

The 5th International Cellulose Conference (ICC2022+1, Hiroshima), September 26th-28th, 2023

The 30th Annual Meeting of the Cellulose Society of Japan (2023 Cellulose R&D; domestic conference), September 28th and 29th, 2023

Venue: International Conference Center Hiroshima

Program at a Glance (tentative version as of July 31, 2023) (A, Application; B, Biology; C, Chemistry; P, Physics)

Mon, Sep 25th		Tue, Sep 26th (ICC)		Wed, Sep 27th (ICC)						Thu, Sep 28th (ICC & 2023 Cellulose R&D)					Fri, Sep 29th (2023 Cellulose R&D)				
Room	Ran		Phoenix Hall	Phoenix Hall	Dahlia 1	Dahlia 2	Cosmos 1	Cosmos 2	Conference Management Room		Dahlia 1	Dahlia 2	Cosmos 1	Cosmos 2	Conference Management Room		Himawari		
9:00		9:00	opening	IL06	OC01	OC05			Poster Mounting for ICC	9:00	OC32	OP11	OA14	OA18	Poster Mounting for 2023 Cellulose R&D	9:00	Oral presentations		
				IL07	OC02	OC06					OC33	OP12	OA15	OA19					
10:00		10:00	CSJ 30th Anniversary & Jisuke Hayashi Award Ceremony	IL08	OC03	OC07					10:00	OC34	OP13	OA16		OA20			
					coffee break							coffee break							
11:00		11:00	HJ1	IL09	OA01	OC09					11:00	OC35	OP14	OA17		OA21			
			HJ2	IL10	OA02	OC10						OC36	OP15	OB01		OA22			
12:00		12:00	Lunch		OA03	OC11						OC37	OP16	OB02		OA23			
												OC38	OP17	OB03		OA24			
												OC39	OP18	OC40		OA25			
13:00		13:00	KN1	IL11	OA04	OP01	OC12	OC18		Poster obligation time for odd-number posters (ICC)	13:00	OA26	OC41	OC46		OA31		Poster obligation time for odd-number posters (2023 Cellulose R&D)	13:00
				IL12	OA05	OP02	OC13	OC19				OA27	OC42	OC47	OA32				
14:00		14:00	KN2	IL13	OA06	OP03	OC14	OC20				OA28	OC43	OC48	OA33				
					OA07	OP04	OC15	OC21				OA29	OC44	OC49	OA34				
					OA08	OP05	OC16	OC22				OA30	OC45	OC50	OA35				
15:00		15:00	coffee break		OA09		OC17	OC23				coffee break							
			IL01		OA10	OP07	OC24	OC28				OA36	OC51	OC55	OA40				
			IL02		OA11	OP08	OC25	OC29				OA37	OC52	OC56	OA41				
16:00	welcome reception	16:00	IL03		OA12	OP09	OC26	OC30				OA38	OC53	OC57	OA42				
			IL04		OA13	OP10	OC27	OC31				OA39	OC54	OC58	OA43				
17:00		17:00	IL05								closing								
18:00		18:00							Poster obligation time for even-number posters (ICC)	18:00					Poster obligation time for even-number posters (2023 Cellulose R&D)	18:00	closing		
19:00		19:00							Poster obligation time for odd-number posters (ICC)	19:00									
20:00		20:00	Banquet @ Rihga Royal Hotel Hiroshima							20:00									
21:00		21:00								21:00									

Program for Oral Sessions (tentative version as of Aug 7, 2023)

Tuesday, September 26th

Room: Phoenix Hall

- 11:00 - 11:30 **HJ1** **Revealing multi-scale structures of cellulose in plant cell walls**
Presenter Seong H Kim
(Pennsylvania State University)
- 11:30 - 12:00 **HJ2** **Studying the structure and moisture behavior of cellulosic materials with scattering methods**
Presenter Paavo Penttilä
(Aalto University)

Lunch

- 13:00 - 14:00 **KN1** **New materials from polysaccharides – from synthesis to applications**
Presenter Thomas Heinze
(Friedrich Schiller University Jena)
- 14:00 - 15:00 **KN2** **Diverse position-selective reactions on crystalline cellulose microfibril surfaces in cellulose fibers under aqueous conditions**
Presenter Akira Isogai
(The University of Tokyo)

Coffee Break

- 15:20 - 15:50 **IL01** **Oxidation reactions in cellulose chemistry: mechanisms, analytical aspects, successes and pitfalls**
Presenter Thomas Rosenau
(University of Natural Resources and Life Sciences , Vienna (BOKU))
- 15:50 - 16:20 **IL02** **Water Interactions With Cellulose**
Presenter Stephen James Eichhorn
(University of Bristol)
- 16:20 - 16:50 **IL03** **Structure and Function of Primary Cell Wall Homotrimeric Cellulose Synthases**
Presenter Jochen Zimmer
(The University of Virginia)
- 16:50 - 17:20 **IL04** **C1-Cx mechanism revisited after 70 years**
Presenter Kiyohiko Igarashi
(The University of Tokyo)
- 17:20 - 17:50 **IL05** **Using cellulose structuring for functional bioproduct development**
Presenter Orlando J. Rojas
(The University of British Columbia)

Wednesday, September 27th

Room: Phoenix Hall

- 09:00 - 09:30 **IL06** **An understanding of cellulose biosynthesis in bacteria: Genes and beyond**
Presenter Inder Saxena

- 09:30 - 10:00 **IL07** (The University of Texas at Austin)
Cellulose synthase is a molecular machine to bundle and crystallize polymer chains
Presenter Tomoya Imai
(Kyoto University)
- 10:00 - 10:30 **IL08**
Questions on the cellulose structure and properties for the next
Presenter Yoshiharu Nishiyama
(Université Grenoble Alpes, CNRS, CERMAV)

Coffee Break

- 10:50 - 11:20 **IL09**
Cellulosic foam and aerogel: strategies for improving elasticity and flame retardancy
Presenter Feng Jiang
(The University of British Columbia)
- 11:20 - 11:50 **IL10**
Nanocellulose as a sustainable support for metal and carbon nanoparticles: biosensing and environmental remediation
Presenter Seung-Hwan Lee
(Kangwon National University)

Lunch

- 13:00 - 13:30 **IL11**
Cellulose assemblies as solution to current environmental challenges
Presenter Maria Soledad Peresin
(Auburn University)
- 13:30 - 14:00 **IL12**
Design and construction of biomass based electrode and electrolyte materials toward advanced energy storage devices
Presenter Xinwen Peng
(South China University of Technology)
- 14:00 - 14:30 **IL13**
Biomimetic colour engineering from nature to applications
Presenter Silvia Vignolini
(University of Cambridge)

Room: Dahlia 1

- 09:00 - 09:20 **OC01**
Nanocellulose in tissue engineering – effects of surface chemistry
Presenter Kristin Syverud
(RISE PFI)
- 09:20 - 09:40 **OC02**
Cellulose-based nano-conjugate of the small organic molecule: Synthesis, characterization, and biological evaluation against the
Presenter Sumit Kumar
(University of Delhi)
- 09:40 - 10:00 **OC03**
Multifunctional nanoparticles based on cellulose for targeted drug delivery
Presenter Lennart Hendrik Skodda
(Friedrich Schiller University Jena)
- 10:00 - 10:20 **OC04**
Recombinant proteins and delignified cellulose forming an excellent adhesive system
Presenter Markus B Linder
(Aalto University)

Coffee Break

- 10:50 - 11:10 **OA01 Biodegradable filtration material by foam forming and**
 Presenter Jukka A. Ketoja
 (VTT Technical Research Centre of Finland Ltd.)
- 11:10 - 11:30 **OA02 Effects of CNF addition on biodegradation in CNF-reinforced biodegradable plastics**
 Presenter Kazuko Ono
 (Kyoto University)
- 11:30 - 11:50 **OA03 Sustainable production and application of straw-based biomass filled biodegradable composites**
 Presenter Min Wu
 (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)
- Lunch**
- 13:00 - 13:20 **OA04 Absorption properties of foam formed cellulose fiber structures & effect of bio-based additives**
 Presenter Annika Ketola
 (VTT Technical Research Centre of Finland Ltd.)
- 13:20 - 13:40 **OA05 The Secret Life of Cellulose: Turning Industrial Wastes into Energy Storage Materials**
 Presenter Julian Selinger
 (Graz University of Technology)
- 13:40 - 14:00 **OA06 Essential requirements of cellulose solvents for one-pot ethanol production**
 Presenter Kosuke Kuroda
 (Kanazawa University)
- 14:00 - 14:20 **OA07 Catalytic Upgrading of Carbohydrates in Paper Sludge to Sustainable Aviation Fuels**
 Presenter Sunkyu Park
 (North Carolina State University)
- 14:20 - 14:40 **OA08 Pyrolysis-based saccharification of cellulosic biomass**
 Presenter Haruo Kawamoto
 (Kyoto University)
- 14:40 - 15:00 **OA09 "Nata Puree," a new cellulosic material in Food Tech**
 Presenter Ken Tokuyasu
 (Institute of Food Research, National Agriculture and Food Research Organization)
- Coffee Break**
- 15:20 - 15:40 **OA10 Interaction of Hairy Carboxyalkylated Cellulose Nanocrystals with Surfactants and Antibiotics**
 Presenter Pedram Fatehi
 (Lakehead University)
- 15:40 - 16:00 **OA11 Novel nanocellulose packaging film containing Pickering emulsion and anthocyanin for food preservation and real-time freshness**
 Presenter Hong Jun Lim
 (Xiamen University Malaysia)
- 16:00 - 16:20 **OA12 Cellulose nanofiber hydrogels for controlled drug release**
 Presenter Timo Laaksonen

(University of Helsinki)
16:20 - 16:40 **OA13 Induction of Inflammation in Liver Cells by Microsized Pickering Emulsion Stabilized with Polysaccharide Nanofibers**
Presenter Qi Li
(Kyushu University)

Room: Dahlia 2

09:00 - 09:20 **OC05 How different birch raw materials affect energy consumption and achieved fibrillation level in purely mechanical MFC processing**
Presenter Sanna Siljander
(Tampere University)

09:20 - 09:40 **OC06 Assessment of microfibrillated lignocellulose fibers produced from unbleached softwood and hardwood kraft pulp**
Presenter Huisi Li
(KTH Royal Institute of Technology)

09:40 - 10:00 **OC07 Valorizing Post-consumer Cotton Fabrics through the Extraction of Cellulose Nanocrystals**
Presenter Maria Ximena Ruiz Caldas
(Stockholm University)

10:00 - 10:20 **OC08 Hypochlorite-free Production of Cellulose Nanocrystals through Electromediated Oxidation**
Presenter Neptun Yousefi
(Aalto University)

Coffee Break

10:50 - 11:10 **OC09 TEMPO/NaBr/ NaClO₂·5H₂O oxidation of wood pulp cellulose**
Presenter Gaoyuan Hou
(The University of Tokyo)

11:10 - 11:30 **OC10 Swelling of wood glucuronoxylan and its dialcohol derivative in water and in humid air**
Presenter Tiina Nypelö
(Aalto University)

11:30 - 11:50 **OC11 Using Xylan-assisted Fibrillation to Fabricate Cellulose Nanofibrils to Better Understand Cellulose and Xylan Interactions and to Develop New Materials**
Presenter Parveen Kumar Deralia
(University of Cambridge)

Lunch

13:00 - 13:20 **OP01 Cellulose thin film interactions with ionic liquids**
Presenter Stefan Spirk
(Graz University of Technology)

13:20 - 13:40 **OP02 Swollen and regenerated structures of cellulose by inorganic salt solution treatments**
Presenter Kayoko Kobayashi
(Kyoto University)

13:40 - 14:00 **OP03 Investigating moisture behavior of wood nanostructure using experimental and simulated scattering**
Presenter Aleksi Zitting

- (Aalto University)
- 14:00 - 14:20 **OP04 Residual strain and nanostructural effects during drying of nanocellulose/clay nanosheet hybrids - synchrotron X-ray scattering results**
 Presenter Lengwan Li
 (KTH Royal Institute of Technology)
- 14:20 - 14:40 **OP05 Organized thin films of cellulose nanocrystals: from model to optically active films**
 Presenter Youssef Habibi
 (Mohamed VI Polytechnic University)
- Coffee Break**
- 15:20 - 15:40 **OP07 From Atoms to suspension - A Bottom-up Approach to Modelling Nanocellulose Dispersions**
 Presenter Gusten Isfeldt
 (KTH Royal Institute of Technology)
- 15:40 - 16:00 **OP08 Nanostructural control in cellulose biocomposites**
 Presenter Lars A Berglund
 (KTH Royal Institute of Technology)
- 16:00 - 16:20 **OP09 Comparison of Wood Fibers and Microfibrillated Lignocellulose in Biocomposites**
 Presenter Erfan Oliaei
 (KTH Royal Institute of Technology)
- 16:20 - 16:40 **OP10 Structure development and mechanical properties of CNF networks crosslinked with difunctional polymers**
 Presenter Maria Fernanda Cortes Ruiz
 (KTH Royal Institute of Technology)

Room: Cosmos 1

- 13:00 - 13:20 **OC12 Hornification of cellulose-based materials**
 Presenter Farhiya Alex Sellman
 (KTH Royal Institute of Technology)
- 13:20 - 13:40 **OC13 Model cellulose materials for studying the molecular adhesion between cellulose-rich surfaces**
 Presenter Nadia Asta
 (KTH Royal Institute of Technology)
- 13:40 - 14:00 **OC14 Monitoring crystallite fusion of nanocellulose during colloid condensation**
 Presenter Tsuguyuki Saito
 (The University of Tokyo)
- 14:00 - 14:20 **OC15 Solidification of water with inherent functionalized fluidic channels by using highly anisotropic cellulose nanofibrils with a theoretical model describing the fibrillar hydrogel network structure**
 Presenter Rebecca Östmans
 (KTH Royal Institute of Technology)
- 14:20 - 14:40 **OC16 Surface Energy and Surface Wettability of Wood and Cellulosic Materials by Inverse Gas Chromatography**
 Presenter Anett Kondor
 (Surface Measurement Systems Ltd.)

- 14:40 - 15:00 **OC17** **Interfacial engineering cellulose surface via solid-state polymer adsorption: unveiling adsorption by sum frequency generation vibrational spectroscopy (SFG-VS)**
 Presenter Wenyang Xu
 (Aalto University)
- Coffee Break**
- 15:20 - 15:40 **OC24** **Investigating the dispersion state of surface modified cellulose nanofibers upon dilution by a time-domain nuclear magnetic resonance (TD-NMR)**
 Presenter Chika Takai-Yamashita
 (Gifu University)
- 15:40 - 16:00 **OC25** **Structural dynamics of a single nanocellulose during drying process**
 Presenter Shuji Fujisawa
 (The University of Tokyo)
- 16:00 - 16:20 **OC26** **Regularly-positioned surface charged groups of nanocellulose visualized by frequency-modulation atomic force microscopy**
 Presenter Kazuho Daicho
 (The University of Tokyo)
- 16:20 - 16:40 **OC27** **The role of counterion condensation in nanocellulose surface charge analyses**
 Presenter Marcel Kröger
 (Aalto University)

Room: Cosmos 2

- 13:00 - 13:20 **OC18** **Structural factors affecting the selectivity of olefin cross-metathesis of end-functionalized cellobiose derivatives**
 Presenter Yuuki Sato
 (Kyoto University)
- 13:20 - 13:40 **OC19** **Roles of Ion Pairs in Chemical O-Glycosylation. Differences between Xylosyl and Glucosyl Donors**
 Presenter Hana Sakai
 (Kyoto Prefectural University)
- 13:40 - 14:00 **OC20** **Synthesis strategies for novel carbamate-type cellulose-based chiral stationary phases**
 Presenter Hubert Hettegger
 (University of Natural Resources and Life Sciences , Vienna (BOKU))
- 14:00 - 14:20 **OC21** **Xylan Phenyl Carbonates as Precursors for the Preparation of Functional Nanoparticles and Polysaccharide Gels - From Synthesis to Material Design**
 Presenter Martin Gericke
 (Friedrich Schiller University of Jena)
- 14:20 - 14:40 **OC22** **Dissolution behavior of abietic acid in water from the solid dispersions of cellulose nanofibers**
 Presenter Satoshi Aruga
 (Kyoto University)
- 14:40 - 15:00 **OC23** **Periodate oxidation of cellulose: chemistry, analytical challenges and routes to novel thermoplastics**
 Presenter Antje Potthast
 (University of Natural Resources and Life Sciences , Vienna (BOKU))

Coffee Break

- 15:20 - 15:40 **OC28** **Highly ductile cellulose-rich papers through incorporation of low molecular weight plasticizers through ultrasonication**
Presenter Adrian Eliasson
(KTH Royal Institute of Technology)
- 15:40 - 16:00 **OC29** **Biodegradable Thermoplastic Polysaccharide Esters with Poly(L-lactic acid) / Poly(ϵ -caprolactone) Side Chains for Marine**
Presenter Jin Ho Seok
(The University of Tokyo)
- 16:00 - 16:20 **OC30** **Synthesis, characterization and biodegradability of paramylon mix ester derivatives with different DS**
Presenter Ruiqi Li
(The University of Tokyo)
- 16:20 - 16:40 **OC31** **Urushi Coating and Water-Based Microtemplating for Water-Resistant Cellulose Films**
Presenter Samantha Pritchard
(The University of British Columbia)

Thursday, September 28th

Room: Dahlia 1

- 09:00 - 09:20 **OC32** **Understanding the Formation of Insoluble Gel Particles during Cellulose Acetylation**
Presenter Sunkyu Park
(North Carolina State University)
- 09:20 - 09:40 **OC33** **The molecular mechanism of cellulose carbonization via 5-HMF**
Presenter Takashi Nomura
(Kyoto University)
- 09:40 - 10:00 **OC34** **Sustainable superblack materials from wood for light management**
Presenter Alexey Khakalo
(VTT Technical Research Centre of Finland Ltd.)
- 10:00 - 10:20 **OC35** **Structure and molar mass of carboxyl-methylated polyglucuronic acid derived from polysaccharides by TEMPO-mediated oxidation**
Presenter Akira Isogai
(The University of Tokyo)

Coffee Break

- 10:40 - 11:00 **OC36** **Structural characterization of biomass films prepared by dissolution of lignocelluloses in formic acid**
Presenter Naoko Kobayashi
(Kyoto University)
- 11:00 - 11:20 **OC37** **Pressurized HCl gas/solid system for efficient degradation of cellulose polymorphs into monosugars**
Presenter Yingfeng Wang
(Aalto university)
- 11:20 - 11:40 **OC38** **Preparation of cellulose oligomers with tunable molecular weight distribution**

- Presenter Wei Li
(Beijing Institute of Technology)
- 11:40 - 12:00 **OC39 Solution (not solid)-state NMR analysis of crystalline cellulosics**
- Presenter Alistair William Thomas King
(VTT Technical Research Centre of Finland Ltd.)

Lunch

- 13:00 - 13:20 **OA26 Investigation of the phase behavior of the chemically tuned cellulose nanocrystals and its application as anticounterfeit material**
- Presenter Shiva Singh
(Indian Institute of Technology Roorkee)
- 13:20 - 13:40 **OA27 One-step hierarchical structuring of nanocellulose by electrophoretic deposition and its applications**
- Presenter Takaaki Kasuga
(Osaka University)
- 13:40 - 14:00 **OA28 Nanoarchitecture of cellulosic materials selectively modified with polymer brush**
- Presenter Yuji Kinose
(Kyoto University)
- 14:00 - 14:20 **OA29 Insulating Cellulose-Fiber Foam with Anti-mold, Superhydrophobic, Fire-retardant Betulin Coatings**
- Presenter Xun Niu
(The University of British Columbia)
- 14:20 - 14:40 **OA30 Modifying Hard and Soft Materials Using Rod Shaped Fillers: Structuring Nanocomposites**
- Presenter Johan Foster
(The University of British Columbia)

Coffee Break

- 15:00 - 15:20 **OA36 Facile preparation of transparent poly(methyl methacrylate) films reinforced by acetylated cellulose nanofiber**
- Presenter Shiori Suzuki
(Hokkaido University)
- 15:20 - 15:40 **OA37 Preparation and Characteristics of Liquefied Cellulose-based Waterborne Polyurethane**
- Presenter Yi-Chun Chen
(National Chung Hsing University)
- 15:40 - 16:00 **OA38 Static and in situ small-angle X-ray scattering analyses of the effect of molecular structure on the tensile properties of highly stretchable cross-linked curdlan hydrogels and their films**
- Presenter Yusuke Matsumoto
(Forestry and Forest Products Research Institute)
- 16:00 - 16:20 **OA39 The combination of high aspect ratio CNFs with 90 wt% nanoMOFs for the preparation of advanced materials**
- Presenter Jowan Rostami
(KTH Royal Institute of Technology)

Room: Dahlia 2

- 09:00 - 09:20 **OP11 Molecular insights into kink defects in cellulose nanocrystals**
 Presenter Yu Ogawa
 (CNRS, Cermav)
- 09:20 - 09:40 **OP12 3D IMAGING AND STRUCTURAL INFORMATION OF THE CHIRAL NEMATIC PHASE OF CELLULOSE NANOCRYSTALS (CNC) BY SECOND HARMONIC GENERATION (SHG) MICROSCOPY**
 Presenter Wim Thielemans
 (KU Leuven)
- 09:40 - 10:00 **OP13 Insight into the mechanism for highly sensitive response of cellulose nanofiber hydrogels to the presence of ionic solutes**
 Presenter Suvi Annikki Arola
 (VTT Technical Research Centre of Finland Ltd.)
- 10:00 - 10:20 **OP14 Tensile deformation mechanism of bacterial cellulose hydrogel visualized by in situ observation**
 Presenter Go Takayama
 (Hokkaido University)

Coffee Break

- 10:40 - 11:00 **OP15 Rheological study of the sol-gel transition in suspensions of cellulose nanocrystals**
 Presenter Lise Morlet-Decarnin
 (ENSL, CNRS, Laboratoire de Physique)
- 11:00 - 11:20 **OP16 Complex Dynamics of Cellulose Nanofiber in Crowded Environments**
 Presenter Ahmad Reza Motezakker
 (KTH Royal Institute of Technology)
- 11:20 - 11:40 **OP17 Relationship between the yield behavior and structural evolution in shear flow of CNF suspensions**
 Presenter Taisuke Sato
 (Photonic Lattice, Inc.)
- 11:40 - 12:00 **OP18 Viscoelastic relaxation of nanocellulose in the dilute and semi-dilute regions**
 Presenter Reina Tanaka
 (Forestry and Forest Products Research Institute)

Lunch

- 13:00 - 13:20 **OC41 Cellulose nanocrystals for circularly polarized light materials**
 Presenter Yan Xu
 (Jilin University)
- 13:20 - 13:40 **OC42 Thermodynamically Controlled Multiphase Separation of Heterogeneous Liquid Crystal Colloids**
 Presenter Han Tao
 (Aalto University)
- 13:40 - 14:00 **OC43 Studies on thermally insulating and transparent cryogels of**
 Presenter Xinyi Hou
 (The University of Tokyo)
- 14:00 - 14:20 **OC44 Processing and properties of multifunctional hybrid CNC-CNT Foams**
 Presenter Carina Schiele
 (Stockholm University)
- 14:20 - 14:40 **OC45 On the mechanism of cellulose foam strengthening and fire-retardancy via phosphorylation**

Presenter Eliott Orzan
(Chalmers University of Technology)

Coffee Break

- 15:00 - 15:20 **OC51** **Withdrawn**
Presenter
- 15:20 - 15:40 **OC52** **Elucidation of instability mechanisms for cellulose nanofiber Pickering emulsions using MRI**
Presenter Noriko Kanai
(Western Sydney University)
- 15:40 - 16:00 **OC53** **CO₂-responsive artificial muscle made of aminated cellulose**
Presenter Frederic Heraly
(Stockholm University)
- 16:00 - 16:20 **OC54** **Twin-Roll Forming: An Innovative Process for High-Consistency Forming and Consolidation of Cellulosic Films**
Presenter Elaheh Sharifi Zamani
(Aalto university)

Room: Cosmos 1

- 09:00 - 09:20 **OA14** **Utilization of deep eutectic solvent to enhance pulp fibrillation and its application in producing low density paperboard**
Presenter Hamidreza Ahadian
(VTT Technical Research Centre of Finland Ltd.)
- 09:20 - 09:40 **OA15** **From Industry 4.0 to Research 4.0. A Modular Approach for the Development of Cellulosic Fibres**
Presenter José Canga Rodríguez
(Dienes Apparatebau GmbH)
- 09:40 - 10:00 **OA16** **Development of Experimental Setup for Dynamic Compression of Cellulose Pulp Fibers**
Presenter Rohan Ajit Kulkarni
(KTH Royal Institute of Technology)
- 10:00 - 10:20 **OA17** **Assessment of a chlorine dioxide-mediated TEMPO oxidation pretreatment to produce MFC from chemical pulps containing residual lignin**
Presenter Laura Vanessa Giraldo Isaza
(Université Grenoble Alpes)

Coffee Break

- 10:40 - 11:00 **OB01** **Shedding light on the un explored light response mechanism of cellulose synthesis in bacteria**
Presenter Pankaj Goyal
(Aalto University)
- 11:00 - 11:20 **OB02** **Paper-based dual-layer scaffold for fabrication of three-dimensional and functional engineered gut tissue**
Presenter Ryo Tanaka
(Waseda University)
- 11:20 - 11:40 **OB03** **Dual-layer cell culture scaffolds based on cellulose materials for real-time observation and fabrication of complex tissues**

Presenter Naoya Takeda
(Waseda University)
11:40 - 12:00 **OC40 Interaction between unmodified cellulose nanocrystals (CNC) and microbial surfactants: a physicochemical investigation**

Presenter Linh Thuy Phi
(Aalto University)

Lunch

13:00 - 13:20 **OC46 Elucidation of the Mechanism for Crystal Transition from Cellulose I to Cellulose II by Low-Concentration NaOH Treatment at Low**

Presenter Yuki Kugo
(Hokkaido University)

13:20 - 13:40 **OC47 Cellulose dissolution in an alkaline solvent: effect of acidic and mercerizing pretreatments**

Presenter Antti Koistinen
(Aalto University)

13:40 - 14:00 **OC48 Cellulose dissolution in green solvents and fabrication of functional materials**

Presenter Feng Xu
(Beijing Forestry University)

14:00 - 14:20 **OC49 Fully Bio-Based Betaine Derived Ionic Liquids for Cellulose Activation and Subsequent Green Chemical Modification**

Presenter Lukas Marcos Celada
(KTH Royal Institute of Technology)

14:20 - 14:40 **OC50 Cellulose in ionic liquids at ultra-high concentrations**

Presenter Takatsugu Endo
(Doshisha University)

Coffee Break

15:00 - 15:20 **OC55 Ionic liquids as designer solvents for hydrophobization of cellulose nanocrystals towards the production of polymer composites**

Presenter Onajite Theresa Abafe Diejomaoh
(University of Bristol)

15:20 - 15:40 **OC56 One-component nanocomposite based-on surface grafted cellulose nanofibers**

Presenter Sikai Chen
(Southwest Jiaotong University)

15:40 - 16:00 **OC57 Modification of nanocellulose networks with core shell nanolatexes synthesized through PISA**

Presenter Asa Jerlhagen
(KTH Royal Institute of Technology)

16:00 - 16:20 **OC58 Toughening of polybutylene succinate by adding surface modified nanofibrillated bacterial cellulose**

Presenter HAMIDAH BINTI HASHIM
(Hokkaido University)

Room: Cosmos 2

09:00 - 09:20 **OA18 New insights into Hydroxypropyl cellulose (HPC) mesophases-functionalisation, self-assembly dynamics and colour response**

- Presenter Ahu Gumrah Dumanli
(University of Manchester)
- 09:20 - 09:40 **OA19 Withdrawn**
Presenter
- 09:40 - 10:00 **OA20 Magnetic Cellulose Nanocomposite Production and Use**
Presenter Pedram Fatehi
(Lakehead University)
- 10:00 - 10:20 **OA21 Electrospun polysaccharidic membranes for efficient chiral**
Presenter Issei Otsuka
(Université Grenoble Alpes, CNRS, CERMAV)
- Coffee Break**
- 10:40 - 11:00 **OA22 Recovery of critical raw materials using functional nanocelluloses with high adsorption capacity**
Presenter Akio Yamamoto
(VTT Technical Research Centre of Finland Ltd.)
- 11:00 - 11:20 **OA23 Cellulose-based functional materials for advanced applications**
Presenter Sheng Chen
(Beijing Forestry University)
- 11:20 - 11:40 **OA24 Wood-based ultrablack materials for electromagnetic shielding**
Presenter Bin Zhao
(Aalto University)
- 11:40 - 12:00 **OA25 Water-responsive nanocellulose-based architectures for value-added materials**
Presenter Tekla Tammelin
(VTT Technical Research Centre of Finland Ltd.)
- Lunch**
- 13:00 - 13:20 **OA31 Exploring the contribution of intrinsic and extrinsic xylan in pulp and paper sheet properties**
Presenter Jana Schaubeder
(Graz University of Technology)
- 13:20 - 13:40 **OA32 Multipurpose threads from microbial cellulose inspired by Japanese kami-ito**
Presenter Ayako Takagi
(The University of British Columbia)
- 13:40 - 14:00 **OA33 Effect of slit lengths of cellulose nanofiber suspensions passing through a planar channel with a slit section**
Presenter Akiyoshi Kusano
(Niigata University)
- 14:00 - 14:20 **OA34 Biopolymer Hydrogels from Cellulose Nanocrystals Cross-Linked with Mixed Linkage Glucan**
Presenter Teemu Suutari
(Aalto University)
- 14:20 - 14:40 **OA35 Millimeter-thick cellulosic plates prepared via gel-based process**
Presenter Noriyuki Isobe
(Japan Agency for Marine-Earth Science and Technology (JAMSTEC))

Coffee Break

- 15:00 - 15:20 **OA40** **Modulating the functionalization degree of nanocellulose using ternary deep eutectic solvent**
Presenter Do Yee Hoo
(Xiamen University Malaysia)
- 15:20 - 15:40 **OA41** **Cellulose dissolution in lithium bromide aqueous solution**
Presenter Xuejun Pan
(University of Wisconsin-Madison)
- 15:40 - 16:00 **OA42** **Construction and performance research of cellulose-based hydrogels**
Presenter Sufeng Zhang
(Shaanxi University of Science and Technology)
- 16:00 - 16:20 **OA43** **The nanocellulose-water nexus: Towards a bioeconomy using interfacial assembly**
Presenter Long Bai
(Northeast Forestry University)

Program for Poster Session (tentative version as of July 31, 2023)

Wednesday, September 27th

Room: Conference Management Room

Obligation time:

from 5:30 pm to 7:00 pm (odd-numbered)

from 7:00 pm to 8:30 pm (even-numbered)

PA01 Evaluation of optimal conditions for cellulose and hemicellulose separation of spent coffee grounds

Presenter Hansol Choi

Author Hansol Choi, Sohyun Yoon, Sohee Lim, Jihui Byeon, Dae-Young Kim
(Dongguk University)

PA02 Isolation and characterization of cellulose nanocrystals from residual softwood pulp of the glycol lignin production

Presenter Thi Thi Nge

Author Thi Thi Nge, Noriko Hayashi, Tatsuhiko Yamada
(Forestry and Forest Products Research Institute)

PA03 Transparent films from dissolved cellulose

Presenter Hamidreza Ahadian

Author Hamidreza Ahadian, Vesa Kunnari, Vinay Kumar, Ali Harlin
(VTT Technical Research Centre of Finland Ltd.)

PA04 Characteristics of Nanofibrillated Bacterial Cellulose Sheets Prepared by Vacuum Filtration, Pressure Filtration, and a Cast Method

Presenter Mai Hirano

Author Ryota Kose, Mai Hirano, Junko Ikeda, Haruto Tujisaki, Kenji Tajima
(Tokyo University of Agriculture and Technology)

PA05 Development of Nanofibrillated Bacterial Cellulose Mixed Fiber Materials Using a Wet Spinning Method

Presenter Yui Kawabata

Author Yui Kawabata, Haruto Tsujisaki, Chaehun Lee, Ryota Kose, Takuya Isono, Masashi Fujiwara, Takuya Yamamoto, Toshifumi Satoh, Hirofumi Tani, Kenji Tajima
(Hokkaido University)

PA06 Study on a safe Non-soap Bubble for Snow-Falling using a Cellulose Derivative

Presenter Kazuhisa Hayakawa

Author Kazuhisa Hayakawa
(Hayakawa Labo)

PA07 Production, structural and physical properties, and applications of nanofibrillated bacterial cellulose

Presenter Kenji Tajima

Author Kenji Tajima
(Hokkaido University)

PA08 Anisotropic frictional properties of cellulose nanofibril monolayer films prepared by Langmuir-Blodgett technique

Presenter Koichiro Ishida

Author Tetsuo Kondo, Koichiro Ishida
(Tokyo University of Agriculture and Technology)

PA09 Optimisation of Spinnability and Mechanical Properties of Bio-based Filaments by Dispersion Characterisation and Processing Conditions

Presenter Mu-Rong Wang

- Author Mu-Rong Wang, Korneliya Tatianovna Gordeyeva, Tomas Rosén, Daniel Söderberg
(KTH Royal Institute of Technology)
- PA10 Effect of tea and sugar on physical properties of kombucha biosynthesized cellulose**
Presenter Uika Oie
Author Uika Oie, Chie Sawatari
(Mukogawa Women's University)
- PA11 Functional characterization of matrix components accumulated in the cell wall of the pine cone from *Pinus densiflora***
Presenter Yoshiki Horikawa
Author Yoshiki Horikawa, Seiya Hirano, Chisato Nakanishi, Xiaoyi Wei, Tatsuki Kurei
(Tokyo University of Agriculture and Technology)
- PA12 Cellulose Nanocrystal Hydrogel Film with High Tensile Strength**
Presenter Liu Liu
Author Liu Liu
(Zhejiang Agriculture and Forestry University)
- PA13 Cellulose-based wood aerogels for thermal insulation in buildings and their advanced applications**
Presenter Shakshi Bhardwaj
Author Pradip K. Maji, Shakshi Bhardwaj
(Indian Institute of Technology Roorkee)
- PA14 Preparation of Multilayer Paperboard with High Bending Stiffness Corresponding to Metal Sheet**
Presenter Kaho Orui
Author Ryota Kose, Kaho Orui, Gentiane Venture, Keisuke Ando, Keiichi Sato
(Tokyo University of Agriculture and Technology)
- PA15 Properties of fine fibers prepared from pulp fibers with a recycling process as a pretreatment**
Presenter Koki Tamura
Author Ryota Kose, Koki Tamura
(Tokyo University of Agriculture and Technology)
- PA16 Influence of its size distribution of added cellulose nanofibers on the properties of unbeaten pulp fiber sheet**
Presenter Naoki Kakinuma
Author Ryota Kose, Naoki Kakinuma
(Tokyo University of Agriculture and Technology)
- PA17 Hydrophobization of CNFs films with Plasma Generated in Inert Gas**
Presenter Ana Oberlintner
Author Ana Oberlintner, Vasyl Shvalya, Neelakandan M. Santosh, Uroš Cvelbar, Blaž Likozar, Uroš Novak
(Department of Catalysis and Chemical Reaction Engineering, Slovenia)
- PA18 Functional control of nanocellulose prepared from citrus exocarp by modification of**
Presenter Akio Kumagai
Author Akio Kumagai, Takashi Endo, Keita Sakakibara
(Research Institute for Sustainable Chemistry, National Institute of Advanced Science and Technology (AIST))
- PA19 Exploration of Modification Conditions of Medicinal Herb Residue sponge by TEMPO Oxidation treatment**
Presenter Sohyun Yoon
Author Sohyun Yoon, Hansol Choi, Sohee Lim, Jihui Byeon, Dae-Young Kim
(Dongguk University)
- PA20 Liquid marbles formed with hydrophobic cellulose powder and water**
Presenter Eiji Togawa

- Author Eiji Togawa
(Forestry and Forest Products Research Institute)
- PA21 Surface modification of paper with trifunctional glucose derivatives**
Presenter Zhiyan Liu
Author Zhiyan Liu, Kazuki Sugimura, Arata Yoshinaga, Hiroshi Kamitakahara
(Kyoto University)
- PA22 Immobilization of catechol groups on TEMPO-oxidized bacterial cellulose nanofibers (TOBCN) and evaluation of adhesive strength**
Presenter Kazuma Tan
Author Kazuma Tan, Hiroya Nakauchi, Satomi Tagawa, Masahiro Mizuno, Yoshihiko Amano
(Shinshu University)
- PA23 Surface Modification of Cellulose Nanofibers (CNFs) for Application to Polymer**
Presenter Hiroyuki Okuno
Author Tada-aki Yamagishi, Hiroyuki Okuno, Masaya Sasagawa, Mizuki Kosuge, Takahiro
(Kanazawa University)
- PA24 Functional materials prepared via direct methylation of lignocellulosic biomass**
Presenter Misato Yamada
Author Misato Yamada, Naotaka Nishio, Mariko Yoshioka, Hiroshi Kamitakahara
(Kyoto University)
- PA25 Wood Foams Made from Forest Residue for Thermal Insulation**
Presenter Elizabeth K Dobrzanski
Author Elizabeth K Dobrzanski, Elisa S Ferreira, Praphulla Tiwary, Richard Chen, Prashant
Agrawal, Emily D Cranston
(The University of British Columbia)
- PA26 Bio-based Pickering foams, from fundamentals to applications**
Presenter Roozbeh Abidnejad
Author Roozbeh Abidnejad, Bruno Mattos, Eero Kontturi, Orlando Rojas
(Aalto University)
- PA27 Formation of Pickering Emulsion with Cellulose Nanofibril for Cosmetics**
Presenter Takazumi Tawa
Author Takazumi Tawa, Akiyo Kubota, Yohsuke Goi
(DKS Co. Ltd.)
- PA28 Dye-adsorptivity of nanocellulose-coated polymer microparticles**
Presenter Shingo Yokota
Author Shingo Yokota, Mayu Mitsunaga, Koichiro Ishida, Tetsuo Kondo
(Kyushu University)
- PA29 Functionalization of polymer microparticles by chitin nanofiber-coating**
Presenter Yuto Kaku
Author Yuto Kaku, Noriyuki Isobe, Tsuguyuki Saito, Shuji Fujisawa
(The University of Tokyo)
- PA30 Development of Composite Materials by Crosslinking of Medicinal Herb Residue /**
Presenter Sohee Lim
Author Sohee Lim, Sohyun Yoon, Hansol Choi, Jihui Byeon, Dae-Young Kim
(Dongguk university)
- PA31 Surface-modified cellulose II microcrystals as nucleating agents for poly(L-lactic acid)**
Presenter Ryosuke Kusumi
Author Ryosuke Kusumi, Ikumi Tsuduki, Mayumi Kobayashi, Kayoko Kobayashi, Masahisa
(Forestry and Forest Products Research Institute)
- PA32 Composites of nanocellulose surface-modified with polydopamine and copper nanoparticles: oxidation inhibition of the nanoparticles and developing conductivity**
Presenter Hiroya Tanaka
Author Yoshikuni Teramoto, Hiroya Tanaka, Toshiyuki Takano

- (Kyoto University)
- PA33 Preparation of various polysaccharide films reinforced by nanofibrillated silk-fibroin**
Presenter Shota Amako
Author Shota Amako, Yoko Okahisa
(Kyoto Institute of Technology)
- PA34 Investigation of elasticity of BC/PVA freeze-dried composites and improvement of elasticity**
Presenter Rie Hioki
Author Rie Hioki, Chie Sawatari
(Mukogawa Women's University)
- PA35 Preparation of bacterial cellulose/ κ -carrageenan composite sheets from two-layer-structured pellicle**
Presenter Yukari Numata
Author Yukari Numata, Chihiro Yamada, Hiroyuki Kono
(Otaru University of Commerce)
- PA36 Mechanical properties and thermal expansion behavior of masterbatch-based nanocellulose/ABS composites**
Presenter Yang Yuanting
Author Yuanting Yang, Tsuguyuki Saito, Shuji Fujisawa
(The University of Tokyo)
- PA37 Multivariate analysis of near-infrared hyperspectral imaging for quantification of moisture content in wood under static load**
Presenter Muhammad Awais
Author Muhammad Awais, Michael Altgen, Tiina Belt, Ella Mahlamäki, Mikko Mäkelä, Lauri Rautkari
(Aalto University)
- PA38 Improvement of water solubility of poorly water-soluble compounds using xylan and statistical extraction of influencing factors**
Presenter Hiromichi Matsuda
Author Yoshikuni Teramoto, Hiromichi Matsuda, Toshiyuki Takano
(Kyoto University)
- PA39 Suppression of mechanical stress in suspension culture of mammalian cells by nanofibrillated bacterial cellulose**
Presenter Eiichiro Kaneko
Author Eiichiro Kaneko, Haruto Tsujisaki, Masashi Fujiwara, Hidenori Ando, Tatsuhiro Ishida, Hirofumi Tani, Kenji Tajima
(Faculty of Engineering, Hokkaido University)
- PA40 Improved Sensitivity of Bioluminescence Assay in a Paper-Based Analytical Device as a Platform**
Presenter Fuko Tanaka
Author Fuko Tanaka, Shota Oyama, Akihiko Ishida, Masatoshi Maeki, Manabu Tokeshi, Masashi Fujiwara, Kenji Tajima, Hirofumi Tani
(Hokkaido University)
- PA41 Polysaccharide Nanofiber Scaffolds for Human Mesenchymal Stem Cells Under Xeno-free Culture Conditions**
Presenter Ritomo Kai
Author Takuya Kitaoka, Ritomo Kai, Mayumi Hatakeyama
(Kyushu University)
- PA42 Structural Polysaccharide Nanofibers Activate Cellular TLR2 Signaling by Direct Cell-Scaffold Contact**
Presenter Risa Hatase
Author Takuya Kitaoka, Risa Hatase, Mayumi Hatakeyama

- (Kyushu University)
- PA43 Photo-oxidation for controlled cargo release from cellulose nanofiber hydrogel-bound liposomes.**
Presenter Olga Lem
Author Timo Laaksonen, Olga Lem, Alexander Efimov, Nikita Durandin
(Tampere University)
- PA44 IT'S TIME TO BE SMART: LIPOSOMAL NANOCELLULOSE HYDROGEL SYSTEMS FOR NIR-LIGHT DRIVEN ON-DEMAND DRUG DELIVERY**
Presenter Puja Gangurde
Author Puja Gangurde, Tatu Lajunen, Patrick Laurén, Timo Laaksonen
(University of Helsinki)
- PA45 C@SiO₂ materials derived from in situ carbonized cellulose or lignin in rice husks suitable for anode of lithium-ion batteries**
Presenter Xiaojing Yang
Author Xiaojing Yang, Daina Wei, Junkai Zhao, Ce Zhang
(Beijing Normal University)
- PA46 Magnetic Response of Elasticity for Methylcellulose/Carrageenan Hydrogels**
Presenter Rio Urano
Author Tetsu Mitsumata, Rio Urano, Mika Kawai
(Niigata University)
- PA47 Effect of calcium divalent ions on the electric properties of cellulose nanofiber aqueous solutions**
Presenter Masahiro Kaneko
Author Masahiro Kaneko, Yoshifumi Yamagata, Keisuke Miyamoto, Mika Kawai, Tetsu
(Niigata University)
- PA48 Viscoelasticity and electric property of cellulose nanofiber aqueous solutions under shear flow**
Presenter Masahiro Kaneko
Author Masahiro Kaneko, Yoshifumi Yamagata, Keisuke Miyamoto, Mika Kawai, Tetsu
(Niigata University)
- PA49 Electrochemical Migration Inhibition of Electronics by Surface-Modified TEMPO-Oxidized Cellulose Nanofiber Coatings**
Presenter Chenyang Li
Author Chenyang Li, Takaaki Kasuga, Hirotaka Koga, Masaya Nogi
(Osaka University)
- PA50 Development of high thermal conductivity cellulose nanofiber filament**
Presenter Shunto Sato
Author Shunto Sato, Junichiro Shiomi, Tsuguyuki Saito, Masaki Kudo, Kazuho Daicho
(The University of Tokyo)
- PA51 Compressible Cu-wood composites toward stress sensor**
Presenter Xiaoying Xu
Author Yuanyuan Li, Xiaoying Xu, Jonas Garemark, Farsa Ram
(KTH Royal Institute of Technology)
- PA52 The light energy converter based on cellulose materials**
Presenter Satoki Ashizawa
Author Satoki Ashizawa, Yuichiro Shiozawa, Kohei Miyazawa, Yoshinobu Uegaki
(Yamanashi Industrial Technology Center)
- PB01 Production of Nanofibrillated Bacterial Cellulose (NFBC) from Agro-industrial By-**
Presenter Ryo Takahama
Author Kenji Tajima, Ryo Takahama, Ryo Serizawa, Hiroaki Sakurai, Chiaki Ogino
(Hokkaido University)

- PB02 Top-Down Approach Fabricating Anisotropic Cellulose Based Hygroscopic Aerogels for Water Capturing Material**
Presenter Zhu Long
Author Xiaotong Fu, Zhu Long
(Jiangnan University)
- PB03 Tuning of Transgene Expression in Cellulose synthesizing Bacteria for In Vivo Nanocomposite Production**
Presenter Noriko Iikawa
Author Kenji Tajima, Noriko Iikawa, Ryo Takahama, Ryo Serizawa, Hosei Hamanishi, Masashi Fujiwara, Hirofumi Tani, Tetsuo Kondo
(Hokkaido University)
- PB04 Enzymatic synthesis of crystalline cellulose in vitro: protein mould for anti-parallel**
Presenter Tomohiro Kuga
Author Tomohiro Kuga, Naoki Sunagawa, Kiyohiko Igarashi
(The University of Tokyo)
- PB05 In vitro cellulose synthesis using a cellulose synthase complex**
Presenter Yuna Maeda
Author Yuna Maeda, Sae Ito, Ryo Takahama, Go Takayama, Shinji Ebara, Masashi Fujiwara, Hirofumi Tani, Tomoya Imai, Kenji Tajima
(Hokkaido University)
- PB06 Whole genome information acquisition and analysis of cellulose synthesis-related genes and proteins in *Gluconacetobacter intermedius* NEDO-01**
Presenter Kazuki Nagai
Author Kazuki Nagai, Kenji Tajima, Masashi Fujiwara, Hirofumi Tani, Ryo Takahama, Ryo Serizawa, Hosei Hamanishi, Chiaki Ogino
(Hokkaido University)
- PB07 Adsorption properties of a novel cellulose-binding domain that specifically adsorbs on crystalline cellulose I**
Presenter Yuka Kojima
Author Yuka Kojima, Naoki Sunagawa, Satomi Tagawa, Tomohiro Hatano, Moeri Aoki, Masahisa Wada, Tatsuki Kurei, Kiyohiko Igarashi, Makoto Yoshida
(Tokyo University of Agriculture and Technology)
- PB08 Uncovering the Catalytic Mechanism of Inverting Cellulase CBH2 by Visualization of Hydrogens using Neutron Crystallography**
Presenter Mikako Tachioka
Author Mikako Tachioka, Sora Yamaguchi, Shigeru Deguchi, Masahiro Samejima, Kiyohiko (Japan Agency for Marine-Earth Science and Technology (JAMSTEC))
- PB09 The roles of conserved amino acid residues in a cellulose binding domain from the brown-rot fungus *Gloeophyllum trabeum***
Presenter Moeri Aoki
Author Makoto Yoshida, Moeri Aoki, Yuka Kojima, Masahisa Wada, Makoto Yoshida
(Tokyo University of Agriculture and Technology)
- PB10 Observation of fungal hyphae in lignin-free wood in terms of anatomical structure vs. chemical component**
Presenter Masaumi Miyabayashi
Author Masaumi Miyabayashi, Tatsuki Kurei, Seiya Hirano, Rikako Tsukida, Makoto Yoshida, Yoshiki Horikawa
(Tokyo University of Agriculture and Technology)
- PB11 Immunohistochemical profiling of poplar wood fiber using monoclonal antibodies directed to non cellulosic polysaccharides**
Presenter Mahiro Tsuchimoto
Author Mahiro Tsuchimoto, Tatsuya Awano, Arata Yoshinaga, Junji Sugiyama

(Kyoto University)

- PB12 Structural characterization of lignin-xylan complex extracted by ionic liquid**
Presenter Masahiro Mizuno
Author Masahiro Mizuno, Yasuko Saito, Akio Kumagai, Satomi Tagawa, Yoshihiko Amano (Shinshu University)
- PB13 Shrinkage anisotropy in carbonization of softwood and hardwood**
Presenter Yu Wang
Author Yu Wang, Yu Wang, Takashi Nomura, Eiji Minami, Haruo Kawamoto (Kyoto University)
- PC01 Covalently DNA immobilization on TEMPO-oxidized pulp fibers using amide condensation reaction and click chemistry**
Presenter Hiroya Nakauchi
Author Hiroya Nakauchi, Satomi Tagawa, Masahiro Mizuno, Yoshihiko Amano (Shinshu University)
- PC02 Preparation and antimicrobial activity of nanofibrillated bacterial cellulose surface modified with quaternary ammonium salts**
Presenter Hiroyuki Kono
Author Hiroyuki Kono, Yoichiro Sogame, Uugan-Erdene Purevdorj, Makoto Ogata, Kenji (National Institute of Technology, Tomakomai College)
- PC03 Bifunctional cellulose nanocrystals for antimicrobial applications**
Presenter Jose Luis Chiara
Author Jose Luis Chiara, Larissa Maierhofer, Andrea Albaya, Ruth Prieto-Montero, Maite Tejon, Francisco Jesus Parra, Enrique Mann, Virginia Martinez-Martinez (Institute of General Organic Chemistry (IQOG-CSIC), Spain)
- PC04 Effect of Acid Hydrolysis on Cellulose Nanocrystal Production from Paper Mulberry**
Presenter Hae Min Jo
Author Ji Young Lee, Hae Min Jo, Soo Hyun Lee (Gyeongsang National University)
- PC05 Evaluation of Characteristics of Cationic Cellulose Nano-fiber Made from Cotton Linter Mixed Pulp**
Presenter SooHyun Lee
Author JiYoung Lee, SooHyun Lee, HaeMin Jo (Gyeongsang National University)
- PC06 Effects of alcoholysis on the matrix composition of earlywood and latewood in Japanese cedar (*Cryptomeria japonica*)**
Presenter Xiaoyi Wei
Author Xiaoyi Wei, Tatsuki Kurei, Seiya Hirano, Takuma Kozono, Yoshiki Horikawa (Tokyo University of Agriculture and Technology)
- PC07 Hyperspectral imaging analysis for cellulose hydrolysed by HCl gas**
Presenter Nashwa Attallah
Author Nashwa Attallah, Isaac Miranda Vald, Juha Koivisto, Valentina Guccini, Mikko Alava, Eero Kontturi (Aalto University)
- PC08 On-site aqueous counter collision method for simultaneous nano-pulverization and nano-composition**
Presenter Yutaro Tsujita
Author Tetsuo Kondo, Yutaro Tsujita, Karin Yamaguchi, Daisuke Tatsumi (Tokyo University of Agriculture and Technology)
- PC09 Effect of ionic liquids pretreatment observed by the differences in the content of acid-soluble lignin for white or red Sorghum**
Presenter Mariely Cristine Dos Santos
Author Mariely Cristine Dos Santos, Satomi Tagawa, Masahiro Mizuno, Yoshihiko Amano

(Shinshu University)

PC10 Optimization of preparation process for cellulose nanofiber

Presenter Tomoki Ito

Author Kayoko Kobayashi, Tomoki Ito, Shuji Fujisawa, Tsuguyuki Saito
(The University of Tokyo)

PC11 Cellulose Nanocrystal-Based New Materials

Presenter Jin Huang

Author Jin Huang, Lin Gan
(Southwest University)

PC12 Chemical purification of cellulose from lignocellulosic biomass without heating

Presenter Tatsuki Kurei

Author Tatsuki Kurei, Yoshiki Horikawa
(Tokyo University of Agriculture and Technology)

PC13 Effect of Partial Delignification on Defibrillation of Brassica Campestris Straw and Its Performance in Transparent Film

Presenter Dayong Huang

Author Dayong Huang, Min Wu, Yong Huang
(Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)

PC14 Creation and characterization of bioplastics by acylation of wood

Presenter Masanori Kameyama

Author Masanori Kameyama, Hiroshi Kamitakahara, Mariko Yoshioka, Naotaka Nishio
(Kyoto university)

PC15 Visualization of hybrid nanofibrils composed of xyloglucan and disintegrated bacterial cellulose

Presenter Satomi Tagawa

Author Satomi Tagawa, Ken Tokuyasu, Kenji Yamagishi, Masakazu Ike, Yoshihiko Amano, Masahiro Mizuno
(Shinshu University)

PC16 Specific ion effects on lignin adsorption and transport through cellulose

Presenter Roujin Ghaffari

Author Roujin Ghaffari, Vishnu Aramughan, Anette Larsson
(Chalmers University of Technology)

PC17 Laser processability of films prepared by CNFs with different surface chemical compositions

Presenter Natsuo Suzuki

Author Kojiro Uetani, Natsuo Suzuki, Daisuke Ando
(Tokyo University of Science)

PC18 Synthesis of Copper Nanoparticles/CNF Composite Materials Using a High-Pressure Wet-Type Jet Mill

Presenter Eiji Fujiii

Author Eiji Fujiii, Yoshihiko Kimura, Atsushi Minemura
(Industrial Technology Center of Okayama Prefecture)

PC19 Probing elasticity and wettability behavior of native and functionalized cellulose systems using Molecular Dynamics Simulations

Presenter Vaibhav Modi

Author Vaibhav Modi, Antti Paajanen
(VTT Technical Research Centre of Finland Ltd.)

PC20 IR spectroscopic analysis of the character of interaction at the interface between the ACC-cellulose nanofibrils and polypropylene sheet

Presenter Masato Kamogawa

Author Masato Kamogawa, Tetsuo Kondo
(Kyushu University)

- PC21 Adsorption of Pluronic F127 triblock copolymer (PEO-PPO-PEO) on TEMPO oxidized cellulose nanocrystals**
Presenter Alessandra Lavoratti
Author Alessandra Lavoratti, Onajite Abafe Diejomaoh, Stephen J. Eichhorn
(University of Bristol)
- PC22 Evaluation of the water repellency and structure of cellulose nanofibers modified using perfluorinated octyl silane**
Presenter Kohei Yamada
Author Kohei Yamada, Noriko Kanai, Izuru Kawamura
(Yokohama National University)
- PC23 A Facile and Green Method to Improve the Water Resistance of Nanocellulose Film and Its Mechanism**
Presenter Lijiaqi Zhang
Author Min Wu, Lijiaqi Zhang, Yong Huang
(Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)
- PC24 Inhibition of quinacridone pigment aggregation using cellulose nanofiber through intermolecular interaction between quinacridone and cellulose**
Presenter Yasuko Saito
Author Yasuko Saito, Naoya Hontama, Yuki Tanaka, Takashi Endo, Keita Sakakibara
(Research Institute for Sustainable Chemistry, National Institute of Advanced Science and Technology (AIST))
- PC25 The effect of charges on non-ionic polymer interaction with polysaccharide surfaces**
Presenter Vishnu Arumughan
Author Vishnu Arumughan, Eero Kontturi
(Aalto University)
- PC26 Preparation of Functional Coated paper by Coating with Carboxymethylcellulose Ammonium salt**
Presenter Tomoki Asano
Author Tomoki asano, Hiroyuki itaya, Naoki Wada, Kenji Takahashi
(Kanazawa University)
- PC27 Alkyl-grafted cellulose nanofiber from agricultural waste hop stems for improvement of emulsion stability**
Presenter Miyu Tanzawa
Author Miyu Tanzawa, Kohei Yamada, Noriko Kanai, Sari Kumagai, Takahiro Sakai, Mijiddorj Batsaikhan, Izuru Kanai
(Yokohama National University)
- PC28 Design, synthesis, and characterization of cellulose/betulin conjugates via click**
Presenter Shiori Itoga
Author Shiori Itoga, Kazuki Sugimura, Hiroshi Kamitakahara
(Kyoto University)
- PC29 The organocatalytic approach to preparing cellulose diacetate-based plastics**
Presenter Wakana Makita
Author Wakana Makita, Naotaka Nishio, Hiroshi Kamitakahara, Mariko Yoshioka
(Kyoto university)
- PC30 Synthesis and properties of cellulose derivative with carbodiimide groups**
Presenter Toshiyuki Takano
Author Toshiyuki Takano, Hiroki Ochiai, Masaya Shibano, Hiroshi Kamitakahara
(Kyoto University)
- PC31 Guideline of zwitterion design enabling one-pot bioethanol production**
Presenter Htomi Tobe
Author Htomi Tobe, Ayumi Hachisu, Kenji Takahashi, Kazuaki Ninomiya, Kosuke Kuroda
(Kanazawa university)

- PC32 Thermal stability of choline chloride/glucose deep eutectic solvent**
Presenter Soki Idenaga
Author Soki Idenaga, Hisashi Miyafuji, Takashi Hosoya
(Kyoto Prefectural University)
- PC33 Chiroptical properties of 2,3-di-O-ethyl-6-O-acetyl/ethyl cellulose**
Presenter Takanori Ueno
Author Takanori Ueno, Hiroshi Kamitakahara, Kazuki Sugimura
(Kyoto University)
- PC34 Preparation of Highly Crystalline and High Mechanical Strength Cellulose II Matetrilals by Multi-step Post-treatments Using Low-Concentration Alkaline**
Presenter Yuki Kugo
Author Yuki Kugo, Takuya Isono, Masashi Fujiwara, Toshifumi Satoh, Hirofumi Tani, Tomoki Erata, Kenji Tajima
(Hokkaido University)
- PC35 Strong and functional filaments made of cellulose nanofibrils and silver nanowires as wearable devices**
Presenter Damien Daniel Pierce
Author Damien Daniel Pierce, Korneliya Gordeyeva, Calvin Brett, Rohan Kulkarni, Mu-Rong Wang, Silja Flenner, Imke Greving, Elena Longo, Stephan Roth, Daniel Söderberg
(KTH Royal Institute of Technology)
- PC36 Synthesis, structure, and property of trifurcate derivatives having cellobiose arms**
Presenter Teruki Sugahara
Author Teruki Sugahara, Kazuki Sugimura, Hiroshi Kamitakahara
(Kyoto University)
- PC37 Machine learning assisted effective production of nanocellulose reinforced PP composites for high impact energy using ATR-IR spectroscopy of wooden materials**
Presenter Koyuru Nakayama
Author Koyuru Nakayama, Takashi Endo, Keita Sakakibara
(Research Institute for Sustainable Chemistry, National Institute of Advanced Science and Technology (AIST))
- PC38 Synthesis, self-assembly, and mechanical properties of cellooligosaccharide-based block copolymers**
Presenter Takuya Isono
Author Takuya Isono, Satoshi Katsuhara, Kenji Tajima, Toshifumi Satoh
(Hokkaido University)
- PC39 Cellulose oxalate chemistry**
Presenter Beatrice Swensson
Author Beatrice Swensson, Monica Ek
(KTH Royal Institute of Technology)
- PC40 Preparation and its oxidation ability of protoporphyrin(Fe) bound chitosan particle**
Presenter Hyolee Choi
Author Hyolee Choi, Yoshikuni Teramoto, Toshiyuki Takano
(Kyoto University)
- PC41 Understanding Interactions of Nano-cellulose Suspensions with Plant Leaves for Enhancing Topical Delivery of Soluble Bioactive and Particulates**
Presenter Shang Xu Jiang
Author Shang Xu Jiang, Gordon (Zhiping) Xu, Peng Li, Neena Mitter, Nasim Amiralian, Li Li
(Australian Institute for Bioengineering and Nanotechnology (AIBN))
- PC42 Basic study to improve zwitterionic cellulose solvents for one-pot ethanol**
Presenter Ayumi Hachisu
Author Ayumi Hachisu, Kazuaki Ninomiya, Kenji Takahashi, Kosuke Kuroda
(Kanazawa University)

- PC43 Facile preparation of cellulose IV using ionic liquids**
Presenter Nana Tokumasu
Author Nana Tokumasu, Takeru Nakano, Yoshifumi Kimura, Takatsugu Endo (Doshisha University)
- PC44 Synthesis and properties of cellobiose octaacetates with different chirality**
Presenter Waki Ikegami
Author Waki Ikegami, Yoshikuni Teramoto, Toshiyuki Takano (Kyoto University)
- PC45 Contamination of stirring bars in heterogeneous solutions**
Presenter Yusuke Morimoto
Author Yusuke Morimoto, Ayumi Hachisu, Kenji Takahashi, Kosuke Kuroda (Kanazawa University)
- PC46 Pursuing transition from cellulose II to cellulose I**
Presenter Rikuto Kihara
Author Rikuto Kihara, Yoshifumi Kimura, Takatsugu Endo (Doshisha University)
- PC47 A new phosphonate-type zwitterion for bioethanol production**
Presenter Tetsuo Komori
Author Tetsuo Komori, Kosuke Kuroda, Kenji Takahashi (Kanazawa University)
- PC48 Characterization of regenerated cellulose fibers prepared from different lignocellulosic plants with ionic liquids and their comparison**
Presenter Akikazu Kashimoto
Author Akikazu Kashimoto, Yoko Okahisa (Kyoto Institute of Technology)
- PC49 Presence of molecular sheets inferred from internal swelling and crystal cleavage of cross-linked regenerated cellulose**
Presenter Akari Okugawa
Author Akari Okugawa, Chihiro Yamane, Yoshiaki Yuguchi (Osaka Electro-Communication University)
- PC50 Comparison of cellulose degradation by amino acid-based deep eutectic solvent under different conditions**
Presenter Kaori Saito
Author Takashi Watanabe, Kaori Saito, Tomohiro Hashizume (Kyoto University)
- PC51 Characterization of Cellulose Hydrogels Prepared from Molten Lithium Salt Hydrates**
Presenter Chufan Zhou
Author Chufan Zhou, Shuhei Miura, Kayoko Kobayashi, Ryouyusuke Kusumi, Masahisa Wada (Kyoto University)
- PC52 Synthesis of Grafted Nanofibrillated Bacterial Cellulose via a Grafting onto Method**
Presenter Takehiro Hoshino
Author Takehiro Hoshino, Hamidah Binti Hashim, Shuichiro Seno, Feng Li, Hiroshi Kani, Masashi Fujiwara, Takuya Isono, Takuya Yamamoto, Hirofumi Tani, Toshifumi Satoh, (Hokkaido University)
- PC53 Cellulose Fiber surface modification by SET-LRP for compounding into mechanically enhanced 3D-printable materials**
Presenter Enguerrand Barba
Author Enguerrand Barba, Julien R.G. Navarro, Jakob Benedikt Mietner (Hamburg University)
- PC54 Hydrophobization of cellulose nanofibers by enzymatic grafting of hydrophobic polysaccharides**
Presenter Tomoya Anai

- Author Tomoya Anai, Jun-ichi Kadokawa
(Kagoshima University)
- PP01 Concentration evaluation of cellulose nanofiber suspensions without drying**
Presenter Koichi Kita
Author Kojiro Uetani, Koichi Kita
(Tokyo University of Science)
- PP02 Evaluation of the dispersion state of cellulose nanocrystals using the centrifugal sedimentation method**
Presenter Yusui Sato
Author Yusui Sato, Toshiya Okazaki, Hiroshi Tateno
(HORIBA Institute for Particle Analysis in AIST TSUKUBA (HIPAA), National Institute of Advanced Industrial Science and Technology (AIST))
- PP03 Morphological analysis of cellulose nanofibers by birefringence parameter of aqueous dispersion**
Presenter Sakura Inada
Author Kojiro Uetani, Sakura Inada
(Tokyo University of Science)
- PP04 Inter-fiber interactions in aqueous suspensions of nanocelluloses obtained by aqueous counter collision for various raw materials**
Presenter Daisuke Tatsumi
Author Tetsuo Kondo, Daisuke Tatsumi, Hiroshi Aramaki
(Kyushu University)
- PP05 Acacia crassicarpa vs Eucalyptus Pelitta : Impact of pulp characteristics to the Cellulose Nanofiber and Lignocellulose Nanofiber**
Presenter Natalie Arazella
Author Hye Jung Youn, Natalie Arazella
(Seoul National University)
- PP06 Composite cellulose filaments: effect of media chemistry and particle size on CNFs alignment**
Presenter Saeed Davoodi
Author Saeed Davoodi, Erfan Oliaei, Daniel Söderberg, Fredrik Lundell
(Department of Engineering Mechanics, KTH Royal Institute of Technology, Teknikringen 8, SE-10044 Stockholm, Sweden)
- PP07 Mechanical Properties of Magnetically Oriented Tunicate Cellulose Microcrystals / Polyvinyl Alcohol Nanocomposite Films**
Presenter Asahi Maeda
Author Asahi Maeda, Kayoko Kobayashi, Ryosuke Kusumi, Masahisa Wada
(Kyoto University)
- PP08 Withdrawn**
Presenter
Author
- PP09 Investigation of Thickness–Property Correlations of Fully Nanocellulose Based**
Presenter Shun Ishioka
Author Tsuguyuki Saito, Shun Ishioka, Takayuki Hirano, Nobuhiro Matoba, Noriyuki Isobe, Shuji Fujisawa
(The University of Tokyo)
- PP10 Low temperature cellulose-acid complexes**
Presenter Jia Hui Lim
Author Jia Hui Lim, Wei Li, Isabelle Morfin, Isabelle Jeacomine, Karim Mazeau, Alfred D. French, Yoshiharu Nishiyama, Yu Ogawa
(Univ. Grenoble Alpes, CNRS, CERMAV)

- PP11 Meso-structural changes in cellulose within cell walls of hardwood upon 200°C hydrothermal treatment**
Presenter Tomoko Kuribayashi
Author Tomoko Kuribayashi, Yu Ogawa, Isabelle Morfin, Yuji Matsumoto, Yoshiharu (The University of Tokyo)
- PP12 Molecular simulations on the effect of fatty acid grafting on cellulose-water**
Presenter Antti Paajanen
Author Antti Paajanen, Panu Korpela, Vaibhav Modi (VTT Technical Research Centre of Finland Ltd.)
- PP13 Multi-scale structure of woody plant stems studied with scanning X-ray scattering and microtomography**
Presenter Patrik Ahvenainen
Author Patrik Ahvenainen, Enriqueta Noriega Benitez, Tuula Jyske, Heikki Suhonen, Paavo Penttilä (Aalto University)
- PP14 Machine Learning-Based Analysis of X-ray Scattering and NIR Imaging Data for Characterization of Spruce Wood**
Presenter Enriqueta Noriega Benitez
Author Enriqueta Noriega Benitez, Mikko Mäkelä, Paavo Penttilä (Aalto University)
- PP15 Chiroptical properties of blends of left-handed ethyl cellulose/CHCl₃ and right-handed acetyl ethyl cellulose/CHCl₃ lyotropics**
Presenter Kazuki Sugimura
Author Kazuki Sugimura, Yuuki Sato, Hiroshi Kamitakahara (Kyoto University)