What's new within EPNOE? Find out about announcements, upcoming events, projects, job opportunities, and much more!



# **EPNOE Newsletter - March 2024**

Connecting the international polysaccharides community



# **Editorial**

Dear Readers,

## It's time to join EPNOE!

This month, we have launched some **limited-time membership discounts**, and we eagerly await your participation. As a Member of EPNOE, you will have the opportunity to connect with foremost experts in polysaccharides worldwide and participate in our exclusive member activities and Working Groups.

We are organising a workshop on Analytics of Polysaccharides in Zürich, an online seminar on Computational Resources, and a workshop on Safety & Sustainability Analysis. Additionally, the 6th International Junior Scientist Meeting promises to be an outstanding event!

These gatherings are particularly exciting because they serve as platforms where **scientists**, technologists, and industry leaders come together, fostering new opportunities for joint project applications and collaborations.

Our commitment extends beyond European borders! We are actively engaging with **Brazil**, **China**, India, and the United States, offering opportunities for our members to showcase their work and create new connections to advance their research and innovation endeavors.

Additionally, nurturing the professional growth and skill development of our scientists lies at the heart of our mission, exemplified by activities such as EPNOE Web-Togethers and tailored workshops designed by the **EPNOE Junior Group**.

We are confident that you will benefit from our membership packages, as well as the opportunity to get involved and evolve within a large community of polysaccharide enthusiasts.

Does this spark your interest? Find out more here and become an EPNOE Member today!

Pedro Fardim

President of EPNOEd us on

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# News & Announcements

# ACS Spring 2024













Prof. Pedro Fardim, President of EPNOE, Prof. Elisabete Frollini, EPNOE Ambassadress in Brazil, and Prof. Guang Yang, EPNOE Ambassadress in China, participated in the ACS Spring 2024 event, on 17-21 March 2024 in New Orleans, (LA) and presented an engaging symposium titled "Polysaccharides As Future Sustainable Materials: Challenges, Opportunities, and Future Directions."

Delving into the compelling world of polysaccharides, this symposium explored their pivotal role in functional materials for human health, renewable energy, environmental applications, and sustainable energy processes.

It was a great success and an opportunity to reconnect with colleagues and friends!

# The EPNOE Junior Group welcomes Guadalupe Vaca-Medina!

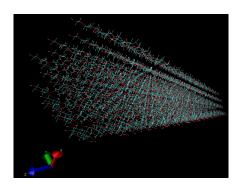


Guadalupe-Vaca Medina, researcher at the French National Research Institute for Agriculture, Food and Environment (INRAE), has recently joined the **EPNOE Junior Group**, a team of enthusiastic scientists working on tailored activities for all EPNOE junior scientists.

She is motivated by a desire to **foster new collaborations on a European scale** and connect with **like-minded individuals** with complementary backgrounds and missions.

Read more here.

## **EPNOE Working Group on Computational Resources: Seminar in Progress!**



In today's landscape, molecular modeling extends far beyond the confines of academia. Computational tools wield significant influence in diverse domains such as **drug discovery** and **development**. They serve as assets for **unfolding the mechanisms underlying experimental outcomes** involving carbohydrate macromolecules and facilitate exploration at a **smaller scale**.

The **EPNOE** Working Group on Computational Resources is organising a **seminar**, scheduled for **13 June**, to explore the potential of computational methods and encourage a dialogue between both industry and academia leaders.

Stay tuned for updates!

## EPNOE Working Group on Safety & Sustainability Analysis: Workshop in Progress!



The EPNOE Working Group on Safety & Sustainability Analysis is organising a workshop, scheduled for 3 June.

The aim is to facilitate discussions and **exchange knowledge** among experts in the field, **foster collaboration**, and develop strategies to **enhance safety and sustainability practices**.

Stay tuned for updates!

# **EPNOE Workshop on Analytics, 25-26 June: Updates**



The Workshop on Analytics of Polysaccharides, taking place in Zürich, on 25-26 June, 2024, will focus on key topics such as rheology, molecular weight, and compositional analysis, presenting an extraordinary lineup of engaging sessions led by both users and technical providers, providing invaluable insights and real-world applications.

The agenda includes "flash talks" by junior researchers, on-site demonstrations that bring theory to life, and thought-



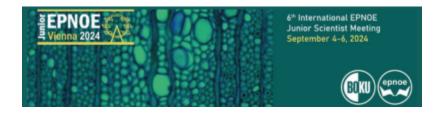
**provoking discussions** that push the boundaries of polysaccharide science.

The EPNOE Working Group on Analytics of Polysaccharides is glad to welcome there both EPNOE members and non-members!

Keep an eye on our website and social media channels for updates on the programme!

## **Events**

# **Deadline Extended: 6th EPNOE International Junior Scientist Meeting**



The abstract submission deadline for the 6th EPNOE International Junior Scientist Meeting, taking place in Vienna, at the University of Natural Resources and Life Sciences (BOKU), on 4-6 September, has been extended by 2 more weeks!

The updated deadline will be announced soon on the **event webpage** and social media channels (**LinkedIn** and **X**).

We warmly encourage the submission of high-quality abstracts for **oral presentations**, **pitch** and **poster presentations**.

More information on submission guidelines can be found here. For registration and information on deadlines and pricing, please refer to this webpage.

Submit your abstract!

# XXII B-MRS Meeting 2024, 29 September - 3 October



The XXII B-MRS Meeting will take place in Santos, São Paulo, Brazil, from 29 September to 3 October, 2024. EPNOE is organising a symposium titled "2nd Polysaccharide-based Materials".



# 2nd International Symposium on Cellulose and Renewable Materials (ISCRM), Chengdu, (China), 20-23 September, 2024



Yuanyuan Li (KTH)is part of the Organising Committee of the 2nd International Symposium on Cellulose and Renewable Materials (ISCRM), taking place in Chengdu (China), 20-23 September, 2024.

**Prof. Pedro Fardim** (EPNOE President) will be one of the chair men, leading a great event which focuses on the latest scientific and technical advancements in cellulose and renewable materials, bringing together universities, research centers, technological institutions, companies, and passionate individuals.

**Prof. Guang Yang** (EPNOE Ambassadress in China) will be the Executive Chair of the conference.

Read more here.

# Register Now: Training school ECO-AERoGELS, 29-31 May



EPNOE is partnering with the ECO-AERoGELS CIG and the Food Technology groups from the University of Udine for the organisation of a Training School on "Technical, commercial and societal innovations on aerogels towards circular economy".

Taking place on **29-31 May**, **2024**, at the University of Udine (Italy), this will be an excellent opportunity to acquire specialised knowledge in a rapidly evolving field.

For more information on the programme and registration, read here.

## Last Few Days to Register: EPNOE Webinar, 4 April



The next EPNOE Webinar is taking place via **Zoom** on Thursday, **4 April**, 2024, from **13:00** to **14:30** (CET).

We are pleased to welcome two outstanding speakers: Li Shen (Utrecht University, Netherlands) and Claudia Mair-Bauernfeind (University of Graz, Austria).

They will discuss "Biobased and circular carbon for material transition" and "Sustainability assessment of redox active molecules for energy storage applications", respectively.

The deadline to register is Monday, 1 April!

Read more here.

#### FibRe International Conference 2024



The FibRe 1st international conference will be launched on 10-12 September, 2024, in Gothenburg (Sweden)!

FibRe is a research consortium between Chalmers University of Technology and KTH Royal Institute of Technology, industry and public organisation partners and is funded by Vinnova, and the participating organisations. The scope of the centre is to develop knowledge and skills required to replace fossil-based plastics with lignocellulose-based counterparts.

Read more here.

#### **WWSC International Conference 2025**



The WWSC International Conference 2025 will take place in Stockholm (Sweden), on 15-18 June, 2025.

Organised by the Wallenberg Wood Science Center, this



conference will bring together leading researchers from around the globe to explore the latest advancements in utilising wood as a sustainable resource for cutting-edge materials.

Read more here.

## **APA-EPNOE-GFL International Conference on "Polymers for**

Advanced Technology'', Jaipur (India), 16-18 October, 2024



The Asian Poymer Association (APA), Gujarat Fluorochemials Ltd (GFL), and EPNOE are co-organising a conference on **Polymers for Advanced Technology**, taking place in **Jaipur** (India), on 16-18 October, 2024.

This event will feature six interesting thematic symposia:

- EPNOE Symposium on Functional Polysaccharides
- GFL Symposium on Fluoropolymers for EVs & Green H2
- Symposium on Herbal Bioengineering
- Symposium on Sustainability & Circular Economy
- Symposium on Food Packaging
- Symposium on Nanoengineering

Read more here.

#### 33rd International Mechanical Pulping Conference, Sundsvall (Sweden), 27-29 May, 2024



The 33rd International Mechanical Pulping Conference (IMPC2024) will be held in Sundsvall, Sweden on 27-29 May, 2024.

This bi-annual conference aims at facilitating **impactful discussions and networking opportunities** among expert professionals from both academia and industry in the **mechanical pulping sector**.

The conference will include a full comprehensive **technical programme** covering the latest mechanical pulping technologies and their applications.

Read more here.

# **Projects**

"PACkaging, Recycling, Recyclability, Re-use of papers and cardboards"

LGP2, Laboratory of Process Engineering for Biorefinery, Bio-based Materials and Functional Printing, (UMR 5518, CNRS, UGA, Grenoble INP) and Rapsodee, (UMR CNRS 5302, IMT Mines Albi)

**Funding Agency**: France 2030, ANR **Grant Number**: ANR-22-PERE-0004

**Start Date**: 05/06/2023 **End date**: 31/05/2027

Contact: Nathalie Marlin and Lorette Brault, LGP2 (nathalie.marlin@grenoble-inp.fr,

lorette.brault@grenoble-inp.fr) Fabienne Espitalier, Rapsodee (fabienne.espitalier@mines-albi.fr)

To align with **European directives** encouraging the use of paper and cardboard materials for **single-use products**, as well as the increase of the incorporation rate of **recycled fibres** in these materials, solutions need to be implemented to limit and valorise the portion of waste (estimated at 10%) from recycling industry.

The aim of the PAC3R project, coordinated by the LGP2 from Grenoble-INP and co-coordinated by Rapsodee is to develop breakthrough processes for the valorisation and upcycling of all components of recovered paper and cardboard. The project gathers the know-how of 6 French academic research laboratories, LGP2, Rapsodee, Cermav, UniLaSalle Beauvais, CEMEF and GEO-MRI, focusing on chemical processes, thermo-conversion processes, shaping processes, and lignocellulosic material characterization techniques.

The **technical purposes** of this consortium are the following:

- To ensure the preservation of the quality of recycled paper and cardboard by creating new fibre-fibre bonds to avoid the addition of starch or other additives.
- To give added value to starch present in paper and board through its extraction, purification, hydrolysis, or modification, in order to valorise it and reduce the demand for biocides in recycling plants.
- To give added value to fibrous waste through extraction, purification, modification and shaping of lignocellulosic fibres in the form of resins, aerogels, MFC, etc.
- To exploit the full chemical and energy potential of non-fibrous waste through thermoconversion.

The developed processes will undergo environmental and socio-economic assessments to better anticipate their integration into paper and board recycling plants.

# **Education**

#### Welcome to New Students, Researchers, and Staff Members within EPNOE network!

- Iman Ramazani Sarbandi, PhD student at the Department of Materials Science & Engineering of the Polytechnic University of Catalonia (UPC) in Terrassa, Spain. Topic: Self-Assembly of End-tethered Cellulose Nanocrystals in Spherical Geometries.
- Shorooq Alzoubi, PhD student at the Department of Materials Science & Engineering of the Polytechnic University of Catalonia (UPC) in Terrassa, Spain. Topic: Synthesis and Self-Assembly of Cellulose Nanocrystals with End-Tethered Poly(ethylene glycol) analogues.

# **Call for Papers**

#### **Issues from Journals**



**Title of the issue**: "Biopolymers and Biohybrids for Human Health"

Journal: Molecules MDPI

Editor: Prof. Pedro Fardim

Submission Deadline: 31/07/2024

Read more here.

# "Biopolymers at Interfaces"

Research Topic: Frontiers in Coatings, Dyes and Interface Engineering

**Manuscript Summary Submission Deadline**: 26 July 2024 **Manuscript Submission Deadline**: 27 September 2024

Editors: Justin Zoppe - Universitat Politècnica de Catalunya (UPC), José Manual García Torres -

Universitat Politècnica de Catalunya (UPC), Nathalie Lavoine - NC State University, Quim Tarrés - Universitat de Girona.

**Description**: Engineering of interfaces through the application of soft coatings has had a broad impact on both academic research and industry. Biopolymers, those produced by living organisms, are particularly valuable as interfacial molecular assemblies, not only in terms of sustainability but also due to their well-defined structures.

Assembling biopolymers at the liquid-liquid, air-liquid, and solid-liquid interfaces remains an active and rapidly growing field of research, which warrants an in-depth examination of the latest accomplishments, new insights, current challenges, and future perspectives.

The collection aims to bring together the latest quality articles from researchers working in the area of biopolymers at interfaces, such as those composed of, but not limited to, biomacromolecules, such as polysaccharides, polypeptides, proteins and/or polynucleotides.

Read more here.

# **Open Positions**

## PhD student vacancy: "cellulose mineralisation"

Job location: Mid Sweden University (Sundsvall, Sweden)

Start date: 1 May, 2024, or according to agreement

**Application deadline:** 15 April, 2024 **Contact:** magnus.norgren@miun.se

## **Short description:**

The research group in Surface and Colloid Engineering mainly conducts research on biopolymers in different materials applications. The objective of this doctoral student project is to investigate biopolymer-mineralisation by using CO2 via a carbonation process to obtain inorganic-organic composite materials.

The mineralisation route could be suitable in the development of many of different technological materials, ranging from use as tissue-friendly scaffolds in biomedical applications to novel large-scale materials for the construction industry.

The visionary outlook of the project includes investigations of how mineralisation can be applied as an efficient process in carbon capture and storage, and thereby providing new technologies to decrease direct CO2 emissions to the atmosphere and mitigate global warming. Depending on the merits of the successful candidate, the project could involve both experimental and theoretical work.

For more information and to apply, please refer to this link.

# **Recent Scientific Publications of EPNOE Members**

Check out the recent publications of our members!

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Forward to a colleague











For more information, please contact us at contact@epnoe.eu

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