



EPNOE Association

Newsletter 79 - March 2025

*March is the month of Spring; in like a lion, out like a lamb  
(Marion Dane Bauer)*

## **Editorial**

Dear Readers,

Spring is coming and our plans for the next months are blooming. We have six active working groups (WGs) now in EPNOE covering exciting fields of analytics, computational resources, sustainable design, junior scientist activities, food and nutrition and chemo-enzymatic conversions. These WGs join experts to discuss challenges and opportunities in specific areas of polysaccharide science and technology and to further propose the organization of workshops and other dissemination activities to our community. EPNOE WGs are exclusively for EPNOE-members. Join us today!

The preparations for the EPNOE 2025 conference in Sundsvall, Sweden are in full swing! We will start on Sunday, August 24th with a course dedicated to doctoral students and industry researchers. The topic of the course is "Polysaccharides in Solution and Solid Materials - Physicochemical Interactions and Analytical Methods". This is an unmissable opportunity for those interested in both fundamental and applied aspects of polysaccharide processing and utilization.

The conference program is building up and we are awaiting your abstract. The deadline for abstract submission is approaching fast, April 1st, so hurry up! Sundsvall, the stone city of Sweden, is easy to reach via train or airplane from Stockholm and counts amongst the country's best-preserved late 19th-century townscapes. You can also find historical Viking sites nearby. Join us to cheer Skål and hear the echoes of Valhalla!

We are looking forward to meeting you in our WG meetings and in Sundsvall in August (24th-28th)!

Best regards,  
Professor Pedro Fardim

President of EPNOE

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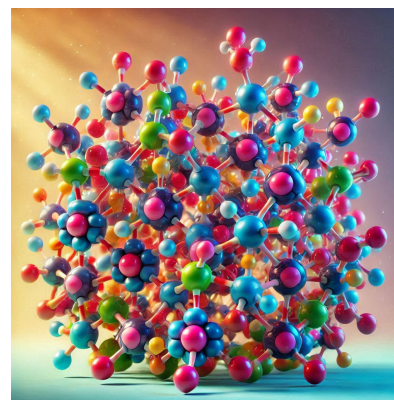
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## **News and Announcements**

### **The 9th International Polysaccharide Conference**

The registrations page for **EPNOE 2025**, the 9th International Polysaccharide Conference, has now been opened.

You can register to join this forward thinking event, focused on broadening the scope of polysaccharide research and its applications in science, industry and everyday life.

Taking place from August 24th until August 28th, 2025 in Sundsvall, Sweden, this bi-annual conference aims to facilitate impactful discussions and networking among expert professionals from both academia and industry.

**Register for EPNOE 2025!**

<https://www.epnoe2025.org/register/>

**EPNOE 2025 is organized by  
Mid Sweden University.**



**Collaborative Doctoral Partnership Programme**

The Joint Research Centre of the European Commission is looking for universities and Higher Education Institutions (HEIs) to jointly design, host and supervise PhD projects of common interest.

See a.o. the topics:

- Innovative Health Biotechnologies in a Competitive Europe
- Advanced Materials for Safe and Sustainable Innovation
- Innovative Safe Automated and Decarbonised Built Environment
- Climate Tipping Point Risks
- Improving Soil Health to Increase Water Quality and Reduce Eutrophication
- Earth System Modelling for a Sustainable and Profitable Use of Marine Ecosystems
- Integrating Small Modular Reactors in future Hybrid Energy Systems
- Technologies and Methods for Monitoring Micro- and Nano-Plastics Pollution

More information can be found here: <https://shorturl.at/uYpnW>



## Joint Research Centre

### **EPNOE Science & Technology Awards 2025**



It is the time of the Award Season again! This year, we will award two outstanding scientists with the EPNOE Technology Award 2025 and the EPNOE Science Award 2025! The Award Ceremony will also take place in Sundsvall, Sweden, during EPNOE 2025. The EPNOE Science Award is given to a scientist for his or her **outstanding work and lifetime achievements** in the field of **polysaccharide science**. The EPNOE Technology Award focuses on **polysaccharide technology and innovation!**

You can use the form to submit your nominations: <https://shorturl.at/2zayX> or follow the nomination procedure as explained on the EPNOE website: <https://www.epnoe.eu/epnoe-awards/> (The latter requires the nominee's signature). The nomination deadline is 30 April 2025.

### **Seppic's foresight on fermentation biotechnologies**

Seppic has opened a laboratory dedicated to fermentation biotechnologies at the Air Liquide Group's Innovation Campus Delaware in the United States. *Fermentation* is a process historically used to produce and preserve food. Applied to the cosmetics and health markets, *this technology enables the production of biobased ingredients with limited*



*impact on the environment and biodiversity, while minimizing impact on land use.*

The aim of this laboratory will be to develop new ingredients that combine efficacy with a response to societal challenges in the cosmetics and health fields, in line with the company's approach to committed innovation. Please find the press release here: <https://shorturl.at/OAQsx>

### **Kemira and IFF announce successful completion of a renewable polymer plant in Finland**



As part of their strategic cooperation in providing new renewable alternatives to fossil-based products, Kemira and IFF today announced successful completion of a market-entry scale industrial polymer plant. The unit is capable of producing unique renewable polymers for Kemira's customers and is based on the patented Designed Enzymatic Biomaterial platform technology (DEB™) developed by IFF. The unit is operated by Chemigate, a member of the Berner Group, and is located within Chemigate Ltd's Finnamy! biorefinery in Kokemäki, Finland.

Read the full press release [here](#).

### **Suzano receives groundbreaking international certifications for its kraft lignin and microfibrillated cellulose (MFC)**



Suzano, the world's largest pulp producer and a global benchmark in the manufacture of bioproducts developed from eucalyptus, is the first Brazilian company to receive international sustainability certifications for its kraft lignin (Ecolig™) and its microfibrillated cellulose (MFC). The company's bioproducts are now part of the list of 100% bio-based raw materials certified by the BioPreferred Program, developed by the United States Department of Agriculture (USDA). Read the full press release [here](#).



### Cosun publishes patent for enzymatic process for the production of aldaric acids

Researchers from Royal Cosun Beet Company have published a patent in R&D. The patent describes '*an enzymatic process for the production of aldaric acids (galactaric acid) wherein the process comprises contacting a flavin dependent oxidase vanillyl-alcohol oxidase (EC 1.1.3.38) with a biomass hydrolysate comprising uronic acids (galacturonic acid or glucuronic acid), wherein the biomass hydrolysate comprises cell wall constituents*'. Read the full text here: [https://www.researchgate.net/publication/379483943\\_Enzymatic\\_process\\_for\\_the\\_production\\_of\\_aldaric\\_acids](https://www.researchgate.net/publication/379483943_Enzymatic_process_for_the_production_of_aldaric_acids)

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## Events



The **Bio-based Industries Consortium (BIC)** is partnering with Tech Tour for the **Circular 2025 Investment Programme** in Ghent, Belgium from the 23rd until 24th of April. This program will select and feature 40 game-changing startups in the circular economy, working on breakthrough innovations that are redefining sustainability. If your company is seeking investment and strategic partnerships in the sustainability space, this is the platform for you.

The Circular 2025 Investment Programme is aimed at emerging and growth-phase companies in:

- ◆ Circular plastics & bio-based polymers
- ◆ Biorefining & biomolecules
- ◆ Biomanufacturing & circular construction materials
- ◆ Alternative food systems & circular agriculture
- ◆ Water reuse and resource recovery

More information here: <https://biconsortium.eu/event/bic-tech-tour-circular-2025>

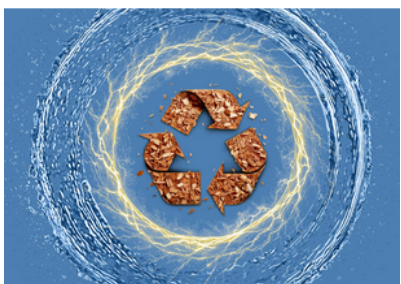
There is also a **showcasing and coaching session** being organized for European healthcare innovators (suppliers, SMEs, healthcare start-ups with an interest in procurement opportunities), **InnoHSupport**, for which there currently an **open call**. The submission deadline 18 April 2025. Please find the information here: [https://innohsupport.eu/open-calls/open-call-for-innovative-suppliers/?utm\\_campaign=53686497-InnoHSupport&utm\\_content=373160122&utm\\_medium=social&utm\\_source=linkedin&hss\\_channel=lcp-89820](https://innohsupport.eu/open-calls/open-call-for-innovative-suppliers/?utm_campaign=53686497-InnoHSupport&utm_content=373160122&utm_medium=social&utm_source=linkedin&hss_channel=lcp-89820)



The Fibre Science and Communication Network (FSCN Research Centre) at Mid Sweden University is organizing the **Progress in Paper Physics Seminar 2025** from the 20th until the 22nd of May.

The FSCN Research Centre is an interdisciplinary research center (bio-based materials, advanced materials and processes) at Mid Sweden University. Their research is developed in close collaboration with the Swedish forest industry and other actors in the materials, chemical, transport, and energy sectors.

More information about the seminar can be found here: <https://shorturl.at/Kvd1J>. There is also a call for abstracts open until 2 March 2025.



In June 2025, you can visit the **Paper & Biorefinery Conference and Tradeshow in Graz, Austria (June 4th and 5th, 2025)**. The conference is known for its comprehensive and multifaceted range of expert contributions. In 2025, it is focusing in particular on the main theme **"FIBER – ENERGY – WATER: Closing the loops for a better tomorrow"**. Faced with scarce resources and great environmental responsibility, the conference is placing a special focus on *circular economy* this year. EPNOE Member TU Graz is one of the partners of the Paper & Biorefinery Conference (PBC). Please find more information on the event's webpages: <https://paper-biorefinery.com/en/>



The **Unite! Innovation & Bio-based materials summer school** aims to introduce PhD students to Innovation and start-ups in relation to bio-based and sustainable materials and is arranged by **KTH Royal Institute of Technology in cooperation with INP Grenoble, Aalto, and Politecnico di Torino**. The school is a Blended Intensive Programme (BIP) with online lectures and on-site activities.

Online Lectures 26 May–5 June  
On-site activities at KTH Stockholm, 10 June – 14 June 2025

Read more, see the speakers and how to apply at <https://www.kth.se/en/cbh/utbildning/forskarutbildning/unite-innovation-bio-based-materials-sommarskola-1.1387431>  
Application is open until May 15 (early-bird until March 31).  
**Professor dr. Monika Ek** is amongst the confirmed speakers!



**U! Bio2** is arranged just before the **Wallenberg Wood Science Center International Conference**, making it easy for students to combine the summer school with the

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conference. The early-bird registration for Wallenberg Wood Science Center International Conference is open until April 10. <https://conference2025.wwsc.se>



There is an Introductory Meeting planned on 30 April 2025, **exclusively for EPNOE's Junior Representatives**. During this event, you will get the opportunity to introduce yourself and your research to other young scientists in the field. You will get the chance to submit proposals for future events and to collaborate further with the current members of EPNOE's Junior Group (<https://www.epnoe.eu/about/>). Registration is mandatory. Please find the registration form here: <https://shorturl.at/ZPCti>



Professor dr. Fardim will teach of course for postgraduate students, **Future Biomaterials for Human Health**, at the Faculty of Pharmaceutical Sciences at University of Campinas (Unicamp), Brazil from 14 until 16 April 2025. Registrations are open until 31 March 2025. Please find the information here: <https://www.fcf.unicamp.br/biomateriais2025/>



ICMAB, the Institute of Materials Science in Barcelona, is hosting a **Technical Seminar on Materials Characterisation** on Tuesday, April 1st, 2025 (9:30 AM - 5 PM CET). The company Nane will give a lecture. This seminar is organised by Soft Materials Lab - NANBIOSIS UNIT 6. Please find the information here: <https://icmab.es/technical-seminar-on-materials-characterisation>

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## Call for Papers

For **EPNOE 2025**, you can still submit your abstract until the 1st of April, 2025. The **9th International Polysaccharide Conference** will be held from August 25 to August 28, 2025, in Sundsvall, Sweden. The conference is organized according to the research themes in the [EPNOE Research Roadmap 2040](#), which was later published in [Carbohydrate Polymers](#).

The themes are:

- Materials & Engineering
- Food & Nutrition
- Biomedical & Well-being applications
- Chemistry, Biology & Physics

The themes include related sub-topics covering various aspects of polysaccharides – ranging from fundamental research to applications and products in different fields.

<https://www.epnoe2025.org/call-for-abstracts/>



The **CBE JU 2025 call for project proposals** will open for submission on 4 April 2025. Meanwhile, you can already prepare your proposal based on the call topic text published in the [CBE JU Annual Work Programme 2025](https://www.cbe.europa.eu/open-calls-proposals).  
<https://www.cbe.europa.eu/open-calls-proposals>



Professor dr. Elisabete Frollini, professor dr. Pedro Fardim, dr. Carmen S.R. Freire, dr. Nicolas Le Moigne, professor dr. Karin Stana Kleinschek and professor dr. Sergio Campana have set the scope for the **3rd Symposium on Polysaccharide-based Materials** including films, composites, membranes, gels, biomedical materials, and sensors, all of which play a crucial role in advancing the circular bioeconomy.

Please find the Call for Abstracts here: <https://www.sbpmat.org.br/23encontro/submission/>



The Research Topic "**Closing the Loop: Enhancing Biotechnological Routes for a More Circular Economy Transition**" is accepting papers for publication. We encourage you to be part of this collection of articles. The manuscript submission deadline is 15 June 2025. More info: <https://www.frontiersin.org/research-topics/65722/closing-the-loop-enhancing-biotechnological-routes-for-a-more-circular-economy-transition>





## Special Issue

# Biological Control and Pesticides in Agriculture: Current Status and Applications

### Message from the Guest Editors

This Special Issue aims to present the most recent achievements and applications of biological control and pesticides. Biocontrol as a pest control strategy forms the basis of integrated pest management. Low-risk pesticides, or so called biopesticides have attracted attention in pest management in recent decades. They have long been promoted as alternatives to synthetic pesticides but environmental risk assessments should be conducted in order to prove their safety. Due to increased resistance to synthetic pesticides among pests, new bio-based products are promising candidates. High-quality studies on the use of diverse beneficial organisms in crop protection and food production as well as on new pesticides are most welcome. This Special Issue is looking for original research articles and reviews that focus on topics including, but not limited to, the following: Integrated and biological pest management systems of crops. Biopesticides and low-risk pesticides. Risk assessment in pesticide applications. Sustainable farming using biological control. Phytochemicals as effective pesticides and antifungal and herbicidal agents. New solutions for microbial and RNA-based pesticides.

### Guest Editors

Dr. Magdalena Dziągwa-Becker

Department of Weed Science, Institute of Soil Science and Plant Cultivation, State Research Institute, 50-540 Wrocław, Poland

Dr. Marta Oleszek

Department of Phytochemistry, Institute of Soil Science and Plant Cultivation, State Research Institute, 24-100 Puławy, Poland

### Deadline for manuscript submissions

20 September 2025



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We are proud to present the book series **SpringerBriefs in Biobased Polymers** and with this mailing campaign we hope to find contributors amongst our networks! This is a very successful book series with thousands of downloads for each book. Moreover, downloads generally correspond with citations.



**SpringerBriefs in Biobased Polymers** covers all aspects of polysaccharide sciences, starting from their production and



isolation from native sources (i.e. biosynthesis, genetics, agronomy, plant cell biology, bio-refinery), over their characterization and processing (chemical / enzymatic modification, shaping, bio-degradation) to the many applications in which they are used (food & feed, materials & engineering, biomedical).

**This series is aimed** at advanced undergraduates, academic and industrial researchers, and professionals studying or using bio-based polymers. Each brief will bear a general introduction enabling any reader to understand its topic.

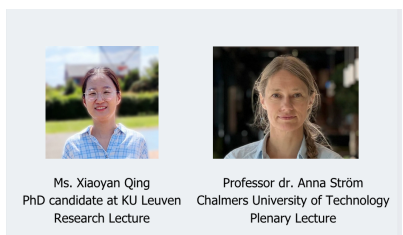
The **focus of this book series** lies on publications related to all kinds of native or synthetic polysaccharides, polysaccharide-derived polymers, and composites containing polysaccharides as a fundamental component. Moreover, topics related to natural fibers, wood, polysaccharide containing biomass and bio-plastics, life cycle assessments are within the scope. The **book proposal form** can be found [here](#). Please find the website of the book series [here](#).

## Education



We would like to congratulate Dr. Nanthilde Malandain with her successful doctoral thesis defense, ***Advanced Scaffolds Incorporating Bacterial Cellulose for Improved 3D Microenvironments***. Dr. Nanthilde Malandain was awarded with the doctoral degree in Biotechnology on February 3rd, 2025 at the Institute of Materials Science Barcelona, Spain.

In regards to her doctoral research, we would also like to refer to the article ***Cell-Laden 3D Hydrogels of Type I Collagen Incorporating Bacterial Nanocellulose Fibers*** (2023), ACS Appl. Bio Mater. 2023, 6, 9, 3638–3647. DOI: <https://doi.org/10.1021/acsabm.3c00126>.



[Watch the latest Webinar here!](#)

On **March 4th, 2025**, We enjoyed an interesting afternoon having our **Webinar with our motivated speakers of the day, professor dr. Anna Ström of the Chalmers University of Technology University of Technology University of Technology and Xiaoyan Qing, PhD candidate at KU Leuven**. Thank you both very much for your time and efforts!

The [recordings of the Webinar have been shared to EPNOE's YouTube channel](#), so you can watch the lectures in your own time! Thank you to all that have attended, the Q&A

sessions always have an added value getting to discuss scientific results with an international community of peers!



Suzano, industrial specialist in pulp and paper, has a **trainee program for recently graduated college students**. There are several conditions to follow before one can apply: you must follow **Suzano** on Instagram to find out when the applications for this trainee program open, you must be willing to relocate as Suzano operates from different locations in Brazil. Please find more information about the Suzano Trainee Program here: <https://shorturl.at/ikask>



**March 8th is International Women's Daycare.** Via EPNOE, we learned of the many female researchers in the field of Chemical Engineering. To our opinion, the shifts in gender balance have been accelerated by funding initiatives from the European Union, a.o. Here we think, for example, of the Marie Skłodowska-Curie Actions, referring not only to the groundbreaking work of professor Curie, but also the socio-economic hardships scientists of her generation faced. So today we want to celebrate what has been made possible over the course of only a few decades: funding for young, bright minds, options to combine an academic career with a family where both the role of being a researcher and being a mother are equally respected. Efforts to support such social systems have contributed a lot to gender balance in the work floor, yet there so much more to be done!



EPNOE 2025  
Pre-conference course

We are organizing a **pre-conference course** during **EPNOE 2025** on Sunday, 24th of August, aiming to connect academia and industry. ***"Polysaccharides in Solution and Solid Materials - Physicochemical Interactions and Analytical Methods"***. You can register for the pre-conference course here: <https://www.epnoe2025.org/pre-conferencecourse/>

## Open Positions

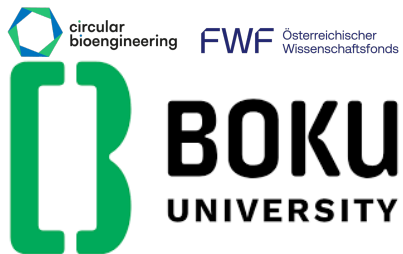


The Nanobiophysics team of the Soft Matter and Biophysics Unit at **KU Leuven** is looking for a **full-time PhD candidate: Implantable Electrochemical Biosensors**. Apply until

March 24th, 2025: <https://www.kuleuven.be/personeel/jobsite/jobs/60436625>



**Suzano** has several job openings. Amongst them, they are looking for a **Laboratory Analyst** in Sao Paulo, but other locations in Brazil are possible. A background in chemistry or a technical background is required. Apply until 22 April 2025. Please find the job description here: <https://shorturl.at/PMRWR>.



**BOKU University** is part of the Cluster of Excellence Circular Bioengineering research project. Currently, there are several job openings available: <https://www.circularbioengineering.at/jobs>.

The job openings are spread over 4 programs: 1) Green Cycles of Renewable Materials, 2) Self-Sustainable Microbial Systems, 3) Biocatalytic Processes for Sustainable Synthesis and 4) Circular Projects. Each of these programs has different **PhD-positions and postdoctoral positions** available. It is advised to apply before 31 March 2025!



The research group led by professor dr. Anna Roig, the **Nanoparticles and Nanocomposites Group** at the Institute of Materials Science in Barcelona, is looking for a **postdoctoral researcher in Biology and Nanotechnology**. This position focuses on the development and testing of highly promising nanoparticles for early stages of hepatocellular carcinoma (HCC), with the ultimate goal of being translated to the clinic and concerns a collaboration between leading research teams in China (Wuhan) and Spain (Barcelona). Apply before 15 April 2025: <https://nn.icmab.es/we-are-hiring-postdoc-researcher-biology-nanotechnology/>

**Royal Cosun Beet Company** has an open position for Maintenance Engineer E&I (factory site in Viervelaten, Groningen). Royal Cosun Beet Company is one of Europe's most efficient producers of sugar. Sustainable



entrepreneurship is a vital part of Cosun's business strategy (bio-based products, zero waste). More information can be found here: <https://werkenbijcosun.nl/en/o/maintenance-engineer-ei-1>.

The company also offers opportunities for master students for a **paid internship in sustainability** (Breda). More information can be found here: <https://werkenbijcosun.nl/en/o/stage-sustainability-wo>

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## **Recent Publications by EPNOE Members**

Dr. Hendryk Würfel, prof. dr. Martin Gericke and prof. dr. Thomas Heinze a.o. from the Friedrich-Schiller-University in Jena published an article in *Cellulose* (8 January 2025): ***Homogeneous synthesis of polygalacturonic acid acetoacetates: the starting point for all-polysaccharide-based living networks.*** DOI: <http://dx.doi.org/10.1007/s10570-024-06335-4>

Mathie Craquelin, PhD-student at Artois University, published a.o. an article in *Applied Sciences* (2024, 14(24), 11999): ***NMR and LC-MS-Based Metabolomics to Study the Effect of Surfactin on the Metabolome of Flax.*** DOI: <http://dx.doi.org/10.3390/app142411999>

Assistant professor Joice Kaschuk from Wageningen University and Research a.o. published the following article: ***Sustainable Nanocellulose UV Filters for Photovoltaic Applications: Comparison of Red Onion ( Allium cepa ) Extract, Iron Ions, and Colloidal Lignin*** (February 2025) in ACS Applied Optical Materials. DOI: <http://dx.doi.org/10.1021/acsao.4c00484>

Dr. Susana Guzman-Puyol from the Institute for Mediterranean and Subtropical Horticulture "La Mayora" (IHSM La Mayora CSIC-UMA) a.o. published the following article: ***Triphenyl Acetic Glycerate as a sustainable multifunctional additive for developing transparent, biodegradable, and flexible polylactide green alternative to polyethylene-based films for food packaging*** (February 2025) in Chemical Engineering Journal 508:160887. DOI: <http://dx.doi.org/10.1016/j.cej.2025.160887>

Professor dr. Valeria Harabagiu, head of the Institute of Macromolecular Chemistry Petru Poni in Iași, published a.o. an article in *Applied Sciences* (2025, 15(2), 492): ***In Situ and Partial In Situ Synthesis of Cellulose Magnetite/Maghemite Composites.*** DOI: <http://dx.doi.org/10.3390/app15020492>

Professor dr. Anna Ström (Chalmers University of Technology) and dr. Patricia López-Sánchez (Institute of Marine Research (IIM-CSIC)) a.o. published the following article: ***Oat protein in vitro digestion is not influenced by pectin in dispersion or gel systems in Food Hydrocolloids*** (Volume 163, June 2025, 111108). DOI: <https://doi.org/10.1016/>

[j.foodhyd.2025.111108](https://doi.org/10.1016/j.foodhyd.2025.111108). Another publication by prof. dr. Anna Ström concerns the following article: **Exploring new routes for texture engineering of aquatic protein-based products via 3D food printing** (March 2025) in *Future Foods*. DOI: <http://dx.doi.org/10.1016/j.fufo.2025.100604>

Professor dr. Sergiu Coseri, head of the "Polyaddition and Photochemistry" Department at the Institutul de Chimie Macromoleculară "Petru Poni" Iași - Academia Română a.o. published an article in the *International Journal of Biological Macromolecules* (Volume 296, March 2025, 139764): **Advancing the design of conductive composite cryogels based on hydroxypropyl cellulose derivatives for improving the compressibility and anti-freezing properties**. DOI: <https://doi.org/10.1016/j.ijbiomac.2025.139764>. Another publication by Professor Dr. Sergiu Coseri a.o. concerns the following article: **Two-Step Synthesis of a Pullulan-Derived Polymeric Fluorophore with Metal Ion Sensing Abilities** (January 2025) in *Macromolecular Rapid Communications*. DOI: <http://dx.doi.org/10.1002/marc.202400923>

Also, from the Institutul de Chimie Macromoleculară "Petru Poni" Iași - Academia Română, dr. Raluca Nicoleta Darie-Nita a.o. published the following article: **Synthesis of Acrylic-Urethane Hybrid Polymer Dispersions and Investigations on Their Properties as Binders in Leather Finishing** (January 2025) in *Polymers*, 17(3):308. DOI: <http://dx.doi.org/10.3390/polym17030308>

Dr. Nanthilde Maladin, professor dr. Anna Roig, dr. Anna Laromaine a.o. from the Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) published an article in *Cellulose* (2024, Volume 31, pages 515–534): **Cellulose-in-cellulose 3D-printed bioaerogels for bone tissue engineering**. DOI: <https://link.springer.com/article/10.1007/s10570-023-05601-1>

Assoc. Professor Nicolas Le Moigne and Assoc. Professor Stephane Corn, both from C2MA - IMT Mines Alès, a.o. published an article *The Plant Journal* (February 2025, 121(3):e17264): **Boosting photosynthesis opens new opportunities for agriculture sustainability and circular economy: The BEST-CROP research and innovation action**. <http://dx.doi.org/10.1111/tpj.17264>

Professor dr. Tatiana Budtova and Sujie Yu, PhD-researcher, both from CEMEF Mines ParisTech, a.o. have published an article in *The International Journal of Biological Macromolecules* (2025, Volume 300, 140277): **Additive-free 3D-printed nanostructured carboxymethyl cellulose aerogels**. DOI: <https://doi.org/10.1016/j.ijbiomac.2025.140277>

Professor dr. Patrick Martin and dr. Nicolas Joly from Artois University a.o. published the following article: **Use of Natural Biomolecules in Animal Feed to Enhance Livestock Reproduction** in the *International Journal of Molecular Sciences* (2025, 26(5), 2328). DOI: <https://doi.org/10.3390/ijms26052328>

Dr. Romain Bordes from Chalmers University of Technology published an article in *Soft Matter* (2025, Advance Article): **New perspectives on green and sustainable wet cleaning systems for art conservation**. DOI: <https://doi.org/10.1039/D5SM00017C>

Dr. Laura Andze from the Latvian Institute of Wood Chemistry a.o. published the following article: **Some Countries Can Say "No!" to Single-Use Plastics, Others Cannot: Why Do Seemingly Similar Policies Have Different Outcomes?** (*Journal of Sustainability*)

Research, 2025;7(1):e250004). DOI: <https://doi.org/10.20900/jsr20250004>

Dr. Mojca Zupanc and Jurij Gostisa from University of Ljubljana, Faculty of Mechanical Engineering a.o. have published the following article: ***The impact of radicals on physicochemical properties of waste activated sludge during hydrodynamic cavitation treatment*** (February 2025) in Ultrasonics Sonochemistry (115:107291). DOI: <http://dx.doi.org/10.1016/j.ultsonch.2025.107291>

Professor dr. Karin Stana-Kleinschek from IBioSys (Institut für Biobasierte Produkte und Papiertechnik) at TU-Graz a.o. has published the following article: ***Modifications of Poly(vinylphosphonates) toward Dynamic Covalent Networks***. (February 2025, Macromolecules, 58(5)). DOI: <http://dx.doi.org/10.1021/acs.macromol.4c03063>. Another publication by prof. dr. Karin Stana-Kleinschek, dr. Rupert Kargl a.o. concerns the following article: ***Functionalization of Polycaprolactone 3D Scaffolds with Hyaluronic Acid Glycine-Peptide Conjugates and Endothelial Cell Adhesion*** (February 2025) in Biomacromolecules, 26(3). DOI: <http://dx.doi.org/10.1021/acs.biomac.4c01559>. Another publication by prof. dr. Karin Stana-Kleinschek, dr. Rupert Kargl a.o. concerns the following article: ***Protocol for the fabrication of self-standing (nano)cellulose-based 3D scaffolds for tissue engineering*** (January 2025) published in STAR Protocols, 6(1):103583. DOI: <http://dx.doi.org/10.1016/j.xpro.2024.103583>. There is also the following publication (poster): ***Biopolymeric Alginate Composites - A Sustainable Approach for Advanced Material Applications*** (February 2025, Conference: Advanced Material Science Poster Day 2025): [https://www.researchgate.net/publication/388869284\\_Biopolymeric\\_Alginate\\_Composites\\_-\\_A\\_Sustainable\\_Approach\\_for\\_Advanced\\_Material\\_Applications](https://www.researchgate.net/publication/388869284_Biopolymeric_Alginate_Composites_-_A_Sustainable_Approach_for_Advanced_Material_Applications). Another publication by Professor Dr. Karin Stana-Kleinschek a.o. concerns the following article: ***Functional coatings with ethyl cellulose-calcium carbonate alkaline nanoparticles for deacidification and mechanical reinforcement of paper artifacts*** (February 2025) in Surfaces and Interfaces. DOI: <http://dx.doi.org/10.1016/j.surfin.2025.106065>

Associate professor Stefan Spirk from TU-Graz a.o. published the following article: ***Safe-and-sustainable-by-design redox active molecules for energy storage applications*** (February 2025) in Energy, Sustainability and Society, 15(1). DOI: <http://dx.doi.org/10.1186/s13705-024-00503-x>. Another article by Associate Professor Stefan Spirk, dr. Rupert Kargl from TU-Graz and Associate Professor Tiina Nypelö from Aalto University a.o. concerns: ***Biobased Antimicrobial Coatings: Layer-by-Layer Assemblies Based on Natural Polyphenols*** (March 2025), published in ACS Applied Polymer Materials. DOI: <http://dx.doi.org/10.1021/acsapm.4c03681>

Associate professor Michael Hummel from Aalto University a.o. published the following article (conference paper): ***Sense and Degrade: Fully Bio-Based and Biodegradable eTextile Capacitive Sensor*** (November 2024) via IEEE Publications (Conference: 2024 International Conference on the Challenges, Opportunities, Innovations and Applications in Electronic Textiles (E-Textiles)). DOI: <http://dx.doi.org/10.23919/E-Textiles63767.2024.10914182>

Professor dr. Pedro Fardim from KU Leuven a.o. published the following article: ***Effect of carbon support on the electrochemical performance of Pt-based anodes for bio-alcohol fuel cells*** (March 2025) in the Journal of Chemical Technology & Biotechnology. DOI: <http://dx.doi.org/10.1002/jctb.7841>

Associate professor Marc Delgado-Aguilar and professor dr. Roberto J. Aguado from the

University of Girona a.o. have published the following article: **Advanced antimicrobial surfaces in cellulose-based food packaging in Advances** (March 2025) in Colloid and Interface Science, 103472 DOI: <https://doi.org/10.1016/j.cis.2025.103472>

Associate professor Luigi Gentile from the University of Bari Aldo Moro a.o. published an article in Food Chemistry (October 2024, 464(2):141823): **Green Cu particles for functional and biodegradable food packaging solutions**. DOI: <http://dx.doi.org/10.1016/j.foodchem.2024.141823>

Dr. Victor Castro-Alves from the Örebro University a.o. published the following article (reprint): **Production of bioactive structural motifs from wheat arabinoxylan via colonic fermentation and enzymatic catalysis: evidence of interaction with toll-like receptors from in vitro, in silico and functional analysis** via BioRxiv (September 2024). DOI: <http://dx.doi.org/10.1101/2024.09.13.612858>

Associate professor Maria Rosario Domingues from CICECO – Aveiro Institute of Materials at the University of Aveiro a.o. published the following article (reprint): **Comprehensive Lipid Analysis of Cape Hake (*Merluccius Capensis*) By-Products: Exploring Key Features for Added Value Applications** (January 2025) via SSRN. DOI: <http://dx.doi.org/10.2139/ssrn.5113261>

Professor dr. Chunli Xu from the Laboratory of Natural Materials Technology at the Åbo Akademi University a.o. published the following article (reprint): **Multifunctional Biogenic Films and Coatings from Synergistic Aqueous Dispersion of Wood-Derived Suberin and Cellulose Nanofibers** (January 2024) via SSRN. DOI: <http://dx.doi.org/10.2139/ssrn.4749934>. Another publication by Professor Dr. Chunli Xu a.o. concerns the following article: **Molecular engineering of nanocellulose-poly(lactic acid) bio-nanocomposite interface by reactive surface grafting from copolymerization** (February 2025) in the International Journal of Biological Macromolecules, 306(12):141371. DOI: <http://dx.doi.org/10.1016/j.ijbiomac.2025.141371>

Lukas Fliri, PhD-student at Aalto University, published the following article: **Exploiting the high affinity between cellulose nanofibrils and Aloe vera acemannan to develop elastic, crosslinker-free, all-polysaccharide hydrogels** (April 2025) in the International Journal of Biological Macromolecules (304(7):140853). DOI: <http://dx.doi.org/10.1016/j.ijbiomac.2025.140853>

Dr. Johnny Beaugrand from the French National Institute for Agriculture, Food, and Environment (INRAE) a.o. published the following article: **Inside the kink-bands of archaeological flax artefacts via sub-micrometer resolution micro-CT: A comprehensive microstructural analysis to better understand degradation mechanisms of fibres** (February 2025) in Composites Part B Engineering, 298:112347. DOI: <http://dx.doi.org/10.1016/j.compositesb.2025.112347>

Professor dr. Manuel A Coimbra and dr. Elisabete Coelho from CICEO – Aveiro Institute of Materials at the University of Aveiro a.o. published the following article (reprint): **One-Step Production of Oligosaccharides from By-Products of Olive Oil Industry** (January 2025) via SSRN. DOI: <http://dx.doi.org/10.2139/ssrn.5163045>



Dr. Muhammad Mujtaba from VTT Technical Research Centre in Espoo, Finland a.o. published the following article (review): ***Chitosan-metal and metal oxide nanocomposites for active and intelligent food packaging; a comprehensive review of emerging trends and associated challenges*** (2025) in Carbohydrate Polymers, Volume 357, 123459. DOI: <https://doi.org/10.1016/j.carbpol.2025.123459>

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