# Soft-interfaces Mini-symposium 2013 -Physical Chemistry and Characterization of Soft-interfaces(SIMS2013)

### Organized by

Scientific Research on Innovative Areas "Softinterface", MEXT



### March 14(Thu)– 15(Fri), 2013 Lecture Hall, Kyushu University Nishijin Plaza



### **Invited Speakers**;

Prof. Sangouk Kim (KAIST, Korea)

Prof. Motomu Tanaka (University of Heidelberg, Germany)

Prof. Daniel K. Schwartz (University of Colorado, U.S.A.)

Prof. Hongbo Zeng (University of Alberta, Canada)

Prof. Hiroyuki Aoki (Kyoto University, Japan)

Prof. Yasuhiro Matsuda (Shizuoka University, Japan)

Dr. Hsiao-hua Yu (RIKEN, Japan)

Prof. Kazuo Sakurai (The University of Kitakyushu, Japan)

Prof. Ko Okumura (Ochanomizu University, Japan)

Prof. Atsuomi Shundo (Kyushu University, Japan)

Prof. Ryohei Ishige (Kyushu University, Japan)

Prof. Nobuhiro Yanai (Kyushu University, Japan)

### Co-sponsor

Polymer Research Core, Kyushu University Institute for Materials Chemistry and Engineering, Kyushu University Center for Molecular Systems (IRCMS), Kyushu University

#### **Contact:**

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# Program

Mar.14	Mar.15
	Ryohei Ishige (Kyushu U.)
9:30 Opening (Maeda)	Madoka Takai (U. Tokyo)
Sangouk Kim (KAIST)	Hsiao-hua Yu (RIKEN)
	Break
Atsuomi Shundo (Kyushu U.)	
Eriko Sato (Osaka City U.)	Hongbo Zeng (U. Alberta)
Motoyasu Kobayashi (Kyushu U.)	
Hiroshi Morita (AIST)	Nobuhiro Yanai (Kyushu U.)
	Syuji Fujii (Osaka Inst. Tech.)
Poster & Lunch	Lunch
	Kazuo Sakurai (U. Kitakyushu)
Hiroyuki Aoki (Kyoto U.)	
Yasuhiro Matsuda (Shizuoka U.)	Daniel K. Schwartz (U. Colorado)
Break	Break
	Tetsuo Yamaguchi (Kyushu U.)
<u> </u>	Wei Ma (Kyushu U.)
	Daiki Murakami (Kyushu U.)
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	Ko Okumura (Ochanomizu U.)
Motomu Tanaka (U. Heidelbera)	Closing (Takahara)
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Banquet at Takasho	
	9:30 Opening (Maeda)  Sangouk Kim (KAIST)  Atsuomi Shundo (Kyushu U.)  Eriko Sato (Osaka City U.)  Motoyasu Kobayashi (Kyushu U.)  Hiroshi Morita (AIST)  Poster & Lunch  Hiroyuki Aoki (Kyoto U.)

# Schedule

### Thursday, Mar. 14

9:30 am		Opening
9:40 am	Sangouk Kim	Flexible and Transferrable Self-Assembled Nanopatterning on Chemically Modified Graphene
10:40 am	Atsuomi Shundo	Spatial Heterogeneity in Rheological Properties of Soft Materials
11:00 am	Eriko Sato	Photopatterning of Shrinkable Polymer Thin Films and Their Application to Wettability Control
11:20 am	Motoyasu Kobayashi	Swollen structure at the Interface of Polyelectrolyte Brushes and water
11:40 am	Hiroshi Morita	Coarse-grained simulations of interfacial structures of soft material
12:00 pm		Poster and Lunch
2:00 pm	Hiroyuki Aoki	Conformation of single polymer chain at interface studied by state-of-the-art optical microscopy
2:40 pm	Yasuhiro Matsuda	Characterization of Polymer and Polymer Aggregates in Solutions by Dynamic and Static Light Scattering
3:20 pm		Break
3:40 pm	Yudai Ogata	Interfacial Effect on Water Sorption in Thin Polyelectrolyte Films
4:00 pm	Jiro Kumaki	Significant melting point depression of two- dimensional folded-chain crystals of isotactic poly(methyl methacrylate)s observed by high- resolution in-situ atomic force microscopy
4:20 pm	Hisao Matsuno	A novel design for cell scaffolds based on mechanical instability of synthetic polymers
4:40 pm	Shin-ichi Yusa	External Stimuli-responsive Liquid Marbles
5:00 pm	Motomu Tanaka	Physics of Biological, Soft Interfaces
6:00 pm		Banquet at Takasho

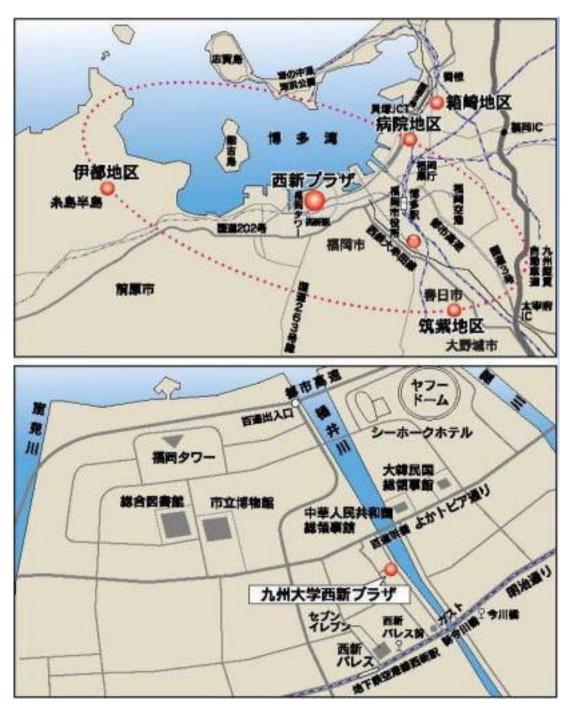
# Schedule

Friday, Mar. 15		
9:00 am	Ryohei Ishige	Well-ordered nano-structure formation in ABA triblock copolymers of side-chain liquid crystalline A blocks and main-chain liquid crystalline B block
9:20 am	Madoka Takai	Soft-interfaces for improving the structure and function of adsorbed protein
9:40 am	Hsiao-hua Yu	Soft Nanomaterials for Efficient Capture of Circulating Tumor Cells
10:20 am		Break
10:40 am	Hongbo Zeng	Intermolecular forces at soft-interfaces in biological and non-biological systems
11:40 am	Nobuhiro Yanai	Soft-Interfaces in Nanoporous Coordination Materials
12:00 pm	Syuji Fujii	Material chemistry using air-water interface: Synthesis of Janus film
12:20 pm		Lunch
1:40 pm	Kazuo Sakurai	Characterizing Self-assembled Nanopaticles Employed in Drug Delivery
2:20 pm	Daniel K. Schwartz	Single-Molecule Tracking at Wet Interfaces: Diffusion, Desorption, Aggregation, and Conformation
3:20 pm		Break
3:40 pm	Tetsuo Yamaguchi	Stress-diffusion coupling in low friction of hydrogels
4:00 pm	Wei Ma	Substrate independent underwater superoleophobic surface inspired by fish skin and mussel adhesive protein
4:20 pm	Daiki Murakami	Characterization of anomalous wetting on super- hydrophilic polyelectrolyte brush surfaces.
4:40 pm	Ko Okumura	Scaling laws for wetting: dynamics of wicking, liquid drops and bubbles
5:20 pm		Closing

# Poster presentation list

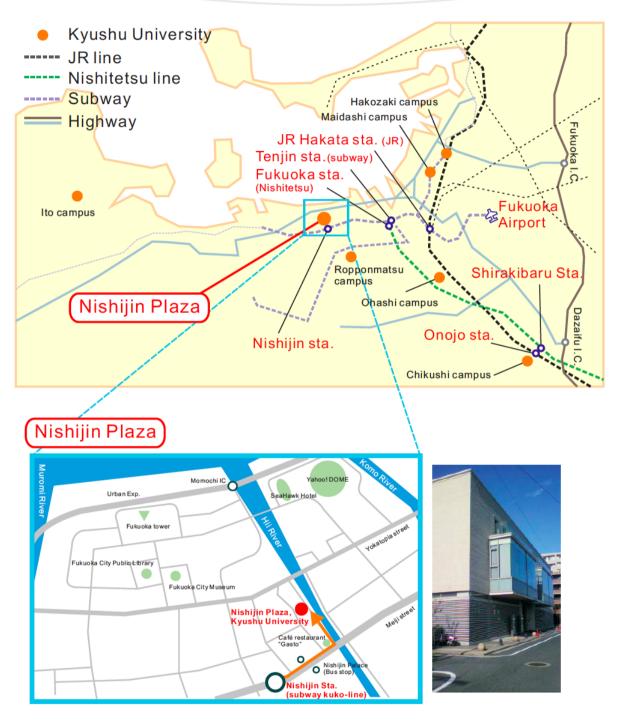
No.	Name	Presentation Title
P-01	Shin-ichi Yusa (U. Hyogo)	Cationic Amphiphilic Random Copolymer Reagents for fixation of organic soil pollutants
P-02	Takuya Matsuyama (Tokyo U. Sci.)	Synthesis of nanosphere having thermoresponsive polymer layer with controlled chain length
P-03	Takuya Koriyama (Tokyo U. Sci.)	Chromatographic characterization of thermoresponsive interfaces on polystyrene monolith surfaces in capillaries
P-04	R.Fukuhara (Kyushu U.)	Effect of Molecular Orientation on Structure and Miscibility of Gibbs Adsorbed Films at Oil/Water Interface
P-05	N.Obayashi (Kyushu U.)	Effect of Solvent on Gibbs Adsorbed Film of Decane-1,10-diol at Air/Water and Perfluorohexane/Water Interfaces
P-06	Yuki Norizoe (JST, ERATO Takahara Soft Interfaces Project)	Two-dimensional microphase separation of homopolymer brushes via molecular Monte Carlo simulation
P-07	Hirohmi Watanabe (JST, ERATO Takahara Soft Interfaces Project)	Adhesion Characteristics of Nanometer-thick Films onto Various Substrates
P-08	R. Murakami (Konan U.)	Effects of density difference between oil and water on stabilization of powdered emulsions
P <b>-</b> 09	Yuji Higaki (Kyushu U.)	Chain Dimension and Tribological Properties of Poly( $\alpha$ -methylene- $\gamma$ -butyrolactone) Brush
P-10	Tatsuya Ishikawa (Kyushu U.)	Chain Dimensions of a Spherical Cationic Polymer Brush in Aqueous Sodium Chloride Solutions
P-11	Benjamin Masheder (AIST)	Hard Coatings for Soft Polymer Substrates
P-12	Mengchen Yue (Kyushu U.)	Study on reversible CO2 absorption by thermo-responsive hydrogel films
P-13	Haejoo Lee (Kyushu U.)	The minimization of polymer ligand interacted with targeted peptide
P-14	Hsing-An Lin (RIKEN)	An Electrochemically Switchable Organic Conducting Biomaterial toward Dynamic Coupling with Cells and Tissues
P-15	Jun Sekine (RIKEN)	The Effects of Conducting Polymer Nano-networks on Fibroblasts Behavior
P-16	Kentaro Yamamoto (Kyushu U.)	Interfacial Characterization of Thin Isotactic Polypropylene Films by Sumfrequency Generation Spectroscopy
P-17	Yuji Matsumoto (Kyushu U.)	Spatial Heterogeneity and Sol-gel Transition of Supramolecular Hydrogel by Particle Tracking
P-18	Shinichiro Shimomura (Kyushu U.)	Mechanical Instability of Glassy Polymer Surfaces and Its Effect on Cellular Adhesion
P-19	Ken Kojio (Nagasaki U.)	Effects of Chemical Structures on a Microdomain Structure of Low-molecular Weight Urethane Thin Films
P-20	Masahiro Fujita (RIKEN)	Synthesis and Characteristics of DNA/Pol(N-isopropylacrylamide) Bioconjugate
P-21	Tomoya Sato (Kyushu U.)	Preparation and Radical Crossover Reactions of Organic Thin Films with Alkoxyamine Units
P-22	Yuhei Tokiwa (Kyushu U.)	Effect of Condensed Film Formation at Alkane Mixture / Aqueous Solution Interface on Its Composition and Emulsion Stability

### Conference Venue



Address: 2-16-23 Nishijin, Sawara-ku, Fukuoka City

### Conference Venue



#### [Route 1] (from Fukuoka Airport)

Fukuoka Airport -(20 min, Subway Kuko Line)-> Nishijin Sta. -(7min, walk)-> Nishijin Plaza \* Take the Fukuoka City Subway going to "Meinohama", "Karatsu" or "Chikuzen-maebaru" at Fukuoka-kuko sta.

#### [Route 2] (from JR Hakata station)

Hakata sta. -(15min, Subway Kuko Line)-> Nishijin Sta. -(7min, walk)-> Nishijin Plaza \* Take the Fukuoka City Subway going to "Meinohama", "Karatsu" or "Chikuzen-maebaru" at Hakata sta.

### Additional Informations

Registration fee: free

#### Banquet

(Cancellation can be accepted until the morning of March 13)

Fukuoka Takasho (Traditional Japanese Style Restaurant). 5min walk from conference venue

Invited speaker: free

General participant: 7,000yen

PD: 6,000yen

Student: 4,000yen

#### Presentation:

Invited (abroad): 50min+10min discussion

Invited (domestic):35min+5min discussion

Oral (including young invited speaker):15min+5 min discussion

Poster (March 14 12:00-14:00 & March 15 12:20-13:40)

Light meal will be provided.

Poster size