (産総研), 藤田麻哉, 吉間達郎 (明治大) Reo NAKABAYASHI (Meiji University), Tsuyoshi KAWANAMI (Meiji University & AIST), Yoshiaki KINEMUCHI (AIST), Asaya FUJITA and Tatsuro KICHIMA (Meiji University)	
15:40-16:00	ガラス面にコーティングされた不凍ポリペプチドの氷成長への影響に関する分子動力学 解析 Molecular dynamics analysis for the effect of glass surfaces coated with antifreeze polypeptide on ice growth	..... 27
	安田昇平 (京工繊大院), 上田浩平, 萩原良道 (京工繊大) Shouhei YASUDA (Kyoto Institute of Technology), Kohei UEDA and Yoshimichi HAGIWARA	
16:00-16:10	<b>Coffee Break</b>	

<b>Session 5</b>	Chair : Takashi MORIMOTO (Aoyama Gakuin University)	
16:10-16:30	微細結晶スラリーを利用する LiBr/H <sub>2</sub> O 系吸収式ヒートポンプ性能の高効率化 Improvement of LiBr/H <sub>2</sub> O absorption heat pump performance using fine crystal slurry	..... 29
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16:30-16:50	Numerical Analysis of performance for enhancement of thermochemical heat battery by using reversible alkali halide hydration reaction	..... 31
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17:10-17:30	脂肪酸を内包したナノ / マイクロ無機カプセルの作製と評価 Synthesis and characterization of fatty acid encapsulated to nano / microscale inorganic shell	..... 35
	三宅信聖 (岡大院), 山田寛, 堀部明彦 Nobumasa MIYAKE (Okayama University), Yutaka YAMADA and Akihiko HORIBE	
18:00-20:00	<b>Banquet</b>	

**December 3 (Tue) Day 2nd**

8:30-9:00 **Registration**

<b>Session 6</b>	Chair : Mitsuhiro KUBOTA (Nagaya University)	
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	Kamel HOOMAN (The University of Queensland)	
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<b>Session 7</b>	Chair : Yutaka YAMADA (Okayama University)	
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10:50-11:10	*Various behavior derived from solution structures in TBAB aqueous solution	..... 43 Takeshi SUGAHARA (Osaka University), Hironobu MACHIDA (Panasonic Corp.), Hiroyasu MASUNAGA (Japan Synchrotron Radiation Research Institute) and Izumi HIRASAWA (Waseda University)
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11:30-11:50	SPM により測定された氷の付着力の経時変化から評価した銅表面の酸化特性の検討 Investigation on oxidation characteristic of copper surface estimated by time dependency on ice adhesion force measured using SPM	..... 47 稲葉陽太郎 (中大院), 梅原友理, 前澤一臣, 松本浩二 (中大理工) Youtaro INABA (Chuo University), Yuri UMEHARA, Kazuomi MAEZAWA and Koji MATSUMOTO
11:50-13:00	<b>Lunch</b>	
<b>Session 8</b>	Chair : Terumi INAGAKI (Ibaraki University)	
13:00-13:40	【Invited Lecture 5】 ヒートパイプ技術の進展 Advances in Heat Pipe Technology	..... 49 神永文人 (茨城大) Fumito KAMINAGA (Ibaraki University)
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<b>Session 9</b>	Chair : Tsuyoshi KAWANAMI (Meiji University)	
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15:50-16:00	<b>Coffee Break</b>	
<b>Session 1 0</b>	Chair : Takaaki INADA (Advanced Institute of Science and Technology)	
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17:00-17:20 多段型潜熱蓄熱式熱交換システム向け新蓄熱物質の探索と熱物性評価  
Study on thermo-physical properties of several fatty acids and their mixture for a multi stage heat exchange system

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稲垣照美 (茨城大工), 岩田拓巳 (茨城大院), 李艶栄 (茨城大工)  
Terumi INAGAKI (Ibaraki University), Takumi IWATA and Yanrong LI

17:20-17:30 **Closing**

\* Contributes to JST-Mirai-Project International Workshop (presented in English)