




## TECHNICAL PROGRAM

As of 06-01-19 - Subject to change – please check the conference app for updates.


<b>Monday 3 June 2019</b>	
<b>9:00 - 10:00</b>	<p><b>TAPPI and NCF Welcome</b></p> <p><i>Dr. Emily Cranston, University of British Columbia</i>  <i>Dr. Nobumitsu Murayama, Vice President of Nanocellulose Forum</i>  <i>Mr. Ichro Kanke, Executive Director of Member Association of Cellulose Nanofiber Utilization</i>  <i>Promotion Parliamentary Vice-Minister of the Environment, Japan</i></p> <p><b>TAPPI Keynote</b>  <b>The Current Status and The Future Prospects of CNF R&amp;D in Nippon Paper Industries</b>  <i>Mr. Kazufumi Yamasaki, Executive Vice President</i>  <i>Nippon Paper Industries Co., Ltd.</i>  <i>Convention Hall A</i></p>
<b>10:00 – 10:30</b>	<p><b>Break</b>  <i>Convention Hall B</i></p>
<b>10:30 – 11:15</b>	<p><b>Keynote</b>            Overview of Canada – <i>Associate Professor Emily Cranston, University of British Columbia</i>  <i>Convention Hall A</i></p>
<b>11:15 – 12:00</b>	<p><b>Keynote</b>            Overview of Europe            - Activities on cellulose nanomaterials            – <i>Dr. Heli Kangas, Research Team Leader, Project Manager</i>  <i>Biomass Processing and Products, VTT Technical Research Centre of Finland Ltd.</i>  <i>Convention Hall A</i></p>
<b>12:00 - 13:30</b>	<p><b>Lunch</b>            Sponsored by:    <b>Mentor/Mentee Meet &amp; Greet</b>  <i>Convention Hall B</i></p>
<b>13:30 – 14:15</b>	<p><b>Keynote</b>            Overview of US – <i>Dr. Alan Rudie, USDA Forest Service, Forest Products Laboratory</i>  <i>Convention Hall A</i></p>
<b>14:15 – 15:00</b>	<p><b>Keynote</b>            Overview of China - <i>Professor Dr. Yong Huang, Technical Institute of Physics and Chinese Academy of Sciences</i>  <i>Convention Hall A</i></p>
<b>15:00 - 15:30</b>	<p><b>Break</b>  <i>Convention Hall B</i></p>

15:30 – 16:15	<b>Keynote</b> Overview of Nanocellulose R&D in Japan <b>Professor Akira Isogai</b> , University of Tokyo Convention Hall A		
16:15 – 18:00	<b>Welcome Reception</b> Sponsored by:  Convention Hall B		
18:00 – 19:30	<b>Young Professionals Mixer</b> Convention Hall A		
<b>Tuesday</b> <b>4 June 2019</b>			
8:30 – 10:00	<b>Session 2: Automotive Processing</b> <b>Session Chair: Priya Venkatraman</b> , Virginia Tech Room 301	<b>Session 3: Emulsions, Gels and Foams I</b> <b>Session Chair: Yaman Boluk</b> , University of Alberta Room 201A	<b>Session 4: Production of CNFs</b> <b>Session Chair: Shaul Lapidot</b> , Melodea Ltd. Room 201B
8:32	CNF Reinforced Thermoplastic Resins for Lightweight Parts - <b>Takeshi Semba</b> , Kyoto Municipal Institute of Industrial Technology and Culture	Expanding Specific Strength and Toughness of Aerogels by Introduction of Chiral Nematic Order – <b>Blaise Tardy</b> , Aalto University	Mineral/ Microfibrillated Cellulose Composite Materials: Recycled Fibres, Engineered Minerals and New Product Forms - <b>David Skuse</b> , FiberLean Technologies Limited
8:54	Road to the Automotive Parts Using CNFs Materials – <b>Hiroyuki Yano</b> , RISH, Kyoto University	Robust Shape Memory Nanocellulose-Based Aerogels Decorated with Silver Nanoparticles for Dye Discoloration – <b>Weihua Zhang</b> , ÅBO Akademi University	New High Solid Content CNFs Production by Twin Screw Extrusion Optimization - <b>Julien Bras</b> , Grenoble INP
9:16	Unprecedented Ultrahigh Expansion Injection-Molded Polypropylene Foams with Hydrophobic-Modified CNFs – <b>Masahiro Ohshima</b> , Kyoto University	Cost-Effective and Functional Emulsions Stabilized with Renewable Particles – <b>Long Bai</b> , Aalto University	Combination of Mechanical Treatments to Optimize CNF Production - <b>Gabriel Banvillet</b> , Arjowiggins Creative Papers
9:38	Development of Lightweight Foamed Plastics with High Mechanical Properties by Using Hydrophobic Modified CNF and Controlling Cell Morphologies – <b>Akihiro Ito</b> , Kyoto Municipal Institute of Industrial Technology and Culture	New Applications of Cross-Linked CNC Aerogels – Energy Production/Storage Devices, Sorbents, Drug Delivery and Bone Implants – <b>Emily Cranston</b> , University of British Columbia	Steam Pretreatment Enhancing Productivity of CNFs from Oil Palm Biomass - <b>Hidayah Ariffin</b> , Universiti Putra Malaysia
10:00 -10:30	<b>Break</b> Convention Hall B		

<b>10:00 – 16:00</b>	<b>Nanocellulose Exhibition in TAPPI Nano</b> <i>Convention Hall A</i>		
<b>10:30 - 12:00</b>	<b>Session 5: New Emerging Applications</b> <b>Session Chair: Aji Mathew,</b> <i>Stockholm University</i> <i>Room 301</i>	<b>Session 6: Plant Based Polymer Composites</b> <b>Session Chair: Johan Foster,</b> <i>Virginia Tech</i> <i>Room 201A</i>	<b>Session 7: Flexible Bio-Electronics</b> <b>Session Chair: Chuanwei Miao,</b> <i>FPIInnovations</i> <i>Room 201B</i>
<b>10:32</b>	Cellulose Biohybrid Foams – Processing, Properties and Applications - <b>Gustav Nyström,</b> <i>EMPA</i>	High Strength Molded Fibers and Transparent Biocomposites Based on Holocellulose Fibers – <b>Xuan Yang,</b> <i>KTH Royal Institute of Technology</i>	Substrates Based on CNFs for Printed Electronics and Optics – <b>Katariina Torvinen,</b> <i>VTT Technical Research Centre of Finland Ltd.</i>
<b>10:54</b>	The Role of Chemistry in High Performance Cement via CNC Addition - <b>Jeffrey Youngblood,</b> <i>Purdue University</i>	Preparation and Pore Regulation of Carboxyethylated Micro-/Nano-Cellulose Films - <b>JingHuan Chen,</b> <i>China National Pulp and Paper Research Institute Co., Ltd.</i>	Preparation and Application of Nanocellulosic Functional Materials - <b>Feng Xu,</b> <i>Beijing Forestry University</i>
<b>11:16</b>	CNCs in Cement-Based Foamed Composite - <b>Vivek Bindiganavile,</b> <i>University of Alberta</i>	Morphology and Properties of CNC-based Biocomposites with Various Compositions – <b>Emilia Csiszár,</b> <i>Budapest University of Technology and Economics</i>	Highly Transparent Cellulose Films for Electronic Applications – <b>Zhiqiang Fang,</b> <i>South China University of Technology</i>
<b>11:38</b>	Edible Bio-Based Oleofilms from Nanocellulose-Stabilized Pickering Emulsions for Active Edible Barriers - <b>Luis Alexandro Valencia Lopez,</b> <i>Stockholm University</i>	Robust and Non-Hazardous Porous Constructs Enabled by Compositing Nanoparticles with Nanocelluloses - <b>Bruno Mattos,</b> <i>Aalto University</i>	Cellulose Based Functional Materials in Electrical and Electrochemical Flexible Devices – <b>Luis Pereira,</b> <i>CENIMAT/13N</i>
<b>12:00 – 13:30</b>	<b>Lunch on Your Own</b>		
<b>13:30 – 16:30</b>	<b>CNM Characterization Workshop: Primary Characterization</b> <b>(additional registration fees required)</b> <i>Room 202</i>		
<b>13:30 – 17:00</b>	<b>Cellulose Nanomaterial Safety: Building a Bridge from Theory to Practice Workshop</b> <b>(additional registration fees required)</b> <i>Room 203</i>		
<b>17:00-18:30</b>	<b>Session 8: Poster Session and Student Poster Competition</b> <i>Convention Hall B</i>		

**Wednesday  
5 June 2019**

<b>7:30 –8:30</b>	<b>NANO Research Committee Meeting (Invitation Only)</b> <i>Room 203</i>		
<b>8:30 -10:00</b>	<b>Session 9: Emulsions, Gels and Foams II</b> <b>Session Chair: Eero Kontturi,</b> <i>Aalto University Room 301</i>	<b>Session 10: Measurement of Surface Interactions</b> <b>Session Chair: Michael Bortner,</b> <i>Virginia Tech Room 201A</i>	<b>Session 11: Production of Rod-Shaped CNMs</b> <b>Session Chair: Mehdi Tajvidi,</b> <i>University of Maine Room 201B</i>
<b>8:32</b>	Rheological Characterization of Medium and High Internal Phase Oil-in-Water Pickering Emulsions Stabilized with CNCS – <b>Chuanwei Miao,</b> <i>FPIInnovations</i>	Hydrophobization of TEMPO Oxidized CNF – <b>Shinichi Onogi,</b> <i>Nippon Paper Industries, Co., Ltd.</i>	Developments in CNC Commercialization – <b>Geoff Clarke,</b> <i>Alberta-Pacific Forest Industries Inc.</i>
<b>8:54</b>	Dual Functions of CNFs in Oil-in-Water Emulsion: Pickering Emulsifier and a Unique Dispersion Stabilizer – <b>Yohsuke Goi,</b> <i>DKS Co. Ltd.</i>	Atomic Force Microscopy as a Tool to Probe Nanocellulose Surface: Possibilities and Challenges – <b>Aji Mathew,</b> <i>Stockholm University</i>	Demonstration of CNC Production at Dramatically Lower Acid Ratios– <b>Michael Gattrell,</b> <i>NORAM Engineering and BC Research</i>
<b>9:16</b>	Fabrication of Edible Oil-in-Water Pickering Emulsions by Microfluidization Using Nanocellulose: Impact on In Vitro Digestion of Triglyceride – <b>Long Bai,</b> <i>Aalto University</i>	Solid State NMR Study on the Cellulose/Poly( $\epsilon$ -Caprolactone)Composites – <b>Min Xu,</b> <i>East China Normal University</i>	CNCs Production and Development of Innovative Products – <b>Shaul Lapidot,</b> <i>Melodea, Ltd.</i>
<b>9:38</b>	Facile Fabrication of Robust Self-Standing Nanochitin Hydro-/Aerogel – <b>Liang Liu,</b> <i>Nanjing forestry University</i>	Rheological Properties of Dilute Nanocellulose Dispersions – <b>Reina Tanaka,</b> <i>Forestry and Forest Products Research Institute</i>	Production of Various Hydrolyzed Cellulosic Materials in a Gas/Solid Reactor Utilizing Pressurized HCl – <b>Timo Pääkkönen,</b> <i>Aalto University</i>
<b>10:00 -10:30</b>	<b>Break</b> <i>Convention Hall B</i>		
<b>10:00 – 15:30</b>	<b>Nanocellulose Exhibition in TAPPI Nano</b> <i>Convention Hall A</i>		

10:30 -12:00	<b>Session 12: Self-Standing CNM Films/Nanopapers and Process Optimization</b> <b>Session Chair: Julien Bras,</b> Grenoble INP Room 301	<b>Session 13: CNM Morphology</b> <b>Session Chair: Behzad (Benji) Ahvazi,</b> InnoTech Alberta Room 201A	<b>Session 14: CNM Modification for Polymer Processing</b> <b>Session Chair: Jeffrey Youngblood,</b> Purdue University Room 201B
10:32	Manufacture of Transparent Paper Using Surface Nanofibrillated Cellulose Fibers – <b>Wenxia Liu,</b> Qilu University of Technology	Nanostructural Properties and Twist Periodicity of CNFs with Variable Charge Density – <b>Mario Arcari,</b> ETH Zurich Department of Health Sciences and Technology	Nano Cellulose Composite with Various type of Thermoplastic Resins and Their Enhanced Mechanical Strength and Thermal Properties – <b>Ryohei Mori,</b> Green Science Alliance Co., Ltd.
10:54	Designing Flexible, Smooth, Highly Transparent and Hazy CNF Films – <b>Christian Aulin,</b> RISE	A Simple Framework for the Complete Morphological Characterization of CNFs to Enable Accurate Prediction of their Assembly Behavior - <b>Blaise Tardy,</b> Aalto University	Modification of CNCs With Triazine Derivates and Their Reinforcement for PLA Composite – <b>Xue Jiang,</b> Jiangnan University
11:16	Refined and Homogenized Nanocellulose: Fiber Quality, Energy and Strength – <b>Shaun Ang,</b> Monash University	Wet-TEM Investigation of Surface-Sulfated CNFs Dispersed in Water Gels - <b>Masaaki Hisa,</b> KRI, Inc.	Interfacial Control of TEMPO-Oxidized CNF Toward Composites – <b>Shunsuke Fukui,</b> Kao Corporation
11:38	Energy Efficient Production of Nanocellulose – <b>Warren Batchelor,</b> Monash University	Thermal Degradation of Cellulose Nanomaterials: Structural and Chemical Changes - <b>Francesco D'Acierno,</b> UBC	Tailoring Interfacial Layer Structures for Nanocellulose/Polymer Composites – <b>Hiroto Soeta,</b> University of Tokyo
12:00 - 13:30	<p><b>Lunch</b></p> <p>Sponsored by:</p>  <p>Convention Hall B</p> <p><b>Producers Committee Meeting (Invitation only)</b></p> <p>Room 203</p>		
13:30-15:00	<b>Session 15: Coatings, Films and Other CNM Applications</b> <b>Session Chair: Scott Rennecker,</b> University of British Columbia Room 301	<b>Session 16: CNM From Structured Materials/CNM Characterization for Safer by Design</b> <b>Session Chair: Jo Anne Shatkin,</b> Vireo Advisors, LLC Room 201A	<b>Session 17: Fundamental Mechanisms</b> <b>Session Chair: Wim Thielemans,</b> KU Leuven Room 201B
13:32	Application of Hydrophobically Modified CNF/Resin Masterbatch "STARCEL®" to Foamed Materials – <b>Shuichi Ohira,</b> SEIKO PMC Corporation	Analysis of the Properties of Anisotropic Foams as a Tool for Characterizing the Fibrillation Degree of CNFs – <b>Nathalie Lavoine,</b> North Carolina State University	Impact of Nanocellulose on the Mechanics and Microstructure of Pectin Hydrogels – <b>Patricia Lopez-Sanchez,</b> RISE, Research Institutes of Sweden
13:54	Cellulose Filaments (CF) for Light-Weight Composites and High Performance Concretes – <b>Balázs Tolnai,</b> Kruger Inc.	R2R Spray Deposition of CNF Thin Films Studied Real-Time Using Surface Sensitive Scattering Methods – <b>Calvin Brett,</b> KTH Royal Institute of	Metal Coordination Reinforced Polyacrylamide-Based Physical Hydrogels Compositing With Carboxylated Cellulose

		<i>Technology &amp; DESY Deutsches Elektronen-Synchrotron</i>	Derivatives – <b>Jianquan Wang</b> , <i>Beijing Institute of Technology</i>
<b>14:16</b>	Optimizing Various Aspects of Nanocellulose Film Forming on Steel Substrate for Drying Studies – <b>Vinay Kumar</b> , <i>VTT Technical Research Centre of Finland Ltd.</i>	Implementation of Safe-by-Design Thinking into Manufacturing and Use of Products Containing Nanomaterials - <b>Heli Kangas</b> , <i>VTT Technical Research Centre of Finland Ltd.</i>	Chitosan Nanofiber-Catalyzed Selective Knoevenagel Condensation Under Green Conditions – <b>Yusaku Hirayama</b> , <i>Kyushu University</i>
<b>14:38</b>	Structure and Functionalities of CNF Nonwoven Sheet – <b>Keisuke Jono</b> , <i>Asahi Kasei Corporation</i>	Update on the Environmental Health and Safety of CNMs – <b>James Ede</b> , <i>Vireo Advisors, LLC</i>	Nanocellulose Aerogels for CO <sub>2</sub> Capturing and Conducting Strain Sensors - <b>You-Lo Hsieh</b> , <i>University of California-Davis</i>
<b>15:00-15:30</b>	<b>Break</b> <i>Convention Hall B</i>		
<b>15:30 -17:00</b>	<b>Session 18: End User Panel</b> <b>Session Chair: Hamdy Khalil</b> , <i>Woodbridge Foam Corporation Room 301</i>	<b>Session 19: Methods in Safety Evaluation of CNM</b> <b>Session Chair: Heli Kangas</b> , <i>VTT Technical Research of Finland Ltd. Room 201A</i>	<b>Session 20: Photonics</b> <b>Session Chair: Chuanwei Miao</b> , <i>FPIInnovations Room 201B</i>
<b>15:32</b>	<b>Panelists:</b> <b>Kazuhito Jinno</b> , <i>DKS Co. Ltd.</i> <b>Junji Nemoto</b> <i>Hokuetsu Corporation</i> <b>Hiroki Matsuo</b> , <i>RBP Co.</i>	Development of Safety Assessment Methods for CNF – <b>Hiedo Kajihara</b> , <i>National Institute of Advanced Industrial Science and Technology/Research Institute of Safety and Sustainability</i>	Photonic CNC Films for Optoelectronic Devices – <b>Paul Grey</b> , <i>CENIMAT/i3N</i>
<b>15:54</b>		An Alternative Testing Strategy for Demonstrating the Safety of CNMs – <b>Jo Anne Shatkin</b> , <i>Vireo Advisors, LLC</i>	Fabrication and Regulation of Colorimetric Humidity-Sensitive CNC Films – <b>Guomin Zhao</b> , <i>Nanjing Forestry University</i>
<b>16:16</b>		Assessing Bioavailability and Bioperformance of Ingested CNFs Using a Novel Physiologically-Relevant Ex Vivo and in Vitro Integrated Methodology – <b>Christie Sayes</b> , <i>Baylor University</i>	Chioptical and Plasmonic Films via Electrochemical Deposition – <b>Chuanwei Miao</b> , <i>FPIInnovations</i>
<b>16:38</b>		In Vivo Testing Approach to Demonstrate the Safety of CNMs in Food– <b>Kimberly Ong</b> , <i>Vireo Advisors, LLC</i>	Control of the Colloidal Deposition of CNC Films – <b>Wim Thielemans</b> , <i>KU Leuven</i>
<b>18:30-21:30</b>	<b>Conference Dinner &amp; Awards Ceremony</b> (additional registration fee required) <i>Hotel The Manhattan</i>		



**Thursday  
6 June 2019**

<b>8:30 – 10:00</b>	<b>Session 21: Use of CNMs for Paper and Paperboard Packaging Application</b> <b>Session Chair: Nathalie Lavoine</b> , North Carolina State University Room 301B	<b>Session 22: New and Emerging Applications</b> <b>Session Chair: Keith Gourlay</b> , Performance BioFilaments Room 301A	<b>Session 23: Printing CNMs for Biomedical Applications</b> <b>Session Chair: Gilberto Siqueira</b> , EMPA Room 201A	<b>Session 24: Non-Traditional Methods for Nano-Lignocellulose Extraction</b> <b>Session Chair: Sean McAlpine</b> , Blue Goose Biorefineries Inc. Room 201B
<b>8:32</b>	Wet Lamination of Micro-Fibrillated Celluloses on Board – <b>David Guerin</b> , Centre Technique du Papier	Overview and Progress of the Nano Cellulose Vehicle (NCV) Project – <b>Naoki Obi</b> , Kyoto University	Bagasse - A Resource for Fibres and Nanocelluloses for Biocomposites and 3D Printing – <b>Gary Chinga Carrasco</b> , RISE PFI	Isolation of Nanocellulose From Biomass via Nontraditional Routes – <b>Feng Jiang</b> , The University of British Columbia
<b>8:54</b>	Benefits of Microfibrillated Cellulose in Paperboard - <b>Jonathan Phipps</b> , FiberLean Technologies	Ionic Polymer Metal Composites for Sensing and Actuation Produced with CNFs – <b>Mehdi Tajvidi</b> , University of Maine	Fabrication of Nanocellulose/PEGDA Hydrogel and Aerogel by Stereolithography – <b>Dong Sun</b> , South China University of Technology	Characterization of CNFs Prepared From Spent Coffee Grounds – <b>Noriko Kanai</b> , Yokohama National University
<b>9:16</b>	Nanocellulose: Packaging Applications and Commercial Development – <b>Jack Miller</b> , Biobased Markets	Novel Double-Networked Cellulose Based Shape Memory Polymer Composites – <b>Chenyang Cai</b> , Nanjing Forestry University	3D Printing of Nanocellulose Scaffold as Culture Platform and Tissue Mimics – <b>Xiaoju Wang</b> , Åbo Akademi University	Preparation of Carboxymethyl Nanocellulose Fibers with Tree-like Structure Using a Recyclable Etherification – <b>Ziqiang Shao</b> , Beijing Institute of Technology
<b>9:38</b>	Preparation of Packaging Paper with High Barrier Properties Through CNF Coating - <b>Hye Jung Youn</b> , Seoul National University	Mechanically Adaptive Nanocomposites with CNCs: Strain-Field Mapping with Digital Image Correlation – <b>Chunxiang Ding</b> , College of Materials Science and Engineering, Nanjing Forestry University	Biomimetic Inks Based on Hemicellulose and Nanocellulose for 3D Printing – <b>Wenyang Xu</b> , Åbo Akademi University	Preparation of Powder CNC From Offcut Cotton Textile for Novel Sustainable Nanofiller – <b>Toshihiko Arita</b> , FillerBank Ltd. / Tohoku University
<b>10:00 -10:30</b>	<b>Break</b> Convention Hall B			

10:30 -12:00	<p><b>Session 25: Lignin and Hemicelluloses Nanoparticles and Applications</b>  <b>Session Chair: Nathalie Lavoine, North Carolina State University</b>  Room 301B</p>	<p><b>Session 26: Production and Characterization of Modified CNFs</b>  <b>Session Chair: David Skuse, FiberLean Technologies Limited</b>  Room 301A</p>	<p><b>Session 27: CNM for Biomedical Applications</b>  <b>Session Chair: Gary Chinga-Carrasco, PFI</b>  RISE  Room 201A</p>	<p><b>Session 28: Towards Non-Traditional Markets</b>  <b>Session Chair: Emily Cranston, University of British Columbia</b>  Room 201B</p>
10:32	<p>Developing Nanomaterials from Xylan: Single Crystal Nanotiles – <b>Scott Renneckar, University of British Columbia</b></p>	<p>Preparation and Characterization of the Surface-Sulfated CNF – <b>Lianzhen Lin, KRI, Inc.</b></p>	<p>Functionalization-Dependent Effects of Nanocellulose on Immuno-Modulatory Properties - <b>Vanja Kokol, University of Maribor</b></p>	<p>Priorities for Development of Standards Test Methods to Support the Commercialization of CNMs – <b>Colleen Walker, University of Maine</b></p>
10:54	<p>Lignin Nanoparticles as a High-value Material Platform to Increase the Revenue of a Lignocellulose Biorefinery – <b>Dong Tian, Sichuan Agricultural University</b></p>	<p>Preparation and Application of CNFs From Modified Fenton Oxidized Cellulose Fibers – <b>Qun Li, Tianjin University of Science and Technology</b></p>	<p>Fibroblast Cell Culture on Extracellular Matrix-Mimetic Scaffolds Composed of Surface-Carboxylated Nanocellulose - <b>Mayumi Hatakeyama, Kyushu University</b></p>	<p>Labeled Cellulose Nanofibrils for EHS Studies – <b>Douglas Fox, American University</b></p>
11:16	<p>Conductive Carbon Microfibers Derived from Lignin-Nanocellulose Hydrogels - <b>Ling Wang, Aalto University</b></p>	<p>Relationships Between the Structures and Properties Relationships Between of Acid-Free TEMPO-Oxidized CNCs (TEMPO-CNCs) – <b>Yaxin Zhou, University of Tokyo</b></p>	<p>Multiple-response Bio-polymer Hydrogels as Flexible Electronic Devices - <b>Hailong Huang, East China Normal University</b></p>	<p>Factors Affecting CNC Organogel Formation and Their Effects on Pharmaceutical Crystallization – <b>Manali Banerjee, Georgia Institute of Technology</b></p>
11:38	<p>Integrated Production of Nanomaterials and Cellulosic Ethanol Form Sugarcane Bagasse - <b>Valdeir Arantes, University of São Paulo</b></p>	<p>Characterization of Phosphorylated CNF Dispersion and its Applications – <b>Yuichi Noguchi, Oji Holdings Corporation</b></p>	<p>Stereolithographic Printing of Nanocellulose/ PEGDA Scaffolds With Tunable Poisson's Ratio and Its Application - <b>Aimin Tang, South China University of Technology</b></p>	<p>Hybrid Materials of Nanocellulose and Graphene – <b>Tiffany Abitbol, RISE, Research Institutes of Sweden</b></p>



12:00-13:30	<p style="text-align: center;"><b>Session 29: Lunch with presentation</b>  <b>Sponsored by: Aalto University &amp; VTT Technical Research Centre of Finland Ltd.</b>  <b>Session Chair: Nathalie Lavoine, North Carolina State University</b></p> <p style="text-align: center;"><b>Renewable Nanomaterial Developments in the Boreal Forest Belt</b>  <b>Orlando Rojas, Aalto University; Heli Kangas, VTT Technical Research Centre of Finland Ltd. and Gilberto Siqueira, EMPA - 2020 Nano Conference Co-chairs</b></p> <p style="text-align: center;"><i>Conventional Hall A&amp;B</i></p>			
13:30 - 15:00	<p><b>Session 30: Commodity &amp; Engineering Plastic Composites</b>  <b>Session Chair: Douglas Fox, American University Room 301B</b></p>	<p><b>Session 31: Energy Storage</b>  <b>Session Chair: Katariina Torvinen, VTT Technical Research Centre of Finland Ltd. Room 301A</b></p>	<p><b>Session 32: End Functionalized CNMs and New Self-Assembled Architectures</b>  <b>Session Chair: Tiffany Abitbol, RISE, Research Institutes of Sweden Room 201A</b></p>	<p><b>Session 33: New Pathways for Nanocellulose Composites</b>  <b>Session Chair: Darren Martin, University of Queensland Room 201B</b></p>
13:32	<p>Creating Filled Nanocomposites from Industrially Relevant Polymers – <b>Johan Foster, Virginia Tech</b></p>	<p>Processability of Nanographite-Nanocellulose Based Electrodes for Flexible Energy Storage Applications – <b>Rajesh Koppolu, Åbo Akademi University</b></p>	<p>Towards Symmetrically and Asymmetrically Functionalised CNCs – <b>Gwendoline Delepierre, Adolphe Merkle Institute - University of Fribourg</b></p>	<p>Highly Thermally Stable Transparent Nanocomposites of Immiscible Polymer and Nanocelluloses – <b>Subir Kumar Biswas, Kyoto University</b></p>
13:54	<p>Synthesis of Nylon 66 Composites Containing Natural Organic Nanomaterials – <b>Lam Tan Hao, Korea Research Institute of Chemical Technology (KRICT)</b></p>	<p>CNFs for Flexible Power Sources - <b>Sand-Young Lee, UNIST</b></p>	<p>Unconventional CNC Derivatives – <b>Johanna Majoinen, Aalto University</b></p>	<p>Developing Polyamide/Cellulose Nanocomposites for Industrial-Scale Processing – <b>Priya Venkatraman, Virginia Tech</b></p>
14:16	<p>Electrospinning and Fiber Stretching of Polymer-Grafted CNC Polystyrene Nanocomposites: Structures and Dynamic Mechanical Properties – <b>Yaman Boluk, University of Alberta</b></p>	<p>Electrochemical Properties of Cellulosic Separators for Lithium-ion Batteries Prepared by TEMPO-oxidized and High-Pressure Homogenized Cellulose Micro-nano-fibers – <b>Weigui Xie, South China University of Technology</b></p>	<p>New Assemblies Based on Asymmetrically-Functionalized CNCs – <b>Bruno Jean, CERMAV-CNRS</b></p>	<p>Zero-VOC Waterborne Acrylic Coatings: Improving Properties with Cellulose Nanocrystals – <b>Ezgi Dogan-Guner, Georgia Institute of Technology</b></p>
14:38	<p>Process Design Due to Nano-Fusion for Reinforced Nanocomposites by Embedding Nanocellulose Honeycomb Frames – <b>Tetsuo Kondo, Kyushu University</b></p>	<p>Highly Porous Willow-Derived Activated Carbon for High Performance Supercapacitor Electrodes – <b>Josphat Phiri, Aalto University</b></p>	<p>Arrangement of CNCs into 2D Cellular Networks with Tunable Dimensions – <b>Eero Kontturi, Aalto University</b></p>	<p>Emulsion-Templated Synthesis of Nanocellulose-Shelled Microparticles – <b>Shuji Fujisawa, University of Tokyo</b></p>

15:00-15:30	<b>Break</b> Convention Hall B			
15:30 – 17:00	<b>Session 34: Additive Manufacturing</b> <b>Session Chair: Tanja Zimmerman, EMPA</b> Room 301B	<b>Session 35: CNM Composites and Surface Modification</b> <b>Session Chair: Jimmy Jong, FPInnovations</b> Room 301A	<b>Session 36: Advances and Insights into CNC Self-Assembly Upon Drying</b> <b>Session Chair: Bruno Jean, CERMAV-CNRS</b> Room 201A	<b>Session 37: Papers and Beyond</b> <b>Session Chair: Warren Batchelor, Monash University</b> Room 201B
15:32	Effect of Viscoelastic Properties on 3D Printability of CNF Hydrogels – <b>Jinho Hyun, Seoul National University</b>	Thiol-Ene Modifications to Alter CNF Film Properties – <b>Kendra Fein, University of Maine</b>	Recent Advances in Vacuum Assisted Self-Assembly of CNCs - <b>Jianming Zhang, Qingdao University of Science and Technology</b>	Structures and Applications in Fluorescent Paper of Cellulose Derivatives/Eu(Tb) Nanocomplexes – <b>Jun Ye, South China University of Technology</b>
15:54	Assessment of Mechanical Properties and Fiber Alignment of Additively Manufactured CNF Materials – <b>Kevin Turner, University of Pennsylvania</b>	Controlling Formation and Properties of Cellulose Nano-Paper Using Polyvinylpyrrolidone/ Laponite Nanoparticle System – <b>Guodong Li, Qilu University of Technology</b>	Nanoparticle Alignment in Drying CNC Droplets – <b>Michael Bortner, Virginia Tech</b>	CNF Based Gel Polymer as a Solid State Electrolyte for Lithium Ion Battery (LIB) – <b>Hao Zhang, Tianjin University of Science and Technology</b>
16:16	Monocomponent Nanocellulose for Biobased 3D Printing - <b>Rubina Ajdary, Aalto University</b>	CNC-based Glass Fiber Sizing for Composite Reinforcement – <b>Ejaz Haque, Georgia Institute of Technology</b>	Colloidal Deposition of Nanocellulose – <b>Wim Thieleman, KU Leuven</b>	Inverse Thermoreversible Methylcellulose/Cellulose Nanocrystal Nanocomposite Hydrogel for Fiber Spinning - <b>Ville Hynninen, Aalto University</b>
16:38	Stretchable and Conductive Nanocellulose Composites – <b>Gilberto Siqueira, EMPA</b>	TEMPO-CNF Epoxy Hybrids for Nanopapers with Improved Wet Strength - <b>Florian Mayer, University of Vienna</b>	Development of Iridescence From Nanocellulose Crystals onto Complex Surfaces – <b>Konrad Klockars, Aalto University</b>	Nano-Cellulose Enhanced Dialdehyde Carboxymethylcellulose Dual Responsive Self-Healing Hydrogel – <b>Shiyu Fu, South China University of Technology</b>
17:00 – 18:00	<b>2019 Nano Conference Wrap Up Meeting (invitation only)</b> Room 201A			
<b>Friday</b> <b>7 June 2019</b>				
8:00 – 19:00	<b>Traditional Japanese Paper Mill, Honda Plant, and Hodosan Shrine Tours</b>			