



SUMMER SCHOOL NANOCELLULOSES

July 9th - 12th, 2024

3 ECTS + CERTIFICATE OF PARTICIPATION

- Tuesday, July 9th - Introduction to Nanocellulose and Production.**
- Wednesday, July 10th - Nanocellulose Characterization.**
- Thursday, July 11th – Nanocellulose Application.**
- Friday, July 12th – Nanocellulose Applications Contests.**
- Social Event: Hiking at the top of the Alps (Chamrousse 2250m)**



Potential Speakers

Julien Bras, LGP2, Grenoble INP Pagora
Isabelle Capron, INRAE
Marc Delgado, UdG, Espagne
Valerie Meyer, CTP
Laurent Heux, CERMAV, CNRS
Yoshi Nishiyama, CERMAV, CNRS
Jean-Luc Putaux, CERMAV, CNRS
Cécile Sillard, LGP2, Grenoble INP Pagora
Bruno Jean, CERMAV, CNRS
Frédéric Pignon, LRP, CNRS
Alain Dufresne, Grenoble INP Pagora

Registration Deadline: May 15th

**Seating is limited to 40 attendees
(First come, first served).**

FEES:

- 500€
- 250€ (for university students)

**The registrations will be open on
March 22nd.**



For more information:
**GlycoAlps-
SummerSchool@univ-
grenoble-alpes.fr**



Visit Our Website
Glyco@alps



Our Location
Grenoble INP Pagora

Preliminary Program:



Tuesday 9th of July - NANOCELLULOSE INTRODUCTION & PRODUCTION

- **08.15-08.45** : Welcome
 - **08.45-09.30** : Summer school Introduction & Nanocellulose History – Julien Bras, Grenoble INP Pagora
 - **09.30-10.15** : Production of CNC – Eero Kontturi, Aalto (tbc)
 - **10.45-11.30** : Production of CNF – Valerie Meyer, CTP
 - **11.30-12.15** : Functionalization of CNF – Lars Wagberg, KTH (tbc)
 - **13.30-16.30** : **Practical work on nanocellulose production (groups):**
 - MFC production by Masuko, Lgp2
 - MFC production by extrusion, Lgp2-CTP
 - CNC production , CERMAV
 - Bacterial cellulose, (tbc)
 - **16.30-17.30** : **Launch of Nanocellulose applications project (group work)**
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Wednesday 10th of July - NANOCELLULOSE CHARACTERIZATION

- **08.45-09.45** : NanoCellulose chemical characterization – Laurent Heux, CERMAV
- **10.15-11.15** : Crystallinity of cellulose - Yoshi Nishiyama, CERMAV
- **11.15-12.15** : Surface characterization of nanocellulose – Wim Thielemans, KU Leuven
- **13.45-16.30** : **Practical works on nanocellulose characterization (groups):**
 - TEM Characterization Jean-Luc Putaux, CERMAV
 - AFM Characterization Cécile Sillard, LGP2
 - DLS Characterization Bruno Jean, CERMAV
 - RMN Characterization tbc
 - Morfi & Optical microscopy tbc
 - Rheology behaviour of CNC colloidal suspension, Frederic Pignon, LRP
- **16.30-17.30** : **Application project (group work)**

Thursday 11th of July – NANOCELLULOSE APPLICATION

- **09.00-10.00** : Nanocellulose in suspension and emulsion – Isabelle Capron, INRAE (tbc)
 - **10.30-11.30** : Use of Nanocellulose in paper & Packaging – Marc Delgado, UdG, Espagne
 - **11.30-12.30** : Use of Nanocellulose in medical application – Kristin Syverud, NTNU, Norway (tbc)
 - **11.30-12.30** : Mixing nanocellulose and cellulose derivatives for various application Kenji Takahashi, KU, Japan
 - **13.45-14.45** : Nanocellulose in Composite - Alain Dufresne, Grenoble INP Pagora, France
 - **15.15-16.15** : Nanocellulose start-up pitch (visio presentation)
 - **16.30-17.30** : **Application project (group work)**
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Friday 12th of July – NANOCELLULOSE APPLICATIONS CONTESTS

- **09.00-10.30** : Application project concourse – Final group presentation (PITCH) in front of expert Jury
- **11.00-17.30** : **Social event-hiking in Chamrousse**

Join us for an insightful journey into the world of nanocelluloses!

For more information and registration, contact:
GlycoAlps-SummerSchool@univ-grenoble-alpes.fr