



2021 VIRTUAL CONFERENCE TECHNICAL PROGRAM

As of 5/03/21 - Subject to change – please check the conference website for updates.

Monday, 14 June, 2021			
11:00 am – 1:00 pm	<p style="text-align: center;">Commercializing Cellulose Nanomaterials - Nordic and International Requirements for Safe Manufacturing and Product Development Workshop</p> <p>Instructors: Jo Anne Shatkin, Ph.D., Vireo Advisors, LLC Julia Catalan, Ph.D., Finnish Institute of Occupational Health Gary Chinga-Carrasco, RISE PFI, Norway Kimberly Ong, Ph.D., Vireo Advisors, LLC James Ede, Ph.D., Vireo Advisors, LLC</p>		
2:00 pm – 4:00 pm	<p style="text-align: center;">CNM Characterization Workshop – Primary Characterization</p> <p>Organizers: Johan Foster, University of British Columbia Robert Moon, US Forest Service Laboratory</p>		
Tuesday, 15 June, 2021			
11:00 am – 12:00 pm	<p>Session 1: Welcome & Keynote Session Heli Kangas, VTT and Nano Virtual Conference Chair Sean Ireland, FiberLean</p>		
12:00 pm – 12:15 pm	<p style="text-align: center;">BREAK</p>		
12:15 pm – 1:45 pm	<p>Session 2: Renewable Nanomaterials as films, coatings and packaging substrates Session Chair:</p>	<p>Session 3: Next Generation of Colloidal Suspension Session Chair:</p>	<p>Session 4: Session Chair:</p>
	<p>Biobased Multilayered films based on Cellulose and Chitin nanofibers for Food Packaging, Eva Pasquier, Université Grenoble Alpes, CNRS, Grenoble INP</p>	<p>Effect of preparation conditions of Pickering-stabilized CNF wet foam on characteristics of CNF-based porous materials, Shin Young Park, Department of Agriculture, Forestry and Bioresources - Korea</p>	<p>Friction behavior of tempo-oxidized nanofibrilated cellulose and its composites, Sefora Riillo, Empa</p>

	The influence of CNF and LCNF quality and starch level on grease barrier properties, Ikko Matsusue, Daio Paper Corporation	Strategies for Next Generation Biomolecular Engineering with Nanopolysaccharides, Orlando Rojas, UBC	Improved mechanical-tribological properties of ultra-high molecular weight polyethylene by the incorporation of cellulose nanofibrils via melt-blending - Hidayah Ariffin, Universiti Putra Malaysia
	Biofabrication of mycelium-nanocellulose composites for barrier film applications, Tiffany Abitbol, RISE Research Institutes of Sweden	Nanocellulose Liquid Crystal Bubbles, Emulsions and Colloidal Glass, Guang Chu, Aalto	Application of Nanocellulose-based Composites in Salt Hydrate Phase Change Materials for Thermal Energy Storage - Zhenghui Shen, Seoul National University
	Multilayer barrier paperboard based on nanocellulose and biodegradable thermoplastics, Rajesh Koppolu, Åbo Akademi University	Cellulose nanocrystals with residual lignin and zwitterionic polymer grafts – development of materials for anti-fouling and anti-bacterial applications, Dimitrios Georgouvelas, Stockholm University	Friction behavior of tempoxidized nanofibrillated cellulose and its composites - Rubina Ajdary, Aalto University
1:45 pm – 2:00 pm	BREAK		
2:00 pm – 3:30 pm	Session 5: Standards and Novel Procedures to Characterize Renewable Nanomaterials Session Chair:	Session 6: Sustainable Packaging and Antimicrobial Personal Protective Equipment Session Chair:	Session 7: Testing Approaches of CNMs from Safety to Properties Session Chair:
	A discussion on “How to develop a particle size measurement standard” for cellulose nanofibrils, Cecilia Land Hensdal, Stora Enso	Developing hydroalcoholic gels - HAGs - for the hand sanitizer market in response to shortages created during the COVID-19 pandemic – the science, Richard Berry, FPInnovations	Tuning properties of high-consistency enzymatically fibrillated cellulose (HefCel) for various applications, Aayush Kumar Jaiswal VTT Technical Research Centre of Finland
	Standardizing Measurements for Cellulose Nanocrystal Particle Size Distributions, Linda Johnston, National Research Council Canada	Renewable barrier films from synergy of cellulose and chitin nanomaterials, Carson Meredith, GT/RBI	Effect of the morphological characteristics and size distribution on the rheological properties of cellulose nanofibril dispersions, Gregory Albornoz, University of Concepcion
	Benchmarking Cellulose Nanocrystals: New Industrially-Produced Materials, Gwendoline Delepierre, Adolphe Merkle Institute	Medical mask using a novel antimicrobial / antiviral biofilter material, Gloria Oporto, West Virginia University	Safety testing methods for novel cellulose nanomaterials, Kimberly Ong, Vireo Advisors

	Application of a semi-automated image analysis framework on the morphology analysis of cellulose nanocrystals , Sezen Yucel, Georgia Institute of Technology	Combining tannins with cellulose nanofibrils towards functional materials , Bruno Mattos	Recent Progress in Demonstrating the Environmental Health and Safety of Cellulose Nanocrystals , James Ede, Vireo Advisors
3:30 pm – 3:45 pm	BREAK		
3:45 pm – 5:15 pm	Session 8: Scaffolding and Antimicrobial Biomaterials Session Chair:	Session 9: Commercialization and Safety Aspects of Cellulose Nanomaterials Session Chair:	Session 10: Production Routes of Cellulose Nanomaterials and Composites Session Chair:
	Nanocellulose-based materials functionalized in supercritical carbon dioxide for antimicrobial wound dressing applications , Bruno Jean, Cermav CNRS	Commercialising MFC Products: Compliance to Ethical Standards and Legislation , Daniel Hewson, FiberLean	Multi-functional high consistency nanocellulose for various applications , Stina Grönqvist, VTT Technical Research Centre of Finland
	Structured Cellulose Nanocrystal – Lysozyme Composite Films - Kevin DeFrance, Empa - Swiss Federal Laboratories for Materials Science and Technology	Surface chemistry and size affect the toxicity of cellulose nanofibrils , Julia Catalan, Finnish Institute of Occupational Health	Applications of mineral/microfibrillated cellulose composite materials: Paper, packaging, paints, boards, tiles, non-wovens and polymer composites , David Skuse, FiberLean Technologies Limited
	Interactions between Cells and Bio-based materials: from Quantitative Analysis to 3D-printed Scaffolds for Medical Applications , XUE Zhang, Aalto	Role of surface chemistry on the in vivo effects of cellulose nanofibrils , Kukka Aimonen, Finnish Institute of Occupational Health	A comparison of mechanical Micro- fibrillated Cellulose production with different refiner types , David Cowles, Valmet
	Silanized Cellulose Nanocrystals for Application in Dental Adhesives , Laleh Solhi, Aalto	Accelerating commercialization of novel bio-based materials and improving safety by design through public private partnerships , Jo Anne Shatkin, Vireo Advisors	Dry cellulose powder as a precursor to high quality nanocellulose , Jonas Engstrand, FineCell Sweden AB
5:15 pm – 6:15 pm	Happy Hour/Networking		
Wednesday, 16 June, 2021			
11:00 am – 12:30 pm	Session 11: End User Panel Moderator: Hamdy Khalil, Woodbridge Foam Corporation		
	Panelist: Dr. Johana Kuncova-Kallio, UPM (Finland) Petter Andersson, Mirka (Finland) Lewis Tunnicliffe, Birla Cargon (US) Juha Salemla, Spinnova (Finland) Dr. Yano, University of Kyoto (Japan) Danilo Limo, Suzano (Brazil)		

12:30 pm – 12:45 pm	BREAK		
12:45 pm – 2:15 pm	Session 12: Session Chair:	Session 13: Session Chair:	Session 14: Session Chair:
	Full-circle Pilot-scale Nanocellulose-based Composite Product Development, Mehdi Tajvidi, University of Maine	Drying stresses in cellulose nanocrystal films and coatings: Effect of macromolecular and molecular plasticizers, Klockars Konrad, Aalto	Benchmarking the optical performance of nanocellulose films for smart device applications, Joice Kaschuk, Aalto
	Scaled-up of the production of eco-friendly bionanocomposite films intended for food packaging applications, Lilian Leite, McGill University	Biomineralization of metal-organic materials on polysaccharides and plants, JJ Richardson, University of Tokyo	Photonic pigments from lignin particles, Bin Zhao, Aalto
	High impact strength composites based on impact modified acrylic and bacterial cellulose, Natalia Herrera-Vargas, Imperial College London	Structuring Nanocellulose Films for Mechanical Measurements and New Applications, Emily Cranston, UBC	Non-wood biomass carbon as an anode material for sodium-ion battery, Rana Afzal, The University of Queensland
	TEMPO-CNF/polymer composites prepared by elastic kneading, Akira Isogai, University of Tokyo	Thermal Stability Enhancement in Modified Cellulose Nanocrystal Films and Aerogels, Francesco D'Acierno, UBC	TBD
2:15 pm – 2:30 pm	BREAK		
2:30 pm – 4:00 pm	Session 15: Student Poster Session & Competition		
4:00 pm – 4:15 pm	BREAK		
4:15 pm – 5:45 pm	Session 16: Barrier and functional coatings and films Session Chair:	Session 17: Renewable Materials Production II Session Chair:	Session 18: Session Chair:
	Fundamental understanding of nanocellulose as a barrier material – energy efficient approach, Sanna Siljander, Tampere University	Improving hydrophobicity of carboxyethylated microfibrillated cellulose film by depositing lignin, Jing-Huan Chen, China National Pulp and Paper Research Institute Co., Ltd	Superelastic 3D printed waterborne polyurethane: enhanced printability and flexibility by cellulose nanofibrils, Yuan Chen, Korea
	Microfibrillated cellulose and polyvinyl alcohol based barrier coating for abrasive paper, Vinay Kumar, VTT	In situ nanocellulose elaboration and modification using natural deep eutectic solvent, Lorelei Douard, Univ. Grenoble Alpes, CNRS, Grenoble INP, LGP2	3D printing of cellulose: design strategies for rigid/stiff or superelastic monoliths, Feng Jiang, UBC
	TEMPO-CNF Foam Coated Viscose Substrates as Water	Hyper Inertia Microfluidization (HIMF) –	All-wood-based antimicrobial hydrogel fabricated by digital

	Filters , Andreas Mautner, University of Vienna	Understanding Cellulose Fibre Homogenization , Jakob Redlinger-Pohn, KTH	light processing (DLP) printing , Luyao Wang, Abo Akademi University
	Recent advances in the microfibrillated cellulose wet lamination process for the production of all cellulose barrier packaging materials , Fleur Rol, Centre Technique du Papier	A Comparison of Films from Lignocellulose Microfibrils and Fibers , Erfan Oliaei, RISE / KTH	Fully bio-based foams from thermomechanical pulp fibers and cellulose nanofibrils produced by microwave radiation , Islam Hafez, University of Maine