

# 8th Asian Coating Workshop

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

Supported by



# 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:** 12-13<sup>th</sup> May, 2016

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

**Website:** <http://fluid.skku.edu/acw2016>

## Conference chair:

Jaewook Nam, [jaewook.nam@gmail.com](mailto:jaewook.nam@gmail.com), +82-10-9521-3091, SKKU, Korea

## Conference co-chair:

Kyunghyun Ahn, [ahnnet@snu.ac.kr](mailto:ahnnet@snu.ac.kr), Seoul National University, Korea  
Hyunwook Jung, [hwjung@grtrkr.korea.ac.kr](mailto:hwjung@grtrkr.korea.ac.kr), Korea University, Korea

## Secretariat:

Semi Lee, [semiii0720@gmail.com](mailto:semiii0720@gmail.com), +82-10-3439-6014  
Onyu Kim, [atwal@skku.edu](mailto:atwal@skku.edu), +82-10-9482-5679  
Kwangguk Ahn, Dongjae Kim, Heechan Jung,  
Hyeyoung Hong, Kwanhong do, Jaehyun Yoo

# Map of SKKU



**Welcome reception:** Faculty Cafeteria on the 6<sup>th</sup> floor of 600<sup>th</sup> Anniversary Hall

**Workshop & Lecture:** Multimedia Lecture Room on the 6<sup>th</sup> floor of 600<sup>th</sup> Anniversary Hall

**Poster exhibition:** 5<sup>th</sup> floor of 600<sup>th</sup> 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

	<b>Morning</b>	<b>Afternoon</b>	<b>Evening</b>
<b>May 11 (Wed)</b>			Welcome Reception
<b>May 12 (Thu)</b>	Topical Session (Professor)	Topical Session (Student)	Faculty Meeting
			Student Tour
<b>May 13 (Fri)</b>	Lecture & Discussion	Lecture & Discussion	Banquet

## May 12 (Thursday)

09:10~09:20	<b>Welcoming address / Announcement</b>
<b>Session I-1. (Session Chair: Hyun Wook Jung)</b>	
09:20~09:40	Single layer vs multiple layer coating: Industrial aspect Shuzo Fuchigami (University of Minnesota, USA)
09:40~10:00	Current research and development at the precision coating lab <u>Ta-jo Liu</u> (National Tsing Hua University, Taiwan)
10:00~10:20	Formation of Cu <sub>2</sub> O p-type oxide semiconductor thin films by wet process <u>Yoshiko Tsuji</u> , Yusuke Kawamoto (The University of Tokyo, Japan)
10:20~10:40	Analysis of AgNw transparent conductive film fabricated from dip coating flow Dongjae Kim, <u>Jaewook Nam</u> (Sungkyunkwan University, Korea)
10:40~11:00	<b>Coffee Break</b>
<b>Session I-2. (Session Chair: Madhu Vinjamur)</b>	
11:00~11:20	Research overview at Kyutech : Fluorescence imaging of drying films <u>Masato Yamamura</u> (Kyushu Institute of Technology, Japan)
11:20~11:40	Effect of particle aggregation on the particle packing during drying <u>Yoshiyuki Komoda</u> , Hiroki Okada (Kobe University, Japan)
11:40~12:00	Packing of colloidal particles due to drying and related phenomena: Overview of recent studies Susumu Inasawa (Tokyo University of Agriculture and Technology, Japan)
12:00~13:30	<b>Lunch</b>

<b>Session II-1. (Session Chair: Yoshiyuki Komoda)</b>	
13:30~15:00	<b>Short Oral Presentations (5min each)</b>
P01	Effects of compositions on shear stress instability in nanoparticle suspensions <u>Eunhye Jang</u> , Yoshihide Mawatari and Masato Yamamura (Kyushu Institute of Technology, Japan)
P02	Hindered drying of O/W emulsions containing liquid crystalline phases <u>Kazuya Inoue</u> , Yoshihide Mawatari, Masato Yamamura (Kyushu Institute of Technology, Japan)
P03	Retarded solvent drying of UV-curing acrylic monomer thin films <u>Yusuke Kuroiwa</u> , Yoshihide Mawatari, Masato Yamamura (Kyushu Institute of Technology, Japan)
P04	Two stage process for microneedle patches using coating technique <u>Ting-Yu Lin</u> , 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 <u>Yi-Ting Chen</u> , 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 <u>Yu-Wei Liu</u> , Hsiu-Feng Yeh, Ta-Jo Liu (National Tsing Hua University, Taiwan)
P07	Lamination of a highly viscous material <u>Shih-Hsuan Chen</u> , Ta-Jo Liu (National Tsing Hua University, Taiwan)
P08	Drug-coated microneedle patches by a dip coating technique <u>Meng-Hsuan Hsiao</u> , Ta-Jo Liu (National Tsing Hua University, Taiwan)

P09	The effect of annealing on the performance of an OLED lighting device <u>Chiao-Ting Tai</u> , Hsiu-Feng Yeh, Ta-Jo Liu (National Tsing Hua University, Taiwan)
P10	Analysis of microneedle drying process <u>Chung-Min Hsieh</u> , Ta-Jo Liu (National Tsing Hua University, Taiwan)
P11	Interfacial shape of liquid films <u>Onyu Kim</u> , Jaewook Nam (Sungkyunkwan University, Korea)
P12	Experimental analysis of slot coating bead with vacuum pressure <u>Semi Lee</u> , Jaewook Nam (Sungkyunkwan University, Korea)
P13	Kinetic analysis for photo-induced polymerization of multifunctional monomer and reactive polymer <u>Ryota Hayashi</u> , K. Taki (Kanazawa University, Japan)
P14	Liquid penetration for detection of structural differences in particulate films prepared from slurries <u>Hayato Miyazaki</u> , 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 <u>Seunghak Lee</u> , Kyu Hyun (Pusan National University, Korea)
15:00~15:20	<b>Coffee Break</b>
<b>Session II-2. (Session Chair: Jaewook Nam)</b>	
15:20~16:30	<b>Short Oral Presentations (5min each)</b>

P16	Effects of dispersion condition on the internal structure of cathode slurry of Li-ion battery <u>Ishibashi Kaoru</u> , 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 <u>Ishikawa Daisuke</u> , Y. Komoda, H. Suzuki, R. Hidema (Kobe University, Japan)
P18	Numerical study on particle migration of suspensions under non-symmetric channel flows <u>Ilyoung Kwon</u> , Hyun Wook Jung (Korea University, Korea)
P19 (No oral presentation)	Flow dynamics and applications of dual layer slot coating process <u>Won-Gi Ahn</u> , Yong Woo Lee, HyunWook Jung (Korea University, Korea)
P20	Operability coating window for viscoelastic fluids in slot coating process <u>YongWoo Lee</u> , Won-Gi Ahn, HyunWook Jung (Korea University, Korea)
P21	Analysis of Al <sub>2</sub> O <sub>3</sub> nanoparticles reinforced thiol-ene cross-linked polymerthacrylate networks <u>DongGeun Lee</u> , 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 <u>Kevin Injoe Jung</u> , Dong Geun Lee, Bumsang Kim, Hyun Wook Jung (Korea University, Korea)
P23	A New Extrusion-Based Additive Manufacturing for Coating Thermoplastic PEEK Material <u>Jian Wei Tseng</u> , 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 <u>Chun-Yi Li</u> , Ying-Chih Liao (National Taiwan University, Taiwan)
P25	Accelerated sedimentation velocity assessment by centrifugation for nanowires stabilized in a non-Newtonian fluid <u>Chia-Wei Chang</u> , Ying-Chih Liao (National Taiwan University, Taiwan)
P26	Finite element simulation of thermal Marangoni flow on uneven surface <u>Jaehyun Yoo</u> , Jaewook Nam, Kyung Hyun Ahn (Seoul National University, Korea)
P27	Role of polymeric binder in Li-ion battery cathode slurry <u>Sanghoon Sung</u> , 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 <u>Jooyoung Lee</u> , S. J. Lee, K. H. Ahn, S. J. Lee (Seoul National University, Korea)
P29	The effect of polymer and secondary fluid concentrations on capillary suspension of aqueous anode slurry <u>Jin Hwan Choi</u> , Kyung Hyun Ahn, Seung Jong Lee (Seoul National University, Korea)
P30	Precipitation phenomena of organic semiconductor materials in solution process <u>Shintaro Hatamiya</u> , Yoshiko Tsuji (The University of Tokyo, Japan)
16:30-18:00	<b>Poster discussion</b>