

August 6 th 6 Wednesday





August 6 - 8 | Lorena, SP, BRAZIL

NANOCELLULOSE CHARACTERIZATION WORKSHOP

08:00 - 08:30 | **REGISTRATION**

08:30 - 08:50 | OPENING AND INTRODUCTION

The importance of knowing your starting material

Dr. Valdeir Arantes - EEL/USP

PART 1 - INTRINSIC PROPERTIES

08:50 - 09:50 | Atomic force microscopy as a tool in nanocellulose research: theory, methodology, data interpretation and case studies

Me. Otávio Berenguel - LNNano/CNPEM, Brazil

09:50 - 10:10 | **COFFEE BREAK**

10:10 - 11:10 | (Cryo)TEM imaging of nanocellulose-based materials

Dra Laura Escobar - LNNano/CNPEM Brazi

Dra. Laura Escobar - LNNano/CNPEM, Brazil

Dra. Talita Martins Lacerda - EEL/USP, Brazil

11:10 - 12:10 | Fundamentals of FTIR and NMR in nanocellulose

12:10 - 14:00 | **LUNCH BREAK**

PART 2 - PERFORMANCE AND APPLICATIONS

14:00 - 15:00 | Mechanical caracterization of cellulose-reinforced polymer nanocomposites:

structure-property relationships Dra. Kelly C. C. Benini - FEG/UNESP, Brazil

15:00 - 15:20 | **COFFEE BREAK**

15:20 - 16:20 | Rheological analysis of nanocellulose suspensions

Dra. Dana Grecov - University of British Columbia (UBC), Canada

16:20 - 16:30 | **CLOSING WORDS**

OPENING: V BRAZILIAN NANOCELLULOSE SUMMIT

16:00 - 17:00 | **REGISTRATION**

17:00 - 17:30 | **OPENING CEREMONY**

17:30 - 18:00 | Technical Standardization Initiatives for cellulose nanomaterials in Brazil

Umberto Caldeira Cinque - Technical Head, Brazilian Pulp and Paper Technical Association - ABTCP Valdeir Arantes - Associate Professor, Lorena School of Engineering, University of São Paulo

18:00 - 20:00 | **WELCOME RECEPTION**





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08:30 - 09:00 | **REGISTRATION**

09:00 - 10:00 | **PLENARY TALK**

Sustainable Packaging Design Strategies with Cellulose Nanomaterials

Dr. Nathalie Lavoine - Professor, College of Natural Resources - NC State University, USA

Chair: Camila Rezende

10:00 - 10:20 | **COFFEE BREAK**

10:20 - 11:00 | **KEYNOTE TALK**

Controlling nanocellulose (dis)assembly via the supramolecular toolbox

Dr. Caio G. Otoni - Professor, State University of Campinas - UNICAMP, Brazil

Chair: Kelly C. C. Benini

11:00 - 12:10 | **PITCH PRESENTATIONS**

Group 1

12:10 - 14:00 | **LUNCH BREAK**

14:00 - 14:10 | INSTITUTIONAL BRIEFING

Hydrogels and electrospun polymeric nanofibers containing nanowhiskers and their potential technological applications

Dr. Edvani Curti Muniz - National Institute of Science and Technology (INCT) Polysaccharides

Chair: Valdeir Arantes

14:10 - 14:50 | **KEYNOTE TALK**

Rheological Characterization of Cellulose Nanocrystals in Hyaluronic Acid

Suspensions: Emphasis on Yield Stress Behavior

Dra. Dana Grecov - Professor, University of British Columbia, Canada

Chair: Humberto de Jesus Eufrade Jr

14:50 - 15:30 | **KEYNOTE TALK**

From Nature to Materials: Cellulose Nanofibrils and Nanocrystals Applied to the

Production of Films, Gels, and Lightweight Materials

Dra. Camila Rezende - Professor, State University of Campinas - UNICAMP, Brazil

Chair: Valdeir Arantes

15:30 - 16:50 | PITCH PRESENTATIONS

Group 2

16:50 - 17:00 | **GROUP PICTURE**

17:00 - 17:20 | **COFFEE BREAK**

17:00 - 18:30 | **POSTER SESSION**

19:00 - 21:00 | HAPPY HOUR





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08:30 - 09:00 | **REGISTRATION**

09:00 - 10:00 | **PLENARY TALK**

A Decade of Application Development in NanoFibrillated Cellulose:

Performance BioFilaments' Journey into Concrete and Mining Applications

Dr. Keith Gourlay - Director of Technology Development - Performance Biofilaments, Canada

Chair: Caio Otoni

10:00 - 10:20 | **COFFEE BREAK**

10:20 - 10:50 | **TECHNICAL TALKS**

Microfibrillated cellulose: A multifunctional sustainable platform

Dr. Willian dos Santos - Research Scientist - Klabin, Brazil

Chair: Hernane Barud

10:50 - 11:20 | **TECHNICAL TALKS**

Applied nanocellulose research and innovation: Perspectives from the SENAI Institute of Technology in Pulp and Paper

• Dr. Braz de Souza Marotti - R&D and Innovation Researcher - Pulp, Paper and Nanocellulose, SENAI, Brazil

 Dr. Mateus Jonsson de Almeida - R&D and Innovation Consultant - Pulp, Paper and Nanocellulose, SENAI, Brazil

Chair: Júlio Cesar da Costa

11:20 - 11:50 | **TECHNICAL TALKS**

Bacterial cellulose from HB Biotec: Bridging biotechnology and industry across

health, food, circular fashion and cosmetics

Dra. Marina Fontes - R&D Manager - HB Biotech, Brazil

Chair: Valdeir Arantes

12:20 - 14:30 | **LUNCH BREAK**

14:30 - 16:00 | **ROUND TABLE**

Challenges and Future Perspectives for Nanocellulose

- Braz de Souza Marotti R&D and Innovation Researcher SENAI, Brazil
- Caio Otoni Professor UNICAMP, Brazil
- Edson Aleixo Director of Nanotechnology Tangho, Canada
- Keith Gourlay Director of Technology Development Performance Biofilaments, Canada
- Nathalie Lavoine Professor NC State University, USA
- Shuma Ueda Masuko, Japan
- Willian dos Santos Research Scientist Klabin, Brazil

Moderator: Dr. Valdeir Arantes - EEL/USP, Brazil

16:00 - 16:30 | AWARD CEREMONY & CLOSING WORDS

- Organizing Committee
- Umberto Caldeira Cinque ABTCP
- Ana L. Gabas Ferreira EEL/USP



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