

The 29th International SPACC Symposium

“Functional materials and complexes for a sustainable future”

September 5–6, 2024

Akira Suzuki Hall,
Frontier Research in Applied Sciences Building,
Faculty of Engineering, Hokkaido University
Sapporo, Japan

Organized by

The Society of Pure and Applied Coordination Chemistry
and
Hokkaido University

Co-organized by

Hokkaido Branch of The Society of Polymer Sciences, Japan
and
Frontier Chemistry Center, Hokkaido University

Supported by

SAKURA SCIENCE Exchange Program, JST



SPACC
先端錯体工学研究会

高分子学会北海道支部
FC Frontier Chemistry Center
フロンティア化学教育研究センター



Dear Colleagues,

The 29th International SPACC (The Society of Pure and Applied Coordination Chemistry) Symposium will be held at Hokkaido University in Sapporo, Japan, from September 5 to September 6, 2024. The International Advisory and Organizing Committee cordially invite you to attend the Symposium and participate in its scientific and social programs. The main theme of the Symposium will be “Functional materials and complexes for a sustainable future”. The Symposium will focus on the chemistry of novel and useful application of coordination chemistry that can open the novel area, afford novel materials, and find insight of the organic, inorganic, and biological system for the new sustainable feature.

As with previous SPACC Symposium, it is intended that this Symposium will provide a platform for young scientists to exchange scientific information among themselves and with the selected leading scientists. This challenging symposium began 30 years ago in Tokyo by the SPACC fellow Prof. Shigenobu Yano, and has being held annually and consecutively in the world. It is our great pleasure to hold this 29th Symposium in Sapporo, Japan.

Presentations will consist of four categories, several plenary lectures, invited lectures, oral presentations, and poster presentations. Prizes will be awarded for the best presentations, especially for students. The International Advisory and Organizing Committee hope all registrants will present a paper, but acceptance of papers will be at the discretion of the Committee. The official language of the symposium will be English.

We look forward to meeting you in Sapporo, Japan.

ADVISORY AND ORGANIZING COMMITTEE

Chairperson:

Toshifumi Satoh Hokkaido University

Co-chairperson:

Mitsunobu Sato President of SPACC / Kogakuin University

Secretary:

Takuya Isono Hokkaido University

Feng Li Hokkaido University

Committee member:

Shigenobu Yano Fellow of SPACC / Nara Women's University

Yutaka Amao Osaka Metropolitan University

Haruo Akashi Okayama University of Science

Kozo Fukumoto University of the Ryukyus

Hideki Hashimoto Kwansei Gakuin University

Yuka Kobayashi Takeda Rika Kogyo Co. Ltd

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Yuji Mikata Nara Women's University

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CORRESPONDENCE

All correspondence concerning the Symposium should be addressed to:

Toshifumi Satoh

Laboratory of Polymer Chemistry, Division of Applied Chemistry,

Faculty of Engineering, Hokkaido University, N13W8, Kita-ku, Sapporo 060-8628, Japan.

E-mail: satoh@eng.hokudai.ac.jp, Phone & Fax:+81-11-706-6602

VENUE

Suzuki Akira Hall, Frontier Research in Applied Sciences Building,

Faculty of Engineering, Hokkaido University, Sapporo, Japan

<https://www.eng.hokudai.ac.jp/english/location/facilities.php>

<https://www.eng.hokudai.ac.jp/graduate/about/building/frontier/>



Campus Map

**Frontier Research Build.
Venue (2nd Floor)**

**Café de Gohan
Banquet
on Sep. 5th**

[Access guide]

By JR line:
Get off at Sapporo Station,
7 minutes walk to the Main Gate.

By Sapporo subway:
If you take Namboku line or Toho line,
get off at Sapporo Station,
10 minutes walk to the Main Gate.
If you take Namboku line,
get off at Kita juni jo Station,
4 minutes walk to North 13 Gate
or get off at Kita juhachi jo Station,
7 minutes walk to North 18 Gate.

-  Information center
-  Cafe
-  Cafeteria
-  Merchandise shop
-  AED station

◇ The names for graduate schools located in the same building as the faculty are omitted
◇ () indicates other facility

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For Hokkaido University's Botanic Garden

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SCIENTIFIC PROGRAM

The Scientific Program will include plenary lectures, invited lectures, oral and poster presentations. The official language of the Symposium is English. Registration, all lectures and the oral and poster presentations will be held at Hokkaido University.

All posters will be placed on the viewing boards from the Thursday morning and will therefore be available for viewing during coffee breaks and lunch for the duration of the conference. A board (approximately 90cm width, 160cm height) will be available for posting each presentation.

Thursday, 5th September, 2024

9:00	Registration		
9:15-9:25	Opening		Chair : Prof. Mitsunobu Sato
9:25-10:00	PL1_35min	Li Lu	National University of Singapore Polyanion-based sodium compounds for sodium ion batteries Chair : Prof. Hiroki Nagai
10:00-10:20	IL01_20min	Haruo Akashi	Okayama University of Science Synthesis and Cathartic Activity of an Oxotitanium Fluorochlorin Complex
10:20-10:40	IL02_20min	Shin Aoki	Tokyo University of Science Design and Synthesis of Cyclometalated Iridium(III) Complexes for Cancer Therapy
10:40-11:00	Break		Chair : Prof. Haruo Akashi
11:00-11:20	IL03_20min	Philipus N. Hishimone	University of Namibia, Namibia Catalytic evaluations of Cu-Co oxides thin films fabricated by the aqueous spray method
11:20-11:40	IL04_20min	Feng Li	Hokkaido University Monomer Sequence Controllable Polymerization from Epoxide/Aziridine/Cyclic Anhydride Monomer Mixture via Binary Organocatalysis
11:40-12:00	IL05_20min	Hiroki Nagai	Kogakuin University Repeated Cu film formation via aqueous precursor solutions recovered from Cu film deposited in a glass tube
12:00-13:30	Lunch Time		Chair : Prof. Takanori Nishioka
13:30-14:05	PL2_35min	Shuichi Suzuki	Osaka University Changes in Magnetic and Photophysical Properties of Radical Ions with Temperature-/Stimuli-triggered Phase Transitions

14:05-14:25	IL06_20min	Naoto Kuwamura	Kogakuin University	Hydrogen Evolution Electrocatalysts Composed of Dithiolene Complexes and Graphene Oxide
14:25-14:45	IL07_20min	Yuriko Matsumura	Tokyo Healthcare University	The Effect of Antimicrobial Photodynamic Inactivation using 5-amino-levulinic acid derivatives and Characterization of the Metabolites
14:45-15:05	IL08_20min	Satomi Niwayama	Muroran Institute of Technology	Practical Desymmetrization Reactions in Aqueous Solvents
15:05-15:25	Break			Chair : Prof. Naoto Kuwamura
15:25-15:30	Award Celemony 1			
15:30-15:55	AL01_25min	Masaru Kato	Hokkaido University	Development of Noble Metal-Free Electrocatalysts Inspired by Metalloenzymes
15:55-16:05	Award Celemony 2			
16:05-16:20	SAL1_15min	Taiki Osawa	Tokyo Institute of Technology	Evaluation of inactivation effect and safety of plasma bubble water for application to living organisms
16:20-16:35	SAL2_15min	Ryota Suzuki	Hokkaido University	Alkali metal carboxylate-catalyzed polymerization for novel functional polyesters and their applications
17:30-19:30	Banquet		Café de Gohan	

Friday, 6th September, 2024

				Chair : Prof. Toshifumi Satoh
9:00-9:35	PL03_35min	Yasuchika Hasegawa	Hokkaido University	Hard and Soft Lanthanide Coordination Materials for Future Photonic Applications
9:35-9:55	IL09_20min	Akane Yaida	Tokyo Institute of Technology	Potential anthropogenic pollution of rare metals used for industrial materials and pharmaceuticals in river water
9:55-10:05	Break			Chair : Prof. Haruo Akashi
10:05-10:20	ISL01_15min	Kexin Wang	National University of Singapore	Metal single atoms assisted carbon anodes for enhanced lithium storage

10:20-10:35	ISL02_15min	Naoki Sugita	Kogakuin University	Correlation Between Growth Conditions in Mist CVD Growth of Copper Nitride and Copper Oxides
10:35-10:50	ISL03_15min	Yifeng Gong	National University of Singapore	Preparation and Doping of NaNbO ₃ -based Solid Electrolyte
10:50-11:05	ISL04_15min	Yuma Takagi	Hokkaido University	Surface ligand modification of Au ₂₅ clusters to improve photocatalytic reaction activity
11:05-11:10	Break			Chair : Prof. Naoto Kuwamura
11:10-11:25	ISL05_15min	Xiaoyu Xu	National University of Singapore	High performance solid-state electrolytes for sodium metal batteries
11:25-11:40	ISL06_15min	Kai Fukuchi	Tokyo Institute of Technology	Development of high-selective single cell element analysis system using cell sorter and ICP-TOF-MS
11:40-11:55	ISL07_15min	Xinyu Wang	National University of Singapore	All-solid-state batteries with negligible interfacial resistance achieved by Aerosol deposition technology
11:55-12:10	ISL08_15min	Chaehun Lee	Hokkaido University	Microphase-separation behavior of Bio-based Sugar-Terpenoid Hybrid Materials
12:10-13:10	Lunch Time			
13:10-14:40	Poster Session			
	PP01	Yuriko Matsumura	Tokyo Healthcare University	A Study on Mitigate the Upstream of Bacteria Existing in Drainage Pipes by Silver Ion Coating
	PP02	Takanori Nishioka	Osaka Metropolitan University	Correlation Between ¹⁹⁵ Pt NMR Signals and Intermetallic Distances Derived from the Interaction of Trinuclear Complexes with Pt-bisNHC Units with Ag(I) ion
	PP03	Moeno Sugiyama	Hokkaido University	Organocatalyzed Ring-Opening Alternating Copolymerization of Isobutylene Oxide and Cyclic Anhydrides
	PP04	David Nanhapo	University of Namibia	Designing suitable aqueous solutions for the preparation of precursor solutions involving copper (II) complexes, directly from the copper ores
	PP05	Kotaro Ibe	Hokkaido University	

			Synthesis of multicyclic poly(<i>n</i> -butyl acrylate) for application in non-leaching damping materials
PP06	Hattori Nagisa	Gifu University	Dispersion-Controllable Solution Synthesis of Metal Oxide Nanoparticles Using Amino Acid Ester Hydrochloride as a Structure-Directing Agent
PP07	Yu Oishi	Hokkaido University	Synthesis and microphase separation behavior of hybrid materials consisting of polyhedral oligomeric silsesquioxane and oligosaccharide
PP08	Yuki Takahashi	Kochi University	Synthesis and characterization of iron(III) complexes of triamine-linked bishydroxamate artificial siderophores with terminal carboxyl groups
PP09	Minori Matsuda	Hokkaido University	Synthesis of Aliphatic Polyesters by Ring-Opening Polymerization Using an Acid-Base Type Zwitterionic Catalyst
PP10	Klaudia N Mwatile	University of Namibia	Characterization of aluminium and zinc-doped TiO ₂ thin films fabricated by the aqueous spray method
PP11	Atsuko Saito	Tokyo Healthcare University	Evaluation of the number of spores of <i>Clostridioides difficile</i> over time in different toxin-producing properties in an aerobic condition
PP12	Toi Iizuka	Hokkaido University	Synthesis and Microphase-Separation Behavior of Asymmetric Polystyrene- <i>b</i> -Poly(methyl methacrylate)- <i>b</i> -Polystyrene
PP13	Shimon Ikenaga	Okayama University of Science	Spin-Driven Electric Polarization and Dielectric Responses in Valence Tautomeric FeCo Complex
PP14	Iyoka Ota	Hokkaido University	Self-switchable polymerization based on a ring-opening copolymerization of oxetanes and cyclic anhydrides
PP15	Miku Matsui	Kogakuin University	Photo-induced hydrophilicity of amorphous titania thin films formed on various synthetic resin plates using the molecular precursor method
PP16	Takaya Kobayashi	Hokkaido University	Toughening cellulose acetate using poly(<i>N</i> -vinylpyrrolidone)-based block copolymers as additive
PP17	Yoshie Hashimoto	Tokyo Healthcare University	Influence of Imitation Pipe Material and Pipe Length on Bacterial Run-Up Migration

PP18	Takumu Yamada	Kogakuin University	Cu film formation by the reaction of ascorbic acid with Cu(II) complexes prepared from the copper powders and $(\text{NH}_4)_2\text{SO}_4$ in aqueous solution
PP19	Rin Iwasaki	Hokkaido University	Systematic synthesis of polyfluorene-containing block copolymers for selective extraction of carbon nanotube
PP20	Kazuto Sato	Kogakuin University	Formation of SWCNT/anatase thin films using titania precursor solution involving formic acid and H_2O_2
PP21	Zhengwei Ma	Hokkaido University	Electrocatalytic N_2O Reduction Performance of Multinuclear Copper Complex with 3,5-Diamino-1,2,4-Triazole
PP22	Yuki Sumiya	Tokyo Institute of Technology	Toluene decomposition by dielectric barrier discharge using comb shape electrodes with water rinse device
PP23	Yuto Kakehi	Hokkaido University	Synthesis of polyacetals and acetal-containing polymers from cellulose-derived compounds
PP24	Hiroki Nakahara	Doshisha University	Exhibition of Laccase Activity by Induction of Copper Ions for Substrate Oxidation into an Oxygen-Reducing MOF
PP25	Yamato Ebii	Hokkaido University	Structure-property relationships of multicyclic polystyrenes synthesized via cyclopolymerization
PP26	Miku Yoshizawa	Kogakuin University	Exploring the synthesis of Gold-thiourea complex using bipolar AC electrolysis
PP27	Shun Irii	Osaka Metropolitan University	Crystal Structures and Piezofluorochromism of Organoboron Complexes with the [2.2]Paracyclophane Moiety
PP28	Ema Baba	Hokkaido University	Introducing substituents into polystyrene-block-poly(methyl methacrylate) by Friedel-Crafts alkylation reaction for controlling microphase-separated structure
PP29	Kota Rio Igarashi	Kogakuin University	Evaluation of SWCNT/ SiO_2 transparent conductive thin films formed by SiO_2 precursor solution with different stoichiometry of oxalic acid to Si
PP30	Akiko Iwama	Tokyo Healthcare University	Differentiation of acid-fast bacilli by the WST-1 method with trypsin and lipase coexistence

PP31	Yu-Jen Shao	Hokkaido University and National Taiwan University
	Synthesis of Triarylamine-Containing Polyesters via Ring-Opening Alternating Copolymerization and their Photophysical Properties	
PP32	Kotono Yamada	Kogakuin University
	Effect of Incubation Time on Ga(C ₅ H ₇ O ₂) ₃ -containing Source Solutions for Growth of α-Ga ₂ O ₃ by Mist CVD	
PP33	Chun-Yao Ke	Hokkaido University and National Taiwan University
	Preparation and Systematic Investigation of Degradable Fluorinated Polyesters via Alternating Copolymerization	
PP34	Chisato Tsukioka	Kogakuin University
	Stability of Copper Complex in Ammonia Aqueous Solution Adding Ethylenediamine for Growth by Mist CVD	
PP35	Taiki Osawa	Tokyo Institute of Technology
	Disinfection effect of atmospheric low-temperature plasma bubbled-up water with various dissolved substances	

Chair : Prof. Kenji Matsumoto

14:50-15:25	PL08_35min	Hideki Hashimoto	Kwansei Gakuin University
	Control of the function of carotenoids in photosynthesis		
15:25-15:45	IL10_20min	Yumei Wang	NUS Chongqing Research Institute
	Ultrastable Sodium-ion Battery Enabled by Well-designed Solid-state Electrolyte		
15:45-16:05	IL11_20min	Misaki Nakai	Kansai University
	Synthesis of ruthenium thiolate complex and photochemical reaction with molecular oxygen		
16:05-16:25	IL12_20min	Hsiang-Jung Wu	Seiwa Electric MFG Co. Ltd
	Super-rapid bacteria inactivation of a Cu ³⁺ -dominated film fabricated via UV-irradiation of a precursor film involving Cu ²⁺ complexes in an ambient environment with controlled humidity		
16:25-16:45	Closing		

Registration fee

Registration Type		Early-Bird Fee* (Deadline: July 31)	Regular Fee (at symposium site)
Member	General	¥20,000	¥30,000
	Student	¥5,000	¥10,000
Non-member	General	¥30,000	¥40,000
	Student	¥15,000	¥20,000

Banquet

General ¥ 6,000, Student ¥ 3,000

Venue: Café de Gohan (N8W5, Sapporo)

<https://cafedegohan.com/>