8th Asian Coating Workshop

May 12-13, 2016
600th Anniversary Hall
Sungkyunkwan University (SKKU), Seoul, Korea

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Notice

The 8th Asian Coating Workshop will be held in Sungkyunkwan University, Seoul, Korea, on May 12th to 13th, 2016. The objective of this workshop is to provide a platform for Asian researchers, engineers and especially graduate students in the area of coating science and technology to exchange the latest knowledge and experience in the spirit of friendship and collaboration. Research topics dealing with related fundamentals and applications for coating science and technology are all welcome.

Organizer: Microfluidics and Coating Process Laboratory, Sungkyunkwan University, Korea

Date: 12-13th May, 2016

Address: 600th Anniversary Hall, Sungkyunkwan University, 25-2, Sungkyunkwan-ro, Jongno-gu, Seoul, Korea

Website: http://fluid.skku.edu/acw2016

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Kwangguk Ahn, Dongjae Kim, Heechan Jung, Hyeyoung Hong, Kwanhong do, Jaehyun Yoo
Map of SKKU

Welcome reception: Faculty Cafeteria on the 6th floor of 600th Anniversary Hall

Workshop & Lecture: Multimedia Lecture Room on the 6th floor of 600th Anniversary Hall

Poster exhibition: 5th floor of 600th Anniversary Hall

Transportation

From Incheon International Airport:
Find gate 6 where you can find airport bus stop 5B.
Take bus 6011 to the "Sungkyunkwan University” stop (approximately 90 min.)
SKKU's Seoul campus is approximately 5~10 minutes‘ walk from the bus stop.

By Subway:
Take Seoul Metro #Line 4 and get off at "Hyehwa” Station.
Take exit #1 and walk straight for 200m.
You can find a stop for the shuttle bus to the campus (300KRW).
Program

Program at a glance

<table>
<thead>
<tr>
<th></th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 11 (Wed)</td>
<td></td>
<td></td>
<td>Welcome Reception</td>
</tr>
<tr>
<td>May 12 (Thu)</td>
<td>Topical Session (Professor)</td>
<td>Topical Session (Student)</td>
<td>Faculty Meeting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student Tour</td>
</tr>
<tr>
<td>May 13 (Fri)</td>
<td>Lecture &amp; Discussion</td>
<td>Lecture &amp; Discussion</td>
<td>Banquet</td>
</tr>
</tbody>
</table>
## May 12 (Thursday)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:10~09:20</td>
<td>Welcoming address / Announcement</td>
</tr>
<tr>
<td>09:20~09:40</td>
<td><strong>Session I-1. (Session Chair: Hyun Wook Jung)</strong></td>
</tr>
<tr>
<td>09:20~09:40</td>
<td>Single layer vs multiple layer coating: Industrial aspect</td>
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<tr>
<td></td>
<td>Shuzo Fuchigami (University of Minnesota, USA)</td>
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<tr>
<td>09:40~10:00</td>
<td>Current research and development at the precision coating lab</td>
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<td>Ta-jo Liu (National Tsing Hua University, Taiwan)</td>
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<tr>
<td>10:00~10:20</td>
<td>Formation of Cu2O p-type oxide semiconductor thin films by wet process</td>
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<td></td>
<td>Yoshiko Tsuji, Yusuke Kawamoto (The University of Tokyo, Japan)</td>
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<tr>
<td>10:20~10:40</td>
<td>Analysis of AgNw transparent conductive film fabricated from dip coating flow</td>
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<td></td>
<td>Dongjae Kim, Jaewook Nam (Sungkyunkwan University, Korea)</td>
</tr>
<tr>
<td>10:40~11:00</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>11:00~11:20</td>
<td><strong>Session I-2. (Session Chair: Madhu Vinjamur)</strong></td>
</tr>
<tr>
<td>11:00~11:20</td>
<td>Research overview at Kyutech: Fluorescence imaging of drying films</td>
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<tr>
<td></td>
<td>Masato Yamamura (Kyushu Institute of Technology, Japan)</td>
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<td>11:20~11:40</td>
<td>Effect of particle aggregation on the particle packing during drying</td>
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<td>Yoshiyuki Komoda, Hiroki Okada (Kobe University, Japan)</td>
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<tr>
<td>11:40~12:00</td>
<td>Packing of colloidal particles due to drying and related phenomena: Overview of recent studies</td>
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<td>Susumu Inasawa (Tokyo University of Agriculture and Technology, Japan)</td>
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<tr>
<td>12:00~13:30</td>
<td><strong>Lunch</strong></td>
</tr>
</tbody>
</table>
| P01 | Effects of compositions on shear stress instability in nanoparticle suspensions  
*Eunhye Jang, Yoshihide Mawatari and Masato Yamamura* (Kyushu Institute of Technology, Japan) |
| P02 | Hindered drying of O/W emulsions containing liquid crystalline phases  
*Kazuya Inoue, Yoshihide Mawatari, Masato Yamamura* (Kyushu Institute of Technology, Japan) |
| P03 | Retarded solvent drying of UV-curing acrylic monomer thin films  
*Yusuke Kuroiwa, Yoshihide Mawatari, Masato Yamamura* (Kyushu Institute of Technology, Japan) |
| P04 | Two stage process for microneedle patches using coating technique  
*Ting-Yu Lin, Hsiu-Feng Yeh, Ta-Jo Liu* (National Tsing Hua University, Taiwan) |
| P05 | The addition of Poly(9-vinylcarbazole) (PVK) into the emission layer of an organic light emitting diodes (OLEDs) device to improve the interlayer mixing  
*Yi-Ting Chen, Ta-Jo Liu* (National Tsing Hua University, Taiwan) |
| P06 | The dewetting phenomenon for coating the hole transport layer (HTL) of flexible organic light-emitting diodes (FOLEDs) lighting device  
*Yu-Wei Liu, Hsiu-Feng Yeh1, Ta-Jo Liu* (National Tsing Hua University, Taiwan) |
| P07 | Lamination of a highly viscous material  
*Shih-Hsuan Chen, Ta-Jo Liu* (National Tsing Hua University, Taiwan) |
| P08 | Drug-coated microneedle patches by a dip coating technique  
*Meng-Hsuan Hsiao, Ta-Jo Liu* (National Tsing Hua University, Taiwan) |
| P09 | The effect of annealing on the performance of an OLED lighting device  
Chiao-Ting Tai, Hsiu-Feng Yeh, Ta-Jo Liu  
(National Tsing Hua University, Taiwan) |
| P10 | Analysis of microneedle drying process  
Chung-Min Hsieh, Ta-Jo Liu  
(National Tsing Hua University, Taiwan) |
| P11 | Interfacial shape of liquid films  
Onyu Kim, Jaewook Nam  
(Sungkyunkwan University, Korea) |
| P12 | Experimental analysis of slot coating bead with vacuum pressure  
Semi Lee, Jaewook Nam  
(Sungkyunkwan University, Korea) |
| P13 | Kinetic analysis for photo-induced polymerization of multifunctional monomer and reactive polymer  
Ryota Hayashi, K. Taki  
(Kanazawa University, Japan) |
| P14 | Liquid penetration for detection of structural differences in particulate films prepared from slurries  
Hayato Miyazaki, Yosuke Nomura, Hiroki Sugai, Motoyuki Iijima, Susumu Inasawa, Hidehiro Kamiya  
(Tokyo University of Agriculture and Technology, Japan) |
| P15 | Effect of silica nanoparticles on copper nanowire dispersion in aqueous PVA Solution  
Seunghak Lee, Kyu Hyun  
(Pusan National University, Korea) |

15:00~15:20 **Coffee Break**

Session II-2. (Session Chair: Jaewook Nam)

15:20~16:30 **Short Oral Presentations (5min each)**
| P16 | Effects of dispersion condition on the internal structure of cathode slurry of Li-ion battery  
Ishibashi Kaoru, Y. Komoda, K. Kuratani, H. Suzuki, R. Hidema, N. Kobayashi  
(Kobe University, Japan) |
| P17 | Development of internal stress in drying film of highly concentrated suspension  
Ishikawa Daisuke, Y. Komoda, H. Suzuki, R. Hidema  
(Kobe University, Japan) |
| P18 | Numerical study on particle migration of suspensions under non-symmetric channel flows  
Ilyoung Kwon, Hyun Wook Jung  
(Korea University, Korea) |
| P19 | Flow dynamics and applications of dual layer slot coating process  
Won-Gi Ahn, Yong Woo Lee, Hyun Wook Jung  
(Korea University, Korea) |
| P20 | Operability coating window for viscoelastic fluids in slot coating process  
Yong Woo Lee, Won-Gi Ahn, Hyun Wook Jung  
(Korea University, Korea) |
| P21 | Analysis of Al2O3 nanoparticles reinforced thiol-ene cross-linked polymerthacrylate networks  
DongGeun Lee, So Young An, Min Seop Um, Woo Jin Choi, Seung Man Noh, Jung Kwon Oh, Hyun Wook Jung  
(Korea University, Korea) |
| P22 | UV polymerization behavior and macroscopic network of PEG hydrogels affected by solvents  
Kevin Injoe Jung, Dong Geun Lee, Bumsang Kim, Hyun Wook Jung  
(Korea University, Korea) |
| P23 | A New Extrusion-Based Additive Manufacturing for Coating Thermoplastic PEEK Material  
Jian Wei Tseng, C.-Y. A. Liu, C.-W. Pan, Y.-W. Hsieh, S.-W. Chao, A.-B. Wang  
(National Taiwan University, Taiwan) |
| P24 | Highly adhesive thin film conductors on hydrophobic surface with an atmospheric plasma treatment  
Chun-Yi Li, Ying-Chih Liao  
(National Taiwan University, Taiwan) |
| P25 | Accelerated sedimentation velocity assessment by centrifugation for nanowires stabilized in a non-Newtonian fluid  
Chia-Wei Chang, Ying-Chih Liao  
(National Taiwan University, Taiwan) |
| P26 | Finite element simulation of thermal Marangoni flow on uneven surface  
Jaehyun Yoo, Jaewook Nam, Kyung Hyun Ahn  
(Seoul National University, Korea) |
| P27 | Role of polymeric binder in Li-ion battery cathode slurry  
Sanghoon Sung, Boris Bitsch, Sunhyung Kim, Norbert Willenbacher, Kyung Hyun Ahn, Seung Jong Lee  
(Seoul National University, Korea) |
| P28 | Microstructure and rheology of coating liquids composed of binary colloidal particles  
(Seoul National University, Korea) |
| P29 | The effect of polymer and secondary fluid concentrations on capillary suspension of aqueous anode slurry  
Jin Hwan Choi, Kyung Hyun Ahn, Seung Jong Lee  
(Seoul National University, Korea) |
| P30 | Precipitation phenomena of organic semiconductor materials in solution process  
Shintaro Hatamiya, Yoshiko Tsuji  
(The University of Tokyo, Japan) |

16:30-18:00 **Poster discussion**